Ministry of Public Health (MOPH)
National Institute for Emergency Medicine (NIEM)
Kingdom of Thailand
Official Project of Association of Southeast Asian Nations (ASEAN)

Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management

Final Report

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Japan International Cooperation Agency (JICA)

Koei Research & Consulting Inc.

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Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management

FINAL REPORT

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Glossary

AADMER	ASEAN on Disaster Management and Emergency Response
ACAPS	Assessment Capacities Project
ACDM	ASEAN Committee on Disaster Management
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AMS	ASEAN Member States
APCDM	Asia Pacific Conference on Disaster Medicine
ARDEX	ASEAN Disaster Emergency Response Simulation Exercise
ARF Direx	ASEAN Regional Forum Disaster Relief Exercise
ASEAN	Association of Southeast Asian Nations
Blue Book	Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters
C/P	Counterparts
CPR	Committee of Permanent Representatives
CPRC	Crisis Preparedness and Response Centre (Malaysia)
DF/R	Draft final report
DMAT	Disaster Medical Assistance Team
DSS	Disaster Summary Sheet
EAS	East Asia Summit
EMT	Emergency Medical Team
EMTCC	Emergency Medical Team Coordination Cell
ERAT	Emergency Response and Assessment Team (ASEAN)
F/R	Final Report
FACT	Field Assessment Coordination Teams
HADR	Humanitarian Assistance and Disaster Relief
HCT	Humanitarian Country Team
HEMB	Health Emergency Management Bureau (Philippines)
IASC	Inter-Agency Standing Committee
IC/R	Inception Report
ICT	Information and Communication Technology
IER	INSARAG External Reclassification
IFRC	International Federation of Red Cross and Red Crescent Societies
INSARAG	International Search and Rescue Advisory Group
JADM	Japanese Association for Disaster Medicine
JCC	Joint Coordinating Committee
JDR	Japan Disaster Relief
JICA	Japan International Cooperation Agency
LEMA	Local Emergency Management Authority
MIRA	The Multi-Cluster/Sector Initial Rapid Assessment
MOPH	Ministry of Public Health
NDMO	National Disaster Management Offices
NFP	National Focal Point
NIEM	National Institute for Emergency Medicine (Thailand)
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
P/R	Progress Report
PDCA	Plan-Do-Check-Action
PDM	Project Design Matrix
PO	Plan of Operation
PPKK	Center for Health Crisis Management (Indonesia)
PWG	Project Working Group
RCM	Regional Coordination Meeting
RDRT	Regional Disaster Response Teams
SARS	Severe Acute Respiratory Syndrome
SASOP	Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations

SFDRR	Sendai Framework for Disaster Risk Reduction
SOP	Standard Operating Procedure
SOMHD	Senior Officials Meeting on Health Development
SimEX	Simulation Exercise
The Project	Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH)
The Project Team	A team consisting of Thai counterparts and Japanese experts
The previous survey	The Survey on the Current Situation of Disaster/Emergency Medicine System in the ASEAN Region
TICA	Thailand International Cooperation Agency
TOR	Terms of Reference
UN	United Nations
UNICEF	United Nations Children's Fund
UNDAC	United Nations Disaster Assessment and Coordination
UNISDER	United Nations Office for Disaster Risk Reduction
USAR	Urban Search and Rescue
WADEM	World Congress on Disaster and Emergency Medicine
WHO	World Health Organization

Chapter 1 Outline of the Project

1.1 Background

The ASEAN has continued to attach the great importance to the cooperation related to prevention of and response to disasters. The ASEAN formulated the ASEAN on Disaster Management and Emergency Response (AADMER) in 2005 and the ASEAN Declaration on Enhancing Cooperation in Disaster Management in 2013. In addition, the ASEAN defined disaster health management as one of the priority issues in the health sector in the ASEAN Post-2015 Health Agenda. And collaboration for disaster health management in the ASEAN region has just started and the capacity of disaster health management varies widely among the ASEAN Member States (AMS) since each country has different needs and priorities in the health sector.

AMS attempt to strengthen their system or capacity for disaster health management when they are faced with turning points such as the outbreak of severe acute respiratory syndrome (SARS) in 2003, Sumatra Earthquake (2004), and Cyclone Nargis in Myanmar (2008). In Thailand, the Thai Disaster Medical Assistance Team (DMAT) was established in 2008, which is based on the Japanese DMAT model in order to apply the lessons from responding to the Indian Ocean Earthquake and Tsunami (2004). The Government of Thailand aims to strengthen its capacity of domestic disaster health system and also to assume a lead role in the disaster health cooperation in the ASEAN region.

The Government of Japan has committed to enhance cooperation in disaster management with the ASEAN as stated in the Vision Statement of the ASEAN-Japan Commemorative Summit. Japan has a plenty of experiences and knowledge in all aspects of disaster management such as DMAT for domestic incidents as well as the Japan Disaster Relief (JDR) Team for international response.

Against this background, the Government of Thailand requested the Government of Japan for a technical cooperation project in establishing a collaboration mechanism of disaster health management in the ASEAN region. Based on the request, the Japan International Cooperation Agency (JICA) conducted “the Survey on the Current Situation of Disaster/Emergency Medicine System in the ASEAN Region (the previous survey) from 2014 to 2015. Through the survey and regional meetings, all AMS and the ASEAN Secretariat reached a common understanding on the importance of regional collaboration mechanism in disaster health management and necessary actions. Based on the common understanding and a series of discussions with stakeholders, the Project of Strengthening the ASEAN Regional Capacity on Disaster Health Management (the Project) was formulated. The Project was officially endorsed by Senior Officials Meeting on Health Development (SOMHD) of ASEAN in September 2015 and the Committee of Permanent Representatives (CPR) in January 2016.

1.2 Overview of the Project

Table 1 shows the outline of the Project according to PDM Version 1 presented in Attachment 1. Although the Project is conducted based on the agreement between JICA and the National Institute for Emergency Medicine (NIEM) in Thailand, the activities related to Output 1, 2, 3 and 5 (except Activity 5-5) are conducted with participants from AMS and other related organizations for the purpose of strengthening regional collaboration.

In August 2017, the Record of Discussion signed on 19 February 2016 was amended. Major amendment includes adding of the MOPH as the counterpart institution as shown in Attachment 2. This amendment aimed to strengthen the collaborative relationship with the WHO and the ASEAN, and the MOPH specifically designated DPHEM for the responsible counterpart section. In addition, it includes a dispatch of a long-term Japanese expert for facilitate the multi-institution project implementation mechanism. With regards to the PDM, a minor change was made to add one verifiable indicator in Output 5, [5-4: Number of participants to attend to the counterpart training courses (Target :20 pax)] as shown in Attachment 3.

This Project has been regarded as the first step for ten-year vision of the ASEAN and Japan collaboration mechanism on disaster health management. To achieve the future vision, the Project aims to strengthen the regional coordination on disaster health management in the ASEAN region and to develop common tools and mechanism for efficient collaboration. Through the Project activities, the Project tries to build up a consensus among AMS and to identify needs for the next steps.

Table 1: Outline of the Project

Overall Goal
ASEAN and Japan collaboration mechanism on disaster health management is developed.
Project Purpose
Regional coordination on disaster health management is strengthened in ASEAN.
Outputs and Activities
Output 1 Coordination platform on disaster health management is set up.
1-1 Regional coordination meetings are organized every year to share the progress and discuss the direction of the Project.
Output 2 Framework of regional collaboration practices is developed.
2-1 Develop and prepare the program of the regional collaboration drill with project working group
2-2 Conduct the regional collaboration drill every year in AMS
2-3 Compile recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities
2-4 On site practice is conducted when disaster occurs in ASEAN (if possible).
Output 3 Tools for effective regional collaboration on disaster health management are developed.
3-1 Formulate project working groups for regional collaboration tools at the beginning of the project
3-2 Develop a draft regional SOP and minimum requirements for disaster health management with the project working group
3-3 Prepare databases of emergency medical teams of AMS
3-4 Draft framework of health needs assessment in emergencies with the project working group
Output 4 Academic network on disaster health management in AMS is enhanced.
4-1 Present outcomes of the Project activities at academic conferences such as JADM, APCDM and WADEM

Output 5 Capacity development activities for each AMS are implemented.
5-1 Prepare training plan, curriculum and materials on disaster health management and emergency medical system based on needs survey with the project working group
5-2 Conduct trainings on disaster health management and emergency medical service for AMS
5-3 Conduct monitoring survey and evaluation on capacity development on disaster health management in each AMS
5-4 Conduct a study tour in Japan for AMS
5-5 Conduct training program in Japan for the Thai counterpart personnel

1.3 Overall Flow

The Project was commenced in July 2016. Plan of operation is enclosed in Attachment 4. Attachment 5 presents the work flow of activities for each outcome of the Project. The work schedule and the latest dispatch schedule of the Japanese Experts are shown in Attachment 6 and Attachment 7, respectively. The following sections describe progress, challenges and efforts of each activity during the implementation period from July 2016 through March 2019.

1.3.1 Preparatory Works (July 2016-February 2017)

(1) **Preliminary Meetings with JICA**

In July 2016, the Project Team had meetings with JICA and the Japanese Advisory Committee on implementation policy and the latest situation of operating environment of the Project, as well as relevant issues to build consensus on the methodology and confirmation of the communication strategy.

(2) **Inception Report (IC/R)**

Based on the consensus achieved in the above meetings, the work plan and methodology were compiled in an inception report (IC/R) which was submitted to JICA, NIEM, ASEC, and AMS.

(3) **Discussion on IC/R and Work Plan with Thai Stakeholders**

The background, outlines, and work plan of the Project was presented to Thai stakeholders along with IC/R to have discussions on the work plan, especially, on the members of each project working group, the schedule, outline and preparation of the first Joint Coordinating Committee (JCC) meeting, the first Regional Coordination Committee (RCC) meeting, and the Start-up Drill were discussed in detail.

The series of official meetings are listed below.

Table 2: Official meetings summary (July 2016-March 2019)

Meetings	Date	Venue	No. of participants
1st JCC	August 4, 2016	Nonthaburi Province, Thailand	34
1st RCC	September 29, 2016	Bangkok, Thailand	62
1st PWG1	January 20, 2017	Bangkok, Thailand	38
1st PWG2	January 20, 2017	Bangkok, Thailand	29
2nd PWG1	May 8-9, 2017	Bangkok, Thailand	47
3rd PWG 1	July 20, 2017	Phuket, Thailand	38
2nd PWG 2	July 20, 2017	Phuket, Thailand	33
2nd RCC	July 21, 2017	Phuket, Thailand	63
2nd JCC	August 28, 2017	Nonthaburi Province, Thailand	27
3rd PWG 2	November 9, 2017	Bangkok, Thailand	42
4th PWG 1	November 28-29, 2017	Bangkok, Thailand	44
5th PWG 1	March 29, 2018	Da Nang, Vietnam	42
4th PWG 2	March 29, 2018	Da Nang, Vietnam	34
3rd RCC	March 30, 2018	Da Nang, Vietnam	46
6th PWG1	July 5-6, 2018	Bangkok, Thailand	38
3rd JCC	October 31, 2018	Bangkok, Thailand	20
7th PWG1	December 6, 2018	Metro Manila, Philippines	43
5th PWG2	December 6, 2018	Metro Manila, Philippines	36
4th RCC	December 7, 2018	Metro Manila, Philippines	53
5th RCC	March 4, 2019	Bangkok, Thailand	45

1.3.2 Output 1: Coordination platform on disaster health management is set up.

(1) **Activity 1-1 Regional coordination committee meetings are organized every year to share the progress and discuss the direction of the Project.**

The first RCC meeting was held in Bangkok on 29 and 30 September 2016. In the first RCC meeting, objectives, expected outputs and activities were presented and the terms of reference (TOR) of RCC and Project Working Groups (PWG) 1 and 2 were agreed as described below. Then, the TORs were endorsed in ASEAN Health Cluster 2 Meeting on 29 and 30 November 2016 in Putrajaya, Malaysia.

Table 3: TOR for the PWG1 and 2

	PWG1	PWG2
Scope of activities	- Design and plan the regional collaboration drills - Develop a draft regional SOP and minimum requirements, Health Needs Assessment forms thorough RCD	- Training for AMS: four times and conduct study tour in Japan - Develop training plan and curriculum and teaching materials

	- Pilot and validate these collaboration tolls - Establish EMT database	
Expected outcomes	- Draft of the reginal collaboration tools are available	- Training plan, curriculum and training materials are produced

The Second RCC was held on July 21, 2017, summarized and demonstrated the progress of the ARCH project activities during nine months after the first RCC meeting in September 2016. The activities were namely the start-up and the regional collaboration drills, AMS training, PWG1 and 2 meetings, development of regional collaboration tools. Also, the RCC meeting approved the proposal of the Philippines to host the third RCD in October 2018, while the approval of Viet Nam to host the second RCD will be requested through online basis.

The Third RCC was held in Da Nang, Vietnam after the second regional collaboration drill. The meeting agenda included updates on the project activities, review and results of the second regional collaboration drill and planning for the third regional collaboration drill in Manila. Planning of the third and fourth AMS training was also shared, and the information on the Study Tour to Japan was announced. The Thai side took a lead in the session for formulation of the Plan of Action for the ASEAN Leaders' Declaration on Disaster Health Management. The Philippines presented their proposal and plan of hosting the third regional collaboration drill and was accepted and authorized at this meeting venue.

The fourth RCC was held in Manila, Philippines on 7 December 2018, after the third regional collaboration drill. The agenda included updates on the development of the POA of ALD on DHM, priorities for the remaining period of ARCH Project. As to the Project evaluation, summary of findings and recommendations were shared among the participants, leading to the discussion on the future actions during the proposed extension phase of the Project.

The fifth RCC was held in Bangkok on 4 March 2019, to conclude this phase of the Project. The team reported the overall progress of the Project including the 3rd regional collaboration drill and the EMTCC training conducted in February 2019. The meeting also shared the updates on the POA of ALD on DHM, and the endorsement process of the EMT SOP and integration into SASOP. The afternoon session mainly covered the Project Proposal for the extension phase, next regional collaboration in Indonesia and the TORs for RCC, PWG1-2 during the extension phase.

1.3.3 Output 2: Framework of regional collaboration practices is developed.

(1) Activity 2-1 Develop and prepare the program of the regional collaboration drill (RCD) with project working group

Objectives of Regional Collaboration Drills are 1) To examine the current regional collaboration mechanism on disaster health management; 2) To develop necessary tools to enhance the collaboration; 3) To draw and establish common understanding on relevant issues; and 4) To Promote a relationship based on mutual trust. Therefore, 1st RCD and 2nd RCD were planned based on the objectives with a full understanding of the lesson learnt from Start-up Drill summarized in Table 4 below. (Scenarios of all RCDs are included in the Attachment 8.)

Table 4: Summary of the Start-up drill

Title	Start-up Drill for Regional Collaboration Drills
Objectives	To understand the regional coordination and collaboration tools in the health sector and to be in line with the existing mechanism / platform / tools such as the SASOP/ EAS toolkit/ WHO EMT standard
Dates	17 to 19 July 2017
Participants	9AMS, Japan, ASEC, AHA Centre, Thai MOH, NIEM Thai, JICA and Japan expert team
Venue	Radisson Blu Plaza Bangkok (Days 1, 3), MOH (Day 2) in Bangkok, Thailand
Activities/ Topics	DAY 1: Table Top Exercise DAY 2: Field Training Exercise DAY 3: Review Workshop
Expected Output	- To identify different gaps between medical procedures provided at a hospital and in the field - To clarify the further challenges on Capacity Building of Team, Personal, Team Collaboration, Regional Collaboration and Issues for the future consideration

Lessons learned	- Project team cooperation
	  - Discrepancy in common understanding about whole process in planning, implementation and feedback.
	  - Mismatch of information sharing on preparation of progress and materials, roles of management staffs
	  - Uncertainty of contact person responsibilities on drafting workstations in the Field Exercise
	  - Misunderstanding of roles among staffs during the drill
	- Identified Gaps and Clarified Challenges
	  - Team Capacity Building
	  ▪ Training for EMT, EMTCC Team, Rapid Health Assessment Team, including risk management and disaster management: leadership and teamwork, Equipment for survival/ medical operation, Logistics and supply management and Communication management (basic use of radio)
	  - Personal Capacity Building
	  ▪ Skills comply with standard protocols among AMS
	  ▪ Understanding of ICS concepts and international standards about Quality and Accountability on Humanitarian Assistance
	  - Team Collaboration Capacity Building
	  ▪ Using the same standard forms
	  ▪ Information management and sharing methods

- Regional Collaboration Capacity Building
  - "ASEAN Collaboration SOP" and standardized forms aligning with WHO Region principles
- Issues for the future consideration
  - Information sharing within each AMS MOH and Health facilities

a. 1st Regional Collaboration Drill

1st RCD was planned from 17 to 19 July 2017 in Phuket, Thailand. The main objective was to enhance knowledge, skills and capacities of the International Emergency Medical Team (I-EMTs) using common reporting forms in I-EMTs' reporting activities. Moreover, special concept was "Being Realistic" that means "Realistic Scenario, Realistic Communication and Real Reporting Forms."

Drill planning was mainly conducted by Thai project team. In addition, Japan Advisory Committee and Japanese expert team were expected technical support of drill planning and an advisory note based on observation of the drill and PHEOC management.

The project team provided 16 common report forms: seven forms form SASOP, four forms in EMT Coordination Handbook _June 2017 FINAL, three forms in WHO MINIMUM DATA SET, and two forms drafted by the project team (Table 5).

Table 5: 16 common report forms for 1st RCD

Resource material	Form
SASOP	FORM 1: Initial Report/Situation Update to AHA Centre
SASOP	FORM 2: Initial Report/Situation Update of AHA Centre to the National Focal Points
SASOP	FORM 3: Request for Assistance
SASOP	FORM 4: Offer of Assistance
SASOP	FORM 5: Contractual Arrangements for Assistance
SASOP	FORM 6: Report of Status of Provision of Assistance
SASOP	FORM 7: Final Report from Assisting Entity to AHA Centre
WHO MINIMUM DATA SET	EMTCC-MDS Feedback Form
WHO MINIMUM DATA SET	EMT-MDS Tally Sheet
WHO MINIMUM DATA SET	EMT-MDS Daily Reporting Form
EMT Coordination Handbook	Emergency Medical Team Registration Form
EMT Coordination Handbook	EMTCC Situation Report
EMT Coordination Handbook	Emergency Medical Team Exit Report
EMT Coordination Handbook	Patient Referral Form

Thai side new product	Medical Record with MDS Tick box (draft)
Japan side new product	Health Needs Assessment Sheet (draft)

In order to offer adequate opportunities of a full understanding of the forms to participants, the drill was designed, that aligned with the regional and global collaboration mechanism for emergency response as follows: 1) request for assistance/ offer of assistance, 2) mobilization/ on-site deployment of assets and capacities, 3) providing medical care/ patient referrals/ health needs assessment, 4) demobilization of assistance.

On day1, a Table-Top Exercise was conducted in the hotel. Each AMS was deployed into one of three rooms such as three provinces, and then they experienced filling the forms based on the simulated patient cards. During the Field Training Exercise on Day2, same scenario as day1 was basically planned to use in order that all participants could get experience step by step; and take more time for 3) providing medical care/ patient referrals/ health needs assessment as mentioned above.

The purpose of Day3 “After Action Review” was to consolidate feedbacks on the forms, which should include 1) modifying framework of form, 2) adding items/topics, and 3) situation that who/when use each form.

In the same session, the project team expected that participants would comment on “Pyramid model of ARCH project” that was drafted based on the lessons learnt from Start-up Drill. Propose of proposing the model was to share the “common” picture for navigating ARCH project in accordance with existing regional mechanisms. Because Disaster Health Management and “One ASEAN One Response” are quite new concepts. On the other hand, AMS have different opinions on the disaster health management. Then it could be basic evidences on developing tools, and planning for Regional Collaboration Drills and AMS trainings.

b. 2nd Regional Collaboration Drill

2nd RCD was planned from 26 to 28 March 2018 in Da Nang, Vietnam. The objectives were 1) to use common forms: medical record, WHO forms, SASOP; 2) to validate "ASEAN SOP"; 3) to know each other more in a situation to work together; 4) to conduct “EOC” by Vietnam actual representatives; and 5) to identify the issues to be discussed on regional collaboration mechanism. The expectations were a) to consolidate findings on the Reporting Forms; b) to concrete feedbacks on Regional Collaboration Tools; c) to configure the ideas on capacity building; and d) to create the further ideas for the Next RCD.

Drill planning was mainly conducted by Vietnam team, therefore Thai and Japanese expert team were expected to provide technical support of drill planning. Also, Thai NIEM team and Japan Advisory

Committee would evaluate the drill management. Five regular meetings were planned to share progress on preparation of scenarios, materials/equipment, roles of management staffs.

According to the lessons learnt from 1st RCD, firstly, the expert team revised some forms and consolidated number of “Common Reporting Forms” as below:

Table 6: Common Reporting Forms

Common Reporting Forms
SASOP Form 1: Initial Report/Situation Update to AHA Centre
SASOP Form 3: Request for Assistance
SASOP Form 4: Offer of Assistance
Emergency Medical Team Registration Form
EMTCC Situation Report
EMT Coordination Meeting Minutes
Medical Record with MDS Tick box
EMT-MDS Tally Sheet
EMT-MDS Daily Reporting Form
Patient Referral Form
Health Needs Assessment (HNA) Form/ Summary Report
Emergency Medical Team Exit Report
SASOP Form 7: Final Report from Assisting Entity to AHA Centre

Secondly, providing methods on Table-Top Exercise (TTx) and Field Training Exercise (FTx) were changed to enhance each EMTs' experiences maximally. In the TTx, learning session should be intended for all participants to fill the all forms based on the given information by themselves. After completing every form, each EMT ought to explain one form to the others in random order. These processes were arranged using active learning method. And then, same scenarios on medical care and health needs assessment were repeated in the morning and afternoon session of the FTx. In addition, team building time could be planned before each session. As a result, each AMS could plan/operate/reflect their performance such like Deming cycle throughout the drill.

Meanwhile, PHECO training for actual Vietnamese representatives was planned by certificated Thai and JAC EMTCC members; to enhance the capacities for conducting domestic PHEOC at actual disaster responses.

c. 3rd RCD

3rd RCD was conducted in Manilla, Philippines. Philippines' representatives had already proceeded the drill preparedness before 1st RCD, therefore, the drill management body was organized cooperating with relevant authorities. Thai and Japan expert team with JAC played a supportive on drill planning and preparedness. Alternatively, the team could contribute pre-education for participants, that is providing leaning materials, "How to use the regional collaboration tools."

A Scenario based on the national response plan to Metro Manila Earthquake includes primary objective; to test the regional collaboration tools such as SOPs, Medical record and health needs assessment from.

Secondary objectives are 1) to test electronic reporting system for ISPEED and 2) to refine EMT team operations at all levels in terms of the following: a. command and control b. coordination and collaboration c. communication.

(2) **Activity 2-2 Conduct the regional collaboration drill every year in AMS**

a. 1st RCD

The 1st RCD was conducted from 17 to 19 July 2017. Eleven emergency medical teams participated in table-top exercise, field exercise, and review workshop. A drill design was almost well planned. The proceedings of the 1st RCD is presented in Attachment 9. The conclusions and recommendations are presented in Attachment 10. And also advisory note on drill and PHEOC management from Japan Advisory Committee was submitted as in Attachment 11.

Table 7: Summary of 1st Regional Collaboration Drill

Title	1st Regional Collaboration Drill
Objectives	To enhance knowledge, skills and capacities of the International Emergency Medical Team (I-EMTs) using common reporting forms in I-EMTs' reporting activities
Dates	17 to 19 July 2017
Participants	10AMS, Japan, ASEC, AHA Centre, Thai MOH, NIEM Thai, JICA and Japan expert team
Venue	Duangjitt Resort & Spa (Days 1, 3), Phuket Mining Museum (Day 2) in Phuket, Thailand
Activities/ Topics	DAY 1: Table Top Exercise DAY 2: Field Training Exercise DAY 3: After Action Review
Expected Output	- Feedbacks on the proposed reporting forms from all participants for further development of these forms - Advisory note on drill and PHEOC management from Japan Advisory Committee

Lessons learned	- Project team cooperation
	  - Discrepancy in information sharing on preparation of progress and materials, roles of management staffs
	  - Using common language within radio communication among exercise controllers
	  - Uncertainty of contact person responsibilities on drafting medical record and health needs assessment form
	  - Misunderstanding of roles among staffs during the drill
	- TTx
	  - Provision for opportunities to understand how to use the forms; to conduct realistic CIQ processes
	  - Insufficient providing procedure in the health needs assessment session
	- FTx
	  - Discrepancy of special concept "Being Realistic" that simulated patients were well prepared in comparison with background information on affected area situations such as hospital locations and domestic referral sysytem
	  - Lack of precise guidance on rule of engagement to the exercise among participants, facilitator and exercise controllers, that could formulate common understanding and expectation to the scenario and exercise control
	  - Consideration for the exercise environment such as weather, temperature and humidity, as for the safety and security of participants

b. 2nd Regional Collaboration Drill

The 2nd RCD was conducted from 26 to 28 March 2018. Twelve emergency medical teams participated in table-top exercise, field exercise, and review workshop. The proceedings of the 2nd RCD is presented in Attachment 12.

Table 8: Summary of 2nd Regional Collaboration Drill

Title	2nd Regional Collaboration Drill
Objectives	To use common forms: medical record, WHO forms, SASOP To validate "ASEAN SOP" To know each other more in a situation to work together To conduct “EOC” by Vietnam actual representatives To identify the issues to be discussed on regional collaboration mechanism
Dates	26-28 March 2018
Participants	10AMS, Japan, ASEC, AHA Centre, Vietnam MHO, Da Nang PHO, NIEM Thai, JICA and Japan expert team
Venue	Grand Tourane Hotel (Day1, 3), Hoa Xuan Stadium (Day2)
Activities/ Topics	DAY 1: Table Top Exercise DAY 2: Field Training Exercise DAY 3: After Action Review
Expected Output	- To consolidate your findings on the Reporting Forms - To concrete feedbacks on Regional Collaboration Tools - To configure the ideas on capacity building - To create the further ideas for the Next RCD.

Lessons learned	- Preparation
	- TTx
	  - Less time to complete all the forms, and should provide teaching template/concept for all the teams
	  - Implementation of process of RCD/PHEOC using provision of flow chart on CIQ, RDC and EMTCC procedures
	- FTx
	  - Less understanding of filling medical record, patient referral form and HNA form/summary
	  - Improving communication problem by pre-education
	  - Clear clarification of facilitators and interpreters’ role
	  - Distributing information on host country resources such as hospital beds/ medical equipment
	  - Diversifying in standard/basic knowledge and skills of HNA including role and responsibility of I-EMT

c. 3rd Regional Collaboration Drill

The 3nd RCD was conducted from 26 to 28 March 2018. Twelve (12) emergency medical teams participated in table-top exercise, field exercise, and review workshop. The proceedings of the 3nd RCD is presented in Attachment 13.

Table 9：Summary of 3rd Regional Collaboration Drill

Title	3rd Regional Collaboration Drill
Objectives	To use common forms: medical record, WHO forms, SASOP To validate "ASEAN SOP" To test electronic reporting system for iSPEED To identify the issues to be discussed on regional collaboration mechanism To refine EMT team operations at all levels in terms of the command and control, coordination and collaboration, communication
Dates	3-5 December 2018
Participants	10AMS, Japan, ASEC, AHA Centre, NIEM Thai, JICA and Japan expert team
Venue	Dusit Thani Manila (Day1, 3), Philippine Army Grandstand (Day2)
Activities/ Topics	DAY 1: Table Top Exercise DAY 2: Field Training Exercise DAY 3: After Action Review
Expected Output	- To consolidate your findings on the Reporting Forms - To concrete feedbacks on Regional Collaboration Tools - To configure the ideas on capacity building - To create the further ideas for the Next RCD.
Lessons learned	- TTx - Experience of entering the country and the requirements in responding as I-EMT - Consider scenario where logistics are brought to the affected countries through other means - FTx - iSPEED as a work in progress - Areas of Improvement for medical records and HNA, but no more additional forms - Value of EMTCC Training - Use of challenging scenario i.e. CBRNE

(3) **Activity 2-3 Compile recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities**

Throughout four RCDs, the Project launched the regional collaboration tools needed for effective EMT activities in an affected country. Drill participants could understand handling the common forms, the WHO MDS concept experiencing with iSPEED, and crucial functions of EMTCC under the PHEOC in an affected country. Moreover, all AMS and Japan might share the common needs for a new protocol to coordinate and support ASEAN EMT operation, which should cover “ASEAN I-EMT agreement” and “National SOP for I-EMT Coordination”**.**

For further development of the regional collaboration, the Project Team provides recommendation as below;

- Using the common forms at sequential RCDs to make them known among ASEAN EMT members,

- Accepting the forms and iSPEED as official materials in trainings and exercises conducted by AIDHM Centre,
- Preparing and conducting the following RCDs supported by the experienced AMS to advance national capacity building for receiving I-EMT, and
- Considering I-EMT/N-EMT cooperation and I-EMT/I-EMT collaborations as one team in terms of appropriate cultural awareness, suitable experience sharing, and practical EMTCC tasking.

1.3.4 Output 3: Tools for effective regional collaboration on disaster health management are developed.

(1) Activity 3-1 Formulate project working groups for regional collaboration tools at the beginning of the project

The PWG 1 and 2 were formulated based on the TOR. In the first meetings, both PWG 1 and 2 shared understanding on the TOR and agreed the overall work plan. PWG 1 agreed on the conceptual framework, purpose, goal, targets and work plan of the draft tools to be developed during the Project. The proceedings of the first PWG 1 meeting is presented in Attachment 14.

(2) Activity 3-2 Develop a draft regional SOP and minimum requirements for disaster health management with the project working group

SOP ver.1 and Minimum Requirements were developed and approved in the 4th PWG1 meeting to be tested in the 2nd RCD. The 5th PWG1 meeting invited AMS members to acknowledge the changes as well as providing comments and feedbacks to the Standard Operating Procedures. More detailed discussions about the revisions are shown in the proceedings of the meeting (Attachment 14).

Through testing and validating at the 2nd RCD and the third RCD, the SOP was routinely reviewed and revised at the subsequent meetings to incorporate the findings and lessons appeared; its refining process was on consensus basis among all AMS. SOP ver. 2 was finally confirmed after the 3rd RCD in December 2018, and in the near future, is expected to be integrated in the ASEAN SASOP. Table of Contents of the SOP is displayed below. Please refer to Attachment 15 for the entire documents of SOP ver. 2 and minimum requirement.

Table 10: SOP Table of Contents

SOP Table of Contents:

List of Acronyms & Abbreviations

1. Introduction
2. Institutions
3. Disaster Preparedness

A. National Focal Units for Emergency Medical Team (EMT) Coordination

B. Inventory of Emergency Medical Team (EMT) Assets and Capacities

C. Emergency Medical Team (EMT) Capacity Building and Strengthening

1. Emergency Response

A. Request for Assistance/Offer of Assistance and Registration of EMTs

B. Mobilisation of Emergency Medical Teams (EMTs)

C. On-Site Operations of Emergency Medical Teams (EMTs)

D. (Rapid) Health Needs Assessment

E. Direction and Coordination of Assistance

F. Periodic Reporting/Daily Report

G. Demobilisation of Assistance

H. Reporting (Handover and Exit Phase)

I. Review of Operations, Experiences and Lessons Learnt (Post-deactivation Phase)

1. Review
2. Annexexes

(3) **Activity 3-3 Prepare database of emergency medical teams of AMS**

The form was developed, finalized and approved at the 4th PWG1 meeting. For the form, please refer to Attachment 16. This form was circulated among AMS to collect the information and the data regarding the EMTs and its experiences. By December 2018, all 10 AMSs submitted this form to the Project. The information is expected to be renewed at least once a year, and in the near future, to be submitted to AHA Center.

(4) **Activity 3-4 Draft framework of health needs assessment in emergencies with the project working group**

The draft Health Needs Assessment Framework including the purpose, roles, and methodologies was discussed in the 1st PWG1 (20 January 2017) and the 2nd PWG1 (4 May 2017) meeting. It was clarified that the primary role of EMTs was to provide the medical services to save people's lives; therefore, the assessment by EMTs should be supplemental and should not be their primary task; the main users of the information from the Health Needs Assessment (HNA) would be local authorities or other relevant parties for further action and support. The first draft HNA Form and Guidance Notes for "Key Informant Interview" and "Observation" were discussed in the 2nd PWG1 Meeting.

Based on the agreed draft HNA Framework, a revised draft HNA Form (version 1) was tested by the AMS teams in the 1st RCD in 17-18 July 2017. The feedback on the draft HNA Form was discussed in the subsequent 3rd PWG1 meeting, especially on the role of ASEAN-EMTs in HNA and the contents of the form. It was reiterated that the ASEAN-EMT role was primarily the delivery of medical services; hence, the conduct of health needs assessment was supportive and if there was capacity to address pressing needs assessment gaps.

A revised HNA Form (version 2), a draft Summary Reporting Form (version 0) and Guidance Note (version 1) were tested in the 2nd RCD. In the subsequent 5th PWG1 Meeting, the Project Team emphasized that the HNA Form could be used as "A Guide" for EMTs when conducting HNA upon request from a local authority, and necessary action or further assessment would be taken by other relevant parties. Some of the AMS pointed out that the current HNA Form was too detailed for EMTs to use; however, the Meeting agreed to maintaining most of the questions in the HNA Form. The agreed revisions include; consolidating the form that is used for the assessment of a village or a shelter as the areas of inquiry are similar; consolidating the question on food items; clarifying the terms, e.g. health facilities, and simplifying the Summary Report.

The revised HNA Form (version 2-1), Summary Report (version1) was tested and validated again in the 3rd RCD in December 2018. These forms were finalized at the subsequent official meeting. For HNA Form ver.2-1, Summary Report ver.1 and Guidance Note, please refer to Attachment 17.

1.3.5 Output 4: Academic networking on disaster health management in AMS is enhanced.

(1) Activity 4-1 Present outcomes of the Project activities at academic conferences such as JADM, APCDM and WADEM

a. The Project Team presented the outlines of the Project in the 13th Asia-Pacific Conference on Disaster Medicine (APCDM) held in November 2016 in Bangkok, Thailand.

In this session, the delegates of the Project Team explained the background of the project including the summary of the previous basic survey on the Current Situation of Disaster/Emergency Medicine System in the ASEAN Region.

Subsequently, the delegates shared the scope and main five objectives of the project to promote actual collaboration of international emergency medical teams (I-EMTs) in case of large natural disasters within the region.

Presentations at APCDM are presented in Attachment 18.

Table 11: Summary of APCDM, Bangkok

Session Title	Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project)
Date	7 November 2016
Participants	- Members of APCDM (about 50 participants) - Twenty (20) ARCH Project team
Venue	Radisson Blu Plaza
Chairperson	Dr. Wiwat Seetamanotch, Executive Advisor to Board of National Institute for Emergency Medicine(NIEM), Thailand
Speakers	JICA ARCH Project 1) Dr. Wiwat Seetamanotch, NIEM, Thailand 2) Dr. Phumin Silapunt, Deputy Secretary General, NlEM, Thailand 3) Dr. Yasushi Nakajima, ARCH Project Team, Japan
Session Overview	1) Introduction: Background of ARCH Project (Dr. Yasushi Nakajima) （15 min.） - Summary of Basic Survey (the Survey on the Current Situation of Disaster/Emergency Medicine System in the ASEAN Region) - Project formulation 2) Presentation: Objectives of ARCH project (Dr. Wiwat Seetamanotch) (15min.) - Steps to ASEAN collaboration mechanism - Scope of the project - Activities of the project 3) Presentation: Implementation Structure (Dr. Phumin Silapunt) (15 min.) - Regional Coordinating Committee - ToR of Project Working Group 1/2 4) Q&A (15 min.)

Feedback, Questions from Participants	The audience was very keen to learn how Thailand and Japan can contribute to strengthening ASEAN disaster health management system. Q&A - How to endorse the outputs of the project though the AMS? →Initially making consensus on the mechanism of international/ Regional disaster response system among the ASM, then submitting them to ASEC as official tools

b. The Project Team presented the outlines of the Project in The Second Workshop of Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) held in December 2016 in Seoul, Korea.

In this session, the delegate shared with the audience on the concept of Disaster Health Management in ASEAN Post 2015 Health Development Agenda for 2016 to 2020 and how ASEAN and Japan collaborate in making the vision come to fruition throughout the Project.

Presentations at REMPAN are presented in Attachment 19.

Table 12: Summary of REMPAN, Korea

Session Title	ARCH project on strengthening regional preparedness to health emergencies in ASEAN member state
Date	6-8 December 2016
Participants	- Twenty four (24) participants from sixteen (16) countries
Venue	Royal Hotel Seoul
Chairperson	Dr. Z. Carr, WHO, Geneva, Switzerland and Dr. Young Woo Jin, NREMC-KIRAMS, Seoul, Korea
Speakers	JICA ARCH Project 1) Ms. Keiko Nagai
Session Overview	Presentation: Overview of ARCH project（15 min.） - Background of ARCH Project - Scope of ARCH Project - Expected Outputs - Progress of ARCH Project

c. The Project Team presented the overview and progress of the Project in the 22nd Annual Meeting of Japanese Association for Disaster Medicine (JADM) in February 2017.

In this session, the delegates shared the results of the Basic survey on disaster medicine and emergency medical services in ASEAN and explained the recent AMS disaster health management drill in January 2017, including the implementation structure and expecting outcomes.

Subsequently, the delegates shared the drill results and had fruitful discussion on the synergies with relevant JDR activates to promote education and training standardization for promoting individual county's capacity of disaster response both sending and receiving I-EMT.

Presentations at JADM are presented in Attachment 20.

Table 13: Summary of 22nd JADM

Session Title	JICA contribution to developments on international disaster medicine
Date	14 February 2017
Participants	- Members of JADM (about 100 participants) - Five (5) Thai C/Ps observed the session
Venue	Nagoya Congress Center
Chairperson	Sachiko Misumi, JDR Secretary-General
Speakers	1) Prof. Yasuhiro Otomo, Department of Acute Critical Care and Disaster Medicine, Tokyo Medical and Dental University, Japan 2) Dr. Tatsuhiko Kubo, University of Occupational and Environmental Health, Japan 3) Dr. Yasushi Nakajima, JICA ARCH Project team 4) Dr. Phumin Silapunt, NIEM, Thailand
Session Overview	1) Introduction (Ms. Misumi) （5 min.) - Overview of this session 2) Presentation: International trends on Emergency Medical Teams (Prof. Otomo) (10 min.) - Introduction on the WHO EMT Initiative - Progressions to JDR Medical Team EMT Type 2 3) Presentation: The WHO EMT Minimum Data Set (MDS) (Dr. Kubo) (10 min.) - What is the MDS? - How to facilitate data processing? - Lesson learned from Japan 4) Presentation: Overview and Current situation of ARCH project (Dr. Nakajima) (5 min.) - Background of the project - Scope of the project - AMS disaster health management drill concepts, objectives and the recent results 5) Presentation: Future activities and vision of ARCH project (Dr. Phumin) (10 min.) - Activities of the project - Steps to ASEAN collaboration mechanism - Future vision of ASEAN Disaster Medical system 6) Q&A (10 min.)
Feedback, Questions from Participants	The audience was very keen to learn how the project collaborate with relevant JDR activates. Q&A - Will the project formulate the ASEAN standards for EMT? →No original standard, some additional tools following with WHO EMT Initiative (Dr. Phumin) - How to join the future drills? →The drills are being considered as ones of JDR trainings, all JDR members have opportunities to join.

d. The Project Team presented the project outline and progress at the Congress of World Association for Disaster and Emergency Medicine (WADEM) to be held in April 2017.

In this session, the delegate shared with participants the highlights of the previous basic survey, which should be linked with the Project goal contributing the concept "ONE ASEAN, ONE RESPONSE".

Subsequently the delegate clarified the project scope and objectives to strengthen regional coordination mechanism and each ASEAN Member State's disaster health management capacity.

Presentations at WADEM are presented in Attachment 21.

Table 14: Summary of 20th WADEM, Canada

Session Title	Health Systems
Date	24-28 April 2017
Participants	- Members of WADEM (about 50 participants) - Three (3) Thai C/Ps observed the session
Venue	Metropolitan Centre
Chairperson	Mr. Knox Andress and Ms. Elaine Daily
Speakers	JICA ARCH Project 1) Dr. Phumin Silapunt, Dr. Yasushi Nakajima
Session Overview	1) Presentation: Overview of the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) (Dr. Phumin) (8min.) - The Survey on the Current Situation of Disaster/Emergency Medicine System in the ASEAN Region - Scope and Objectives of the project - Implementation Structure 2) Q&A (5 min.)
Feedback, Questions from Participants	The audience was very keen to learn the relationship among the present international mechanism. Q&A - Funding Agency? →Mainly form JICA and NIEM, Thailand. - Who are main targets of Minimum Requirement? →Both individual EMT member and EMT - Who has the responsibility for team accreditation? Does ASEAN take it independently? →Following WHO EMT Initiative. - How to prove team consistency? → Within the Regional Collaboration Drill aligning with ASEAN context.

e. The Project Team participated in the 23rd annual meeting of Japanese Association for Disaster Medicine (JADM) and held the session of "ASEAN- Japan collaboration for future vision of ASEAN Disaster Medical System."

In this session, the delegates of the Project Team shared the experiences of success and challenges mainly through the regional collaboration drills, which have been conducted for better cooperation/coordination on the disaster health management among ASEAN Member States.

Subsequently, the delegates explained about ASEAN Leaders' Declaration on Disaster Health Management, which has been adopted in the 31st ASEAN Summit in Manila, Philippines in November 2017. The delegates shared with the audience how ASEAN and Japan collaborate in making the vision come to fruition.

Presentations at JADM are presented in Attachment 22.

Table 15: Summary of JADM

Session Title	ASEAN-Japan collaboration for future vision of ASEAN Disaster Medical System
Date	1 February 2018
Participants	- Members of JADM (about 100 participants) - Ten (10) Thai C/Ps observed the session as part of the C/P training course (Pl. see (4) Activity 5-5)
Venue	Pacifico Yokohama
Chairperson	Dr. Tatsuro Kai, Chair of Japanese Advisory Committee ARCH Project
Speakers	JICA ARCH Project 1) Dr. Yasushi Nakajima 2) Dr. Prasit Wuthisuthimethawee 3) Dr. Phumin Silapunt
Session Overview	3) Introduction (Dr. Nakajima) （5 min.) - Overview of this session - Background of ARCH Project - Introduction of Thai speakers 4) Presentation: Wrap up ASEAN Member States (AMS) disaster health management drill (Dr. Prasit) (8min.) AMS disaster health management drill concepts and objectives - Outcomes and what we learned from previous drills - Next coming drill concepts and expected outcomes 5) Presentation: ASEAN Disaster Medical System; How does vision become reality? (Dr. Phumin) (8 min.) - Future vision of ASEAN Disaster Medical system - ASEAN Leaders' Declaration on Disaster Health Management - ASEAN -Japan collaboration; how can we walk together? 6) Q&A (5 min.) 7) Conclusion & Suggestion from Japanese Advisory Committee, ARCH Project (Dr. Kai) (4 min.)
Feedback, Questions from Participants	The audience was very keen to learn how Japan can contribute to strengthening ASEAN disaster medical system. Q&A

	- Are there any NGOs involved in ARCH Project? (Dr. Ukai) →No NGOs involved (Dr. Nakajima) - If required, we are willing to create a relevant and customized JDR training programme for AMS training of ARCH. (Dr. Tomioka, JDR)

f. APCDM October 2018

The Project Team participated in the 14th Asia Pacific Conference on Disaster Medicine (APCDM) in Kobe and held two sessions of "Experience on domestic capacity building with the ARCH project" and "How to meet the WHO Standards and ASEAN current situations?", and one joint session with WHO.

In the first session, Thai Project team introduced the Project purpose and activities for achievement such as regional collaboration drills. And as a host country of the drill, delegates from Viet Nam and Philippines shared their challenges, responsibilities and benefits.

In the second session, the delegates of the Project team shared the issues to be addressed to fill a gap between WHO EMT standards. They explained that all AMS members have reached a common understanding on the current challenges through the ARCH Project activities or their own experiences of the actual dispatch to the affected country. The delegates shared with the audiences how ASEAN meet the WHO EMT standards while considering in the context of the actual situation in ASEAN. (Presentations are included in the Attachment 23.)

Table 16: Summary of APCDM

Session Title	a. Experience on domestic capacity building with the ARCH project b. How to meet the WHO Standards and ASEAN current situations?
Date	17 October, 2018
Participants	- Speakers: Eight (8) AMS C/Ps and two (2) Japanese Advisory Committee ARCH Project members - Observers: 36 AMS C/Ps and Experts of disaster medicine from Asia-Pacific countries (about 100 participants)
Venue	Seaside Hotel Maiko Villa Kobe, Hyogo Prefecture, Japan
Chairperson	a. Dr. Yuichiro Koido, Member of Japanese Advisory Committee ARCH Project b. Dr. Tatsuro Kai, Chair of Japanese Advisory Committee ARCH Project
Speakers	JICA ARCH Project - Dr.Phumin Silapunt - Alisa Yanasan - Dr. Lam Nhu Nguyen - Ms. Janice Palad Feliciano - Dr. Soichiro Kai - Dr. Maria Suleiman - Dr. Arifin Sudirman Maraudin

	- Dr. Kanin Keeratipongpaiboon - Mr. Yusuke Takada - Dr. Ferdinal Moreno Fernando
Session Overview	a. Experience on domestic capacity building with the ARCH project a-1. The Innovation for Regional Collaboration on Disaster Heath Management (Dr. Silapint, 10 min.) a-2. Thai Capacity Building through ARCH project (Dr. Yanasan, 10min.) a-3. Experience and lessons learned from ASEAN second regional collaboration drill in disaster health management (Dr. Nguyen, 10 min.) a-4. The Final Regional Collaboration Drill for the ASEAN Regional Capacity on Disaster Health Management Project in the Philippines (Ms. Feliciano, 10 min.) Q&A (5 min.) b. How to meet the WHO Standards and ASEAN current situations? Keynote Lecture: Quality Assuarance and Capacity Building of Emergency Medical Teams (EMTs): Recent trends and future challenges in ASEAN region (Dr. Soichiro Kai, 20min.) b-1. The Malaysian Field Hospital, Ukhiya, Coxs Bazar, Bangladesh (Dr. Suleiman, 10 min.) b-2. International Development of Indonesian Medical Team (Dr. Maraudin, 10 min.) b-3. Developing of Health Needs Assessment tool in ASEAN and “Beyond the Trauma care”. (Dr. Keeratipongpaiboon and Me. Takada, 15 min.) b-4. Addressing Potential Challenges or Gaps in ASEAN in Meeting the WHO WMT Minimum Standards through the ARCH Project (Dr. Fernando, 10 min.) Q&A (5 min.)
Feedback, Questions from Participants	The audience had high expectations for further development of ARCH Project activities. Q&A - What is the benefit of being a host of regional collaboration drill? →Develop the fundamental strength of the national capacity for disaster health.

1.3.6 Output 5: Capacity Development Activities for each AMS are implemented.

(1) **Activity 5-1 Prepare training plan, curriculum and materials on disaster health management and emergency medical system based on needs survey with the project working group**

Activity 5-2 Conduct trainings on Disaster health management and emergency medical service for AMS

a. The first AMS training

Overall goal for AMS training is to strengthen the national capacity of AMS through human resources development, improvement of operational capacity of emergency medical teams and the establishment of national disaster medical system. In the first PWG 2 meeting, the members discussed on overall objectives of the series of AMS training during the Project, and agreed that the first AMS training would mainly focus on strengthening professional competence of individuals comprising emergency medical teams.

The first AMS training was held in May 2017. As this is the first training under ARCH and the Project covers ten countries with different training systems, more attention was paid to make sure that the participants could understand what types of training programme and advanced efforts in capacity development in the field of disaster health management are made by each AMS.

Overview of the first AMS training is shown in the table below.

Table 17: Summary of the 1st AMS Training

Title	The First AMS Training
Theme	Human Resources Development
Objectives	1. To understand the current training system for human resource development in disaster health management and to identify the priority areas in each country (both pre-service training and continuous professional development (CPD) 2. To identify the issues and challenges of the current training system in each country. 3. To share the best practices in capacity development and related training courses conducted by other countries and stakeholders (e.g. development of curriculum, certification system and skills standard for medical personnel) 4. To identify the priority areas in each country for planning effective human resource development program to strengthen capacity of AMS on disaster health management. 5. To understand how to set up the training system on disaster health management system
Dates	22 – 26 May 2017
Participants	Three (3) representatives from each AMS - The person in charge of policy related to human resource development in disaster health management or emergency medical system - The person in charge of developing curriculum or trainers of disaster health management or emergency medical system at an educational institution
Resource Persons	Invited from Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam and Japan

Venue	The Empress Hotel & Faculty of Medicine, Chiang Mai University, Chiang Mai Thailand
Activities/ Topics	DAY 1 Current system human resource development in disaster health management (both pre-service and continuing professional development; CPD) / Mass Casualty Incident (MCI) management DAY 2 - Best practices in Pre-service - Best practices in CPD DAY 3 Introduction of related training course and training package DAY 4 Site Visit: Faculty of Medicine, Chiang Mai University DAY 5 - Workshop/Discussions: What is "standardized" training /knowledge in disaster healt management for each AMS/ASEAN region? - Course evaluation and way forward for the 2nd AMS Training
Outputs/Feedback	The majority of participants evaluated the quality of the programme positively particularly in the following aspects: ■ Good sharing experiences among AMS ■ Practical programmes - learned how to conduct DHM courses that will benefit staffs in each AMS rather than just sharing each country educational program on DHM. - especially development of curriculum, certification system and skill standard for medical personnel **Suggestions for the 2nd AMS Training** ■ Topics/Contents - Modified/simplified DMAT or MERT Training - Specific instructions on how to develop EMT and train them - Useful tools, skills or knowledge needed for EMT responding to a disaster in other country - To focus on the most feasible goal for every AMS that is the development of at least one Type 1 mobile team or Type 1 fixed team that could respond both in the local setting and in international deployment. - To start database of all EMT team members for fast acceptance of team deployment - To include other organizations who also developing EMT for deployment for us to form only one standard and better networking on team deployment - Logistic deployment planning - Cooperation/ coordination with multiple sectors - To develop standardized Disaster Training Modules for ASEAN for undergraduate, master and doctorate training program ■ Scope: need to set objective/scope of the deployment (e.g. acute or delayed phase?) ■ Participants - Medical Team - EMT team leader - Same participants as the 1st AMS Training for the continuity in action - Person who started development of EMT in order for them to be guided properly and to learn from other AMS - More doctor and nurses, who are directly working in disaster health management

b. The Second AMS training

The second AMS training was planned in the second PWG 2 meeting in July 2017 based on the overall training plan, which was agreed in the first PWG 2, and the feedback of the fist AMS training. Since there is no standard training module for disaster health management in ASEAN, the members discussed on the knowledge/skills AMS must have for developing EMT.

The second AMS training was held in November 2017. The theme was capacity development of emergency medical team (EMT) with a special focus on "on-site team management". Based on the feedback of the first AMS training, consideration was given to the resources available and the topics/activities selected for training program to be effective for team management. Examples include:

-use of modified or simplified version of existing training module (e.g. DMAT) due to lack of standard training module in ASEAN

-paying special attention to practices, which are required for on-site team management in the local setting (e.g. logistics, radio communication)

-specifying the exact role of each participant in EMT in selection criteria (e.g. 1 team leader, 1 team member, 1 actual deployment person)

Overview of the second AMS training is shown in the table below.

Table 18: Summary of the 2nd AMS Training

Title	The Second AMS Training
Theme	Capacity Development of Emergency Medical Team (EMT) – On-site Team Management-
Objectives	The course focused on **national** disaster response. Specific objectives are (1) To understand what EMT is expected to do when deployed to disaster area (2) To get the competency to build an effective domain for right directions of disaster management, especially for team management (3) To share the concept of EMT Response (4) To evaluate this training course as a first step for standardizing ASEAN EMT Training
Dates	5 – 8 November 2017
Participants	Three (3) representatives from each AMS NIEM staff, relevant officials and JICA staff
Resource Persons	Specialists in disaster health management in AMS AHA Centre
Venue	Grande Centre Point Ploenchit Hotel, Bangkok, Thailand
Activities/ Topics	1. Country Report on Current Situation of Emergency Response System 2. On-site Team Management (lectures/exercise/simulation) - Definition/mission/objective of EMT - Role of medical team - Preparation of medical team - Activation and response - Supplies and logistic preparation, - Psychological preparation, PFA - CSCATTT Concept - Communication tools - Field triage - Transportation/refer/coordination

	satellite - Documentary management skill - Security and safety	- Simulation (from activation to withdrawal) - Post incident evaluation
Lessons learned	1) There is a wide gap among AMS in the level of knowledge about concepts and practices, which require different capacity building intervention (special attention is needed for countries with less experiences such as CLMV). In order to establish standard training package in ASEAN, further consideration will be needed to identify what are the core knowledge/skills in disaster health management in the region. 2) Many participants don't fully understand WHO standard, which is the global standard for EMT. The Project needs to ensure that all AMS familiarize themselves with WHO standard, which would enable them to think how ASEAN can bring together to achieve the standard.	

c. The Third AMS training

In the third PWG 2 meeting held in November 2017, the members discussed and agreed on the theme and topics of the third AMS training, which were finalized in the fourth PWG 2 meeting in March 2018 by reflecting the lessons learned from the 2nd Regional Collaboration Drill (RCD) in Viet Nam. Training needs identified from the 2nd RCD includes health needs assessment and PHEOC training, which focuses on the role/responsibility of EOC. Summary of this training is shown in the table below.

Table 19: Summary of the 3rd AMS Training

Title	The Third AMS Training
Theme	International Emergency Medical Team (I-EMT)
Objectives	1.To learn the process and efforts for deploying International- EMT from experienced countries. 2.To understand core/common requirements of I-EMTs during deployment. 3.To understand minimum Pre-Deployment and Post- Deployment requirements to ensure the requirements during deployment are met. 4.To uunderstand the role of receiving country/how receiving country coordinates with I-EMTs.
Dates	28 – 31 May 2018
Participants	Four (4)* representatives from each AMS consist of current duties - 1 team leader of EMT - 3 team members At least 1 or 2 persons: same participants of the 3rd Regional Collaboration Drill (RCD) in Philippines in December 2018 * Preferably, there should be at least 1 person who is responsible for deployment or who is expected to be a national instructor for capacity development of EMT in the future.
Resource Persons	■ Mainly selected from the countries, which have experiences of deploying/receiving I-EMT including Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, Japan ■ ASEC, AHA Centre
Venue	Pullman Hotel, Bangkok, Thailand
Activities/ Topics	DAY 1 "Pre-requisite for deploying I-EMT" 1) WHO standard (EMT classification, efforts/ lessons learned in the process of obtaining EMT certificate (Type I), group discussion on challenges in meeting WHO standard

	2) Presentation: recent experiences of receiving I-EMT & challenges, 3) Presentation: recent experiences of deploying I-EMT & challenges DAY 2 "Introduction "Roles and Responsibility of EMTCC" 1) EMTCC 2) ASEAN EOC Network establishment 3) Health Needs Assessment DAY 3 "Mission Management of I-EMT" 1) Personnel preparation of EMT (Activation → Deployment) 2) Logistic requirement required for Type 1 EMT 3) TTX: Preparedness -> Activation -> Operations-> Transition Deactivation 4) Safety & security, command & control 5) Filling the forms DAY 4 "Adaptation of WHO standard to ASEAN Context" 1) Group Discussion on Addressing ASEAN Common Challenges in Meeting WHO EMT Initiative Standards' 2) Comments on the recommendations of each group 3) Course evaluation 4) Wrap-up and Way forward
Outputs/Feedback	1) The course participants were able to familiarize themselves with WHO standard by reflecting the lessons learned from the 2nd AMS training. Through group discussions, they exchanged views on aspects of WHO EMT Initiative minimum standards that are considered difficult to fulfill and proposed actions that could be collectively addressed by ASEAN. 2) As receiving countries, some documents and forms may not be required from incoming/deploying I-EMT. Receiving countries are perceived to be more concerned with the outcomes of services delivered by deployed I-EMT. 3) As sending countries, almost all documents and forms are considered essential and need to be fulfilled to illustrate their capacity, as well as recognizing that forms are to be adapted according to the laws, regulations, systems and procedures of the receiving country. 4) Suggested actions to collectively address selected standards that are potentially very challenging to meet; - Customs compliance on controlled substances and dangerous goods - Water management (general and clinical waste) - Team safety and security - Indemnity and malpractice insurance

d. The Fourth AMS training

Though the past training courses, which focused mainly on emergency medical teams (EMTs), issues and challenges in receiving I-EMTs were discussed and training needs were identified on skills and knowledge that a receiving country will need in order to coordinate with I-EMTs. In the fourth PWG 2 meeting held in March 2018, the members agreed that the fourth AMS training would focus on emergency medical team coordination cell (EMTCC).

The ARCH Project, in partnership with the World Health Organization (WHO), jointly implemented the EMTCC training course. This was the first EMTCC course run jointly by the WHO for both the Western Pacific (WPRO) and South-East Asia (SEARO) regions. The planning, coordination and design for the event

were conducted from WHO headquarters in Geneva, regional offices including WPRO/SEARO, Thailand office, JDR/JICA headquarters in Tokyo and the ARCH Project Team including the Thai MOPH and NIEM.

The unique aspect of this training was that the course was conducted by modifying the WHO standard EMTCC training package to fit into the ASEAN context. Specific sessions were provided for ASEAN SASOP and the tools developed by the ARCH Project.

Table 20: Summary of the 4th AMS Training

Title	The Fourth AMS Training
Theme	Emergency Medical Team Coordination Cell (EMTCC)
Objectives	1. To develop a cadre of operationally-ready emergency medical team (EMT) coordination cell personnel in the ASEAN region 2. To sstreamline coordination mechanisms linking national, regional and international EMT responders 3. To compliment the EMT Coordination Handbook, and other relevant guidelines, by focusing on skills, practical challenges and likely response scenarios for ASEAN Member States
Dates	17 – 22 February 2019
Participants	32 participants ■ Two (2) Representatives from each AMS - national focal point for developing national EMTs and/or - national focal point for national dispatch/coordination of national response medical teams, for example within the national Health EOC and in the position to manage a national EMT Coordination Cell for arriving international teams when required ■ ARCH Project (Thailand & Japan) ■ WHO SEARO/AFRO
Resource Persons	■ WHO (HQ, SEARO/WPRO, Thailand) ■ Consultants & Technical experts (JDR/JICA) ■ ASEAN Secretariat, AHA Centre ■ ARCH Project (Thailand and Japan)
Venue	The Sukosol Hotel Bangkok, Thailand
Activities/ Topics	DAY 1 1) Introductions 2) Review of Pre-learning 3) Operational Context of the EMTCC 4) Humanitarian Assistant Procedure (SASOP) and EMTCC Coordination in ASEAN DAY 2 1) Chaos at the EMT Arrivals Lounge 2) Overview of the EMTCC Lifecycle 3) Activation & Set-up 4) Interactive Mentoring Exercise using Earthquake Case Study (Mobilization & Registration of teams, Task Allocation) DAY 3 1) Interactive Mentoring Exercise (cont'd) (Civil-Military Coordination, Managing Referrals, Dealing with Complaints, Transition, De-activation) 2) Skills Stations: Facilitation Skills for EMTCC Personnel DAY 4 Skills Stations (cont'd): Reception & Departure Procedures, Information Management, Linking with Other Humanitarian Coordination Structures, Operations Management DAY 5 Field Simulation Exercise (SIMEX)

	DAY 5 1) SIMEX (cont'd) 2) SIMEX Debrief 3) Learning Review/Action Planning/Knowledge Test/Participant Feedback
Outputs/Feedback	1) Very positive feedback from participants: Excellent 66%, Good 34% 2) Participants could understand both global (WHO) and regional initiatives, which align with each other 3) Participants could understand coordination in emergency context according to EMTCC concept From the regional viewpoint, 4) The course increased the pool of trained health workers on the WHO EMTCC methodology in the region. 5) The increase of pool of EMTCC-trained health workers in the ASEAN region can contribute towards: - strengthening of human resources pool in the respective Ministry of Health of AMS who could facilitate the setting up of the EMTCC methodology as part of their national health response plan and operational mechanism - strengthening the collective ASEAN operationalization of the One ASEAN, One Response - enabling AMS in implementing the ALD on DHM through the Plan of Action (2019-2025) in which one of the national targets is the establishment of EMTCC - linking EMTCC initiatives with linked the ASEAN ERAT which is being further developed through the identification of specific capacities or specialties. - adding value in making available mutual technical support and knowledge on EMTCC matters. Challenges/Lessons - The gap was identified in emergency/disaster health knowledge and management among AMS - It is necessary to support 1) TOT for each AMS on EMT coordination cell and 2) further training for specific topics (e.g. impact assessment, information management) through ARCH drill

Special Notes: Support for the EMTCC operation in Mozambique

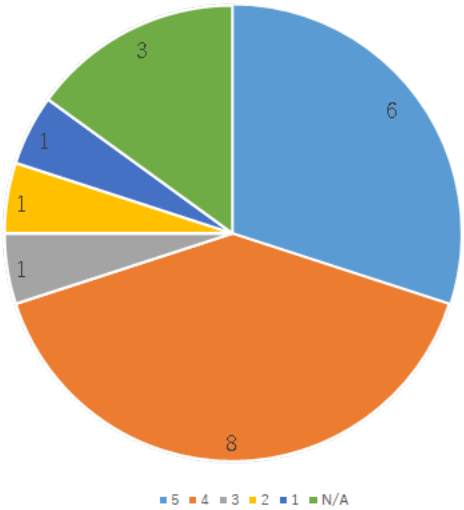
Cyclone Idai hit Mozambique in March 2019 and two of JDR experts, Dr.Kubo and Mr.Toyokuni were dispatched to support EMTCC operation. They contributed to establishing EMTCC, led by the Ministry of Health supported by WHO. Dr.Kubo also facilitated EMT Daily MDS Reporting, which was highly appreciated by the Ministry of Health, WHO staff, and dispatched I-EMTs.

Both experts participated in EMTCC training, the fourth AMS training, as a faculty member and a trainee. They made a significant contribution in the real disaster response just one month after the training, which could be the biggest outcome of the training. It should also be noted that constructing a relationship of mutual trust obtained through the training with WHO AFRO staff, who worked as an EMTCC coordinator in Mozambique, brought about close collaboration between the JDR experts and WHO staff in EMTCC operation.

(2) **Activity 5-3 Conduct monitoring survey and evaluation on capacity development on disaster health management in each AMS**

In October 2018, taking the opportunity of the Study Visit to Japan, monitoring survey was conducted among the participants of the said visit by the questionnaires. The main components of the survey were, a. Evaluation of progress and activities, b. question about your country's situation, c. request for the project. This section highlights the summary results of the evaluation of the progress and activities of the Project. The answers are given in 5-level scale, to show the level of achievement. (Please refer to the full survey results in Attachment 24)

(1) Project goal “Regional coordination on disaster health management is strengthened in ASEAN”



The Philippines scored 4 by explaining that with the development of the standard operating procedures on disaster health management and the several trainings conducted under the ARCH Project, coordination among the ASEAN Member States (AMS) was improved with a guideline that will be followed by the AMS. The camaraderie among the key officials and representatives of the ASEAN Member States was strengthened through the several drills they participated. A lot became friends making coordination easy. Further improvement can be achieved through sustaining interventions such as the conduct of regular drills and the conduct of AMS training and other capability development activities on different technical and operational areas. There is also a need to ensure implementation of the agreed collaboration platforms.

Vietnam scored 5 for the following reasons.

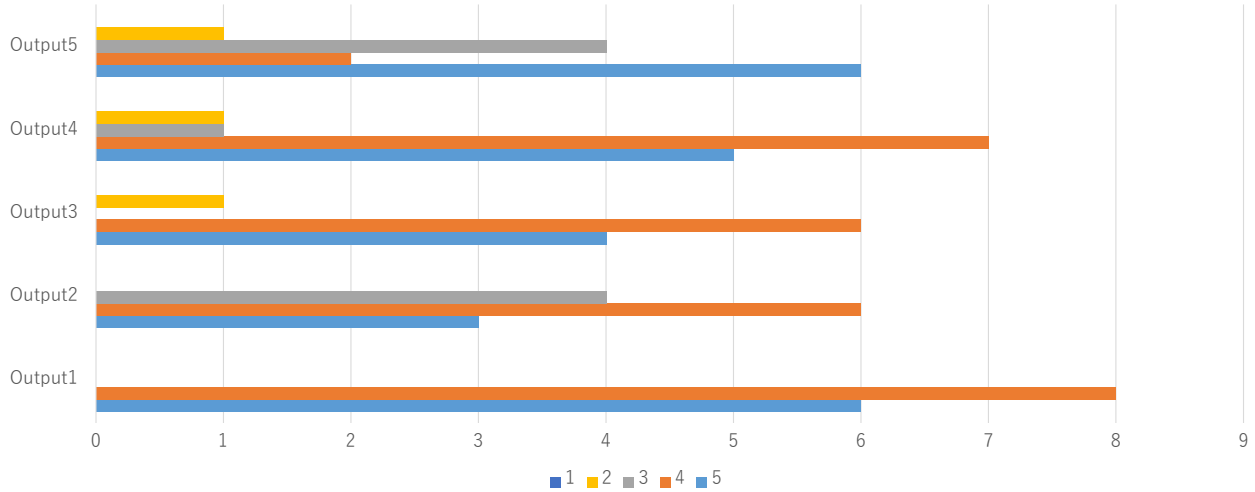
1.Understand better the health sectors among ASEAM countries and could be able to help each other.

2.Develop the SOP for ASEAN countries which could be used for the situation.

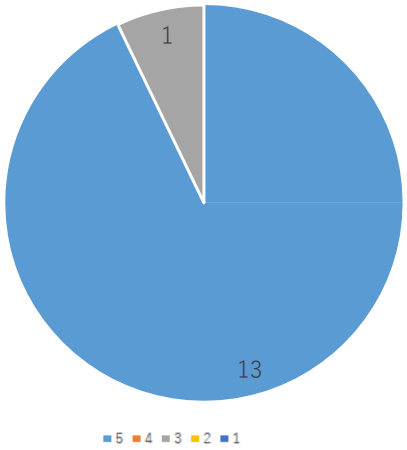
3.Improve the quality of EMT to respond to disaster management locally and standard the I-EMT for ASEAN countries.

4.Improve the ability to offer the assistance to health disaster management.

(2) Five Outputs



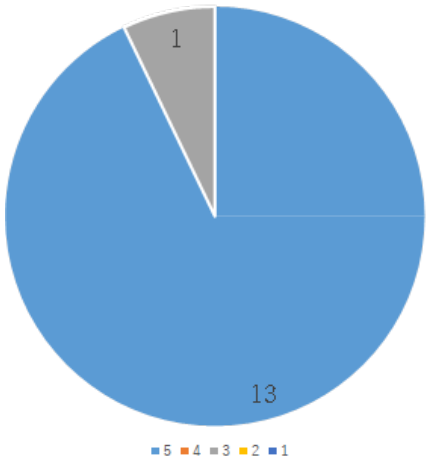
(3) Was RCC meeting functional as Regional coordination platform?



(4) Evaluation on the Project's main activities

Output 1: Coordination platform

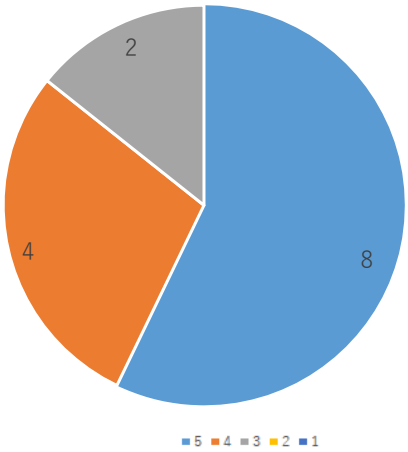
Did Regional Coordination meeting encourage active discussion and helped adjust AMSs opinions?



One of the AMS commented that the discussions during RCC meetings works under the spirit of camaraderie and solidarity, ensuring that all the opinions of the AMS are taken into consideration, and are given importance. Each representative of the AMS are open to the comments, insights and opinions of the other AMS. The agreements and higher level of consultations and decisions from PWGs meetings are attained through the RCC meetings.

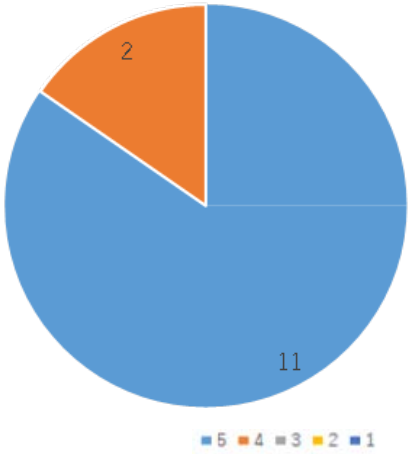
Output 2: Regional Collaboration Drill

Did your country's response capability on disaster improve by participating the regional collaboration drill?

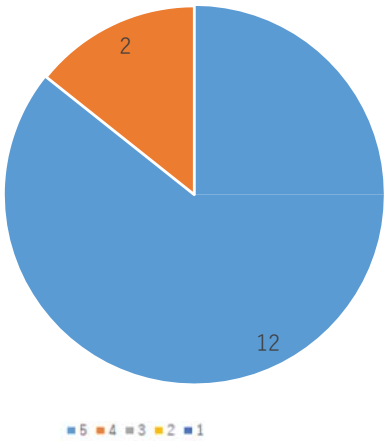


Both the Philippines and Vietnam which hosted the drills gave positive feedback, while some AMS commented that there was no dispatch of the EMTs to test the collaboration in real disaster response.

Did the drill help you to understand SOP?

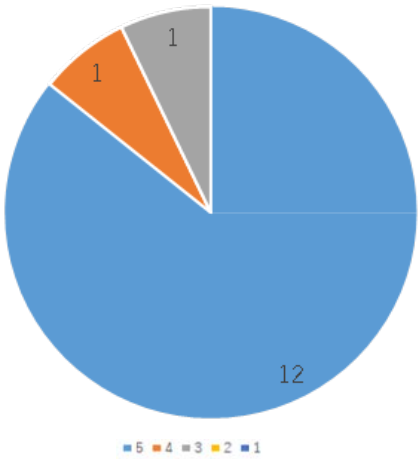


Did the drill enable you to collaborate with other AMS?

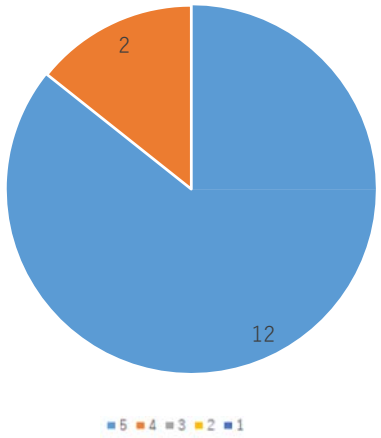


Output 5: Capacity Development

Were AMS trainings beneficial for your country's capacity building on disaster health management?



Did AMS trainings strengthened ASEAN's capacity building on disaster health management?



Overall, most of the AMS gave positive feedback on the AMS training courses. One AMS commented that these trainings were relevant because topics were based on the best experiences and lessons learned from the previous disasters.

(3) **Capacity Development/ Needs Assessment for the Extension Phase**

It was decided to conduct a study on systems and needs for capacity development on DHM in AMS taking into account the realistic consideration of ASEAN Leaders' Declaration on Disaster Health Management (ALDDHM) adopted during the 31st ASEAN Summit in November 2017 and its plan of action (POA). Main objectives and overall plan are defined as follows.

1) Objectives of the Study

1. To identify possible educational/training institutes which are capable to conduct domestic training programs on DHM in each AMS
2. To identify training/competency needs of personnel in DHM and needs for external supports in case that the above institutes will organize domestic training programs on DHM
3. To specify AMS educational/training institutes which will be members of ASEAN academic/training centers network on DHM whose purpose is to strengthen regional and domestic capacities on DHM in collaboration with ASEAN reginal disaster training center which is considered to be established in the POA on DHM

2) Survey Items

1. Medical education system, especially focusing on EMS
2. Information on educational institutes in above system, especially on EMS (subjects, curriculum,

lectures)

3. Situation for education or training on DHM (pre-service education and in-service training)
4. Needs for education/ training on DHM
5. Candidates of educational institutes which are capable to conduct domestic training programs on DHM
6. Needs for external supports
7. Others

3) Process of Study

1. To draft a questionnaire for AMS based on the discussion with both Japanese and Thai task force members and to finalize the questionnaire at PWG2 meeting in July 7, 2019. To decide respondent(s) in cooperation with AMS focal points during or after the meeting.
2. To send the questionnaire to AMS (August, 2019)
3. To collect and analyze the questionnaire (October, 2019)
4. To share the results and to plan the field study at PWG 2 (November, 2019)
5. To conduct a field study in selected AMS (in the first quarter of 2020). Members will be selected from PWG 2 members.
6. To summarize the study results (in the second quarter of 2020)
7. To identify academic/training institute(s) in each AMS to be invited to APCDM (October, 2020)

In the above process, the consultant team took responsibility for preparing and finalizing the questionnaire based on the discussion with PWG 2 members of AMS in July 2019. (For the questionnaire, please refer to the Attachment 25)

(4) **Activity 5-4 Conduct a study tour in Japan for AMS**

The Project conducted the study visit programme in Japan in order to provide AMS participants opportunities to simulate disaster health management from their own perspective and to think about the challenges/future directions of regional collaboration in disaster health management. This programme was conducted under close collaboration with JICA Kansai and related organizations especially in Kansai area.

Table 21: Study visit in Japan

Title	Study Visit in Japan
Objectives	(1) To understand the system of disaster health management in Japan (2) To identify the challenges and to consider the measures for further strengthening the disaster health management and regional collaboration in ASEAN (3) To establish a network of medical professionals involved in disaster health management in Japan and ASEAN (4) To review the ARCH Project activities and discuss future directions of the Project
Dates	16 - 19 October 2018
Participants	Three (3) participants from each AMS *at least 2 persons: members of the Project Working Group (PWG) 1 and of PWG ASEC and other relevant institutions
Venue	Kobe, and surrounding area
Activities/ Topics	DAY 1: Lessons Learned from Hanshin Awaji Earthquake DAY 2: Asia Pacific Conference on Disaster Medicine (APCDM)* 1) PART I: Experience on domestic capacity building with the ARCH Project 2) PART II: How to meet the WHO Standards and ASEAN current situations? 3) PART III: WHO Joint Session/Expert Roundtable Discussions on Strategic and structured development of scientific evidence through collaboration among Asian and global researchers. *Pls.see 1.3.5 Output 4 Activity [f. APCDM] for details DAY 3: 1) Psychological Support in Disaster 2) Site visits The Disaster Reduction and Human Renovation Institution (DRI) Hyogo Emergency Medical Center DAY 4: 1) ARCH Project Review 2) Site visit: Hokudan Earthquake Memorial Park (Awaji Island)
Outputs/feedback	1) In general, participants were satisfied with the programmes and outputs. 2) The course provided good opportunities for learning disaster health management in Japan including recovery policy, information system, mental health services and involvement of community and private sector, which are all essential for prevention, mitigation and preparedness for disaster. 3) Participants could establish a new network and exchanged views on disaster health management with Japan 4) The knowledge and lessons learnt can be shared through training, policy, protocols and plan development in each AMS. 5) Good to review the ARCH progress together and share its future directions among AMS **Suggestions** - Need more practical training together between AMS and Japan (e.g. logistics, DMAT, hospital management) - better to include different levels of disaster management system to get broader views (e.g. national level, interprovince/prefecture) → Need to work with different stakeholders in disaster - Need more discussions/group work 1) to consider policies, processes and social empowerment to understand unique disaster health management in Japan and 2) to

identify the challenges and further improvements in disaster health management in the region/countries.

Actions to be taken by participants

- To advocate all stakeholders
- To reflect in policy, protocols and development plan
- To apply the knowledge and lessons in curriculum of training/medical university
- To develop our material and program appropriate to the situation of AMS
- To plan drill and related exercises
- To apply the concept self and community help in disaster response

(5) **Activity 5-5 Conduct training program in Japan for the Thai counterpart personnel (CPs)**

a. First Thai Counterpart Training in Japan

The Project conducted the first Thai counterpart training in Japan from 22 February to 07 March 2017. This training program was implemented as trainer's training (TOT) for Thai counterparts in order to develop their leadership and capacity as trainers through understanding the current system and management of related training center in Japan. Detailed training programme is shown in Attachment 26.

Table 22: The First Thai Counterpart Training in Japan

Title	The First Thai Counterpart Training in Japan
Objectives	1) To identify the issues and challenges in the disaster health management in Thailand through understanding the Japanese system. 2) To consider the measures for capacity development in the disaster health management in Thailand through understanding the training system, the situation and the activities of institutes for human resource development in Japan. 3) To enhance the recognition of the Project among the concerned organizations in Japan and build relationships with them
Dates	22 February to 07 March 2017
Participants	Eleven (11) Thai counterpart personnel, who are engaged in /are expected to be trainers for human resource development in disaster health management in Thailand
Venue	JICA HQ JICA Tokyo International Center (JICA Tokyo) National Disaster Medical Center, Tachikawa Center for Disaster Medicine and Education, Niigata University Kaetstu Hospital, Niigata, etc.
Activities/ Topics	1. Training for Disaster Health Management 2. Lecture/Exercise - History of disaster health management in Japan - Overview of Disaster Medical Assistance Team (DMAT) and the role of a disaster base hospital - Overview of Center for Disaster Medicine and Education, Niigata Uni. Faculty of Medicine - Overview of Japan Disaster Relief Team (JDR) - Lessons learned from the Great East Japan Earthquake - WHO Minimum Data Set (MDS)

	3. Developing an action plan for further strengthening disaster health management system and capacity development in Thailand
Training Institution	- JDR Secretariat - DMAT Secretariat - National Disaster Medical Center, Tachikawa - Center for Disaster Medicine and Education, Niigata University Faculty of Medicine - Other organizations related to human resource development in disaster health management
Feed-back from participants Lessons learned	■ Almost all participants answered they achieved the course objectives. ■ In particular, they appreciated learning 1) importance of standardized training programme (e.g.MCLS), 2) the effectiveness of inter-professional training and 3) the Japanese style of training (e.g. methodology, management). ■ Participants demonstrated good teamwork skills to achieve a specified task/goal through disaster medicine training in Niigata and they even inspired Japanese stakeholders. ■ Participants were divided into three groups and each group presented an action plan to strengthen the capacity in disaster health management in Thailand and ASEAN - Group I: Current situation & Training Center in Thailand for AMS - Group II; Training Programme - Group III: Quality Assurance & Sustainable Strategy **Suggestions for further improvement of the second C/P training** ■ Would like to participate in more practical training (e.g. JDR, DMAT) ■ Need more lectures on nursing roles

b. Second Thai Counterpart training in Japan

The Project conducted the second Thai counterpart training in Japan from 25 January to 03 February 2018. Based on the feedback of the first Thai counterpart training, the programme was designed to be more practical with a special focus on on-site team management and fill the gap which exists in disaster health management training system in Thailand. Detailed training programme is shown in Attachment 27.

Table 23: The Second Thai Counterpart Training in Japan

Title	The Second Thai Counterpart Training in Japan
Objectives	1) To identify the issues and challenges in the disaster health management in Thailand through understanding the Japanese system. 2) To consider the measures for capacity development in the disaster health management in Thailand through understanding the training system, the situation and the activities of institutes for human resource development in Japan. 3) To enhance the recognition of the Project among the concerned organizations in Japan and build relationships with them
Dates	25 January to 03 February 2018
Participants	Ten (10) Thai counterpart personnel, who are engaged in /are expected to be trainers for human resource development in disaster health management in Thailand
Venue	JICA HQ JICA Tokyo International Center (JICA Tokyo) National Disaster Medical Center, Tachikawa Joetstu General Hospital, Niigata Pacifico Yokohama, etc.
Activities/ Topics	1. Training for Disaster Health Management 2. Lecture/Exercise - Overview of Center for Disaster Medicine and Education, Niigata Uni. Faculty of Medicine - Role and function of Ministry of Health, Labor and Welfare during disasters as well as peacetime - History of disaster health management in Japan - Overview of Disaster Medical Assistance Team (DMAT) and the role of a disaster base hospital - Logistics and team management - Overview of Japan Disaster Relief (JDR) - Observation of JDR Stockpile in Narita - WHO Minimum Data Set (MDS) – progress in Japan- 1. The 23rd Annual Meeting of Japanese Association for Disaster Medicine (JADM) - Presentation by ARCH Project
Training Institution	- JDR Secretariat - DMAT Secretariat - National Disaster Medical Center, Tachikawa - Center for Disaster Medicine and Education, Niigata University Faculty of Medicine - Other organizations related to human resource development in disaster health management
Feed-back from participants **Lessons learned**	■ In general, the participants were satisfied with the contents of the training, especially they appreciated learning; 1) importance/effectiveness of multidisciplinary and multi-agency coordination 2) team management: in particular, logistics management is a key to successful disaster health management 3) different types of teaching methods Those above are not paid so much attention in disaster health management training in Thailand. 1) and 2) are one of the key messages from Japanese resources and it was very meaningful that Thai participants understand the importance. ■ The participants presented their action plan to strengthen the capacity of miniMERT by utilizing DMAT concepts, programme of Center for Disaster Medicine and Education, Niigata Uni. Faculty of Medicine. They conducted a training for miniMERT in Phang-Nga Province after the counterpart training, which is a good indication that the participants are taking initiatives in capacity development in disaster health

management in Thailand by applying the knowledge and experiences acquired from the counterpart training programme.

- Throughout the entire training period, the Thai counterparts could broaden their network with the medical professionals in disaster health management in Japan. Many of them are JDR registered personnel and it is expected that they will provide technical inputs and cooperate with ARCH Project in conducting upcoming events including RCD, AMS training, Study Tour in Japan. Such human relationship/network could be the basis for strengthening the regional collaboration/coordination in the future.

Chapter 2 Project Management

2.1 Joint Coordination Committee (JCC)

The first JCC meeting was held on 04 August 2016 to share the outlines of the IC/R, and the annual work plan from July 2016 to September 2017 was endorsed.

The second JCC meeting was held on 28 August 2017. The meeting shared the progress of the project and laid out the further annual work plan. For detailed discussion, please refer to the proceedings shown in Attachment 28.

The third JCC meeting was held on 31 October 2018. The meeting reported the changes made in the Record of Discussions (R/D), progress of the project activities and the schedule until August 2019. The Thai side updated on the formulation of the Plan of Action for the ASEAN Leaders Declaration on Disaster Health Management, also the progress on human resources development in this sector. For the Project evaluation, JICA presented the results of the evaluation, surveyed in October 2018, according to the five criteria. The extension of the Project for another 21 months was proposed and agreed at this meeting.

2.2 Communication among the Stakeholders

Communication flow was modified as shown in Figure 1 because Thai counterparts would like to be fully involved in drafting and preparation process of project activities. Also, ASEAN Secretariat is involved in communication with AMS because the Project is an official project under the ASEAN Health Cluster 2.

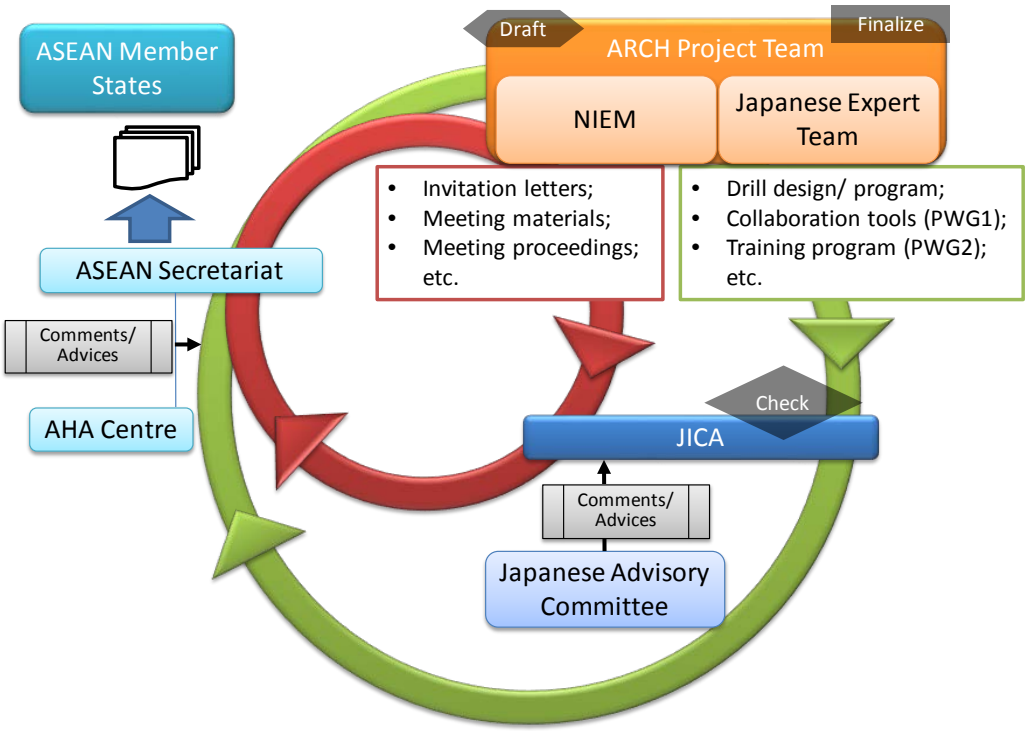


Figure 1: Communication Flow Chart

In addition, the Project Team decided to have monthly meetings to maintain effective and efficient communication. The first team meeting was held in February 2017, among the key members.

2.3 Counterpart Staff

NIEM is a coordinating agency of emergency and disaster medicine, therefore, most of technical staff are mobilized from academic institutions and hospitals as counterparts of the Project. Since it was still in the initial stage, the technical staff were not stable and consistent. NIEM has been trying to improve such situation by increasing number of technical personnel in their permanent staff and strengthening cooperation with the above academic institutions and hospitals.

Because the Project needs close communication with ASEAN and Thailand is working as one of the lead countries of the Project in Health Cluster 2 of ASEAN, the Project Team has been aware that MOPH should be more actively involved in the project activities.

Chapter 3 Results of Project Evaluation

To conclude this phase of the Project, terminal evaluation was conducted in March 2019 with the following objectives;

(1) To verify the accomplishments of the Project compared to those planned;
(2) To identify obstacles and/or facilitating factors that have affected the implementation process;
(3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); and
(4) To make recommendations on the Project regarding the measures to be taken for the remaining period as well as the post-project period.

1. Methodology of Evaluation

(1) Accomplishment of the Project

The accomplishment of the Project was measured in terms of the Outputs and the Project Purpose in comparison with the Objectively Verifiable Indicators of PDM as well as the plan delineated in the R/D.

(2) Implementation Process

The implementation process of the Project was reviewed to see if the Activities have been implemented according to the schedule delineated in the latest PO, and to see if the Project has been managed properly as well as to identify obstacles and/or facilitating factors that have affected the implementation process.

(3) Evaluation based on the Five Evaluation Criteria

(a) Relevance：Relevance of the Project was reviewed to see the validity of the Project Purpose and the Overall Goal in connection with the needs of the beneficiaries and policies of the ASEAN and Japan.

(b) Effectiveness：Effectiveness was analysed by evaluating the extent to which the Project has achieved and contributed to the beneficiaries.

(c) Efficiency：Efficiency of the Project implementation was analysed focusing on the relationship between the Outputs and Inputs in terms of timing, quality, and quantity.

(d) Impacts：Impacts of the Project were forecasted by referring to positive and negative impacts caused by the Project.

(e) Sustainability：Sustainability of the Project was analysed in institutional, financial and technical aspects by examining the extent to which the achievement of the Project would be sustained and/or expanded after the Project is completed.

2. Accomplishments of the Project

The summary is listed below.

Accomplishment for the Project Purpose

Project Purpose	Regional coordination on disaster health management is strengthened in ASEAN.
Verifiable Indicators	1 Coordination meetings on disaster health management in ASEAN are held on a regular basis. **Expected to be achieved** 2 Activities needed for regional collaboration are clarified and approved in the coordination meeting. **Achieved** 3 Recommendations for developing regional collaboration mechanism in disaster health management is proposed to the SOMHD. **Expected to be achieved** 4 Regional collaboration tools are developed and approved in the coordination meeting. **Expected to be achieved**

Accomplishment for the Overall Goal

Overall Goal	ASEAN and Japan collaboration mechanism on disaster health management is developed.
Verifiable Indicators	1. Roadmap of ASEAN regional collaboration mechanism on disaster health management is finalized and proposed to SOMHD. **Expected to be achieved.** 2. Hub organization in-charge of coordination of ASEAN and Japan collaboration mechanism is identified, and its role is clarified. **Partially Achieved. Expected to be achieved after the project period** 3. Necessary staff and budget of hub organization of ASEAN and Japan collaboration mechanism are proposed. **Expected to be achieved after the project period.** 4. Activities based on ASEAN and Japan collaboration mechanism will work if large scale disaster occurs**. Too early to validate**

Five Evaluation Criteria

Relevance	**High**; ✓ ASEAN is continuously the region where frequently occurs large scale disasters. ASEAN have been strengthening their efforts for disaster prevention/mitigation as well as rapid and effective disaster response. ✓ Regarding the disaster medicines which had not been approached enough in comparison with other sectors relating to disaster management in the ASEAN, as a result of the adoption of ALDDHM at the occasion of the

	ASEAN Summit last year, it can be expected that political priority for the Disaster Health Management could rise higher in this region than the situation before the project.
Effectiveness	**Relatively High**; ✓ Targets of all the indicators for the Project Purpose have been achieved or could be achieved by the end of the Project. ✓ The SOP and other tools developed by the project are very useful, but they are not sufficient for actual international deployment, because EMTs of AMS have difficulties in meeting some elements of WHO I-EMT minimum standards, especially in the area of logistics, and their capabilities are not enough for self-sufficient international deployment. ✓ It is not certain how the participants of the AMS trainings and the RCDs have utilized their acquired knowledge or could contribute for capacity development on Disaster Health Management in each AMS.
Efficiency	**Medium**; ✓ The organizational commitment from Thai MOPH for the ARCH had not been clear even up to the latter part of the Project period. ✓ There are many relevant parties of Japan involved in the project implementation such as the Advisory Committee, the Consultant Team, Infrastructure and Peacebuilding Department of JICA and the Secretariat of Japan Disaster Relief Team. However, the roles and responsibilities of each party were not distinct and communication among the parties was somewhat confused in the first half of the project period. ✓ Because the participants for the RCC and PWG from each AMS were often changed, it was difficult to maintain the consistency of the sequence of discussions. ✓ It is not certain how the participants of the AMS trainings and the RCDs could contribute for the regional collaboration and capacity development on Disaster Health Management in the ASEAN and their home countries.
Impact	**High**; ✓ The ARCH has been able to have many opportunities to make presentations on the progress and outputs of the project and to publicize the importance of Disaster Health Management on the occasions of the ASEAN Summit, ASEAN Health Ministers Meeting, SOMHD or other important ASEAN meetings relating to the disaster management. ✓ The text of the ALD was drafted through a series of discussions in the RCC and PWG of the ARCH. ALD DHM was adopted on the occasion of the 31st ASEAN Summit in Philippines on 13 Nov. 2017 and the leaders of the ASEAN confirmed to strengthen the further efforts for Disaster Health

Management in the ASEAN.

- ✓ Plan of Action (POA) to implement the ALDDHM (2018-2025) was drafted and was submitted once to the SOMHD in April 2018. The RCC and PWG of ARCH have discussed to improve the POA and a revised version based on those discussions will be submitted again to the SOMHD on April 2019. If the POA will be approved by the SOMHD and proceed into the implementation stage, it could be regarded that the ASEAN Collaboration Mechanism was developed and ASEAN is expected to be gradually strengthening the capacities of Disaster Health Management and be acquiring the capabilities of rapid and effective medical response for any large scale disasters in near future.
- ✓ MDS which JICA proposed WHO to develop and took the lead for the development was tested by the RCD of ARCH and its effectiveness was verified by the ARCH regional drills. MDS was officially adopted by WHO on Feb.2017 as an international standard. It is regarded that ARCH has also made a significant international contribution beyond the ASEAN region.
- ✓ Based on J-SPEED which was developed in Japan, referring to Philippine Method "SPEED", a Japanese company has developed i-SPEED system and that company is now trying to introduce its products to Philippines using JICA's Public-Private Partnership Program. ARCH worked to test the effectiveness of this rapid information collection system by the Regional Coordination Drill and introduced this i-SPEED system to other AMS. If the effectiveness will be verified and i-Speed will be utilized in this region, ARCH can contribute to improve the information management on Disaster Medicine.

Sustainability **High**;

- ✓ The ALD was already adopted and the Leaders of the ASEAN have reconfirmed to strengthen the system and mechanism for the Disaster Health Management in each country as well as in the region as a whole. It could be expected that the political priority for the DHM will continue at a higher level.
- ✓ Once the POA will be approved, it is regarded that the RCC set up by the ARCH could expand its role and function, and upgrade to the RCCDHM which should be a permanent formal mechanism of the ASEAN.
- ✓ Once the SOP and other collaboration tools developed by the ARCH are endorsed by the SOMHD, those will be recognized as the official tools which should be continuously utilized in ASEAN. The integration of those tools into the SASOP, which is a most important official standard procedure for Humanitarian Assistance to disasters in ASEAN, could ensure the

	effective utilization for actual disaster cases. Moreover it is expected that the tools will be continuously effective for various cases in ASEAN in future because the RCCDHM set up by the POA would repeatedly review and improve and revise the tools if necessary. ✓ Once the POA is approved and AIDHM is established, implementation of RCD and AMS training courses which were initiated by the ARCH will be taken over to the AIDHM. AIDHM will be responsible to develop training curriculum and teaching materials as the regional training center on DHM, referencing the products of the ARCH. AIDHM will also play the role as the facilitator to enhance the Academic network on DHM ✓ It is regarded that the activities and products through the ARCH will be integrated into the part of the POA and be improved.

3. Conclusion

Most of the Activities have been implemented and the Outputs have been almost achieved as planned. Regarding the indicators for the Project Purpose, the Project has already achieved or can be expected to achieve all of the targets by the termination of the Project period. In addition, the Project has worked on the efforts beyond the Project Purpose and has made results in some extent toward the Overall Goal, which should be achieved several years after the termination of the Project period, and it is regarded that the Project has succeeded to generate a bigger Impact and to secure higher Sustainability than those expected before the Project. Then if the POA to implement the ALD is approved and the RCC & AIDHM to operationalize the POA start up, the Impact and Sustainability for the ARCH could be ensured further.

On the other hand, it is necessary to continue testing the products through the ARCH such as the collaboration tools or the RCD whether those can be functional and effectively applied to an actual disaster. In addition, it is also necessary to improve the capacities on DHM in each AMS and to consider the regional collective measures in order to complement the incomplete capacities of AMS until each AMS could fulfill capabilities necessary for disaster medical response.

4. Recommendation

Based on the above conclusion, it is recommended that this ARCH Project should extend the cooperation period until the POA is approved and the main Mechanism of the POA (RCC & AIDHM) can start and get its actual activities on track so that the ARCH could ensure the Impact and Sustainability.

In addition, it is recommended that continuous testing for the tools and study on the capacity development needs in each AMS should be conducted and the regional approach to complement the capabilities of ASEAN-EMT should be discussed during the extension period.

(For the full report, please refer to Attachment 29.)

Attachment 1：

Project Design Matrix (PDM) (Version 1)

Project Design Matrix (PDM): PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT

Version 1
as of 04 Augst 2016

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal ASEAN and Japan collaboration mechanism on disaster health management is developed.	1. Roadmap of ASEAN regional collaboration mechanism on disaster health management is finalized and proposed to SOMHD. 2. Hub organization in-charge of coordination of ASEAN and Japan collaboration mechanism is identified, and its role is clarified. 3. Necessary staff and budget of hub organization of ASEAN and Japan collaboration mechanism are proposed. 4. Activities based on ASEAN and Japan collaboration mechanism works if large scale disaster occurs.	1 Monitoring/review survey report 2 Agreement documents in ASEAN SOMHD 3 Summary of related meetings/ conferences (SOMHD or Summit etc)	
Project Purpose Regional coordination on disaster health management is strengthened in ASEAN.	1 Coordination meetings on disaster health management in ASEAN are held at regular basis. 2 Activities needed for regional collaboration are clarified and approved in the coordination meeting. 3 Recommendations for developing regional collaboration mechanism in disaster health management is proposed to SOMHD. 4 Regional collaboration tools are developed and approved in the coordination meeting.	1 Agreement and/or summary of coordination meeting	1 Policy of ASEAN on disaster health management is not changed. 2 Commitment from AMS is assured. 3 Serious political problem will not happen among ASEAN.
Output			
Output 1 Coordination platform on disaster health management is set up.	1-1 Number of regional coordination meeting during the Project (Target: at least once a year) 1-2 Clarification of focal point of each AMS 1-3 Agreement of set-up of regional coordination platform on disaster health management in ASEAN	1-1 and 1-3 Records of coordination meetings 1-2 List of focal points	1 Commitment of AMS for is assured.
Output 2 Framework of regional collaboration practices is developed.	2-1 Regional collaboration drill is conducted. (basically, once a year) 2-2 Recommendations/lessons learned for the regional collaboration drills are concluded . 2-3 Mechanism of regional collaboration among emergency medical teams in disaster affected area is clarified.	2-1 Records of the regional collboration drills 2-2 Monitoring/review survey report 2-3 Draft regional agreement of the regional collaboration on disaster health management	
Output 3 Tools for effective regional collaboration on disaster health management are developed.	3-1 Standard Operating Procedure (SOP) (draft) 3-2 Minimum requirements for disaster health management personnel (draft) 3-3 Framework of health needs assessment in emergencies (draft) 3-4 Preparation of database of emergency medical teams in ASEAN	3-1, 3-2, 3-3, and 3-4 Regional collaboration tools such as SOP, minimum requirement, framework of health needs assessment, database Records of coordination meetings Monitoring/review survey report	
Output 4 Academic network on disaster health management in AMS is enhanced.	4-1 Number of presentation(s) made at academic conference(s) (Target: at least 1 paper/year)	4-1 Academic conference/journal such as JADM, APCDM, and WADEM Monitoring report	
Output 5 Capacity development activities for each AMS are implemented.	5-1 Number of trainings (Target:4 courses) 5-2 Number of participants to attend to the training courses (Target:150 pax) 5-3 Lessons learned from the training courses was utilized in each AMS	5-1 and 5-3 Training report(s) 5-2 Monitoring/review survey report	

Activities	**Inputs**	
1-1 Regional coordination meetings are organized every year to share the progress and discuss the direction of the Project. 2-1 Develop and prepare the program of the regional collaboration drill with project working group 2-2 Conduct the regional collaboration drill every year in AMS 2-3 Compile recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities 2-4 On site practice is conducted when disaster occurs in ASEAN (if possible). 3-1 Formulate project working groups for regional collaboration tools at the beginning of the project 3-2 Develop a draft regional SOP and minimum requirements for disaster health management with the project working group 3-3 Prepare databases of emergency medical teams of AMS 3-4 Draft framework of health needs assessment in emergencies with the project working group 4-1 Present outcomes of the Project activities at academic conferences such as JADM, APCDM and WADEM 5-1 Prepare training plan, curriculum and materials on disaster health management and emergency medical system based on needs survey with the project working group 5-2 Conduct trainings on disaster health management and emergency medical service for AMS 5-3 Conduct monitoring survey and evaluation on capacity development on disaster health management in each AMS 5-4 Conduct a study tour in Japan for AMS 5-5 Conduct training program in Japan for the Thai counterpart personnel	Japanese side 【Experts】 (1)Expert Consultant team (a) Dispatch of Experts 1.Leader 2.Specialist in medical system 3.Specialist in disaster health management/emergency medicine 4.Specialist in planning/organizing regional collaboration drill 5.Specialist in planning/organizing trainings 6.Project coordinator 7.Others, if necessay (b) Provision of necessary equipment (if necessary) (2)Japanese Advisory Committee 1.Provide advice and technical support to JICA on the project management. 2.Join the project working groups 3.Participate ~~to~~ in the regional collaboration drills 4.Conduct advisory survey 【Local cost】 1.Expense mutually agreed upon as necessary	Thailand side 【Counterpart Personnel】 1.Project Director 2.Project Manager 3.Officer(s) in charge 4.Secretary at the project office 【Facilities and Equipment】 1.Project office space for JICA experts 2.Facilities and equipment necessary for trainings/regional drills 3.Equipment mutually agreed upon as necessary 【Available data and information related to project】 【Local cost】 1.Expense mutually agreed upon as necessary

Attachment 2：

Amendments of Record of Discussion (signed on 30 August 2017)

MINUTES OF MEETINGS

BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

NATIONAL INSTITUTE FOR EMERGENCY MEDICINE

FOR AMENDMENT OF THE RECORD OF DISCUSSIONS

ON

PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and National Institute for Emergency Medicine (hereinafter referred to as "NIEM") hereby agree that the Record of Discussions on Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (hereinafter referred to as "the Project") signed on 19 February, 2016 will be amended as follows;

1 Implementation Structure

Before	Amended Version
(1)NIEM (a)Project Director Secretary General, NIEM (b)Project Manager Deputy Secretary General of NIEM will be responsible for overall administration and implementation of the Project. (c) Counterpart Personnel Counterpart Personnel of NIEM will be assigned.	(1)NIEM (a)Project Director Secretary General, NIEM (b)Counterpart Personnel Counterpart Personnel of NIEM will be assigned. (2)MOPH (a)Co-Project Director Permanent Secretary, Ministry of Public health (b)Counterpart Personnel Counterpart Personnel of MOPH will be assigned.

	(3)Project Manager(s) Project Manager, who is responsible for overall administration and implementation of the Project, will be assigned by the Project Director and Co-project Director, and to be informed to JICA. Also, Co-Project Manager will be assigned by the Project Director and Co-project Director when necessary. (4)Other organization Other organization will be added when necessary. Also. Co-Project Manager will be selected from other organization than NIEM and MOPH when the Project Director and the co-Project Director mutually assign.
Reason: Through the initial implementation, the importance of the involvement of MOPH in the Project has been more recognized both for international and domestic environment considering the following situations: The Project has been approved by ASEAN Committee of Permanent Representative (CPR) as an official project under ASEAN Health Cluster 2. The focal point of SOMHD of each AMS has been involved in communications relevant to the Project. Also, the Project will facilitate future vision of ASEAN collaboration in disaster health management, that should be further discussed among AMS. In Thailand, MOPH is responsible for disaster health management in coordination with NIEM. Therefore, discussions on disaster health management in ASEAN in the Project and capacity development through mutual cooperation through the Project should involve the above two agencies, MOPH and NIEM. Taking into account the above situation, the three parties, MOPH, NIEM and JICA agreed to additionally include the Permanent Secretary, Ministry of Public Health as Co-Project Director.	

2 Proposed member of joint Coordinating Committee (JCC) : Annex IV

Before	Amended Version
2. Chairperson and Members (1) Chairperson Secretary General, National Institute for Emergency Medicine(NIEM) (2)Members <u>The Thai side</u> (a) Ministry of Public Health (MOPH) Thailand (b) National Institute for Emergency Medicine (NIEM) (c) Thailand International Cooperation Agency (TICA) <u>The Japanese side</u>	2. Chairperson and Members (1) Chairperson Secretary General, National Institute for Emergency Medicine(NIEM) (2)Co-Chairperson, Permanent Secretary , Ministry of Public Health (2)Members <u>The Thai side</u> (a) Focal point of SOMHD, Thailand (b) Director General, Department of Medical Services, MOPH (c) Director General, Department of Disease Control, MOPH (d) Director, Division of Public Health

(a) JICA Thailand Office (b) JICA Expert Team (c) Embassy of Japan in Thailand (Observer)	Emergency Management (DPHEM), Ministry of Public Health (MOPH) Thailand (e) Director, Division of Global Health, MOPH (f) Deputy Secretary General, National Institute for Emergency Medicine (NIEM) (g) Director, Bureau of Academic Affairs and Quality Management, NIEM (h) Director, Bureau of Policy and Strategy, NIEM (i) Officer, Thailand International Cooperation Agency (TICA) (j) President, College of Emergency Physician (k) President of Nursing Association (l) Representative from Paramedic Council The Japanese side (a) Chief Representative, JICA Thailand Office (b) Leader, JICA Expert Team (c) Long Term Expert (d) Embassy of Japan in Thailand (Observer)
Reason: As the same reason above, MOPH will be assigned as the Co-Chairperson of Joint Coordinating Committee. Also, both sides agreed that the members of the JCC will be added and confirmed as above so that the coordination among concerned organizations will be strengthened.	

3 Input by JICA : Appendix 1 Project Description, 5. Input

Before	Amended Version
5 Input (1) Input of JICA (a) Dispatch of Expert	5 Input (1) Input of JICA (a)Dispatch of Expert (b)Dispatch of Long Term Expert for ASEAN Coordination in Disaster Health Management to the Division of Public Health Emergency Management
Reason: The Japanese long-term expert is expected to play a role of communication hub among the regional and international society to support the Project Team. The Project has various stakeholders in the regional and international society, such as AMS, ASEAN Secretariat, AHA Center, and WHO. And it aims to be consistent with existing consensus and discussions on disaster health management. The long-term expert will build and maintain good relationship with various stakeholders and facilitate discussions in regional and international society on future vision of ASEAN regional collaboration on disaster health management in line with relevant visions such as "One ASEAN, One Response".	

4 Input by Thai side

Before	Amended Version
(2)Input by NIEM (g)Part of running expenses necessary for the implementation related to the Project, but limited to only Thai personnel;	(2)Input by NIEM (g) Part of running expenses necessary for the implementation related to the Project, but limited to only Thai personnel which needed for activities in Thailand (for the international travel, the number of Thai personnel whose cost will be covered by JICA is equivalent to other AMS); (3)Input by MOPH MOPH will take necessary measures to provide at its own expense: (a)Services of MOPH's counterpart personnel as referred to in Ⅱ-6; (b)Suitable office space with necessary equipment for the long term expert; (c)Part of running expenses necessary for the implementation of the Project, but limited to only MOPH personnel;
Reason: ・ At the project initial stage, all the project activities were planned to be conducted in Thailand and therefore, both parties agreed that travel cost for Thai personnel would be borne by Thai side. After commencement of the project, possibility to conduct some of the project activities outside Thailand has been considered. Given the current situation, both parties agreed to cover international travel cost for Thai personnel by the project budget. Both parties also agreed that the number of personnel whose international travel cost covered by JICA is limited to equivalent to other AMS. ・ NIEM, MOPH, and JICA agreed to add the inputs by MOPH since MOPH will enhance its role and involvement in the Project Implementation Structure.	

5 Project monitoring and discussions.

Before	Amended Version
JICA and/or NIEM were responsible for monitoring and evaluation of the progress of the Project, for taking appropriate measures to make the Project widely known to the people of Thailand, mutual consultation.	In addition to JICA and NIEM, MOPH will be included in the responsible parties for monitoring and evaluation, taking appropriate measures to make the Project widely known to the people of Thailand, mutual consultation, and any other issues arise from the project.
Reason: To ensure more involvement of MOPH in the project management activities and discussions,	

6 PDM

Before	Amended Version
PDM version 1.0	PDM version 2.0
Reason: The capacity development of Thai personnel was added in the indicator of Output 5.	

7 Amendments of RD

Before	Amended Version
The RD may be amended by the MM between JICA and NIEM.	The RD may be amended by the MM among NIEM, MOPH. and JICA.
Reason: Since the MOPH will be additional signer of RD, MM will also necessary to be signed by MOPH.	

This amendment will become effective as of August, 2017.

Annex 1 : Record of Discussions (signed on 19th February, 2016)

Annex 2 : PDM (ver. 2.0)

Bangkok, 30 August, 2017

Mr. Hiroo Tanaka Chief Representative Japan International Cooperation Agency, Thailand Office	Flt.Lt.Dr. Atchariya Pangma Secretary General National Institute for Emergency Medicine, Thailand	Dr. Sopon Mekthon Permanent Secretary Ministry of Public Health, Thailand

Attachment 3：

Project Design Matrix (PDM) (Version 2)

Project Design Matrix (PDM): PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT

Version 2
as of 17 August, 2017

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal ASEAN and Japan collaboration mechanism on disaster health management is developed.	1. Roadmap of ASEAN regional collaboration mechanism on disaster health management is finalized and proposed to SOMHD. 2. Hub organization in-charge of coordination of ASEAN and Japan collaboration mechanism is identified, and its role is clarified. 3. Necessary staff and budget of hub organization of ASEAN and Japan collaboration mechanism are proposed. 4. Activities based on ASEAN and Japan collaboration mechanism works if large scale disaster occurs.	1 Monitoring/review survey report 2 Agreement documents in ASEAN SOMHD 3 Summary of related meetings/ conferences (SOMHD or Summit etc)	
Project Purpose Regional coordination on disaster health management is strengthened in ASEAN.	1 Coordination meetings on disaster health management in ASEAN are held at regular basis. 2 Activities needed for regional collaboration are clarified and approved in the coordination meeting. 3 Recommendations for developing regional collaboration mechanism in disaster health management is proposed to SOMHD. 4 Regional collaboration tools are developed and approved in the coordination meeting.	1 Agreement and/or summary of coordination meeting	1 Policy of ASEAN on disaster health management is not changed. 2 Commitment from AMS is assured. 3 Serious political problem will not happen among ASEAN.
Output			
Output 1 Coordination platform on disaster health management is set up.	1-1 Number of regional coordination meeting during the Project (Target: at least once a year) 1-2 Clarification of focal point of each AMS 1-3 Agreement of set-up of regional coordination platform on disaster health management in ASEAN	1-1 and 1-3 Records of coordination meetings 1-2 List of focal points	1 Commitment of AMS for is assured.
Output 2 Framework of regional collaboration practices is developed.	2-1 Regional collaboration drill is conducted. (basically, once a year) 2-2 Recommendations/lessons learned for the regional collaboration drills are concluded . 2-3 Mechanism of regional collaboration ~~of~~ among emergency medical teams in disaster affected area is clarified.	2-1 Records of the regional collboration drills 2-2 Monitoring/review survey report 2-3 Draft regional agreement of the regional collaboration on disaster health management	
Output 3 Tools for effective regional collaboration on disaster health management are developed.	3-1 Standard Operating Procedure (SOP) (draft) 3-2 Minimum requirements for disaster health management personnel (draft) 3-3 Framework of health needs assessment in emergencies (draft) 3-4 Preparation of database of emergency medical teams in ASEAN	3-1, 3-2, 3-3, and 3-4 Regional collaboration tools such as SOP, minimum requirement, framework of health needs assessment, database, Records of coordination meetings Monitoring/review survey report	
Output 4 Academic network on disaster health management in AMS is enhanced.	4-1 Number of presentation(s) made at academic conference(s) (Target: at least 1 paper/year)	4-1 Academic conference/journal such as JADM, APCDM, and WADEM Monitoring report	
Output 5 Capacity development activities for each AMS are implemented.	5-1 Number of trainings (Target: 4 courses) 5-2 Number of participants to attend to the training courses (Target: 150 pax) 5-3 Lessons learned from the training courses was utilized in each AMS 5-4 Number of participants to attend to the counterpart training courses (Target :20 pax)	5-1 and 5-3 Training report(s) 5-2 Monitoring/review survey report 5-3 Training report(s)	
Activities	**Inputs**		
1-1 Regional coordination meetings are organized every year to share the progress and discuss the direction of the Project.	Japanese side	Thailand side	
2-1 Develop and prepare the program of the regional collaboration drill with project working group	【Experts】 (1)Expert Consultant team (a) Dispatch of Experts 1.Leader 2.Specialist in medical system 3.Specialist in disaster health management/emergency medicine 4.Specialist in planning/organizing regional collaboration drill 5.Specialist in planning/organizing trainings 6.Project coordinator 7.Others, if necessay (b) Provision of necessary equipment (if necessary) (2)Japanese Advisory Committee 1.Provide advice and technical support to JICA on the project management. 2.Join the project working groups 3.Participate in the regional collaboration drills 4.Conduct advisory survey 【Local cost】 1.Expense mutually agreed upon as necessary	【Counterpart Personnel】 1.Project Director 2.Project Manager 3.Officer(s) in charge 4.Secretary at the project office 【Facilities and Equipment】 1.Project office space for JICA experts 2.Facilities and equipment necessary for trainings/regional drills 3.Equipment mutually agreed upon as necessary 【Available data and information related to project】 【Local cost】 1.Expense mutually agreed upon as necessary	
2-2 Conduct the regional collaboration drill every year in AMS			
2-3 Compile recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities			
2-4 On site practice is conducted when disaster occurs in ASEAN (if possible).			
3-1 Formulate project working groups for regional collaboration tools at the beginning of the project			
3-2 Develop a draft regional SOP and minimum requirements for disaster health management with the project working group			
3-3 Prepare databases of emergency medical teams of AMS			
3-4 Draft framework of health needs assessment in emergencies with the project working group			
4-1 Present outcomes of the Project activities at academic conferences such as JADM, APCDM and WADEM			
5-1 Prepare training plan, curriculum and materials on disaster health management and emergency medical system based on needs survey with the project working group			
5-2 Conduct trainings on disaster health management and emergency medical service for AMS			
5-3 Conduct monitoring survey and evaluation on capacity development on disaster health management in each AMS			
5-4 Conduct a study tour in Japan for AMS			
5-5 Conduct training program in Japan for the Thai counterpart personnel			

Attachment 4 :

Plan of Operation

Plan of Operation

Project Title : PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT

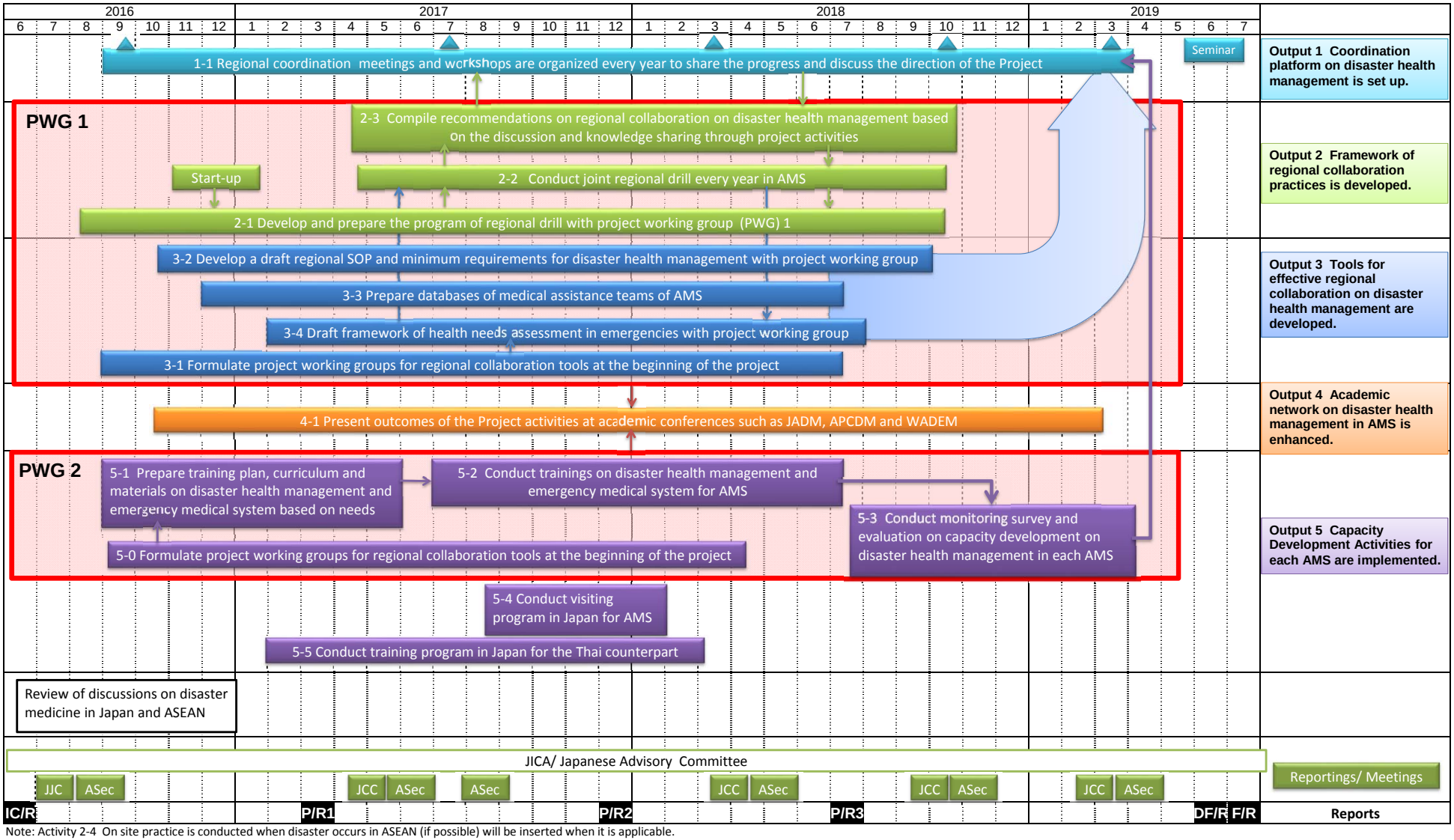
Overall Goal	ASEAN and Japan collaboration mechanism on disaster health management is developed.
Project Purpose	Regional coordination on disaster health management is strengthened in ASEAN.
Duration of the Project	3 years

Ver. 1
(04 August 2016)

Outputs	Activities	Schedule (2016: 6–12; 2017: 1–12; 2018: 1–12; 2019: 1–9)
1. Coordination platform on disaster health management is set up.	1-1 Regional coordination meetings are organized every year to share the progress and discuss the direction of the Project.	
2. Framework of regional collaboration practices is developed.	2-1 Develop and prepare the program of the regional collaboration drill with project working group	
	2-2 Conduct the regional collaboration drill every year in AMS	S.U
	2-3 Compile recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities	
	2-4 On site practice is conducted when disaster occurs in ASEAN (if possible).	
3. Tools for effective regional collaboration on disaster health management are developed.	3-1 Formulate project working groups for regional collaboration tools at the beginning of the project	
	3-2 Develop a draft regional SOP and minimum requirements for disaster health management with the project working group	
	3-3 Prepare databases of emergency medical teams of AMS	
	3-4 Draft framework of health needs assessment in emergencies with the project working group	
4. Academic network on disaster health management in AMS is enhanced.	4-1 Present outcomes of the Project activities at academic conferences such as JADM, APCDM and WADEM	APCDM, JADM, WADEM, JADM, APCDM
5. Capacity Development Activities for each AMS are implemented.	5-1 Prepare training plan, curriculum and materials on disaster health management and emergency medical system based on needs survey with the project working group	
	5-2 Conduct trainings on disaster health management and emergency medical service for AMS	
	5-3 Conduct monitoring survey and evaluation on capacity development on disaster health management in each AMS	
	5-4 Conduct a study tour in Japan for AMS	
	5-5 Conduct training program in Japan for the Thai counterpart personnel	

Attachment 5：

Work Flow of Activities



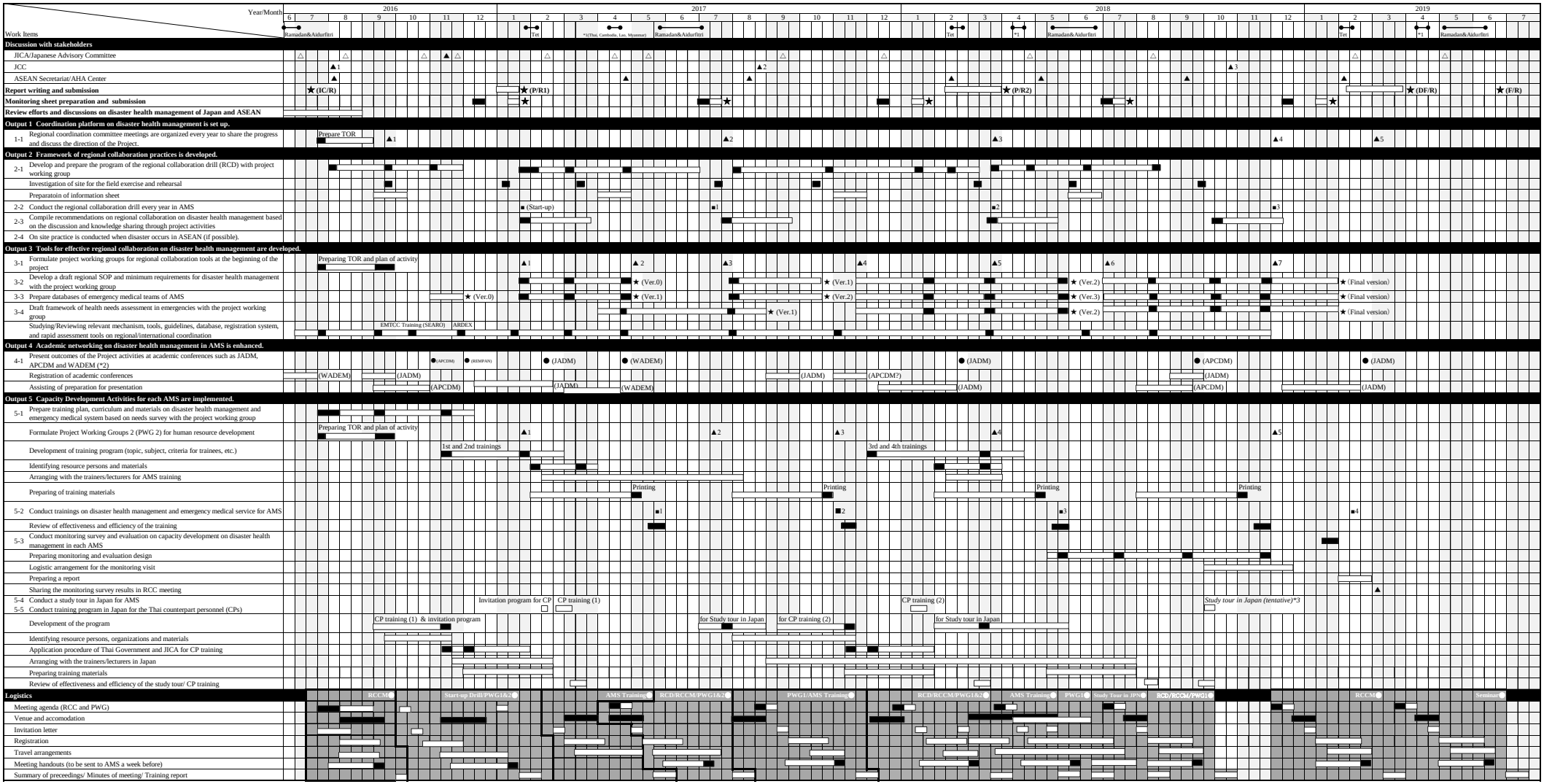
Note: Activity 2-4 On site practice is conducted when disaster occurs in ASEAN (if possible) will be inserted when it is applicable.

Attachment 6：

Work Schedule

Form 2

Work Schedule of the Project



Legend : □Work in Japan ■Field work △Meeting in Japan ▲Meeting (in Field) ★Submission of a report

Note: Meetings, workshops, drills, trainings and study tours will be scheduled based on the discussion with stakeholders.

*1: JADM (Japan Association for disaster medicine), APCDM (Asia-Pacific Conference on Disaster Medicine), WADEM (World Association for Disaster and Emergency Medicine)

*2:One PWG 2 will endorse two AMS training programs.

*3: Details of the study tour in Japan to be decided

Start-up drill & PWG1&2 meetings

Attachment 7：

Dispatch Schedule of Japanese Experts

1. Activities in Field

Assignment	Name	2016							2017											2018											2019								
		6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7		
Team Leader	Keiko Nagai		5		9	2	1		4			4	6	7	5	11	5	8																						84	2.80
			10~14 (5)		1~9 (9)	21,26/29,30 (2)	1 (2)	1 (1)	6~9 (4)		5~10 (6)	9	13-21 (9)			3~6 (4)	7~12,21~27 (6)	6-10 (7) (5)	12-22 (11)	8-12, 23-30 (5)	(8)																			84	2.80
Team Leader	Fude Takayoshi																		10		10	5	15	5	7	7	7		7	12	1			8	4	7	6			111	3.70
																			26-30 (5)	1, 10-17 (1) (8)	15-20 (6)	5-11,19-24 (7) (6)	24-31 (8)	1 (1)	25-31 (7)	1, 10-17 (1) (8)	3-7, 19-21 (5) (3)		3-9 (7)	13-21, 29- (9) (3)	1 (1)			10-17 (8)	2-5 (4)	14-20 (7)	26-31 (6)	1-5 (5)		116	3.87
Disaster Health Managemant/Regional Collaboration Tools (1)	Yasushi Nakajima		1		5	3	1	5	13		3	7	4	4	12	4			7		7	7	15		6		6	6	6											122	4.07
			31 (1)	1~5 (5)		28~30 (3)	1 (1)	6~~10 (5)	9~21 (13)		22~24 (3)	24~30 (7)	7~10 (4)	7~10 (4)	11~22 (12)	24~27 (4)			3~11 (9)		16~19 (4)		5-7 22-31 (3) (10)	11-13 (3)		27-31 (5)	1 (1)	4-7,19-21 (4) (3)					1-8 (8)		17-23 (7)	3-5 (3)					122	4.07
Capacity Development Planning (1)	Junko Sato		1		5	6	5		6		8	10			19	6	16		8		5		15																	252	8.40
			31 (1)	1~5 (5)		25~30 (6)	1~5 (5)	6~11 (6)	7~14 (8)	12~21 (10)		13~22 (10)		10~28 (19)	19~24 (6)	11~26 (16)	26~31 (6)	1~2 (2)	9-13 30-31 (5)	(2)	1~12 26~30 (12)	(5)	1~5 (5)	7	19-24 (6)	23-31 (9)	1,7-14,30 (1) (8)	(1)	1-3, 22-31 (3) (10)	1-2 (2)	2-8 (7)		2-7, 30- (6) (1)	6	30	-8 (8)	18-22 (5)	21-31 (11)	1 (1)	10-25 (16)	2-5 (4)			9-12 (4)	8-12 (5)	252	8.40
Regional Collaboration Tools (1)	Junko Yamada		1		9	11	12	6	5	15		9	9	9	9	14		4																						113	3.77
			31 (1)	9 (9)		20 (11)	-5 16-22 (5) (7)	6-11 (6)	6-10 (5)	8-22 (15)		16-24 (9)	3-7,19-22 (5) (4)	2-10 (9)	5-13 (9)	10-23 (14)		27-30 (4)																								113	3.77
Regional Collaboration Tools (2)	Yumiko Kashiba		1		5	6	1	6	10			4	8	5	10			4	5	7	3				22-31 (10)															75	2.50
			31 (1)	1~5 (5)		25~30 (6)	1 (1)	6~11 (6)		12~21 (10)			19-22 (4)	3~10 (8)	6~10 (5)	13~22 (10)		27~30 (4)		26~30 (5)																				75	2.50
Capacity Development Planning (2)	Takashi Senda		14		16	20	8	12	12	19		14		28	7	22	7		5	20	8	12	12	25		10	10	15		10	10	20		10		20		5	2		373	12.43
			10-15/24-31 (6) (8)		1~16 (16)	11~30 (20)	1~8 (8)	6~17 (12)	6~17 (12)	9~27 (19)		12~25 (14)		2~29 (28)	7~13 (7)	5~26 (22)	27~31 (5)	~2 (2)	9-13 30-31 (5)	(2)	1~12 19~30 (12)	(12)	~2 (2)	14-23 (10)		4-31 (28)	1-2,29-30 (2)	(2)	1-8, 21-31 (8) (11)	1-3 27-30 (3) (4)	1-9 (9)	22-25 (4)	2-7 (6)		11-30 (20)	-10 (10)	20-26 (7)	6-28 (23)	-8 (8)	21-26 (6)			373	12.43
Regional Collaboration Drills	Masako Tani		1		5	4	1	3	2	15		4		5	4	13	5			7		7	15		7	8	8	8	8	2									140	4.67
			31 (1)	~5 (5)		27~30 (4)	1 (1)	28~30 (3)	~2 (2)	8~22 (15)		21~24 (4)		7~11 (5)	7~10 (4)	10~22 (13)	23~27 (5)			3-11 26~30 (9) (5)		17~21 (5)	16-20 (5)		5-8,19-31 (4) (13)	1, 15-18 (1) (4)		23-31 (9)	1-2 (2)	3-8 (6)				29-30 (2)	-8 (8)			2-6 (5)				140	4.67
Project Coordinator	Mami Wakabayashi		8		12					10				11																										41	1.37
			24~31 (8)		~12 (12)					12~21 (10)				18~28 (11)																										41	1.37
Project Coordinator	Shinya Abe														12																									12	0.40
															11~22 (12)																									12	0.40
Project Coordinator	Ayako Yoshimitsu																		7			7	10		7		7			7			3							48	1.60
																			22~30 (9)	~1 (1)			22-31 (10)		25-31 (7)	1 (1)	3-7 (5)				29-30 (2)	-8 (8)				21-25 (5)			48	1.60
																																							Plan	1371	45.71
																																							Actual	1376	45.88

2. Activities in Domestic

Assignment	Name	2016							2017												2018												2019								
		6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7		
Team Leader	Keiko Nagai	5					3	5		5			10		5	8																								41	2.05
		21-25 (5)					25,28,29 (3)	1,2,19,20, 26 (5)		8,9,13-15 (5)			8-19 (10)		25-31 (5)	1,14,21,2 2,31 (8)																								41	2.05
Team Leader	Fude Takayoshi																			3		3			4			4		4				4			4	20	7.2	53.2	2.66
																				19-21(3)		27-28(2)	* (1)		15-18 (4)			22-25 (4)		1-4 (4)		2-8 (7)		25-28 (4)		1,5,8-12 (10)	20-24 (5)	24-27 (4)	9-16 (7.2)	55.2	2.76
Disaster Health Managemant/Regional Collaboration Tools (1)	Yasushi Nakajima		1	1	3		5	3		5	1	3		5				3		2	2	2					2	4	5								4	8		66	3.30
			4 (1)	17 (1)	7,8,9 (3)		2,3,13,19, 24(5)	22,27,28 (3)		3,14,15, 25,26(5)	6 (1)	7,13,17 (3)		25,12, 15,20(5)				4,5,26 (3)		7-8(2)	30-31 (2)	26,27 (2)			13,26 (2)	18 (1)	3,15 (2)	6,12 (2)	3, 15-20 (7)	5 (1)	27 (1)	31 (1)	1 (1)	7, 29-31 (4)	1,2,6,8 (4)	2-3,8 (3)	17 (1)		66	3.30
Capacity Development Planning (1)	Junko Sato	5					5			10	9	3		5		3		7				5	4	3			5		7	15	10			15	7			14	10	4	144	7.20
		22-24 (3)					21,22,24, 25,28 (5)			19-28(10)	1-9(9)	12-14(3)		5-9 (5)		2-4 (3)		4-8,18,19 (7)			25-29(5)	1-2,4-5 (4)	19-20,22 (3)	23-27 (3)	7-11,14,15 (7)	8,20,26 (3)	10-12,25 (6)	30-31	(12)	(7)	10, 14-20 (1)	(7)	(6)	(5)	7-9,15-17 (6)	4-8, 26 (6)	7,14,15,18 (4)	1-3 (3)	17,27-28 (3)	7, 24-26 (4)	3-5, 14 (4)	144	7.20
Regional Collaboration Tools (1)	Junko Yamada			5	5	5	5			5			5	6		10	5	2																					53	2.65
				15-19 (5)	12-16 (5)	24-28 (5)	14-18 (5)			9,10,13,14,15 (5)			15-19 (5)	19-23, 26 (6)		1-4,7-9,29-31 (10)		4,5, 20-22 (5)	13, 16 (2)																					53	2.65
Regional Collaboration Tools (2)	Yumiko Kashiba	3		5	5		5			3	3		8	2				5								5		1								4			45	2.25
		23,26-27 (3)		12,16,17,22,23 (5)	2,7,8,15 (5)		1,2,15,16, 21(5)			9,11,13 (3)	4,16,22 (3)		2,12,13,19,20,2 6,27,28 (8)	13, 17 (2)				4,4,5,24,26 (5)			17,18,24 (3)			11,12,19 (3)															45	2.25
Capacity Development Planning (2)	Takashi Senda	3								5					3	1		7		3		5						3					3				9	5		47	2.35
		21-23 (3)								17,21,25, 27,28 (5)					3, 27, 28 (3)	11 (1)		4-8,18,19 (7)	10 (1)	11 (1)		31(1)	1,9 (2)				26(1)			14-20 (7)	9 (1)	14 (1)	11,18,28 (3)	1,5 (2)	15,20,25 (3)	4,8 (2)	10,27,29 (3)			47	2.35
Regional Collaboration Drills	Masako Tani		1	1	3	4	1	2		4		2	3	2	4		1	3	3	3	3	3			2	2	3	3	3								17			73	3.65
			4 (1)	17 (1)	7,8,9 (3)	11,27-29 (4)	25 (1)	15,27 (2)		13-16(4)		19,27 (2)	15,25,30 (3)	16,19 (2)	3,6,7,28 (4)		6 (1)	10,18,19 (3)	15,16,21 (3)	10,11,23 (3)	9,10,15 (3)	9, 28 (2)	1 (1)		8-10 (3)	13,26 (2)	23-24,27 (3)	10,22,30 (3)	21,25,27 (3)	14-20 (7)	1 (1)		21,22 (2)	25,26 (2)	22,23,25 (3)	2 (1)				73	3.65
Project Coordinator	Mami Wakabayashi								5	6																														11	0.55
									9,23-26 (5)	17,20-24 (6)																																11	0.55
Project Coordinator	Shinya Abe															3			0.4																						3.4	0.17
																2,7,21 (3)			1 (0.5;0.4)																					3.4	0.17
Project Coordinator	Ayako Yoshimitsu																			5		7			5				5				3				9	17	19.8	75.8	3.79
																				18-22 (5)		1-2,7-9,28 (6)	1 (1)		7-11 (5)				20-24 (5)	18 27 (2)	14-20 (7)	26-28 (3)			12-15, 25-27 (7)	6-8 (3)	1-5,8-12 (10)	20-24,27-31 (10)	19, 24-28 (6)	16 (0. 4)	70.4	3.52

1,2,8,9,16,21, 22-24,27,29,31

12,14,18, 20,26-28 7days

9,16,19,20 ,27,28 6days

11,12,14,17,27

Sub total	Plan	612.4	30.62
	Actual	609.0	30.45
Total	Plan	1983.4	76.33
	Actual	1985.0	76.33

Attachment 8 :

Scenarios of All RCDs

Start-up Drill

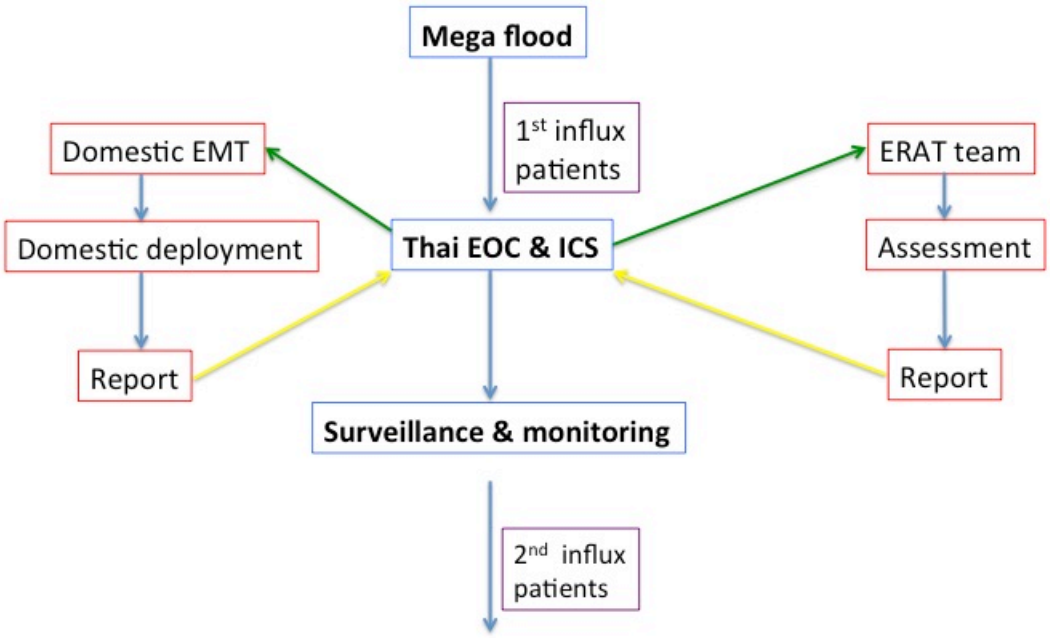
Baseline scenario for disaster drill 17 January 2017

Thailand mega-flood 2011

March 2011	Depression affected southern of Thailand, flooding in 8 Provinces, dead 13, affected people 842, 324
15 April 2011	64 dead (26 in Nakhon Srithammarach)
May to September	Flood effecting North, Northeast Dead 366, drowning 86%, electrical injury 6%

Thailand set up emergency operation center according to incident command system of DDPM. Ministry of public health set up the public health emergency operation center (PHEOC). The PHEOC requested for domestic emergency medical team (EMT) deployment from non-effected area in the south, central, east and west. Later PHEOC requested domestic EMT deployment from the other parts of Thailand.

Domestic respond and deployment



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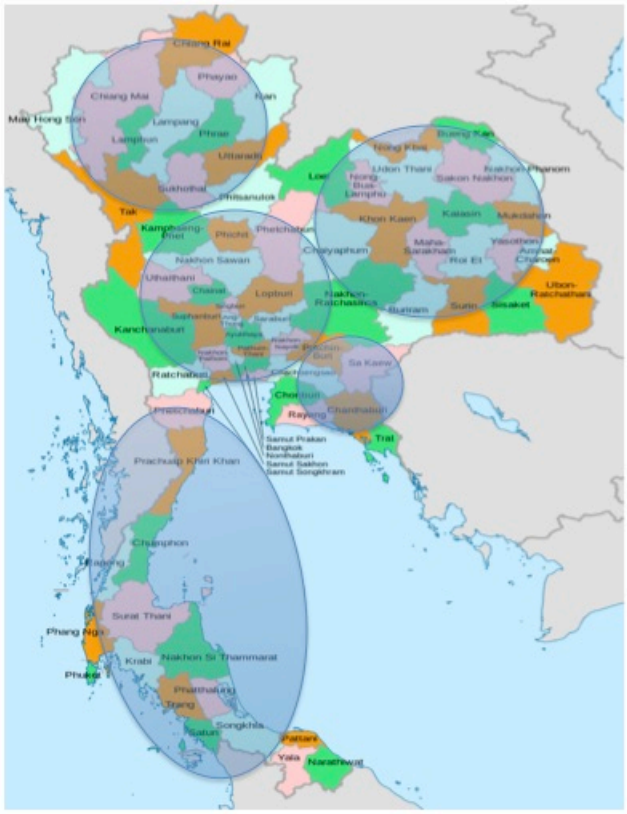
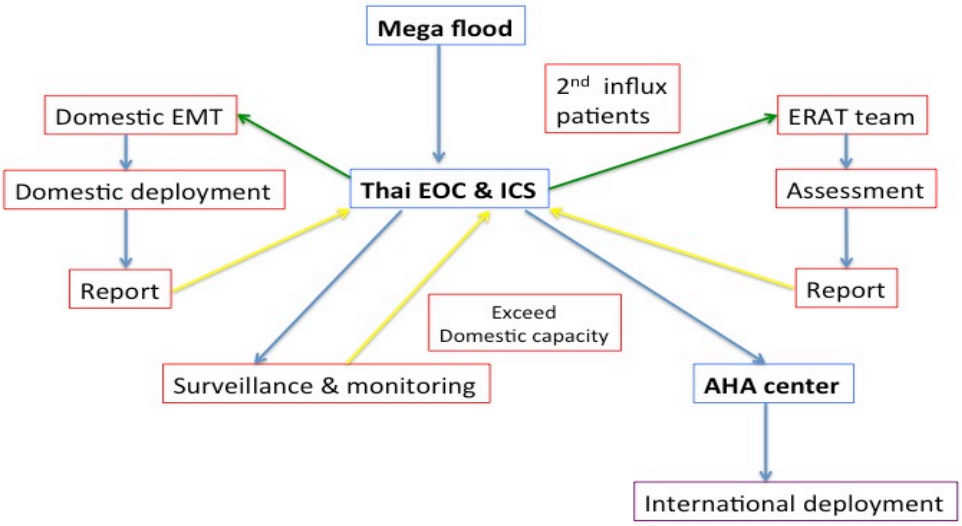
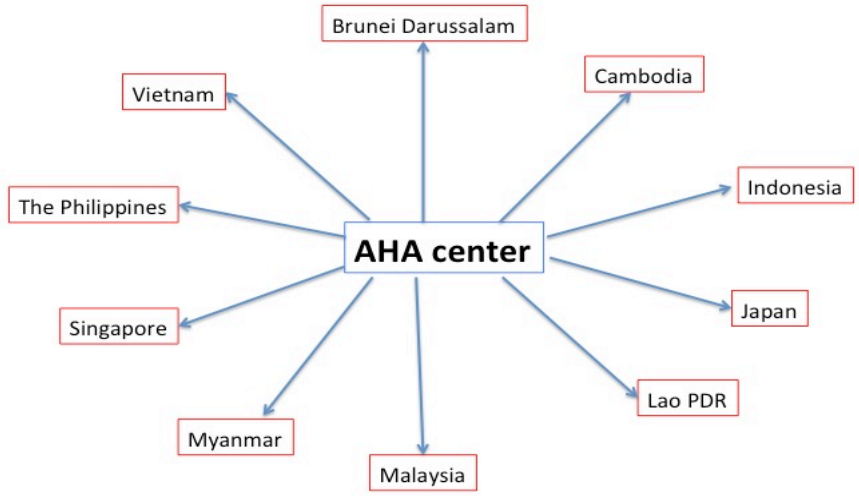
October 2011 Flooding in Northern part of Thailand down to Bangkok (most affected area) (over 65 provinces affected, 12 million population)
Dead 815, Homeless 5,388,204, Unemployed 650,000,
Economic lost 1.425 trillion baht (4th world ranking)
Duration 25-27 days, height 87-88 cm.
Inpatient bed surge capacity 1,241, Out patient mobile clinic in 53 provinces (1.3 million population)
Flooding areas involved agriculture, business and industries, ecology, service, education, health.



The Thai Department of Disaster Prevention and Mitigation (DDPM) announced level 4 disaster and exceeding domestic capacities.

Thai government by national focal point (NFP) requested international assistant to AHA center.





Some data of health problems during flooding period.

Table 1 Represent most common causes of drowning and dead (partially data)

Cause	Number
Drowning	1
Drunk	7
Boat accident	5
Swimming	5
Brian anomaly, seizure and drowning	4
Fall	3
Fishing	3
Walking through water	1
Landslide	7

Health effects from mega-flood 2011

Health divided into body, mind, social, and welfare

1. Body health
    a. Trauma
        i. Falling, drowning and near drowning
        ii. Electrical injury
        iii. Animal bite
    b. Diseases (table 2) Statistic from 5-19 October 2011
        i. Skin diseases
        ii. Respiratory diseases
        iii. Conjunctivitis
        iv. Gastroenterologic diseases

Table 2 Represent common diseases during flood

Diseases	Number	Ratio per 1000,000 population
Conjunctivitis	517	4.21
Leptospirosis	6	0.16
DHF	91	0.64
Diarrhea	3,146	22.06
Hand foot mouth	96	0.85
Flu	144	1.18
Pneumonia	649	4.43

Not include skin diseases

2. Mental health: effected 125,762 people
    i. Anxiety disorder
    ii. Depressive disorder

iii. Suicidal attempt

Table 3 Represent mental health problems

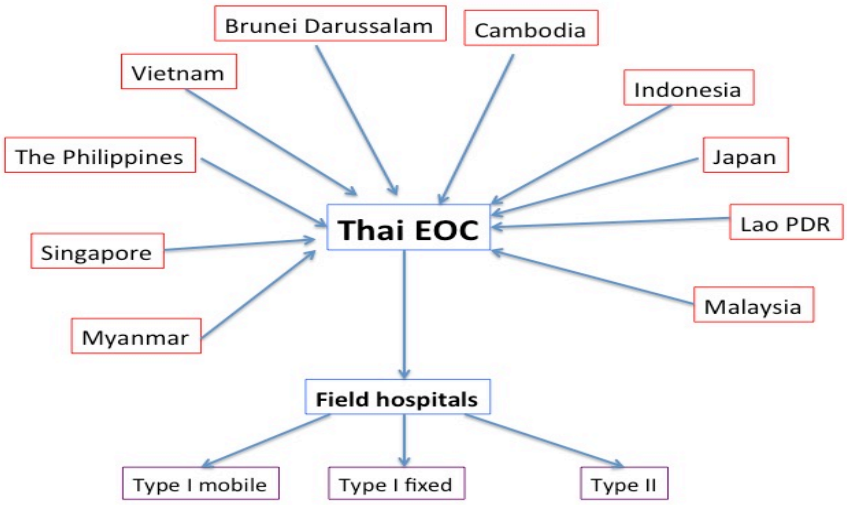
Diagnosis	Number	Percentage
Anxiety	6,985	5.75
Depression	8,698	7.15
Suicide	1,533	1.26

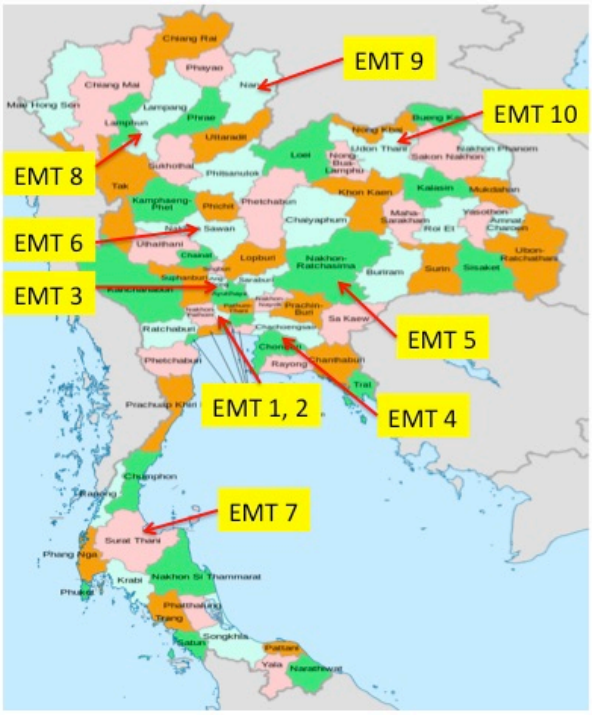
* High risk in elderly and working age group

3. Social health
    a. Structural and infrastructural damages
    b. Asset security
    c. Changing in way of living
    d. Riot
    e. Unemployed
    f. Donation
    g. Government economic policies
4. Welfare
    a. Shelter: communicable diseases (>100,000), quarantine (tuberculosis, chicken pox), inadequate sanitation
    b. Homeless

Evacuation and transportation
- Air transport 73
- Boat and ground transport 2,046

The international EMT deployed into Thailand and made registration at the airport. Then EMT went to PHEOC at Ministry of Public Health for assignment as following;





EMT 1, 2: Bangkok

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	46	DM, HT	Fever, cough 2 days	BT 38 P 100 RR 29 BP 110/70 Lung: crepitation at LLL	
2	F	14	-	Wound at foot	LW at Lt. foot 3 cm., contaminated	
3	F	6 m	-	Fever	BT 37.8 BP 70/40 P 122 RR 28 GA: active	
4	M	8	-	Rash at both legs	Erythematous rash both lower legs, itching, serum oozing	
5	M	31	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
6	F	19	-	Diarrhea	BT 37.6 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
7	M	36	Cushing	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
8	M	5	-	Diarrhea	BT 37.5 BP 90/60 P 100 RR 24 GA: active, dry lips Abd: soft, not tender	
9	F	22	Epilepsy	Refill medicine	Normal	
10	M	28	None	Fall from height	Abrasion at Lt. forearm with deformity	
11	M	32	DM	Drowsiness for 1 day	B T 37.5 BP 120/70 RR 22 P 89 GA: drowsy, respond to voice	

12	F	38	Asthma	Dyspnea and tachypnea	BT 37.4 BP 110/60 RR 36 P 120 GA: tachypnea Lung: wheezing both lungs O2 sat (RA) 86%	
13	M	12	-	Homeless	Normal	
14	F	49	-	Homeless	Normal	
15	M	52	-	Homeless	Normal	

EMT 3: Pathum Thani province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	58	DM, HT	Chest pain	BT 38 P 88 RR 29 BP 110/70 Pain score 9/10, refer to Lt. shoulder	
2	F	8	-	Wound at foot	LW at Rt. foot 2 cm., contaminated	
3	F	1	-	Fever	BT 37.8 BP 80/40 RR 22 P 110 GA: active, rhinorrhea	
4	M	48	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	24	-	Diarrhea	BT 37.6 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	F	48	SLE	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	F	22	Epilepsy	Seizure 2 min	BT 37.8 BP 110/70 P 110 RR 26 GA: good consciousness N/S: no neurological deficit	
8	M	35	None	Fall from height	Abrasion and contusion at Rt. chest	
9	F	65	COPD	Dyspnea and tachypnea	BT 37.4 BP 110/60 RR 36 P 120 GA: tachypnea Lung: wheezing both lungs O2 sat (RA) 86%	
10	M	72	-	Homeless	Normal	

EMT 4: Chonburi province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	62		Near-drowning	BT 36.7 P 90 RR 24 BP 100/70 GA: drownsy Lung fine crep both LL	
2	F	16	-	Electrical injury	BT 37.8 RR 24 P 100 BP 110/70 GA: active Rt. Hand: burn 2nd degree 2%	
3	F	23	-	Fever	BT 37.8 BP 80/40 RR 22 P 110 GA: active, rhinorrhea HEENT: injected tonsils	
4	M	32	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	54	-	Diarrhea	BT 38.2 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	M	19	-	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26	

					GA: active, dry lips Abd: mild tender no guarding	
7	M	22	Hemophilia A	Rt. Elbow swelling	BT 37.8 BP 110/70 P 110 RR 26 GA: good consciousness Rt. Elbow swelling Pain 8/10	
8	M	42	HT	Fall from height	Abrasion and contusion at forehead GA: good consciousness	
9	F	90	Stroke, bed ridden	Left in house	BT 37.6 BP 110/60 RR 24 P 80 GA: semi-consciousness, bed ridden Skin: Bed sore at both thigh	
10	M	8	-	Seeking for parent	Normal, crying	

EMT 5: Nakhon Ratchasima province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	54	COPD, DM, HT	Dyspnea	BT 38.5 P 100 RR 34 BP 100/70 GA: dyspnea Lung crep both LL	
2	F	12	-	Electrical injury	BT 37.8 RR 24 P 100 BP 110/70 GA: active Rt. Hand: burn 2nd degree 2%	
3	F	26	-	Electrical injury	BT 37.8 BP 80/40 RR 22 P 110 GA: active Both hand: 2nd degree burn 5%	
4	M	43	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	17	-	Diarrhea	BT 38.2 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	M	22	-	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	M	15	-	Diarrhea	BT 37.8 BP 110/70 P 110 RR 26 GA: active, dry lips Abd: soft mild tender	
8	M	42	HT	Fall from height	Abrasion and contusion at Rt. knee GA: good consciousness Rt. Knee: swelling, tender	
9	F	38	-	Fall from height	BT 37.6 BP 110/60 RR 24 P 80 GA: active Back: tender at L2 spine	
10	M	35	-	Homeless	Normal	

EMT 6: Nakhon Sawan province

Pt	Sex	Age	U/D	CC	PE	Remark
1	F	14	-	Wound at foot	LW at Lt. foot 3 cm., contaminated	
2	M	31	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
3	F	19	-	Diarrhea	BT 37.6 BP 110/70 P 90 RR 22	

					GA: active, dry lips Abd: mild tender no guarding	
4	M	36	Cushing	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
5	F	22	Epilepsy	Refill medicine	Normal	
6	M	28	None	Fall from height	Abrasion at Lt. forearm with deformity	
7	M	32	DM	Drowsiness for 1 day	B T 37.5 BP 120/70 RR 22 P 89 GA: drowsy, respond to voice	
8	F	38	Asthma	Dyspnea and tachypnea	BT 37.4 BP 110/60 RR 36 P 120 GA: tachypnea Lung: wheezing both lungs O2 sat (RA) 86%	
9	M	12	-	Homeless	Normal	
10	F	49	-	Homeless	Normal	

EMT 7: Surat Thani province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	58	DM, HT	Chest pain	BT 38 P 88 RR 29 BP 110/70 Pain score 9/10, refer to Lt. shoulder	
2	F	8	-	Wound at foot	LW at Rt. foot 2 cm., contaminated	
3	F	1	-	Fever	BT 37.8 BP 80/40 RR 22 P 110 GA: active, rhinorrhea	
4	M	48	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	24	-	Diarrhea	BT 37.6 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	F	48	SLE	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	F	22	Epilepsy	Seizure 2 min	BT 37.8 BP 110/70 P 110 RR 26 GA: good consciousness N/S: no neurological deficit	
8	M	35	None	Fall from height	Abrasion and contusion at Rt. chest	
9	F	65	COPD	Dyspnea and tachypnea	BT 37.4 BP 110/60 RR 36 P 120 GA: tachypnea Lung: wheezing both lungs O2 sat (RA) 86%	
10	M	72	-	Homeless	Normal	

EMT 8: Lampang province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	62		Near-drowning	BT 36.7 P 90 RR 24 BP 100/70 GA: drownsy Lung fine crep both LL	
2	F	16	-	Electrical injury	BT 37.8 RR 24 P 100 BP 110/70 GA: active Rt. Hand: burn 2nd degree 2%	
3	F	23	-	Fever	BT 37.8 BP 80/40 RR 22 P 110	

					GA: active, rhinorrhea HEENT: injected tonsils	
4	M	32	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	54	-	Diarrhea	BT 38.2 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	M	19	-	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	M	22	Hemophilia A	Rt. Elbow swelling	BT 37.8 BP 110/70 P 110 RR 26 GA: good consciousness Rt. Elbow swelling Pain 8/10	
8	M	42	HT	Fall from height	Abrasion and contusion at forehead GA: good consciousness	
9	F	90	Stroke, bed ridden	Left in house	BT 37.6 BP 110/60 RR 24 P 80 GA: semi-consciousness, bed ridden Skin: Bed sore at both thigh	
10	M	8	-	Seeking for parent	Normal, crying	

EMT 9: Nan province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	54	COPD, DM, HT	Dyspnea	BT 38.5 P 100 RR 34 BP 100/70 GA: dyspnea Lung crep both LL	
2	F	12	-	Electrical injury	BT 37.8 RR 24 P 100 BP 110/70 GA: active Rt. Hand: burn 2nd degree 2%	
3	F	26	-	Electrical injury	BT 37.8 BP 80/40 RR 22 P 110 GA: active Both hand: 2nd degree burn 5%	
4	M	43	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	17	-	Diarrhea	BT 38.2 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	M	22	-	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	M	15	-	Diarrhea	BT 37.8 BP 110/70 P 110 RR 26 GA: active, dry lips Abd: soft mild tender	
8	M	42	HT	Fall from height	Abrasion and contusion at Rt. knee GA: good consciousness Rt. Knee: swelling, tender	
9	F	38	-	Fall from height	BT 37.6 BP 110/60 RR 24 P 80 GA: active Back: tender at L2 spine	
10	M	35	-	Homeless	Normal	

EMT 10: Udon Thani province

Pt	Sex	Age	U/D	CC	PE	Remark
1	M	58	DM, HT	Chest pain	BT 38 P 88 RR 29 BP 110/70 Pain score 9/10, refer to Lt. shoulder	
2	F	8	-	Wound at foot	LW at Rt. foot 2 cm., contaminated	
3	F	1	-	Fever	BT 37.8 BP 80/40 RR 22 P 110 GA: active, rhinorrhea	
4	M	48	-	Fever, Malaise, Muscle pain	BT 38.4 P 110 R 28 BP 100/70 Jaundice, Pain at both lower ext	
5	F	24	-	Diarrhea	BT 37.6 BP 110/70 P 90 RR 22 GA: active, dry lips Abd: mild tender no guarding	
6	F	48	SLE	Diarrhea	BT 38.0 BP 90/60 P 90 RR 26 GA: active, dry lips Abd: mild tender no guarding	
7	F	22	Epilepsy	Seizure 2 min	BT 37.8 BP 110/70 P 110 RR 26 GA: good consciousness N/S: no neurological deficit	
8	M	35	None	Fall from height	Abrasion and contusion at Rt. chest	
9	F	65	COPD	Dyspnea and tachypnea	BT 37.4 BP 110/60 RR 36 P 120 GA: tachypnea Lung: wheezing both lungs O2 sat (RA) 86%	
10	M	72	-	Homeless	Normal	

1st Regional Collaboration Drill

Baseline scenario for 1st Regional Collaboration Drill (17 July 2017) (V.4)

2004 Tsunami in Thailand

26 December 2004

On the early morning of December 26, 2004 (07:58 local time), a 9.3 magnitude earthquake was recorded off northern Sumatra. According to reports, the epicenter of the earthquake was located approximately 250 kilometers south-southeast of Aceh Province, northern Sumatra of Indonesia [1], causing ruptures in the Andaman-Sunda trench. The ruptures initiated a complex series of waves across the entire Indian Ocean and resulting in a form of *tsunami*.

Map of Indian Ocean areas affected by tsunami in 2004
(Source: http://www.bbc.co.uk/schools/gcsebitesize/geography/natural_hazards/tsunamis_rev2.shtml)

Thailand is not located in the direct line of the seismic waves; still, tremors were felt in many areas of the country, including the capital-Bangkok. People in high-rise buildings could feel the shakes and some even had nausea[2]. When the waves finally reached the country, six provinces on the south-western coast were hit, including the provinces of **Ranong, Phang Nga, Phuket, Krabi, Trang,** and **Satun.**

Map of the six provinces of Thailand affected by tsunami in 2004
(Source: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5403a1.htm)

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[1] Ioualalen, M., J. Asavanant, N. Kaewbanjak, S. T. Grilli, J. T. Kirby, and P. Watts (2007), Modeling the 26 December 2004 Indian Ocean tsunami: Case study of impact in Thailand, J. Geophys. Res., 112, C07024, doi:10.1029/2006JC003850.

[2] Department of Mineral Resources, เหตุการณ์เกิดคลื่นยักษ์ "สึนามิ" จากแผ่นดินไหว 9 ริกเตอร์ เมื่อวันที่ 26 ธันวาคม 2547, (Retrieved from www.dmr.go.th/download/tsunami_manual/005.pdf).

Situation report:

Phang Nga, especially in the Khao Lak area, suffered the most from the Tsunami in 2004. The second area reported of being most destructed by the waves was **Krabi**. The island of Phi Phi of Krabi was reported as seriously destroyed. The third area most destructed by the waves was **Phuket**. Kamala and Patong beaches were reported of being affected by the waves.

Initial health situation report:

In Phang Nga, local hospital has reported an intake of 986 patients[3].
Six Public Health Centres (PHCs) in Ranong and Phang Nga[4] were reported of being seriously damaged, while three PHCs were heavily damaged in Phuket and Krabi[5].

Pictures of the destruction caused by 2004 Tsunami

Destruction of tsunami wave in Phi Phi Village
(Source: http://www.abc.net.au/news/2014-12-24/
boxing-day-tsunami-then-now-photos/5875900)

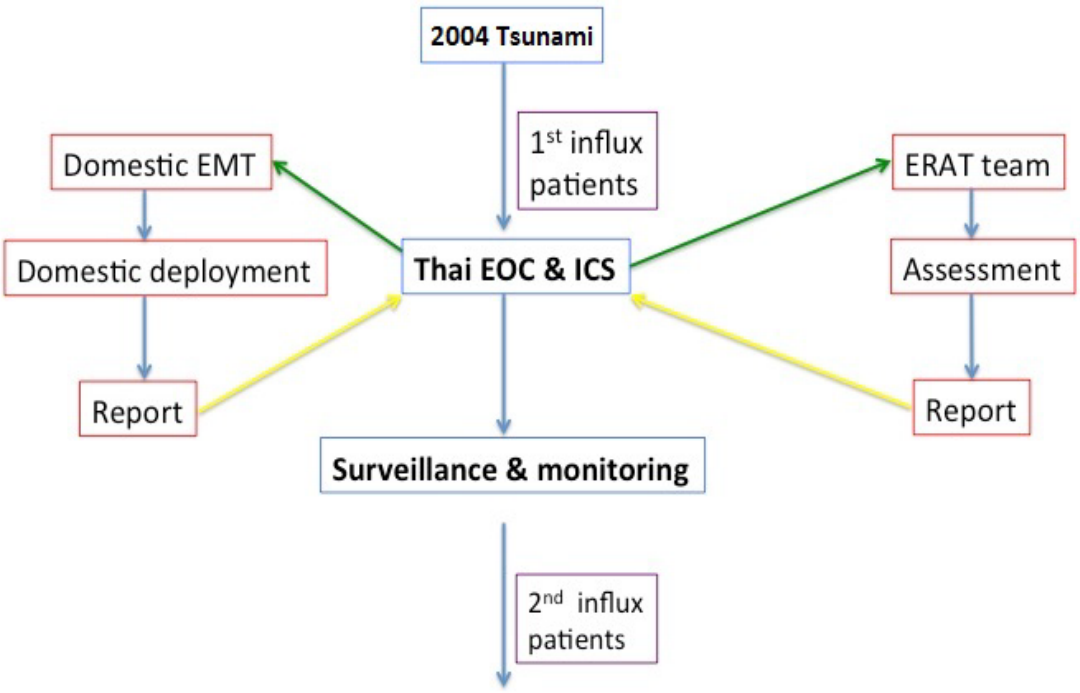
[3] Carballo, M., Daita, S., and M. Hernandez, Impact of the Tsunami on healthcare systems, doi: 10.1258/jrsm.98.9.390.
[4] ibid.
[5] ibid.

Destruction of tsunami waves in 2004
(Source: http://www.bbc.com/news/uk-30537152)

Destruction of tsunami waves in 2004
(Source: http://www.indiatimes.com/news/400-bodies-in-thailand-still-remain-unidentified-12-years-after-2004-tsunami-268256.html)

26 December 2004 **<u>Thai Government's Responses:</u>**

- Thai government set up the **Emergency Operation Center** (EOC) according to **the Incident Command System (ICS)** of DDPM.
- Ministry of Public Health (MOPH) set up the **National Public Health Emergency Operation Center** (nPHEOC) to do supporting functions in the EOC.
- The nPHEOC set up the **Regional Public Health Emergency Operation Center (rPHEOC)** and **Provincial Public Health Emergency Operation Center** (pPHEOC) to be command centers in each affected province.
- The nPHEOC requested for the deployment of domestic Emergency Medical Team (EMT) from non-affected area to the disaster site.
- **Emergency Medical Team Coordination Cell** (EMTCC) was set up to coordinate all deployed EMTs.
- Deployments of EMTs include:
    - 100 teams for emergency clinical care,
    - 12 teams for technical support and health education,
    - 5 teams for active surveillance and investigating outbreaks,
    - 6 teams providing mental health support[6].
    - The first team from Bangkok arrived on December 26.



[6] Centers for Disease Control and Prevention (CDC), Rapid Health Response, Assessment, and Surveillance After a Tsunami --- Thailand, 2004—2005, (Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5403a1.htm).

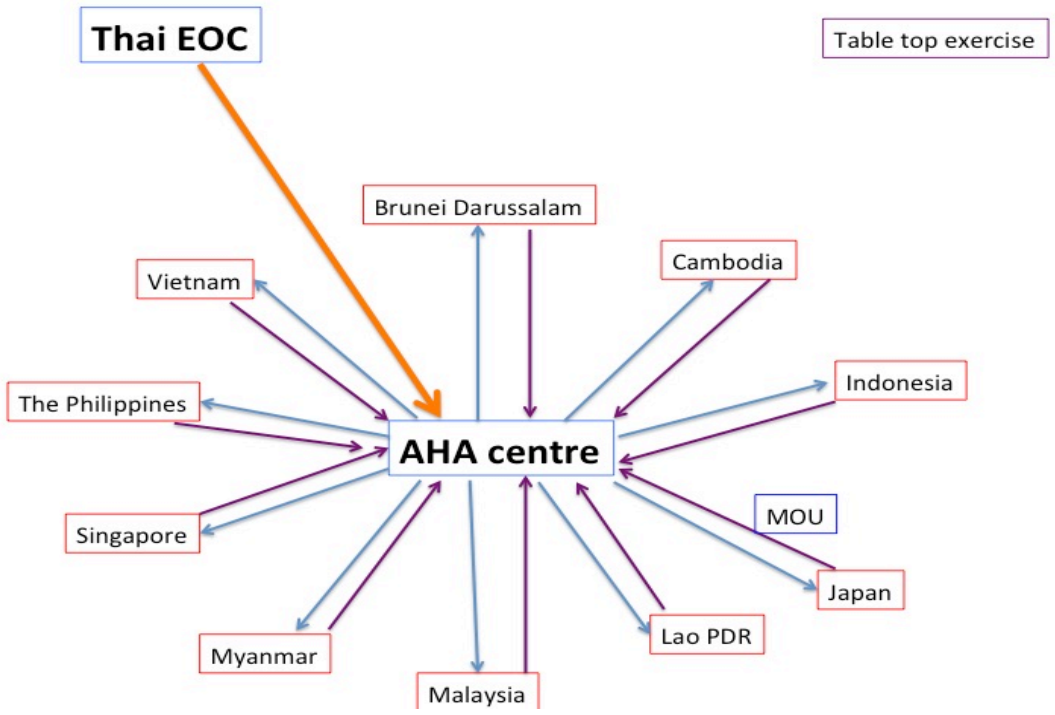
27-28 December 2004

Health situation Report:

- Main causes of death in Phang Nga:
  - Drowning due to currents of the waves
  - Multiple trauma from the impact of the waves
- District hospitals were overwhelmed.
- District hospitals had to do patient referrals to provincial hospitals.
- Some patients were transferred to Phuket since there were several private and government health care facilities that can accommodate a larger number of patients.
- Immediate medical services such as treatment for trauma and other life-saving activities had been performed.

Thai Government's Responses:

- Thailand's Department of Disaster Prevention and Mitigation (DDPM) announced level 4 disaster and announced that the situation is exceeding domestic capacities.
- **Thai government by national focal point (NFP) requested international assistant to AHA center.**



Data of health-related problems during 2004 Tsunami in Thailand

The Ministry of Interior reported that there were 5,395 deaths among the victims of the tsunami, 8,457 cases of injuries and 3,001 persons are reported missing from the 2004 Tsunami in Thailand.

Table 1 Numbers of deaths, injured and missing persons in Thailand during 2004 Tsunami as of (15 February 2005)

Nationality	Confirmed Dead	Injured	Reported Missing
Thai	1,897	8,457	2,039
Foreigner	1,953		962
Unidentified	1,545		-
Total	5,395		3,001

(Modified from: Thailand Post Rapid Assessment Report: December 26th, 2004 Tsunami (Asian Disaster-Preparedness Centre (ADPC))

Patient status

There had been 10,000 patients being recorded within the affected areas during the two-week period after the Tsunami. Of the ten thousand cases, 2,233 cases required hospital admission, while 1,254 cases needed major surgical procedures. Lastly, 398 cases had to be placed in intensive care.

Table 2 Numbers of overall recorded patients, patients needed admitted; to be in surgery and to be in intensive care

Category	Numbers of patients
Overall Recorded patients	10,000
Need hospital admission	2,233
Need surgery	1,254
Need to be in intensive care	398

(Modified from: Rapid Health Response, Assessment, and Surveillance After a Tsunami --Thailand, 2004—2005, (CDC))

Ailment status

Table 3 Common ailments found during the 2004 Tsunami in Thailand

Ailments	Reported cases	Number of deaths
Acute diarrhea	1,237	No Data
Wound Infections	356	No Data
Febrile illness	177	No Data
Respiratory illness	156 (six cases of pneumonia)	2 (pneumonia)

(Source: Ministry of Public Health; World Health Organization representative to Thailand; Thai Ministry of Health--US CDC Collaboration, Nonthaburi; Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand.)

Mental Health Status

There had been numbers of victims who were suffering from mental illness after encountering the disaster and its consequences. Records shows that during the early week of the disaster, there are 18,402 cases of patients who needed psychological advices and therapies.

Table 4 Number of cases seeking psychological treatment

Province	Number of cases	Types of treatment		
		Therapy with medicine	Psychological advice	Health check
Phang Nga	9,336	2,931	9,354	2,821
Krabi	3664	839	3,799	1,114
Phuket	2600	634	2,669	883
Ranong	1,484	178	1,364	316
Satun	704	273	226	458
Trang	614	6	594	156
Total	18,402	4,861	18,006	5,698

(Modified from สึนามิ : การตายและบาดแผลจากพื้นที่ (พิมลพรรณ อิศรภักดี))

Common cases of mental illnesses in tsunami victims were **Post Traumatic Stress Disorder** (PTSD) and **depression**[7].

Post Traumatic Stress Disorder (PTSD)

- Phang Nga:
  - 12 percent of the victims living in the shelter suffer from PTSD
  - 7 percent of the victims living in the community suffer from PTSD
- Krabi and Phuket:
  - 3 percent of the victims living in the community suffer from PTSD

Depression

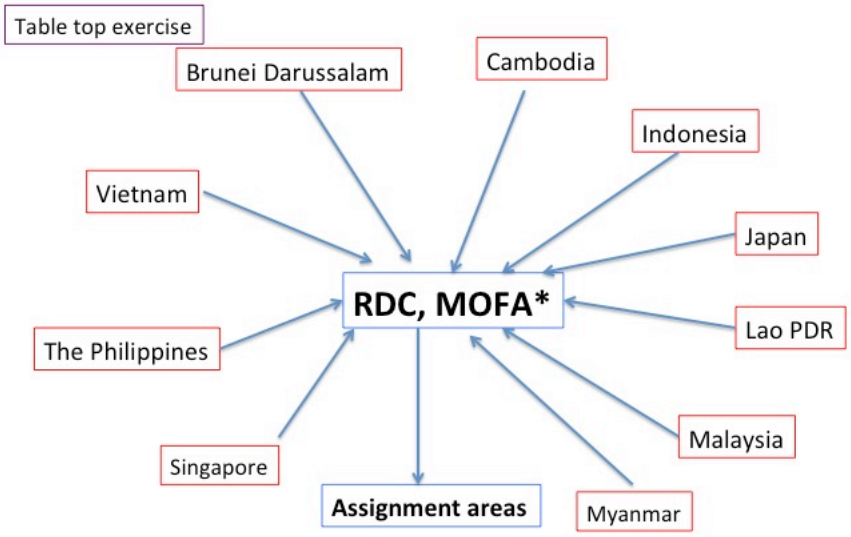
- Phang Nga:
  - 30 percent of the victims living in shelter suffer from depression
  - 20 percent of the victims live in the community suffer from depression
- Krabi and Phuket:
  - 10 percent of the victims living in the community suffer from depression

[7] พิมลพรรณ อิศรภักดี, สึนามิ : การตายและบาดแผลจากพื้นที่,
(Retrieved from www.ipsr.mahidol.ac.th/IPSR/AnnualConference/ConferenceII/Article/Article06.htm)

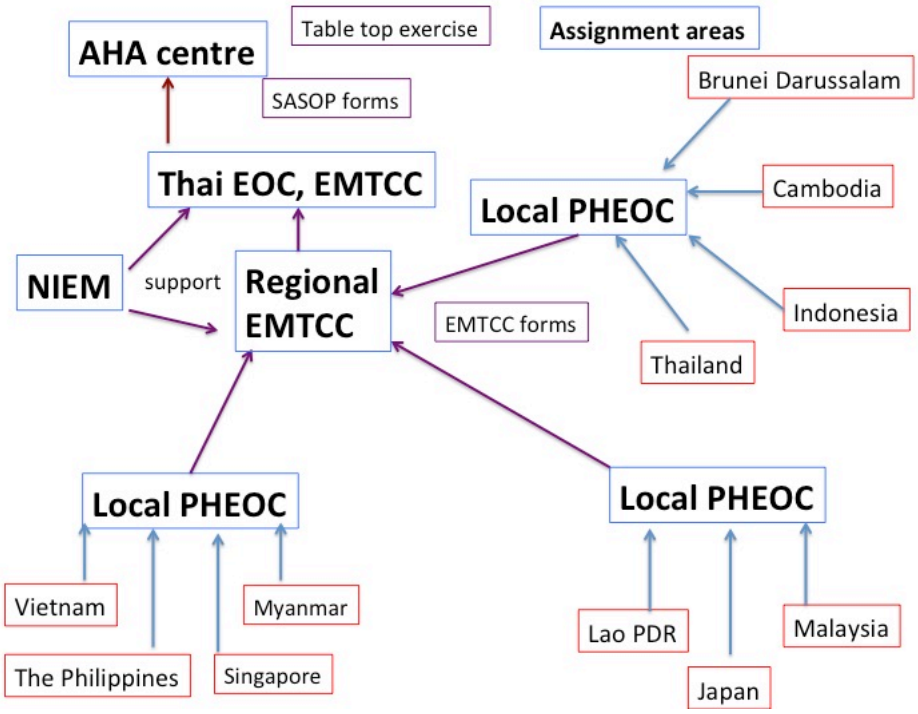
29 December 2004

International Responses:

- The international EMTs have been deployed into Thailand and they have completed the registration process at the airport.
- RDC at the airport gave the international EMTs their assignment, then the EMTs went to pPHEOC located in the affected areas as the following;



*Immigration processes and assignment
RDC: Reception and Departure Center, MOFA: Ministry of Foreign Affair



International Responses (Continued):

- The international EMTs did the registration at the provincial PHEOC to receive their assignment in the affected areas.
- Each EMTs took care of the patients in each affected province through the coordination with pPHEOC.
- The pPHEOC coordinated with the rPHEOC and national EMTCC by completing forms (e.g. Daily Report, Health Need Assessment Report).
- Each EMT stationed for 1 week duration. The task for each EMT would depend on their capabilities. Some EMTs will work with others as one team, while some might be working as a coordinate team.
- Each EMTs will do Health Need Assessment at the villages, performing outpatient clinic, performing emergency care and operating procedures according to their type of capabilities and facilities.

Guidelines for International Deployment of EMTs in 2004 Tsunami

1. The International EMTs are required to submit the WHO registration form to Thai government before their deployment. Any EMT who do not submit those form in time may encounter the delay in their deployment.
2. The EMTs will submit the registration form to RDC (representative of Thai EOC) at the airport at the time of their arrival (if not submit it before their departure). Then, this registration form will be sent to any provincial PHEOC upon their assignment.
3. The EMTs will receive their tasks from provincial PHEOC.
4. The EMTs will be mixed as one team or coordinate with others according to their actual capabilities
5. The EMTs will attend daily meeting at pPHEOC and they will be required to send daily report upon schedule for each pPHEOC.
6. The EMTs will use EMTCC forms to coordinate with others and pPHEOC.
7. The EMTs will work for 1 week duration then they are needed to submit final report before leaving the affected province
8. The pPHEOC will coordinate with regional PHEOC and national EOC via EMTCC function in the national PHEOC.
9. National focal point in the national EOC will coordinate with AHA Centre by using SASOP forms.
10. Each EMT is required to submit exit form of SASOP after finishing their task and after leaving the affected country as soon as possible.

2nd Regional Collaboration Drill

MINISTRY OF HEALTH

SCENARIO AND PLAN FOR
REGIONAL COLLABORATION DRILL
(Draft)

Hanoi, January 2018

TABLE OF CONTENTS

PART I. SCENARIO AND RESPONSE MODEL

1.1. Hypothetical situation

On date N, a typhoon enters the South China Sea with winds of 200 km/h, directly striking provinces in the south central coast of Vietnam including Thua Thien Hue, Da Nang, Quang Nam and Quang Ngai, with serious damage caused to areas attacked by the epicenter of the typhoon - especially Da Nang and Quang Nam provinces.

Map 1. Movement of the typhoon and affected provinces

Beside the damage caused by strong winds such as fallen trees, destroyed houses and construction works, the typhoon also raises the sea level, breaks moles, causes floods and landslides, which isolate the affected residence areas.

1.2. Initial health situation report

In Da Nang city, according to a rapid report by the Department of Health (DOH), there are approximately 300 people dead and missing, 450 people injured, 6 residence areas isolated where the number of casualties and the needs for medical support are unknown. The most affected district is Son Tra with an estimate of 150 people dead and missing, 300 people injured and 3 residence areas isolated where damage and the needs for medical support are unknown. Commune health stations, the district hospital and district health center are also damaged seriously and nearly completely destroyed.

Photo 1. The district hospital is no longer operational after the typhoon

(Source: https://baomoi.com/ha-tinh-10-benh-vien-bi-thiet-hai-nang-do-bao-so-10-gay-ra/c/23304044.epi)

In Quang Nam province, according to a rapid report by the DOH, there are approximately 200 people dead and missing, 350 people injured, 3 residence areas isolated where the number of casualties is unknown. The most affected city is Hoi An with an estimate of 100 people dead and missing, 200 people injured and 3 residence areas isolated All health facilities in Hoi An city are seriously damaged, most medical equipment is broken and no longer operational.

Photo 2. Hospital facilities are seriously damaged by the typhoon

(Source: https://baomoi.com/ha-tinh-10-benh-vien-bi-thiet-hai-nang-do-bao-so-10-gay-ra/c/23304044.epi)

- Thua Thien Hue and Quang Ngai provinces are less affected, with their health facilities being still operational.

1.3. Vietnamese Government's responses

- Mobilization of resources for responses before, during and after the typhoon
- The Central Steering Committee for Natural Disaster Prevention and Control, Vietnam National Search & Rescue Committee (VINASARCOM) direct relevant Provincial Steering

Committees for Search and Rescue to mobilize resources to prepare for the respond to and the overcoming of consequences of the typhoon.

- Establishment of a Regional Emergency Operation Center (EOC) in Da Nang city to coordinate military, public security, health, fire fighting, etc. forces in overcoming the consequences.
- Activation of local EOCs, which include Public Health Emergency Operation Centers (PHEOCs), in provinces affected by the typhoon (Thua Thien Hue, Da Nang, Quang Nam, Quang Ngai)
- The Ministry of Health (MOH) appoints its staff to join the Regional EOC and activates the National Public Health Emergency Operation Centers (nPHEOC) under the Ministry.

1.4. Health situation report on the second day of the typhoon

- Major causes of death: drowning, combined injuries
- High prevalence of psychological disorders in the community: panic, depression, etc.
- Health facilities at district/city level are overloaded, unable to deliver medical techniques due to inadequate equipment or serious infrastructure damage.
-

Table 1. Health needs of provinces

Provinces	# patients admitted to hospital	# patients in need of surgeries	# patients in need of emergency treatment	# patients in need of psychological support
Thua Thien Hue	1250	650	120	2200
Da Nang	5500	2100	950	8500
Quang Nam	2100	910	510	3200
Quang Ngai	1250	320	120	1250
Total	9100	3980	1600	15150

- The needs for healthcare is increased due to the big number of casualties and newly emerging diseases (e.g. diarrhea, epidemic fever, etc.). It is necessary to assess and meet the health needs of isolated residence areas, especially those in Da Nang city and Quang Nam province which are the most affected as they are struck by the epicenter of the typhoon.
- The MOH mobilizes the health workers of 10 central/regional hospitals, 15 provincial hospitals and 6 preventive medicine centers to support local ones to care for and treat victims with injuries and diseases, provide psychosocial support, health education and prevention of epidemics.
- Number of medical supporting teams: 50 outreach emergency teams, 6 preventive medicine teams and 10 psychological support and health education teams.

- The MOH assesses this typhoon as a Category-IV Disaster and requests the Government to call for international assistance to address its consequences in Da Nang and Quang Nam.

1.5. Vietnamese Government's direction and ASEAN's actions

- The Vietnamese Government calls for assistance from ASEAN countries: the Ministry of Foreign Affairs (MOFA) contacts the AHA Center.
- At the request of the MOH and MOFA, the Government has agreed to receive medicine and medical equipment brought by International Emergency Medical Teams (I-EMTs) in the form of temporary import for re-export.

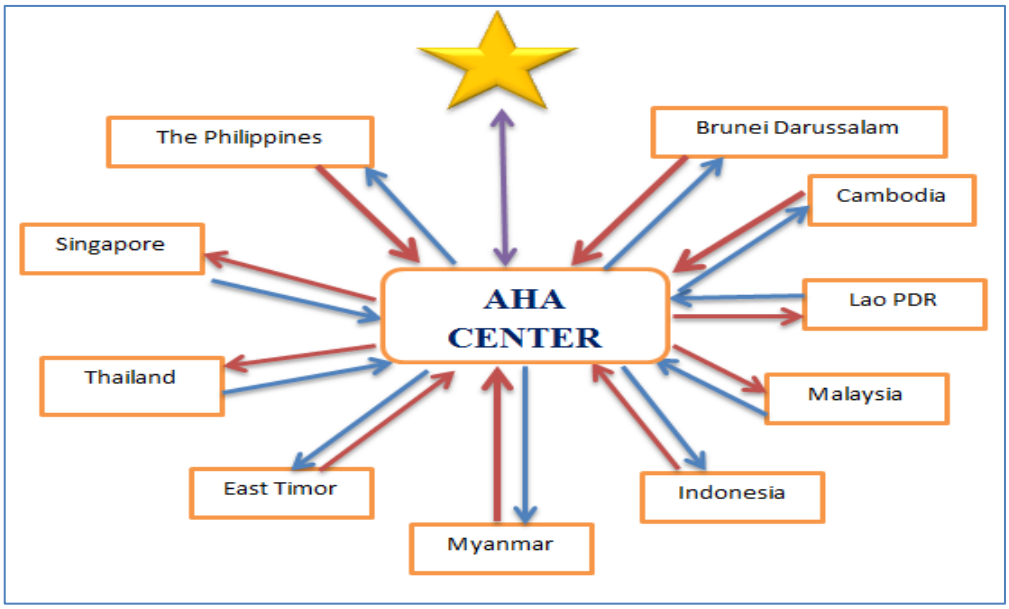


Figure 1. Coordination of the AHA Center

- Under the coordination of the AHA Center and upon the agreement on diplomatic, medical and logistic procedures with the Vietnamese Government, the AHA Center sends experts to help with the direction and requests ASEAN countries to send forces to support Vietnam.
- ASEAN countries send 10 I-EMTs by air to Vietnam.

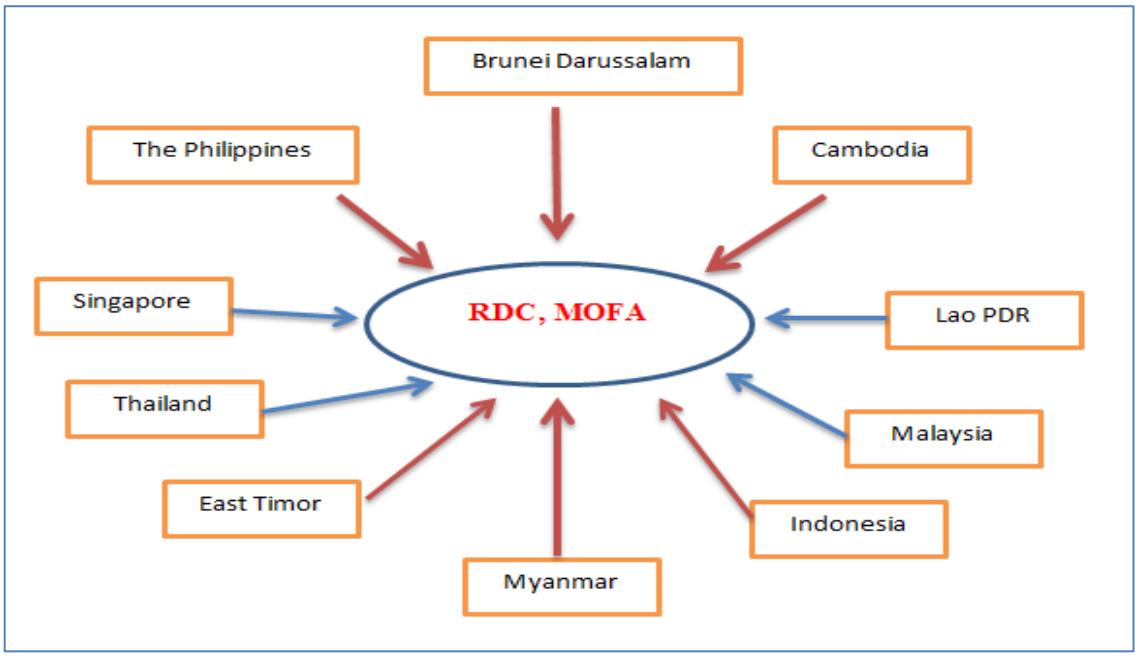


Figure 2. Customs procedures at airport

*(*RDC: Reception and Departure Center)*

- At Da Nang International Airport (substitute airports: Chu Lai Airport in Quang Nam, Phu Bai Airport in Hue city), Vietnam has arranged staff to assist with customs procedures, receive medical equipment and transport them to needy areas in Da Nang city and Quang Nam province.

1.6. Coordination of I-EMTs in Vietnam

- RDC:
  + Based in Da Nang International Airport (substitute airports: Chu Lai and Phu Bai)
  + Composition: DOH staff, Da Nang Airport security force, Da Nang customs office

- I-EMTs:

  + 10 I-EMTs are sent to Quang Nam and Da Nang
  + Each I-EMT is in charge of healthcare in one district
  + I-EMTs are directly directed by PHEOC1 and PHEOC2 under the management of the Regional Public Health Emergency Operation Center (rPHEOC).
- rPHEOC:
  + Based in Da Nang city and is a part of the Regional EOC
  + Composition: MOH leaders, AHA Center expert; leaders of Quang Nam and Da Nang DOHs, local health experts.

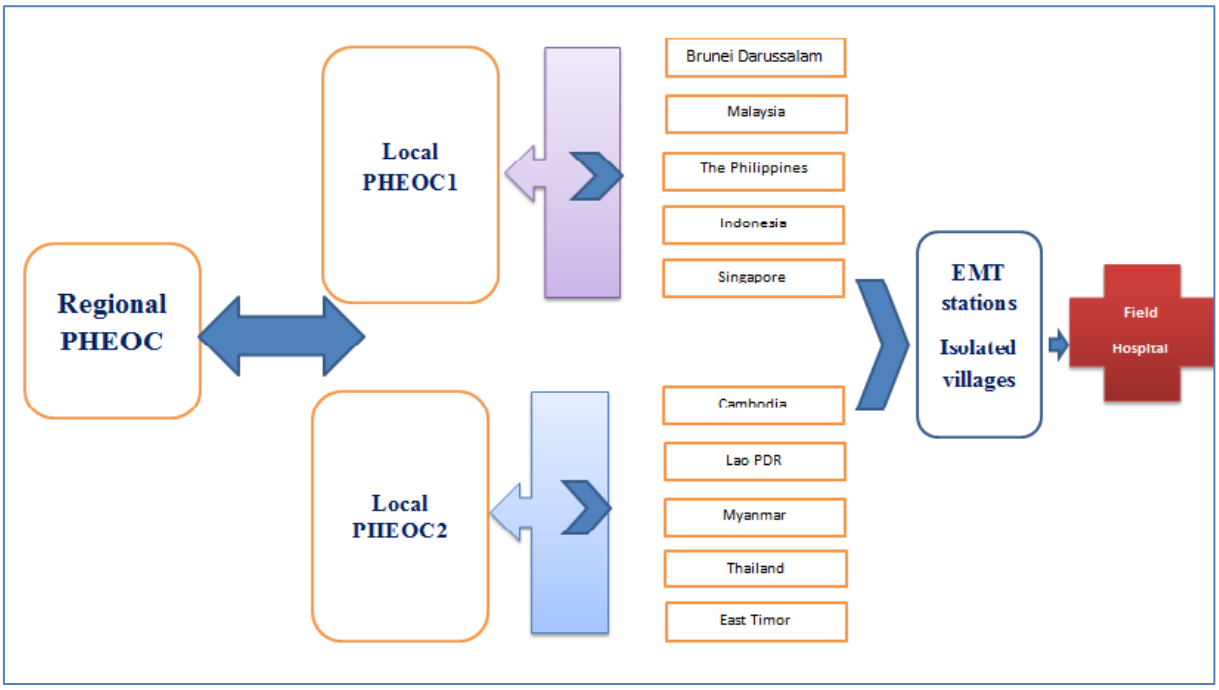


Figure 3. Operation of PHEOCs

- pPHEOCs:
  - + Based in Son Tra district, Da Nang city (PHEOC1) and Hoi An city, Quang Nam province (PHEOC2)
  - + Composition: AHA Center experts; staff of Da Nang or Quang Nam DOH, technical and support staff.

PART II. DRILL PLAN

2.1. Objectives of the drill

- **Overall objective:** to enhance the capacity of coordination and mobilization of resources in the region and in each ASEAN country for quick and effective medical response to disasters on the principle of "**ONE ASEAN ONE RESPONSE**"
- **Specific objectives**

- To deploy the EOC
- To check the relevance of healthcare forms and assess the health needs in disasters
- For international teams to practice the plan on medical support and health needs assessment in Vietnam.

2.2. Scope of the drill: medical response on land, overcoming of the consequences of the typhoon in Da Nang and Quang Nam.

2.3. Contents of the drill

2.3.1. Tabletop exercise

- Activities of the RDC:
  + Support for I - EMTs to enter Vietnam
  + Support for I – EMTs to exit Vietnam
- Familiarization to and practice of filling in the forms (12 forms)

2.3.2. Field exercise

- Direction of rPHEOC and pPHEOCs: 1 rPHEOC, 2 pPHEOCs
- Practice of classification, emergency and referral of victims in health stations by I–EMTs: 12 health stations for 90 assumed victims
- Practice of health needs assessment in isolated residence areas: 2 villages

2.4. Participants in the drill

- From ASEAN countries: 9 I–EMTs, 3 AHA Center experts on EOC direction (from Thailand)
- From Japan: 1 I–EMT (to replace the one from Timor Leste)
- From Vietnam: 2 I–EMTs, 1 RDC, 3 PHEOCs (1 rPHEOC and 2 pPHEOCs)

2.5. Time and locations of the drill

2.5.1. Time

- 1 day for tabletop exercise
  + RDC: 10.00 – 10.30, 26 March 2018
  + Forms: 13.15 – 15.00, 26 March 2018
- 1 day for Field exercise: 8.30 – 16.30, 27 March 2018

2.5.2. Locations

- Location of the RDC: meeting room of Grand Tourane hotel, Son Tra district, Da Nang city
- Location for Field exercise: Hoa Xuan stadium, Da Nang

+ Address: Hoa Xuan ward, Cam Le district, Da Nang city
+ Area of the stadium: 66,530m^2

Photo 3. Panorama of Hoa Xuan stadium

- Locations of rPHEOC and pPHEOCs: 3 meeting rooms on the first floor of the stadium, the rPHEOC is connected to the 2 pPHEOCs. Each of the pPHEOC is connected to 6 I-EMTs in the same province (Da Nang and Quang Nam)
- Area for gathering assumed victims: outside the stadium
- Areas for establishment of emergency station: 12 tents (Station 1-12) are to be set up and assumed as health stations of 12 I-EMTs (including 2 from Vietnam) in Da Nang (6 stations) and Quang Nam (6 stations) along the 3 sides of the stadium (except for the area along Stand A).

Figure 4. Arrangements for full scale drill

- Locations of isolated villages: outside, about 100m from the entrance, 2 villages are arranged in 2 different areas.
- Parking lot of ambulances: outside the stadium
- Entrance/exit of ambulances: one way, along Stand A
- Each I-EMT will set up an emergency station and assess health needs as required by pPHEOC.
- Time for operations of each I-EMT: tentatively 150 minutes for practice at the health station and 120 minutes for health needs assessment in isolated villages, including reporting to pPHEOC.

2.6. Organization of the drill at different locations

2.6.1. RDC operation drill

- Location: meeting room of the Grand Tourane hotel
- An RDC team of 4 persons: 1 team leader (security), 2 team members (customs + health), 1 interpreter
- Equipment: tables, chairs, pens, forms, guidelines (see annexes)
- RDC team leader: to check equipment, assign tasks to team members and synthesize the report
- Practice of the procedures for entering Vietnam
  + I-EMTs enter through a separate (priority) door
  + Once I-EMTs are present, each team leader briefs about the team

+ 1 RDC team member checks passports and the validity of forms and records previously registered.
+ 1 RDC team member provides necessary documents and information about Vietnam as well as regulations applied in the performance of the task.

- Practice of the procedures for exiting Vietnam
  + I–EMT leaders report to RDC
  + RDC team members guide the completion of customs procedures and check the list of re-exported equipment, etc.

2.6.2. PHEOC operation drill

2.6.2.1. Operation of rPHEOC

- Number of rPHEOC: 1
- Location: the first floor of Hoa Xuan Stadium
- rPHEOC team: 3 Vietnam persons (1 team leader and 2 team members) + 1 AHA Center expert
- Equipment: tables, chairs, walkie talkie, computer, reporting forms, camera, Wi-Fi, screen
- Assignment of tasks:
  + Team leader: to give overall direction and report to the Regional EOC
  + 1 team member: to receive information from pPHEOCs, analyze data and report to the team leader
  + 1 team member: to coordinate facilities and materials for I-EMTs as required by pPHEOCs
- Steps to be taken:
  + Taking the drill location, necessary facilities and materials
  + rPHEOC team leader assign tasks to team members
  + Testing the connection to the Regional EOC and pPHEOCs
  + Convening and assigning tasks to pPHEOCs regarding the areas they are in charge of, I-EMTs under their management, isolated residence areas communication methods, reporting time, collaboration among PHEOCs when requested, etc.
  + Monitoring the operations of pPHEOCs, coordinating and providing pPHEOCs with forces and facilities upon request.
  + Informing and asking local EOCs to carry out arising tasks (tentatively 2 arising situations: collective food poisoning, mass accidents due to fire and explosion)
  + Receiving routine and ad-hoc reports from pPHEOCs
  + Analyzing data and reporting to the Regional EOC

2.6.2.2. Operation of pPHEOCs (PHEOC1 and PHEOC2)

- Number of pPHEOCs: 2, located in 2 rooms near the rPHEOC
- Each pPHEOC team: 3 Vietnamese persons (1 team leader and 2 team members) + 1 AHA Center expert
- Equipment: tables, chairs, walkie talkie, computer, reporting forms, camera, Wi-Fi, screen
- Assignment of tasks:
  + Team leader: to give general direction and report to the rPHEOC

+ 1 team member: to receive information from I-EMTs, analyze data and report to the team leader
+ 1 team member: to coordinate the flow of victims, facilities and materials for I-EMTs

- Steps to be taken:
  + Receiving task from the rPHEOC
  + Receiving equipment and materials from the rPHEOC
  + Arranging areas in the drill location
  + The team leader assigns tasks to team members
  + Testing the connection to I-EMT stations, villages, heads of victim transportation teams, ambulance teams and relevant I-EMTs.
  + Convening and assigning specific tasks to I-EMTs regarding the areas they are in charge of, isolated residence areas, communication methods, reporting time and collaboration among I-EMTs when requested, etc.
  + Convening and assigning tasks to heads of the victim transportation team and ambulance team.
  + Organizing the coordination of the flow of victims, distributing victims to emergency stations, supplementing forces and facilities to I-EMTs upon request.
  + Organize the coordination of ambulances when requested by I-EMTs
  + Assigning arising tasks to I-EMTs at the request of the rPHEOC or the other pPHEOC.
  + Assigning each I-EMT to assess the health needs in isolated residence areas.
  + Reporting to and asking the rPHEOC for additional forces and facilities in case of need or in arising situations
  + Analyzing data and reporting to the rPHEOC twice a day (10h and 18h) and upon the completion of the assigned tasks.

2.6.3. Coordination of assumed victims

- 2 canvas tents are to be set up (with sitting mats or chairs and drinking water) outside the stadium, behind Stand B.
- 90 assumed victims are disguised, trained to act as having certain diseases, numbered and having a tag specifying the type of their disease (disease tag) in 4 categories (A, B, C, D). It is planned that each I-EMT will handle 10-15 victims (rotation among I-EMTs)
- Transportation team: 41 persons (1 leader + 40 drivers) distributed to 12 I-EMTs (each I-EMT has a transportation crew of 3 members). The transportation team leader is equipped with a walkie talkie connected to pPHEOCs. Each transportation crew has a stretcher-trolley on wheels.

Photo 4. Area for gathering assumed victims (behind Stand B)

- Under the coordination of local EOCs, the head of the transportation team coordinates the transfer of assumed victims (transporting victims by stretchers, leading victims by hands, carrying victims on the back, etc.) to and from I-IMT stations.
- After being treated, assumed victims are taken out of the stations by road, then by ambulance (if referred to higher level) or guided to reach a safe area.
- Ambulances: to enter and exit along the area of Stand A in the stadium

2.6.4. Operation of I–EMT stations

- Facilities:
  + Canvas tents
  + Desk, chair, camera, walkie talkie, connection network, Wi-Fi
  + Insulated wires
  + Medicines and medical equipment (see annexes)
  + Materials, forms, patient referral form, etc.
  + Electric fans, drinking water
  + (Simulated) generator
- Participants:
  + 5 health workers (2 medical doctors, 3 nurses or paramedic staff)
  + 3 transportation crew members
  + 1 person to support with the scenario

+ 1 interpreter

- Tasks:
  + Receive and classify victims, deliver emergency treatment, make transportation records, fill in forms.
  + Report to the pPHEOC on the number of patients, situation of the treatment, needs for medical equipment, medicines, human resources.
  + Arrange personnel to transport and deliver patients as well as their transportation records to the transportation team.
  + Require the pPHEOC to provide means of and personnel for transportation, supplementary equipment and help solve problems beyond I-EMT capacity.
  + Be willing to send staff to perform health needs assessment as required by the local EOC while maintaining the emergency service at the emergency station
  + Collect data and report to the pPHEOC upon completion of the assigned tasks.
- Drill time: 150 minutes

2.6.5. Arrangement and organization of activities in isolated villages

- Number of isolated villages: 2, village A (in Hoa Khuong commune, Hoa Vang district, Da Nang city – a village near the beach) and village B (in Dai Hiep commune, Dai Loc district, Quang Nam province – a village far from the sea)
- Location: outside the stadium (about 100m away)
- Tentative area: approximately 200m^2
- Number of people in the role-play: 15 (including 1 village head or health station head)
- The village/heath station head is responsible for reporting the situation and asking for help when a rescue team arrives.
- Arrangement: 1 canvas tent with 15 people (10 victims, 5 local people in and out of the tent, some cards and drawings representing assumed victims, local people, animals, polluted water source, etc.), destroyed transportation system, inaccessible ambulances and means of transport (see annexes).
- As requested by local EOCs, I-EMTs alternately approach the 2 isolated villages by walking, conduct health needs assessment and preparing reports in the villages. Each I-EMT is divided into 2 groups: group 1 conducts the assessment and pays a visit to the victims in the tent while group 2 assesses and survey outdoor locations, collects information about victims (to make sure no victims are missed) as well as environmental conditions, meets and discusses with the village head about the damage, potential risks such as floods, landslides, coming tsunamis, risk of epidemics. During the survey and situational assessment, attention will be paid to security and safety
- Total drill time (including completion and submission of reports to the Regional EOC): 120 minutes

Annex 1. List of (12) forms

1. **Emergency Medical Team Coordination Cell (EMTCC) forms** (6 forms)

- EMT registration
- Daily report
- Situation report
- Exit report
- Patient referral form
- EMTCC coordination minute

2. SASOP forms (4 forms)

- Initial report/Situation update to AHA center
- Initial report/Situation update of AHA center to the national focal point (NFP)
- Request for assistance
- Final report from assisting entity to AHA center

3. Medical record form (1 form)

4. Health need assessment form (1 form)

Annex 2. List of equipment

1. List of medical equipment: 12 items
2. List of equipment for emergency stations: 12 items
3. List of equipment for isolated villages: 2 items
4. List of equipment for PHEOCs: 3 items
5. List of equipment for the RDC: 1 item
6. List of equipment for the victim gathering area: 1 item
7. List of equipment for the victim transportation team: 1 item
8. List of equipment for ambulances: 4 items

Annex 3. Information about isolated villages

1. Village A

1.1. General information

- Village A, 500m from the beach, 15km from the city center, with an area of 45ha, 530 households, 2700 residents including 1300 males (48.1%) and 1400 females (51.9%), 55 pregnant women, 220 children under 5 years old (8.1%) of whom 72 are under 1 year old, 400 people aged ≥60 (14.8%).
- Occupations: 80% of the population are fishermen, 10% are civil servants/public employees and 10% are self-employed workers.
- Health: 50% of the elderly have hypertension, 12% of children under 5 are malnourished.
- 1 primary and lower secondary school with 12 classrooms and 260 students.
- 1 health station of 150 m^2 with 6 rooms and 5 health workers (1 medical doctor and 4 nurses)
- Source of drinking water: 100% of the population use the city's tap water,
- Other water sources: a small lake and a small stream at the edge of the village.

1.2. Damage caused by the typhoon

- 70% of houses are completely destroyed; 20% are partially destroyed and can be repaired for temporary stay; 10% are mildly destroyed and can still be used.
- An estimation of 100 dead and missing victims, 70 injured people. Causes of death: 80% due to drowning when people are on fish raising cages, 20% due to fallen houses/trees. There is no death from epidemics/diseases.
- About 400 people are currently without housing or warm clothes.
- The school and heath station are completely destroyed and unable to operate.
- One health worker dies, 3 health workers have houses destroyed and family members dead so they cannot deliver health care.
- Environment: the lake and stream are polluted by rubbish and dead animals.
- Water source: the source of clean water is destroyed causing a lack of water, so local people have to use water from the polluted small lake and stream in the village.
- Electricity and communication: outage, no power reserve, loss of telephone connection.
- Foods/foodstuff: a small amount reserved by households, which is enough for 2 days.
- Traffic: roads are destroyed, the village can only be accessed by walking. It takes 2 hours to walk from the city center to the village.
- Diseases and health: some people, mostly children under 5 years of age, have acute diarrhea. Some people have fever and panic.
- Security: generally there is nothing special. There is, however, a great risk of insecurity if the situation is not well managed, especially in the absence of clean water, foods and shelters.

1.3. Responses already taken

- There has been a military troop to provide dry foods and bottled water, however it only meets 30% of people's needs.
- The army has set up 10 canvas tents which can accommodate 200 people.

- The DOH has sent a team of heath workers to the village to provide first aid/emergency care, guide local people to treat the environment and provide heath education for epidemic prevention.

1.4. Intermediate needs

- Clean water, foods, warm clothes for about 700 people,
- Nutrition for children, pregnant and nursing mothers,
- Management of patients with chronic diseases (e.g. hypertension, COPD, diabetes)
- Shelters for about 200 people,
- Search and on-site first aid for patients,
- Means of transporting victims to health facilities,
- Search for and management of dead bodies,
- Environmental treatment and disease prevention,
- Psychosocial support for the community,
- Enhancement of security,
- Management of on-site support resources.
- Electricity (generator)

2. Village B

2.1. General information

- Village B, 20km from the sea, close to a mountain, 20km from the city center, with an area of 70 ha, 400 households, 2000 residents including 1000 males (51.1%), 1000 females (48.9%); 80 pregnant women; 190 children under 5 years old (9.5%) of whom 75 are under 1 year old; 230 people aged ≥60 (11.8%).
- Occupations: 60% of the population are involved in agriculture, 20% are involved in forestry, 10% are civil servants/public employees and 10% are self-employed workers. 25% of households are poor.
- Health: the rate of exclusive breastfeeding for the first 6 months is 30%, malnutrition rate of children under 5 years old is 22%. 70 elderly people (30.4%) have hypertension while 30 others have COPD. Full vaccination rate of infants is 95%. Apart from the high malnutrition rate of children under 5 (which is higher than the province's average rate of 15%), no other epidemics exist before the typhoon.
- 1 elementary and lower secondary school with 10 classrooms and 200 students.
- 1 health station of 250m^2 with 6 rooms and 4 health workers (1 medical doctor and 3 nurses).
- Source of drinking water: 100 drilled wells, 150 dug wells.
- Other water sources: 2 lakes, one of 500m^2 and the other of 700m^2, a small stream at the edge of the village.

2.2. Damage caused by the typhoon

- 50% of houses are completely destroyed; 30% are partially destroyed and can be repaired for temporary stay; 20% are mildly destroyed and can still be used.

- An estimation of 100 dead and missing victims, 150 injured people. Causes of death and missing: 50% due to landslides, 30% due to flash flood and 20% due to fallen houses. There is no death from epidemics/diseases.
- About 500 people are currently without housing or warm clothes.
- Regarding the school, 5/10 classrooms are completely destroyed, the other 5 are mildly destroyed and can be repaired for temporary stay
- The heath station is destroyed and unable to operate.
- Among the 4 health workers, 2 have houses destroyed and family members dead so they cannot deliver health care, the other 2 can still continue their work.
- Environment: the lakes and stream are polluted by rubbish and dead animals. The stream is eroded causing a reverse flow thus the water cannot be used.
- Water source: 50% of the drilled wells are operational and the water can be used if being disinfected, the other 50% are destroyed. 100% of the dug wells are polluted thus the water cannot be used.
- Electricity and communication: outage, no power reserve, loss of telephone connection.
- Foods/foodstuff: 500 people lack food.
- Traffic: the roads are destroyed, the village can only be accessed by walking. It takes 4 hours to walk from the city center to the village.
- Diseases and health: some people, mostly children under 5 years of age, have acute diarrhea. Some people have fever and panic.
- Security: generally there is nothing special. There is, however, a great risk of insecurity if the situation is not well managed, especially in the absence of clean water, foods and shelters.

2.3. Responses already taken

- There has been a military troop to provide dry foods and bottled water (1 day after the typhoon), however it only meets 30% of people's needs.
- The army has set up 15 canvas tents which can accommodate 300 people.
- The Provincial People’s Committee has directed relevant sectors and agencies to provide foods, clean water, shelters, etc. to local people. These types of aid will come today (2 days after the typhoon) and will meet 80% of people's needs.
- The DOH has sent a team of heath workers to the village to provide first aid/emergency care, guide local people to treat the environment and provide heath education for epidemic prevention.

2.4. Intermediate needs

- Clean water, foods, warm clothes for about 100 people,
- Prevention of malnutrition for children under 5 and pregnant women,
- Shelters for about 200 people,
- Clothes for about 100 people
- Search and on-site first aid for patients,
- Means of transporting victims to health facilities,
- Search for and management of dead bodies,
- Environmental treatment and disease prevention,

- Psychosocial support for the community,
- Management of hypertension patients
- Management of COPD patients
- Communications and education on health, food safety, epidemic prevention
- Electricity (generator)

Annex 4. Lists of items needed for the 2 isolated villages

1. List for village A

1.1. A tent of 20m^2 with clear surrounding area, including:

- the floor covered by a sitting mat
- 1 table and 3 chairs (old, can be broken)
- 1 cardboard (simulated) TV
- 8 victims in the tent (categorized by type of victim)
- 2 local people in the tent (to care for the victims)
- 1 water jar and glasses
- 1 electric fan
- 2 (simulated) sets of pots + kettles
- 1 (simulated) generator
- 3 empty carton boxes of instant noodles (enough for 3 days)
- 2 first aid kits with some medicines + dressing
- 2 sets of old blankets + mosquito nets + mats

1.2. Outside the tent:

- A map of the lake and the stream at the edge of the village.
- 2 victims (role play)
- 2 signs of dead people
- 3 local people outside the tent (including the village head)
- 5 signs of dead animals (buffalo, cow, chicken, pig, etc.) placed near the lake and stream.
- 4 signs of fallen trees (some real branches can be placed outside the tent) and fallen power poles.
- 2 pictures or drawings of 3 snakes on the ground.
- 2 signs of collapsed houses
- 4 signs of vehicles (cars, motorcycles) placed scatteredly in the village
- 1 signboard which states “Flooded and muddy roads. No motorized vehicles allowed”
- 1 signboard which states “Eroded beach. No entry”

2. List for village B

2.1. A tent of 20m^2 with clear surrounding area, including:

- the floor covered by a sitting mat
- 1 table and 3 chairs (old, can be broken)
- 1 cardboard (simulated) TV
- 8 victims in the tent (categorized by type of victim)
- 2 local people in the tent (to care for the victims)
- 1 water jar and glasses
- 1 electric fan
- 2 (simulated) sets of pots + kettles
- 1 (simulated) generator

- 3 empty carton boxes of instant noodles (enough for 3 days)
- 2 first aid kits with some medicines + dressing
- 2 sets of old blankets + mosquito nets + mats

2.2. Outside the tent:

- A map of the 2 lakes and the stream at the edge of the village. The lakes are polluted by rubbish and dead animals. The stream is eroded causing reverse flow, full of sand and rubbish
- 2 victims (role play)
- 6 signs of dead and missing people, placed scatteredly in the village and near the lakes/stream/mountain
- 3 local people outside the tent (including the village head)
- 5 signs of dead animals (buffalo, cow, chicken, pig, etc.) placed scatteredly in the village
- 5 signs of fallen trees (some real branches can be placed outside the tent) and fallen power poles.
- 4 signs of collapsed houses
- 1 sign of motorcycles placed scatteredly in the village
- 1 drawing of mountains including a signboard which states “Eroded and dangerous roads. No motorized vehicles allowed”

Annex 5. Summary of participants in the drill

Participants	Organization	Quantity
International participants		**83**
	12 I-EMTs from ASEAN countries, Japan and Vietnam	60
	JICA experts, ARCH project staff	20
	AHA Center experts	03
Local participants		**201**
	Participants to role-play in RDC	03
	Participants to role-play in EOCs	09
	Personnel of Service 115 in Da Nang city (area 1) and Da Nang C hospital (area 2) to engage in transportation of victims (including drivers)	41
	Interpreters to help in tents and villages (Da Nang University of Medical Technology and Pharmacy)	23
	Participants to role-play victims and village people (students of Da Nang University of Medical Technology and Pharmacy)	120
	Security force in the drill area (to be in charge of by Da Nang city)	05
Organizers		**23**
Drill Steering Committee	MOH, Da Nang City People's Committee	5
Planning, Logistics, Communications units	MOH Departments Local departments of Da Nang city	15
Health care during the drill	Da Nang C hospital	03
Total		**307**

3rd Regional Collaboration Drill

MASTER SCENARIO

ARCH Regional Collaboration Drill

December 2018 - Philippines

Department of Health - Philippines
Health Emergency Management Bureau

Introduction

The Association of Southeast Asian Nations (ASEAN) identified disaster health management as one of the priority issues of the health sector in the ASEAN Post-2015 Health Agenda. Based on the results of the survey in 2014-2015 on the situation of disaster emergency medicine system in the ASEAN region, all the ASEAN Member States (AMS) reached a common understanding on the importance of regional collaboration mechanism in disaster health management and necessary actions in support of the One ASEAN, One Response. Thus, the ASEAN Regional Capacity on Disaster Health Management (ARCH) Project was formulated.

ARCH Project, which started in 2016, has three (3) mechanisms of implementation namely *1)* Project Working Group (PWG) 1 for the development of standard operating procedures and tools, *2)* PWG 2 for the capacity building, and *3)* Regional Collaboration Drill (RCD) where the standards and tools developed will be tested, in the form of tabletop and field exercise. Under the project, there are three (3) RCDs that will be conducted. The first RCD was held in Phuket, Thailand in July 2017 while the second RCD was held in Da Nang, Vietnam. The third RCD will be held in Manila, Philippines on December 3-5, 2018.

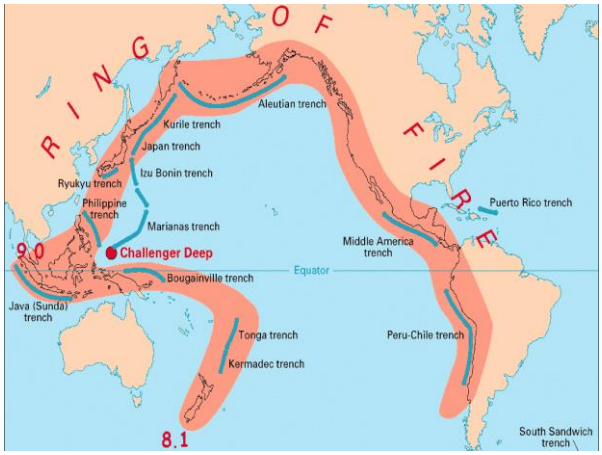
Emergency exercises such as tabletop and field exercises are activities to practice, develop, test and improve the plans and procedures on how to respond to emergencies and disasters[1]. Important in the conduct of emergency exercises is a well thought exercise scenario.

This document highlights the scenario that will be used in the third RCD. Note that other information cited in this document is not true and are made only for the purpose of the exercise. Note further that the scenario is fictitious by nature but are based on several researches/studies and existing reference materials. Also, the scenario was written to meet the objectives of the drill, particularly on the elements of response operations that will be tested. In addition, please note that some parts of this document were adapted/lifted from the master scenario of the INSARAG exercise in the Philippines in June 2018.

Background of the scenario and area affected

Profile of the Philippines

The Philippines is an archipelagic nation located in the Southeast Asia comprising about 7,641 islands (National Mapping and Resource Information Authority). It is situated in the western Pacific Ocean and is categorized broadly under three main geographical divisions from north to south namely Luzon, Visayas, and Mindanao. It is comprised of 17 regions.



[1] Hospital and Health Facility Emergency Exercises, Guidance Materials, 2010

The Philippines has a total land area of 343,448 square kilometers, and 36,000 kilometers of coastlines. It is bounded by large bodies of water namely *1)* West Philippine Sea on the west and north, *2)* Pacific Ocean on the east, and *3)* Celebes and Sulu Sea on the south. As of 2016, the Philippines has an estimated population of 103,711,044. As of January 2018, it was the 7th most populated country in Asia and the 13th most populated country in the world. Multiple ethnicities and culture are found throughout the islands.

The Philippines is located at the Pacific Ring of Fire and situated along the two major plates, the Eurasian and Pacific Plates, close to the equator. As such, the country frequently experiences natural hazards such as typhoons, earthquakes, and volcanic eruptions.

There are about 300 volcanoes in the Philippines, of which 22 are classified as active. There is an average of 20 quakes in a day in the Philippines. Likewise, the country experiences an average of 20 typhoons a year, of which five (5) are destructive. Having about 36,000 kilometers of coastline makes the country vulnerable to tsunami and storm surges.

Profile of Metro Manila

Metro Manila is the seat of Philippine government and one of the three defined metropolitan areas of the country. All the main offices of the executive departments of the country including the Malacañan Palace (official residence and office of the President of the Philippines) are located in Metro Manila.

It is officially known as the National Capital Region but is commonly known as Metro Manila. The capital city of the Philippines is Manila which is located in Metro Manila. Likewise, it is the main business hub of the country.

Map of the National Capital Region
Source: http://www.nnc.gov.ph

<u>Geography</u>

Metro Manila is the only region in the country without any province. It is subdivided into 17 local government units (LGUs) comprising of 16 cities (Caloocan, Malabon, Navotas, Valenzuela, Quezon, Marikina, Pasig, Taguig, Makati, Manila, Mandaluyong, San Juan, Pasay, Parañaque, Las Piñas, and Muntinlupa) and 1 municipality (Pateros).

Each of the cities and municipality is governed by a Mayor. It is bounded by the provinces of Bulacan from the north, Rizal at the east, Cavite at the south-west and Laguna at the south. Manila Bay lies to the west and Laguna de Bay to the southeast. It has a total land area of 619.57 $km^{2.}$

Population

As of 2016, the estimated total population of Metro Manila is 13,205,216 (Philippine Statistics Authority, Population census).

Table 1. Estimated population of Metro Manila

City/Municipality	Estimated population	Number of households[1/]	Average Household Size[1/]
Caloocan	1,722,366	345,000	4.3
Las Piñas	608,833	128,000	4.3
Makati	566,015	126,000	4.2
Malabon	362,836	83,000	4.3
Mandaluyong	355,590	80,000	4.0
Manila	1,686,621	387,000	4.2
Marikina	447,099	91,000	4.6
Muntinlupa	481,468	104,000	4.2
Navotas	261,648	59,000	4.2
Parañaque	692,381	137,000	4.3
Pasay	417,005	98,000	4.0
Pasig	797,054	155,000	4.3
Pateros	68,663	15,000	4.4
Quezon	3,190,989	634,000	4.3
San Juan	123,266	29,000	4.3
Taguig	783,592	150,000	4.3
Valenzuela	639,790	138,000	4.2
Total	**13,205,216**	**2,759,000**	

[1/] Based on 2010 Census of Population and Housing by the Philippine Statistics Office

The region's population is 13% of the entire country's population making it the most populous and most densely populated region of the entire country. According to the 2017 edition of the Demographia's World Urban Areas Index, Metro Manila is the 4th largest urban areas in the world by population.

The seven most populated barangays in the region are mostly in Quezon City. Residents in Metro Manila are relatively young who belongs to the working group. While there are millions of slum dwellers living in Metro Manila, there are also those living in the exclusive subdivisions and high rise condominiums.

Transportation

The metropolis has an extensive system of highways connecting the various cities and municipalities, one of which is the popular Epifanio de los Santos Avenue (EDSA).

There are two different transit system in Metro Manila namely Manila Light Rail Transit System or the LRT, and the Metro Manila Rail Transit System or the MRT. The Yellow Line (LRT-1) and the Purple Line (LRT-2) form the LRT network, while the Blue Line (MRT-3) forms the MRT network.

Ninoy Aquino International Airport (NAIA), which straddles the boundary between Parañaque City and Pasay City, is the country's busiest airport. It consists of domestic and international terminals. There are two main runways and the hangar of the Philippine

Airlines is located near the Villamor Air Base. The other airport that serves Metro Manila is the Clark International Airport in Pampanga which is located 80 kilometers away.

Electricity and Water

Meralco is the sole electric distributor of Metro Manila. It generates its power from the National Grid Corporation of the Philippines and other independent power producers in Luzon. The Metropolitan Waterworks and Sewerage Systems was responsible for the supply and delivery of potable water and the sewerage system in Metro Manila. At the west zone, Maynilad Water Services is in-charge with Manila (excluding the southeastern part of the city), Caloocan, Las Piñas, Malabon, Muntinlupa, Navotas, Parañaque, Pasay, and Valenzuela. It also operates in some parts of Makati and Quezon City.

On the other hand, Manila Water operates on the east zone, comprising the cities of Mandaluyong, Marikina, Pasig, Pateros, San Juan, and Taguig. It also operates in large areas of Makati and Quezon City and the southeastern part of Manila, which was excluded from the west zone.

Communication

All the possible lines of communication are available in Metro Manila from landlines to mobile phones. The major provider of telecommunication service is Globe and Smart. Most of the areas have access to internet.

Economy

Metro Manila exerts a significant impact on commerce, finance, media, art, fashion, research, technology, education and entertainment, both locally and internationally. It is the home to all the consulates and embassies in the Philippines, thereby making it an important center for international diplomacy in the country. Its economic power makes the region the country's premier center for finance and commerce, and accounts for about 1/3 of the gross domestic product of the Philippines. It is the home to the tallest skyscrapers in the region as well as in the country.

Makati City is the largest financial and economic hub of the metropolitan area and the country. It is regarded as the metropolis' central business district as it is the base of many Philippines' largest corporations and the nation's major banks. It is the home of the nation's stock exchange.

New developments seeking to become vibrant centers of their own are Bonifacio Global City in Taguig; Eastwood City and Triangle Park in Quezon City; the Manila Bay City Reclamation Area in the cities of Pasay, Parañaque and Las Piñas; and Alabang Estates and Filinvest Corporate City in Muntinlupa. Situated in Mandaluyong and Pasig, it is home to the headquarters of several major Philippine companies such as San Miguel Corporation and Meralco, and hosts of many shopping malls and hotels. The Asian Development Bank also has its headquarters in here. On the other hand, the traditional business center is in Binondo District in the City of Manila.

Health

Health Human Resource

The health human resource are the main drivers of the health care system and are essential for the efficient management and operation of the public health system. Currently, government health workers in Metro Manila comprises 590 doctors, 498 dentists, 4,576 nurses and 17,437 midwives.

Health Facilities

Health facilities in Metro Manila include government hospitals, private hospitals and primary health care facilities. Hospitals are classified based on ownership as public and private hospitals. Both public and private hospitals can also be classified by the service capability. Levels 1 and 2 hospitals are relatively well-distributed across the country, hospitals with higher service capabilities are highly concentrated in Metro Manila.

Most of the Metro Manila Hospitals are privately owned. There are 16 hospitals in Metro Manila that are directly under the supervision of DOH Central Office, and 4 hospitals that are under the DOH Regional Office.

The following are the health facilities in Metro Manila.

City/Municipality	DOH hospitals	Other government hospital	Private hospital	City/Municipal Health offices	Barangay Health Stations
Valenzuela	1	1	6	1	33
Caloocan	2	0	12	1	188
San Juan	0	1	2	1	21
Mandaluyong	1	1	2	1	27
Quezon City	8	7	38	1	142
Pasig	1	1	12	1	30
Marikina	1	0	11	1	16
Manila	4	7	17	1	897
Malabon	0	2	0	1	21
Navotas	0	0	0	1	14
Makati	0	1	3	1	33
Pateros	0	0	0	1	10
Taguig	0	3	4	1	28
Parañaque	0	1	7	1	16
Las Piñas	1	0	11	1	20
Muntinlupa	1	3	8	1	9
Pasay	0	2	2	1	201
Total	**20**	**30**	**135**	**17**	**1,706**

The headquarters of the World Health Organization Regional Office for the Western Pacific Region, and the World Health Organization Country Office for the Philippines are in Metro Manila. The main office of the Department of Health (DOH), the national health department, is also in the region.

Quezon City is the location of prominent national health centers namely Lung Center of the Philippines, National Kidney and Transplant Institute, and the Philippine Heart Center. Other national special hospitals in Metro Manila includes the Philippine Orthopedic Center in Quezon City and the National Center for Mental Health in Mandaluyong City. The Philippine General Hospital, the country's premier state-owned tertiary hospital, is located at the City of Manila. The St. Luke's Medical Center which operates in Quezon City and Taguig City, is a private tertiary referral hospital cited as one of the best hospitals in the world.

Health and Nutrition Status

The recorded maternal mortality rate in 2016 was 45 per 100,000 livebirths and the infant mortality rate is 14 infant deaths per 1,000 livebirths. The leading causes of infant deaths are both communicable such as pneumonia and diarrhea as well as maternal and prenatal related conditions as in prematurity, sepsis neonatorum, asphyxia and even tetanus neonatorum. The overall leading cause of death is a mixture of communicable diseases such as pneumonia, tuberculosis, and gastroenteritis while the topmost are non-communicable such as cardiovascular, cancer and renal diseases. The leading causes of morbidity are mostly communicable such as pneumonia, TB, diarrhea. Measles increased significantly compared to the five-year average.

Metro Manila, in spite of its urbanized state, experiences the effects of malnutrition. In fact, the region has a double burden of malnutrition in the form of undernutrition and over nutrition affecting vulnerable population groups such as children and women.

Stunting and wasting among under five children are significant public health problems while overweight and obesity rates among children and adults are higher than the national levels.

Based on the 2015 Updating of the Nutritional Status of Filipino Children conducted by the Food and Nutrition Institute of the Department of Science and Technology, among children less than 5 years old, one in every 4 children are stunted (24.9%). This is lower by 8,5% percentage points than the national prevalence of 33.4%. About 6 out of 100 or 6.4% children 0-5 years old are wasted or thin. Although this rate is lower than the national prevalence rate of 7.1%, it is considered to be a public health problem.

On the other hand, six out of 100 under-five children or 6.0% are overweight for their height. This rate is higher by 2.1 percentage points than the national prevalence of 3.9%.

<u>Natural hazards</u>

Metro Manila is exposed to multiple natural hazards such as earthquakes, floods, and typhoons. It is surrounded by active faults. Flooding is recurrent every year especially in low-lying areas. Around five to seven typhoons hit Manila yearly. According to a poll by Swiss Re in 2014, an international reinsurance company, Metro Manila is the world's second riskiest city in terms of natural disasters.

Metro Manila is transacted by two faults, the East and West Valley Faults or the Valley Fault System. The West Valley Fault, based on historical data and studies of the Philippine Volcanology and Seismology (PHIVOLCS) may produce a 7.2 magnitude earthquake with intensity VIII ground shaking, and is called "The Big One". An intensity VIII ground

shaking based on the Philippine Earthquake Intensity Scale is very destructive. The description of intensity VIII are as follows:

> *People panicky. People find it difficult to stand even outdoors. Many well-built buildings are considerably damaged. Concrete dikes and foundation of bridges are destroyed by ground settling or toppling. Railway tracks are bent or broken. Tombstones may be displaced, twisted or overturned. Utility posts, towers and monuments mat tilt or topple. Water and sewer pipes may be bent, twisted or broken. Liquefaction and lateral spreading cause man- made structure to sink, tilt or topple. Numerous landslides and rock falls occur in mountainous and hilly areas. Boulders are thrown out from their positions particularly near the epicenter. Fissures and faults rapture may be observed. Trees are violently shaken. Water splash or stop over dikes or banks of rivers.*

Two (2) studies have been made to determine the possible impact of such earthquake in Metro Manila namely *1)* the Metro Manila Earthquake Impact Reduction Study (MMEIRS) in 2004 with the Metro Manila Development Authority, Japan International Cooperation Agency (JICA), and the PHIVOLCS; and *2)* in 2013, updated risk calculations and maps were produced under the *Project on Enhancing Risk Analysis Capacities for Flood, Tropical Cyclone, Severe Wind and Earthquake for the Greater Metro Manila Area* with the National Disaster Risk Reduction and Management Council-Office of Civil Defense, Geoscience Australia, and also PHIVOLCS.

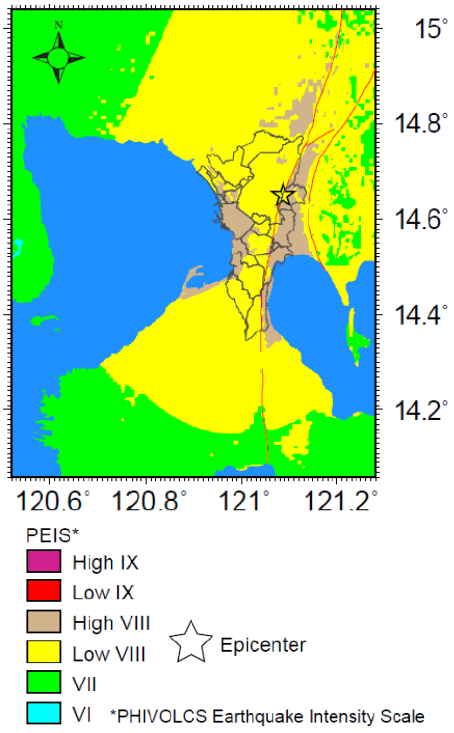
The Scenario – Event (November 28, 2018 - Wednesday)

At 1043H local time, **November 28, 2018 (Wednesday),** an earthquake rocked Metro Manila and nearby areas in Regions III and IVA. The magnitude of the earthquake was recorded at 7.2, with epicenter of 15 kilometers, east of the City of Manila and depth of focus was 7 kilometers. It affected all the cities and municipality of Metro Manila. The quake was also felt in the nearby cities and municipalities of Regions III and IVA.

The duration was recorded at approximately 63 seconds. Aftershocks continue to rattle the entire region.

It was the deadliest earthquake in the Philippines in 28 years since the 1990 Luzon earthquake. PHIVOLCS estimated that the energy released by the earthquake was equivalent to 32 Hiroshima bombs.

The Pacific Tsunami Warning Center did not issue a Pacific-wide tsunami threat. The United States Geological survey issues a yellow warning, saying



Ground shaking model for Magnitude 7.2 West Valley Fault Scenario Earthquake
Source: DOST

"some casualties and damage are possible and the impact should be relatively localized".

The temperature on this day was on average of 31 degrees centigrade and winds were calm at 8-16 miles per hour from the southeast. The estimated weather forecast for the succeeding days are as follows:

THU 11/29	FRI 11/30	SAT 12/1	SUN 12/2	MON 12/3	TUE 12/4	WED 12/5
Hist. Avg. 31˚/22˚	**Hist. Avg.** 31˚/22˚	**Hist. Avg.** 30˚/21˚	**Hist. Avg.** 32˚/22˚	**Hist. Avg.** 30˚/21˚	**Hist. Avg.** 30˚/21˚	**Hist. Avg.** 30˚/21˚
Some sun with a few showers	Some sun with a few showers	A couple of showers	Spotty showers in the morning	A couple of showers	A couple of showers	A couple of showers

The Scenario – Initial Impact (November 28, 2018 - Wednesday)

Transportation

The earthquake caused several collapsed structures and damaged majority of the roads in most of the parts of Metro Manila resulting to its inaccessibility. Several bridges, including many along the national roads, were damaged and impassable due to debris from collapsed roads, hampering aid efforts. Almost all stations of Manila Metro Rail Transit (MRT) and Light Rail Transit (LRT) incurred great damage and were shut down.

Photo credit: s1.ibtimes.com

All the four (4) terminals of Ninoy Aquino International Airport suffered mild to moderate damages in the runway, and loss electrical power. As such, all the terminals of Ninoy Aquino International Airports were declared non-functional/operational and all flights, both local and international, are directed mostly to Clark International Airport in Pampanga (Region III); or some to Mactan International Airport in the Province of Cebu (Region IV) or Laguindingan International Airport in Cagayan de Oro City (Region X).

In addition, the North and South Harbor in Manila also incurred few damages, including the various machines and equipment used in the ports.

Power, communication and water supply

Lifelines, which includes electricity and communication systems, were severely affected. The earthquake caused damages to most of the water pipelines of Maynilad Water Services and Manila Waters resulting to failure of water supply.

Cellular (mobile) phone and internet signals are not working due to damages sustained by cellular and internet sites. Landlines were also non-functional. Most of the Meralco electric lines suffered damages in its electric transmission facilities. As such, for the safety of the residents of Metro Manila, energy services were cut-off.

Approximately 500 incidents of widespread fire outbreaks were reported in several factories, hospitals, restaurants, residential kitchens, and malls because of electricity short circuits. The biggest of which is at the Pandacan Oil Depot in the City of Manila. There were also reports of leakages of petroleum and liquefied petroleum gas from underground storage tanks of several gasoline stations in Metro Manila.

Photo credit: pragativadi.com

Infrastructures

Thirty (30%) of all hospitals and other health facilities, schools, government buildings have been destroyed or damaged. Several government buildings and numerous schools in the province were also partially or totally damaged, including the municipal and city halls of the sixteen (16) cities and one (1) municipality.

Nearly 25% residential houses were damaged (out of which half were totally destroyed), with the cities of Manila and Quezon among the worst affected.

A rough estimate of the damage/loss is expected to be at least Php 2.3 trillion.

Affected population

Based on population figures of the most affected areas, as many as 10 million people could be affected. The cities of Manila, Taguig, Marikina, and Quezon had the largest number of fatalities. Thousands are reported dead, missing and injured, and many are believed to be trapped under collapsed structures.

Most of the residents are still in shocked because of the continuous aftershocks being experienced. People near Manila Bay are in panic because of the rumors of a possible tsunami spread within the area.

Health, Food, and Nutrition

Many residents were left in the street without adequate safe drinking water and sanitary facilities after the quake. Food supply was also disrupted with many markets unable to operate causing reports of looting in several stores and supermarkets.

Health centers and hospital buildings were rendered non-operational, resulting in the use of makeshift wards outside the affected building handling a lot of trauma cases.

Furthermore, prolonged periods of aftershocks forced the population to take residence in makeshift shelters, afraid to go inside weakened buildings, thus causing psychological trauma.

The Response – Initial Impact (0 hour to 12 hours)

(November 28, 2018 – Wednesday – 10:43H to 22:43H)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

After the earthquake, the region still experiences a lot of aftershocks. There were a total of 45 aftershocks recorded, with intensities ranging from III to V. These aftershocks hampered the local government authorities from conducting initial assessments.

At around 1300H, as stipulated in the National Disaster Risk Reduction and Management Council Harmonized Contingency Plan for 7.2 Magnitude Earthquake, the Regional Disaster Risk Reduction and Management Council VII started mobilizing personnel and equipment for deployment to Clark Special Economic Zone in Pampanga, Region III to establish the back-up National Disaster Risk Reduction and Management Council (National) Emergency Operations Center. At the same time, the Department of Health Region VII is doing the same to establish the National Health Emergency Operation Center.

Metro Manila Disaster Risk Reduction and Management Council, on the other hand, has established its Regional Emergency Operations Center at the Joint Task Force National Capital Region Compound in Camp General Emilio Aguinaldo, Quezon City. Metro Manila Disaster Risk Reduction and Management Council also established Emergency Operations Centers in the pre-designated areas in the four quadrants of Metro Manila. An on-site National Emergency Operations Center at the Armed Forced of the Philippines General Headquarters Grandstand in Quezon City has been activated pending full activation of the National Emergency Operations Center in Clark Special Economic Zone. Likewise, an on-site Health Emergency Operation Center is established at the East Avenue Medical Center as temporary Health Emergency Operation Center.

Pre-identified assisting regions have mobilized resources for deployment such as: Incident Management Teams (IMT), Search, Rescue and Retrieval (SRR) Teams, Emergency Medical Teams (EMTs), RDANA Teams, Rapid Emergency Telecommunications Team (RETT), Law and Order Teams, Camp Management Teams, etc. in their respective areas of assignment, bringing with them needed emergency relief and shelter, supplies and equipment.

At around 1400H, Local Government Units officials who survived the earthquake have started to undertake rapid damage assessments of accessible areas. Search and rescue operations have started. Some Local Government Units have started to establish their respective Incident Command Posts. Based on the initial damage assessment of the Local Government Units, power and telecommunications networks are non-operational.

Initial estimates identified about more than a million people are currently displaced, about tens of thousands are feared dead, injured, missing and are trapped from collapsed buildings. Reports of cases of life-threatening injuries numbering thousands. Substantial number of residential and commercial buildings have either collapsed or sustained heavy and moderate damages.

Most people who escaped from collapsing buildings are staying in the streets or have occupied open areas as aftershocks fuel fears of further collapses. The Government has started to establish temporary evacuation centers as well as arranging evacuations to move people out of the most affected areas. The National Emergency Operation Center is currently trying to get information from the surrounding areas but communication is proving difficult. Some health care facilities have partial services available, however initial reports indicate that many more are completely non-functional.

At around 1430H, Armed Forces of the Philippines Joint Operations Center directed the Philippine Navy and the Philippine Air Force to conduct rapid aerial assessments of all quadrants using available helicopters and personnel. The AFP Chief of Staff wanted to make full use of the remaining daylight to have as much information as possible on the conditions of airports and seaports, main supply routes, main road networks, bridges along the Pasig river and its tributaries, and other key infrastructure.

Likewise, two (2) Rapid Damage Assessment and Needs Analysis Team were deployed to assess the extent of damage caused by any disaster, determine the needs, and evaluate the severity of the damage to structures.

At around 1430H, Director Balboa of the Health Emergency Management Bureau is closely coordinating with DOH Secretary Francisco Duque III on the incident. One (1) team of Health Emergency Management Bureau Disaster Risk Emergency Assessment and Management (DREAM) Team was deployed. The aim of the team is to gather information and provide recommendations for decision makers at the strategic level on what, when and how response interventions will be employed

See Annex 1 for the accomplished Rapid Health Assessment Form of the Department of Health prepared by the DREAM Team and submitted to the Department of Health Emergency Operation Center at around 1700H of November 28, 2018.

At around 1500H, a total of four (4) Philippine Disaster Relief Team (PDRT), the National Urban Search and Rescue Team, and the four (4) Philippine National Emergency Medical Teams have been deployed to support response operations. The Department of Health is coordinating large numbers of medical personnel both from within the affected area as well as mobilizing additional staff from other regions. The Emergency Medical Team Coordination Cell within the Health Emergency Operation Center has been activated and planning for the National Emergency Medical Team tasking is ongoing.

At around 1700H, countries have sent inquiries on humanitarian assistance required by the Government of the Philippines. International USAR, EMT and humanitarian response teams are on standby and have expressed readiness to deploy as reported/indicated in the Virtual On-Site Operations Coordination Centre (V-OSOCC) and ASEAN Emergency Operation Center. In-kind assistance/relief goods are being mobilized by Filipino diaspora communities around the world.

As per the ASEAN Contingency Plan, the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) has elevated its Emergency Operation Center status to "Red" level and deployed two staff to further coordinate with National Disaster Risk Reduction and Management Council for potential ASEAN response.

The Response (+12 hours to 24 hours)

(November 28, 2018 – Wednesday - 22:43H to November 29, 2018 – Thursday – 10:43H)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

At around 0600H of November 29, 2018 (Thursday), Regional Disaster Risk Reduction and Management Council VII has now activated the National Emergency Operations Center in Clark Special Economic Zone, Pampanga to coordinate response operations on behalf of the National Disaster Risk Reduction and Management Council. Likewise, the Health Emergency Operation Center at Clark, Pampanga has been activated.

At around 0700H of November 29, 2018 (Thursday), The Armed Forces of the Philippines-Joint Operations Center has mobilized four (4) helicopters to transport key officials and staff of National Disaster Risk Reduction and Management Council member agencies from temporary National Emergency Operation Center that was earlier established at the Armed Forces of the Philippines General Headquarters to the National Emergency Operation Center at Clark Special Economic Zone, Pampanga. This includes among others President Rodrigo Roa Duterte, Secretary Delfin Lorenzana of the Department of National Defense, Secretary Virginia Orogo of the Department of Social Welfare and Development, and Secretary of Health Francisco T. Duque III. It is expected to be completed during the day. Subsequently, the National Disaster Response Cluster and National Incident Management Team have been activated.

At around 1000H of November 29, 2018 (Thursday), the reports from the Local Government Units through the Incident Management Team Quadrant Emergency Operations Centers were now submitted to the National Emergency Operation Center and it has become clear to the National Disaster Risk Reduction and Management Council that the extent of the devastation is much greater than initially estimated. Local responders are not able to cope and the number of deaths, injuries, missing and displaced continue to rise. Congestion on major road networks in Metro Manila due to debris is constraining access by road to affected areas in the four quadrants, seriously hampering response operations.

Initial estimates indicate more than a million people are currently displaced, tens of thousands are either dead, injured, missing or are trapped under the rubble of collapsed buildings. Reports of cases of life-threatening injuries number to thousands. Substantial number of residential and commercial buildings have either collapsed or sustained heavy or moderate damages.

Some commercial radio networks have started to broadcast situation reports on the ground based on interviews with first responders and affected population.

All bridges along the Pasig and Marikina rivers have sustained damages and declared as impassable pending structural assessment.

The Response (+24 hours to +48 hours)

(November 29, 2018 – Thursday – 10:43H to November 30, 2018 – Friday - 10:43H)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

At around 1100H of November 29, 2018 (Thursday), the scale and magnitude of the impact of the earthquake led the National Disaster Risk Reduction and Management Council Chairman Secretary Lorenzana to recommend to President Duterte the declaration of a State of National Calamity and to request for international assistance.

Meanwhile, across the globe, Emergency Medical Teams and other response teams have mobilized and are on standby for deployment to assist the Philippines. The AHA Centre has likewise alerted Emergency Response and Assessment Team, and Emergency Medical Teams and placed them on standby for potential deployment.

At around 1130H of November 29, 2018 (Thursday), AFP helicopters did sorties to further assess the affected areas within Metro Manila. Heavy impact on infrastructure was reported especially within the western and eastern portions. Numerous bridges were damaged in the northern and southern areas of Metro Manila. Significant damage to low and medium rise houses and apartment buildings were also reported. Many people have been seen staying outside houses and residential buildings.

At around 1200H of November 29, 2018 (Thursday), the National Disaster Risk Reduction and Management Council releases initial information regarding the number of people affected and the extent of the damage. Initial report indicates the following casualties:

Location	Fatalities	Injuries	Missing	Displaced
North Quadrant	2,123	3,756	17,125	354,789
East Quadrant	916	6,148	9,489	300,476
West Quadrant	1,698	7,723	10,476	510,478
South Quadrant	4,417	8,456	22,479	354,473
Total	**9,154**	**26,083**	**59,569**	**1,520,216**

At around 1300H of November 29, 2018 (Thursday), President Duterte declared a State of National Calamity and has issued a call for International Assistance. See Annex 2 for the copy of the declaration, Annex 3 for the SASOP Form on the request of assistance, and Annex 4 for the cover letter of the request for assistance.

At around 1400H of November 29, 2018 (Thursday), the Health Emergency Management Bureau released the first Health Emergency Alerting and Reporting System Report.

At around 0900H of November 30, 2018 (Friday) the Philippine International Humanitarian Assistance Reception Center (PIHARC) headed by the Department of Foreign Affairs has been established in Clark Special Economic Zone in Pampanga to process incoming international humanitarian teams.

At around 1000H of November 30, 2018 (Friday), ASEAN Member States offered assistance to the Government of the Philippines through the AHA Centre as well as bilaterally. Subsequently, the ASEAN EOC started submission of the offer of assistance from the

ASEAN Members States to the Philippines. On the other hand, the Department of Health started sending acceptance of the offer. See Annex 5 for the acceptance form.

The Response (+48 to +96 hours)

(November 30, 2018 – Friday - 10:43 H to December 2, 2018 – Sunday – 10:43H)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

At around 0900H of December 2, 2018 (Sunday), AHA Centre has released goods from its depot in Subang, Malaysia. The goods were unloaded and handed over to the Chair of the National Response Cluster. The Secretary General of ASEAN is activated as the ASEAN Humanitarian Assistance Coordinator.

At around 0800H of December 1, 2018 (Saturday), the countries who already received acceptance from the Philippines started preparing for deployment.

At around 1200H of December 1, 2018 (Saturday), the National Disaster Risk Reduction and Management Council releases additional information on the initial number of people affected and the extent of the damage.

Location	Fatalities	Injuries	Missing	Displaced
North Quadrant	2,725	12,442	21,878	812,874
East Quadrant	3,816	9,137	17,241	476,321
West Quadrant	3,947	14,789	28,478	1,127,256
South Quadrant	6,135	15,366	25,696	890,784
Total	**15,500**	**46,500**	**93,000**	**3,120,000**

Damage was also reported in government buildings, and schools, as well as commercial and private residential buildings. All public and private schools in Metro Manila have been closed pending a structural inspection. Disruption in education is expected for many weeks.

Infrastructure damage was widespread. An estimated 170,000 residential houses were heavily damaged; 340,000 residential houses are moderately damaged; and 10,000 residential units situated near the Manila Bay area were affected by liquefaction. Below is the table on the number of damaged residences:

Municipality	Heavily damaged residences	Partially damaged residences
Northern quadrant		
Caloocan	6,893	13,740
Mandaluyong	4,216	8,403
Quezon City	25,744	51,315
San Juan	1,149	2,290
Valenzuela	2,298	4,580
Eastern quadrant		
Marikina	14,645	29,193
Pasig	22,014	43,879

Municipality	Heavily damaged residences	Partially damaged residences
Southern quadrant		
Las Piñas	6,126	12,211
Makati	8,807	17,544
Muntinlupa	12,923	25,759
Parañaque	8,807	17,554
Pasay	6,703	13,362
Pateros	1,628	3,246
Taguig	11,109	22,143
Western quadrant		
Malabon	4,496	8,961
Manila	25,075	49,981
Navotas	5,455	10,873
Total	**168,088**	**335,034**

Approximately 100,000 residential buildings have been destroyed by fire, some of which were already damaged by the earthquake. A total of 700 fire incidents has reportedly occurred in factories, hospitals and residential kitchens due to electrical short circuits. Moreover, more fire incidents are happening due to explosions of LPG and petroleum tanks in industrial areas.

Immediate needs identified at this stage are collapsed structure, search and rescue and medical trauma care, as well as debris clearing of major road networks. While information on the full impact is still unclear, it is expected that there are significant needs in food and non-food items, water and sanitation, emergency shelter and assistance for locating the missing. In some areas, very limited food and water is available. Many shops in Metro Manila have been damaged and/or remain closed. There are rumors of looting in some part of the metropolis.

Ninoy Aquino International Airport is still not operational, and all incoming flights are diverted to the Clark International Airport in Pampanga.

Initial report on the damages in the health facilities were reported as follows:

City/ Municipality	DOH Hospitals			Other government hospital			Private hospital			City/Municipal Health Offices			Barangay Health Stations		
	Total number	Totally damaged[1/]	Slightly damaged[2/]	Total number	Totally damaged[1/]	Slightly damaged[2/]	Total number	Totally damaged[1/]	Slightly damaged[2/]	Total number	Totally damaged[1/]	Slightly damaged[2/]	Total number	Totally damaged[1/]	Slightly damaged[2/]
Valenzuela	1	0	1	1	0	1	6	2	4	1	1	0	33	10	23
Caloocan	2	1	1	0	0	0	12	4	8	1	1	0	188	56	132
San Juan	0	0	0	1	0	1	2	1	1	1	1	0	21	6	15
Mandaluyong	1	0	1	1	0	1	2	1	1	1	1	0	27	8	19
Quezon City	8	3	5	7	2	5	38	11	27	1	1	0	142	43	99
Pasig	1	0	1	1	0	1	12	4	8	1	1	0	30	9	21
Marikina	1	0	1	0	0	0	11	3	8	1	1	0	16	5	11
Manila	4	1	3	7	2	5	17	5	12	1	1	0	897	269	628
Malabon	0	0	0	2	1	1	0	0	0	1	1	0	21	6	15
Navotas	0	0	0	0	0	0	0	0	0	1	1	0	14	4	10
Makati	0	0	0	1	0	1	3	1	2	1	1	0	33	10	23
Pateros	0	0	0	0	0	0	0	0	0	1	1	0	10	3	7
Taguig	0	0	0	3	1	2	4	1	3	1	1	0	28	8	20
Parañaque	0	0	0	1	0	1	7	2	5	1	1	0	16	5	11
Las Piñas	1	0	1	0	0	0	11	3	8	1	1	0	20	6	14
Muntinlupa	1	0	1	3	1	2	8	2	6	1	1	0	9	3	6
Pasay	0	0	0	0	0	0	2	1	1	1	1	0	201	60	141
Total	**20**	**5**	**15**	**30**	**7**	**21**	**135**	**41**	**94**	**17**	**17**	**0**	**1,706**	**511**	**1,195**

[1/] Non-operational
[2/] Operational

The Response (+96 hours to 144 hours)

(December 2, 2018 – Sunday – 10:43H to December 4, 2018 – Tuesday – 1700H)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

At around 1100H of December 2, 2018 (Sunday), the NDRRMC Chairman Secretary Lorenzana and OCHA Resident Coordinator discussed and agreed to launch an international Flash Appeal to mobilize emergency funding for the response.

Neighboring countries, international donors and foreign embassies are coordinating with the NDRRMC and the PIHA Cluster, seeking information on priority needs. There is increasing pressure from the international public to help the Philippines in responding to this catastrophe.

At around 1500H of December 3, 2018 (Monday), following the declaration of a state of national calamity and acceptance of international assistance, international teams including ASEAN-ERAT, UNDAC and USAR Teams and Emergency Medical Teams (EMT) have started arriving at Clark International Airport. Upon arrival, following the customs, immigration and quarantine process, they have checked-in at the Philippine International Humanitarian Assistance Cluster Reception Center (PIHARC). They were briefed on the current situation, including casualty figures.

On the other hand, all arriving EMTs were briefed at the National Emergency Medical Team Coordinating Cell (NEMTCC) on the health situation, reporting mechanism, area of assignment and others. Subsequently, all international teams move to their identified areas of assigned tasking.

The National Emergency Medical Team Coordinating Cell is trying to figure out how to transport the EMTs to Metro Manila. The best option is through helicopters but its availability is a problem. Road transport is another option and was the one explored by the NEMTCC. International EMTs will be transported directly to their tasking location.

At around 0800H of December 4, 2018 (Tuesday), all the EMTs from ASEAN Member States arrived at their assigned quadrants through land travel. They were briefed at their assigned Sub-Emergency Medical Team Coordinating Cell on the current situation of the quadrant, and were given assignments. They were also informed on the current health situation in the area, particularly on the increasing number of trauma cases.

The leading causes of mortality includes limb fractures, wound lacerations, head injury, blunt chest and abdominal trauma, soft tissue injury, penetrating injuries, loss of consciousness, anxiety, hysteria, and hypertension.

On the other hand, the causes of deaths include hypovolemia, crushing injury, cerebrovascular accidents, acute coronary events, respiratory failure, and severe burn.

The Response (10th day to 15th day)

(December 8, 2018 – Saturday to December 13, 2018 - Thursday)
Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

The Philippine Institute of Volcanology and Seismology (PHIVOLCS), indicated that more than 100 aftershocks of magnitudes ranging from 4 to 6 have been recorded since the main earthquake. More international response teams, including foreign militaries, are arriving to assist in the disaster response operations.

At around 1200H of December 8, 2018, NDRRMC releases additional information regarding the estimated number of people affected and the extent of the damage.

Location	Fatalities	Injuries	Missing	Displaced
North Quadrant	4,560	13,680	18,240	900,000
East Quadrant	3,240	9,720	12,960	450,000
South Quadrant	6,120	18,360	24,480	900,000
West Quadrant	4,680	14,040	18,720	1,260,000
Total	**18,600**	**55,800**	**74,400**	**3,510,000**

The Government is activating its contingency plan for 11 temporary evacuation camps collectively capable of hosting 1.1 million people. See inset map for individual locations and capacities.

The affected population has limited access to basic health services, food and drinking water. In addition to those people in evacuation centers, many thousands are staying with host families or in tents near their houses. Some have moved outside of the affected areas, fearful of continued aftershocks.

A significant number of children and internally displaced people are showing signs of psychosocial trauma. There were also a lot of public health cases (infectious diseases such as measles, leptospirosis, acute gastro enteritis, abscess, acute respiratory infection, sore eyes (conjunctivitis).

Temporary Evacuation Camps And Capacity

There is extensive damage to sewerage and water pipes. As a result, water sources have been contaminated. As such, there are also reports of increasing number of people, especially infants needing medical attention due to contamination of water sources and the unsanitary living conditions in camps.

Reports indicate the need to provide psychosocial support to affected people. Children have become orphaned or separated from their families. There are increasing reports of children, women, persons with disabilities and the elderly who are seeking assistance.

There is also a huge and immediate need for tents, tarpaulins and temporary shelter to house the displaced population. Access to basic medical services is a problem and disease surveillance need to be strengthened.

School buildings, equipment as well as learning and teaching materials need to be rebuilt or replaced. Many schools that could re-open lack access to clean water and sanitation. Many other schools remain closed and are too damaged to re-open.

NAIA runway has been repaired, and has been opened for rotary wing aircraft. Logistics hubs were established in Cebu and Subic to receive incoming international humanitarian assistance. Manila North and South Harbor piers are still inoperable.

On-going restoration of electricity and communications lines are being hampered by numerous aftershocks.

Initial reports from the media and social media indicate that many areas affected have not yet received any assistance from government, and have aired appeals from people asking for help.

The Response (16th day to 21st day)

(December 14, 2018 – Friday to December 19, 2018 – Wednesday)

Adapted/Lifted from the INSARAG 2018 Scenario, NDRRMC and OCHA

At around 1200H of December 14, 2018, NDRRMC has released an updated information regarding the estimated number of people affected and the extent of the damage.

Location	Fatalities	Injuries	Missing	Displaced
North Quadrant	9,400	32,900	5,472	991,196
East Quadrant	6,000	20,700	3,888	792,956
South Quadrant	11,400	38,800	7,344	1,110,139
West Quadrant	8,000	27,500	5,616	1,070,491
Total	**34,800**	**119,900**	**22,320**	**3,964,782**

Of the 17.7 million people that have been affected, 5.5 million are in need of immediate assistance. Of this 25% are staying in evacuation camps (around 1.1 million people), while another 35% have opted to leave Metro Manila to stay with their relatives in nearby provinces. Many of them are requesting for transportation assistance from government.

A significant number of children and internally displaced people (IDP) are showing signs of psychosocial problems. The IDP Protection Cluster have raised the issue of heightened risks of sexual and domestic violence in evacuation camps.

There is urgent need for food and water in evacuation camps. Health Cluster is also monitoring and addressing reported increasing medical and hygiene concerns in some evacuation camps.

More dead bodies are being dug out of collapsed buildings. Severely injured persons have died due to limitations in medicines and medical supplies. The local government units are having a problem in looking for appropriate burial sites for the dead. Local Government Units have sought the assistance of the Cluster on the Management of the Dead and Missing.

The last live rescue activity by international USAR team was conducted on December 18, 2018. Considering that there the probability of further live rescue is very low and that local SRR Teams have sufficient presence in Metro Manila, the Philippine government decided to declare the end of international SAR and have asked the OCHA to start the demobilization of international USAR Teams.

Foreign Military Forces have started transition planning with government counterparts for eventual drawdown. The MNCC is facilitating discussions, in coordination with the National Emergency Operation Center and the National Response Cluster, for the deployment of foreign military engineering battalions to support the debris removal and emergency repair/rehabilitation of bridges, schools and other government facilities.

The EMTs of the ASEAN Members States and Japan were instructed to conduct Health Needs Assessment in their assigned quadrants.

Additional Health Emergency Response Teams from the Assisting Regions have already arrived and are preparing to deploy in the four quadrants of Metro Manila.

At around 1200H of December 17, 2018, additional Emergency Medical Teams from other countries are starting to arrive to replace the Emergency Medical Teams from the ASEAN Member States who were the first to arrive in the Philippines.

At around 0800H of December 19, 2018, the Emergency Medical Teams from the ASEAN Members States are preparing their exit reports to be handled to the Department of Health.

Emergency Medical Teams reported to the National EMTCC and PIHARC. They also underwent the usual customs, immigration, and quarantine process before leaving the country

References:

1. INSARAG Asia-Pacific Regional Earthquake Response Exercise 2018 Scenario Plan
2. Metro Manila Earthquake Impact Reduction Study

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FOR ARCH RCD PURPOSES ONLY

Annex 1 **Rapid Health Assessment Accomplished Form**

CHD REPORTING FORM 2

Republic of the Philippines
Department of Health
HEALTH EMERGENCY MANAGEMENT STAFF
REPORTING UNIT: HEMB DREAM TEAM

RAPID HEALTH ASSESSMENT

Date Prepared: November 29, 2018

Event: 7.2 Magnitude Earthquake in Metro Manila

Purpose: To determine the magnitude of an emergency and the health needs and capacity of the affected area/s to cope.

Instructions: This form shall be submitted **within 24 hours** upon occurrence of major emergency or disaster. **Complete all the necessary fields.** Please attach photos if available.

A. EVENT INFORMATION			
Type of Hazard			
NATURAL	**BIOLOGICAL**	**TECHNOLOGICAL**	**SOCIETAL**
❑Monsoon Rains ❑ LPA/ALPA ❑Typhoon ❑Storm Surge ❑Flooding ✓❑Earthquake ❑Others, specify _____ ❑Lightning ❑Volcanic Eruption ❑Lahar ❑Tsunami ❑Landslide	❑ Poisoning ❑ Disease Outbreak ❑Others, specify _____	❑Fire ❑Chemical Spills ❑Toxic Waste ❑Nuclear ❑Damaged Infrastructure ❑Trash slide ❑Explosion (Unintentional) ❑Others, specify _____ ❑Maritime Accident ❑Air Accident ❑ Land Transportation Accident	❑Bombing ❑Armed Conflict ❑War ❑Mass Gathering ❑Ambush Incident ❑Terrorist Activities ❑Hostage Taking ❑Coup d'état ❑Repatriation ❑Civil Unrest ❑Specify _____

Date of Occurrence	**28 November 2018 (Thursday)**	Time of Occurrence	❑AM ✓❑PM **10:43 AM**	
Place of Occurrence	Barangay/Landmark **All the barangays in Metro Manila**	Municipality/City: **All the cities and municipality of Metro Manila**	Province: **Not applicable**	Region: **Metro Manila/ National Capital Region**

Brief Description

At 1043H local time, November 28, 2018 (Wednesday), an earthquake rocked Metro Manila and nearby areas in Regions III and IVA. The magnitude of the earthquake was recorded at 7.2, with epicenter of 15 kilometers, east of the City of Manila and depth of focus was 7 kilometers. It affected all the cities and municipality of Metro Manila. The quake was also felt in the nearby cities and municipalities of Regions III and IVA. The duration was recorded at approximately 63 seconds. Aftershocks continue to rattle the entire region.

It was the deadliest earthquake in the Philippines in 28 years since the 1990 Luzon earthquake. PHIVOLCS estimated that the energy released by the earthquake was equivalent to 32 Hiroshima bombs.

The Pacific Tsunami Warning Center did not issue a Pacific-wide tsunami threat. The United States Geological survey issues a yellow warning, saying "some casualties and damage are possible and the impact should be relatively localized.

B. LIFELINES IN THE AFFECTED AREAS

Lifelines		Status	Remarks
Communication Services	Landline	❑ Available ☑ Not available	**Due to damages in the sites**
	Cellphone	❑ Available ☑ Not available	**Due to damages in the cellular sites**
	Internet	❑ Available ☑ Not available	**Due to damages in the internet sites**
Electricity Services		❑ Available ❑ Not available ☑ Total black out	**Power outages were reported due to damages sustained by electric transmission facilities**
Water Services		❑ Available ☑ Not available	**Failure of water supply caused by the damage of water supply pipes**
Main Roads/Bridges		☑ Passable ❑ Not passable	**The earthquake caused the inaccessibility of areas within Metro Manila, destroyed road networks, and collapsed structures.**
Airports and Seaports		❑ Functional ❑ Not Functional	**The Ninoy Aquino International Airport aircraft approach systems were rendered inoperable by the loss of electrical power. The runway and the terminals incurred damages and are closed to all air traffic. As such, The Ninoy Aquino International Airports is declared not functional and all flights, both local and international, are directed to Clark International Airport in Pampanga, or Cebu International Airport in Cebu City, or Laguindingan International Airport in Cagayan de Oro City.** **The North and South Harbor in Manila were damaged and have tilted due to liquefaction. The cargo handling machines in both ports were damaged, rendering them**

		indefinitely non-operational.
Source: **Department of Public Works and Highways, Department of Information and Communications Technology, and Metro Manila Development Authority**		

C. IMPACT OF THE EVENT IN THE COMMUNITY

Please attach updated List of Casualties in the prescribed format. (Add more rows if necessary)

Province	City/ Municipality	Number Affected		Evacuation Center			Casualties		
		Families	Individuals	No. of EC	No. of Families	No. of Individuals	No. of Deaths	No. of Injured	No. of victims in the hospital
Cannot be determined at the moment									
Total:									

D. IMPACT OF THE EVENT ON HEALTH FACILITIES

(Add more rows if necessary)

Province	City/Municipality	No. of Existing Facilities	No. of Damaged facilities	No. of functional facilities	Remarks
Cannot be determined at the moment		DOH _____ LGU _____ Private_____ Others: _____	DOH _____ LGU _____ Private _____ Others: _____	DOH _____ LGU _____ Private _____ Others: _____	

E. HEALTH PERSONNEL

(Add more rows if necessary)

Province | City/ Municipality | Hospital	Percent of personnel reporting for work	Command system in place?
Since the earthquake just happened, most of the personnel are still checking on their family. As such, the personnel in the hospital are those that are on duty on November 28, 2018.	☑ less than 50 percent ❑ more than 50 percent	☑ Yes ❑ No

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F. LOGISTICS		
Office	Essential Drugs and Medicines	
	Status	For how many days will it last?
CHD	❑ Adequate ☑ Inadequate	**Some of the logistics prepositioned were destroyed**
LGU	❑ Adequate ☑ Inadequate	**Some of the logistics prepositioned were destroyed**
Hospitals	❑ Adequate ☑ Inadequate	**Some of the logistics prepositioned were destroyed**

G. Actions Taken	
1.	**Provision of drugs and medicines to the affected areas.**
2.	**Conducted Rapid Water, Sanitation and Hygiene; and Nutrition Assessment.**

H. Recommendations	
1.	**Immediate mobilization of Health Emergency Response Teams to all the quadrants to respond to the medical and public health needs of the survivors.**
2.	**Immediate provision of logistical requirements needed to ensure provision of medical and public health services to the survivors.**
3.	**Coordination with the regional office assigned for the first wave to immediately deploy to the assigned quadrants.**
4.	**Immediate distribution of potable water supply.**
5.	**Management of the dead and the missing.**
6.	**Activation of the Health Clusters composed of Medical and Public Health; Water, Sanitation and Hygiene; Mental Health and Psychosocial Support Services; and Nutrition.**

Prepared and Submitted by:			
Date Prepared:	**November 29, 2018 (Thursday)**	Mobile No.:	**+632 9283946756**
Printed Name:	**Dr. Arnel Rivera**	Landline:	**+632 7430538**
Designation/Office:	**Medical Officer IV**	Fax No.:	**+632 7430538**
Signature	**Signed**	Email:	**armyra2001@yahoo.com**

Annex 2

FOR ARCH RCD PURPOSES ONLY

MALACAÑAN PALACE
MANILA

BY THE PRESIDENT OF THE PHILIPPINES

PROCLAMATION NO. 143

DECLARING A STATE OF NATIONAL CALAMITY

WHEREAS, the devastating effects caused by 7.2 magnitude earthquake in Metro Manila have brought death, destruction, and in calculable damage to the lives and properties of Filipinos;

WHEREAS, due to the severe gravity of the damage, particularly in Metro Manila, Region III and Region IVA, the government is spearheading the entire nation's efforts to undertake immediate rescue, recovery, relief and rehabilitation;

WHEREAS, a declaration of a State of National Calamity will hasten the rescue, relief and rehabilitation efforts of the government and the private sector, including any international humanitarian assistance, and will effectively control the prices of basic goods and commodities for the affected areas;

WHEREAS, this declaration also necessitates that the mechanisms for international humanitarian assistance are implemented pursuant to Republic Act No. 10121, otherwise known as the "Philippine Disaster Risk Reduction and Management Act of 2010" and the guidelines of the Philippine International Humanitarian Assistance;

WHEREAS, such declaration will further afford the local government units ample latitude to utilize their respective calamity funds for the rescue, relief and rehabilitation of their constituents.

NOW, THEREFORE, I, RODRIGO ROA DUTERTE, President of the Philippines, by virtue of the powers vested in me by law, hereby declare a **State of National Calamity**.

All departments and other concerned government agencies are hereby directed to implement and execute medical assistance, relief and rehabilitation work in accordance with existing operational plans and directives and orders issued in connection with the occurrence of calamities.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the Republic of the Philippines to be affixed.

DONE, in the City of Manila, this 29th day of November in the year of Our Lord, Two Thousand and Eighteen.

(Sgd.) RODRIGO ROA DUTERTE

By the President:

(SGD.) SALVADOR C. MEDIALDEA
Executive Secretary

Lifted from a sample proclamation on the State of National Calamity

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Annex 3

ANNEX I

FORM 3

REQUEST FOR ASSISTANCE

1. General Information

   Office Reference Number:

   From: **Republic of the Philippines**

   To: **AHA Center/ASEAN Member States/Japan**

   Day/Date/Time: **Thursday/November 29, 2018/1300H**

   Disaster Event Name/Location(s): **Metro Manila, Philippines**

2. Requesting party

   National Focal Point

   Name: **Undersecretary Ricardo Jalad**

   Designation: **Executive Director**

   Institution: **National Disaster Risk Reduction and Management Council**
   Address: **Camp Aguinaldo, Quezon City**

   Phone/Fax: **+632 912-2424, +632 912-6675**

   Email: **ocda@ocd.gov.ph or ocda.ocd@gmail.com**

3. General Description of Disaster Event (Please state briefly the type (s) of hazard, the specific location(s), date, time, and duration of impact, and the factors or circumstances that triggered or brought about the disaster event.)

At 1043H local time, November 28, 2018 (Wednesday), an earthquake rocked Metro Manila and nearby areas in Regions III and IVA. The magnitude of the earthquake was recorded at 7.2, with epicenter of 15 kilometers, east of the City of Manila and depth of focus was 7 kilometers. It affected all the cities and municipality of Metro Manila. The quake was also felt in the nearby cities and municipalities of Regions III and IVA. The duration was recorded at approximately 63 seconds. Aftershocks continue to rattle the entire region.

It was the deadliest earthquake in the Philippines in 28 years since the 1990 Luzon earthquake. PHIVOLCS estimated that the energy released by the earthquake was equivalent to 32 Hiroshima bombs.

The Pacific Tsunami Warning Center did not issue a Pacific-wide tsunami threat. The United States Geological survey issues a yellow warning, saying "some casualties and damage are possible and the impact should be relatively localized.

4. Disaster Emergency Related Information

1. Disaster Event: **Earthquake**
2. Location(s): **Metro Manila**
3. Description: **The magnitude of the earthquake was recorded at 7.2, with epicenter of 15 kilometers, east of the City of Manila and depth of focus was 7 kilometers.**
4. Resources currently mobilized/actions taken:
   a. **Metro Manila Disaster Risk Reduction and Management Council established its Regional Emergency Operations Center at the Joint Task Force National Capital Region Compound in Camp General Emilio Aguinaldo, Quezon City.**
   b. **Metro Manila Disaster Risk Reduction and Management Council also established Emergency Operations Centers in the pre-designated areas in the four quadrants of Metro Manila.**
   c. **Pre-identified assisting regions have mobilized resources for deployment such as: Incident Management Teams (IMT), Search, Rescue and Retrieval (SRR) Teams, Emergency Medical Teams (EMTs), RDANA Teams, Rapid Emergency Telecommunications Team (RETT), Law and Order Teams, Camp Management Teams, etc. in their respective areas of assignment, bringing with them needed emergency relief and shelter, supplies and equipment.**
   d. **Local Government Units officials who survived the earthquake have started to undertake rapid damage assessments of accessible areas. Search and rescue operations have started. Some Local Government Units have started to establish their respective Incident Command Posts.**
   e. **Two (2) Rapid Damage Assessment and Needs Analysis Team were deployed to assess the extent of damage caused by any disaster, determine the needs, and evaluate the severity of the damage to structures.**
   f. **One (1) team of Health Emergency Management Bureau Disaster Risk Emergency Assessment and Management (DREAM) Team was deployed. The aim of the team is to gather information and provide recommendations for decision makers at the strategic level on what, when and how response interventions will be employed**
   g. **A total of four (4) Philippine Disaster Relief Team (PDRT), the National Urban Search and Rescue Team, and the four (4) Philippine National Emergency Medical Teams have been deployed to support response operations. The Department of Health is coordinating large numbers of medical personnel both from within the affected area as well as mobilizing additional staff from other regions. The Emergency Medical Team Coordination**

Cell within the Health Emergency Operation Center has been activated and planning for the National Emergency Medical Team tasking is ongoing.

h. Regional Disaster Risk Reduction and Management Council VII has now activated the National Emergency Operations Center in Clark Special Economic Zone, Pampanga to coordinate response operations on behalf of the National Disaster Risk Reduction and Management Council. Likewise, the Health Emergency Operation Center at Clark, Pampanga has been activated.

i. The Armed Forces of the Philippines-Joint Operations Center has mobilized four (4) helicopters to transport key officials and staff of National Disaster Risk Reduction and Management Council member agencies from temporary National Emergency Operation Center that was earlier established at the Armed Forces of the Philippines General Headquarters to the National Emergency Operation Center at Clark Special Economic Zone, Pampanga. This includes among others President Rodrigo Roa Duterte, Secretary Delfin Lorenzana of the Department of National Defense, Secretary Virginia Orogo of the Department of Social Welfare and Development, and Secretary of Health Francisco T. Duque III.

5. Additional resources needed or required (please list according to priority):
   - **a. Immediate mobilization of Health Emergency Response Teams, especially Emergency Medical Teams to all the quadrants to respond to the medical and public health needs of the survivors.**
   - **b. Immediate provision of logistical requirements needed to ensure provision of medical and public health services to the survivors.**
   - **c. Immediate distribution of potable water supply.**
   - **d. Management of the dead and the missing.**

5. Requested Resources (Please give details of the requested resources and other relevant information)

a. Personal

No	Skills (Please specify expected skills and qualifications: i. Basic; ii. Advanced; iii. Specialized Skills; iv. Command Skills	Number of Personnel	Targeted Deployment Location(s) (Where the assisting personnel will proceed upon arrival)	Specific Tasks to be Assigned	Anticipated Duration of Assignment
1	2	3	4	5	6
	Emergency Medical Team Type 1 Fixed	**5 members**	**Metro Manila**	**In all the quadrants (Note that Metro Manila will be subdivided into four quadrants**	**2-3 weeks deployment**

				for ease in the response operations)	

b. Equipment and Materials					
No	Type of equipment/materials	Number of equipment/ materials	Targeted Deployment Location(s) (Where the assisting personnel will proceed upon arrival)	Purpose of Use	Anticipated Duration of Assignment
1	2	3	4	5	6
	Equipment and materials needed by the EMT Type 1 Fixed	**Depends on the team**	**Metro Manila**	**For used in the treatment of patients**	**2-3 weeks**

6. Administrative Arrangements (please indicate information on administrative arrangements)

a. Expected arrival of requested resources (Please indicate when resources are needed to be sent) **As soon as possible, preferably on or before December 3, 2018**
b. Contact person at disaster event location or deployment Name: **Ms. Maria Lovella Rhodora Rago** Designation: **Supervising Health Program Officer/Coordinator of the National Emergency Medical Team Coordinating Cell** Institution: **Department of Health – Health Emergency Management Bureau** Address: **Department of Health – Health Emergency Management Bureau / National Emergency Medical Team Coordinating Cell at the Clark Special Economic Zone in Pampanga** Phone/Mobile Phone/Fax: **+632 711-1001, +632 915-772 5621**
c. Funding Arrangements (Please indicate how the resources will be funded, whether the requesting Party will shoulder the cost (some/all) or whether the assisting Party is expected to shoulder the costs (some/all), etc.) **All the Emergency Medical Team are expected to be self-sufficient. Being self-sufficient will mean that the team should be able to provide for support oneself and as such, the team should not require assistance from the affected area and from other teams including provision of food, accommodation, personal protective equipment, other logistics, cash advance, other life support mechanism, and all other expenses that may be incurred in response to events, emergencies, and disasters.**

Signed by

Signature
Undersecretary Ricardo Jalad
National Focal Point, National Disaster Risk Reduction and Management Council
Philippines

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Annex 4

November 29, 2018

_____
National Focal Point
National Disaster Management Office
xx Country

Dear Sir/Madam:

Thank you for your interest in assisting the Philippines in responding to the impact of the 7.2 magnitude earthquake that hit Metro Manila last November 28, 2018. Attached is the copy of Proclamation 143 declaring the National State of Calamity.

In the interest of an effective response, the Government of the Philippines currently requires all international assistance to be coordinated through official government channels. International teams should not mobilize until their offer of assistance has been approved and accepted.

Emergency Medical Teams (EMTs) are invited to register their offer of assistance by returning the attached SASOP Form 4 on the offer of assistance, and EMT Registration Form to archproject.philippines@gmail.com. Approval to mobilize will be expedited for the teams that are already in the WHO Global EMT Registry. Regardless of registration status, all teams must comply with the EMT guiding principles and minimum standards as indicated in the attached copy of the Blue Book guidelines on EMTs.

Based on preliminary assessments, the priority needs in the health sector are the following:

1. Immediate mobilization of Health Emergency Response Teams, especially Emergency Medical Teams to all the quadrants to respond to the medical and public health needs of the survivors.
2. Immediate provision of logistical requirements needed to ensure provision of medical and public health services to the survivors.
3. Immediate distribution of potable water supply.

We thank you again for your offer of assistance, and hope you understand and respect our efforts to coordinate incoming assistance to ensure more effective response.

Yours sincerely,

Signed
Dr. Francisco T. Duque III
Secretary of Health, Department of Health
Republic of the Philippines

Signed
Undersecretary Ricard Jalad
National Focal Point, National Disaster Risk Reduction and Management Council
Republic of the Philippines

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Annex 5

LETTER OF ACCEPTANCE

XX November 2018

_____
National Focal Point
National Disaster Management Office
xx Country

Dear Sir/Madame:

Thank you for your offer of assistance to help the Philippines during the response operations relative to the 7.2 magnitude earthquake that hit the country last November 28, 2018.

This letter serves as the official acceptance of the Government of the Philippines on your offer. The country is following guidelines on the international humanitarian assistance, and as such you are expected to follow. Attached is a copy of National Disaster Risk Reduction and Management Council No. 158 on the Enhanced Philippine International Humanitarian Assistance for your information and reference.

On the other hand, please submit your Emergency Medical Team (EMT) Registration Form if you have not submitted one. We expect you to be in the Philippines soon. Please bring copy of this letter of acceptance and EMT Registration Form with the necessary attached documents to facilitate the approval of your entry in the Philippines, subject to the laws of the Philippine Government.

In addition, please do not forget to register at the Philippine International Humanitarian Assistance Reception Center in Clark Special Economic Zone in the province of Pampanga.

Thank you very much.

Signed
Dr. Francisco T. Duque III
Secretary of Health, Department of Health
Republic of the Philippines

Signed
Undersecretary Ricard Jalad
National Focal Point, National Disaster Risk Reduction and Management Council
Republic of the Philippines

Attachment 9：

Proceedings of the 1st RCD

The First Regional Collaboration Drill,
the Third Project Working Group (PWG) 1 Meeting and the Second PWG 2 Meeting, and
the Second Regional Coordination Committee Meeting
on the Project for Strengthening the ASEAN Regional Capacity on
Disaster Health Management (ARCH Project)

17 – 21 July 2017
Duangjitt Resort & Spa and Phuket Mining Museum, Phuket, Thailand

Summary of Proceedings

1. The first regional collaboration drill (RCD), the third project working group (PWG) 1 meeting, the second PWG 2 meeting, and the second regional coordination committee (RCC) meeting on the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) were held in Phuket, Thailand from 17 to 21 July 2017. The overall programme of activities is presented in **Annex I**.

2. The first RCD, the third PWG 1 meeting, the second PWG 2 meeting, and the second RCC were attended by participants from ASEAN Member States (AMS): Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam, along with ARCH Project Team consisting of the National Institute of Emergency Medicine (NIEM) of Thailand and Japanese expert team, as well as representatives of the Department of Disaster Prevention and Mitigation (DDPM) of Thailand, Ministry of Health of Thailand, ASEAN Secretariat (ASEC), ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), the World Health Organization (WHO) Headquarters and Thailand Representative Office, the Japanese Advisory Committee, as well as the Japan International Cooperation Agency (JICA). The list of participants is enclosed in **Annex II**.

3. The summary of proceedings consists of three parts: 1) the first RCD, 2) the PWG meetings, and 3) the second RCC meeting.

Part 1 First Regional Collaboration Drill: from 17 to 19 July 2017

1. The first RCD was conducted by ARCH Project Team, and participated by teams from ten ASEAN Member States (AMS); Brunei, Cambodia, Laos PDR, Malaysia, Myanmar, Indonesia, Philippines, Singapore, Thailand, and Viet Nam, as well as Japan Disaster Relief (JDR). Also, participants from ASEAN Secretariat, AHA Centre, WHO, JICA, and Japanese Advisory Committee were involved. The first RCD consisted of the introductions and the table-top exercise (TTX) (Day 1), the field exercise (Day 2), as well as the review workshop (Day 3).

I. OPENING REMARKS / GROUP PHOTO

2. Mr. Norraphat Plodthong, Phuket Governor greeted and welcomed participants and honored guests. He appreciated ARCH Project to provide great opportunity to Phuket for strengthening of ASEAN regional coordination capacity on disaster health management and capacity development on disaster response for public health personnel of Thailand including Phuket and other southern provinces. Mr. Plodthong also expressed the expectation on future collaboration in disaster response based on experiences and learnings from this important event.

3. Dr. Atchariya Pangma, Secretary General, NIEM made opening remarks. He mentioned the outlines of the three-day program which consists of table-top exercise, field exercise and the review workshop. Dr. Atchariya also emphasized the objective of the first RCD to offer practical experiences in which you can learn about information management along with practicing effective collaboration among the emergency medical teams and with the concerned local agencies in a simulated disaster-affected area.

4. From JICA Thailand, Mr. Masato Koinuma, Senior Representative expressed sincere appreciation to close cooperation of all the stakeholders of ARCH Project. He mentioned that three RCD will be conducted during the three-year project and the first RCD was designed based on practical experiences of the Start-up Drill in January 2017. Mr. Koinuma emphasized that ARCH Project could contribute to enhance regional collaboration on disaster health management in ASEAN, one of the most disaster prone area in the world.

5. Then, the group photo was taken followed by the safety and security briefing by JICA Thailand Office.

II. INTRODUCTION TO THE FIRST REGIONAL COLLABORATION DRILL: CONCEPT, PURPOSES AND EXPECTED OUTCOMES

6. Dr. Phumin Silapunt, ARCH Project Team, made an introduction to RCD with and the overall picture of ARCH Project. The presentation of Dr. Silapunt can be found in **Annex III**.

III. INTRODUCTION TO ASEAN MECHANISM ON DISASTER MANAGEMENT

7. Mr. Arnel Capili, AHA Centre, presented on concept of collective response in ASEAN. His presentation included ASEAN Joint Disaster Response Plan (AJDRP) and ASEAN Military Ready Group (AMRG) as well as proposed mechanism for emergency medical teams (EMT). Also, he provided procedure and forms in SASOP relevant to the first RCD. Dr. Capili's presentation can be found in **ANNEX IV**.

IV. INTRODUCTION TO EMT CONCEPT AND COORDINATION MECHANISM (ESPECIALLY, FORMATS TO BE USED IN THE DRILL)

8. Mr. Flavio Salio, Emergency Medical Teams, Emergency Operations Department, WHO Headquarters, made presentation on EMT concept and coordination mechanism. Also, he explained the forms in the EMT Coordination Handbook, especially on those to be used in the first RCD. Then, Dr. Tatsuhiko Kubo from JDR presented on EMT Minimum Data Set (MDS). Presentations of Mr. Flavio and Dr. Kubo can be referred in **ANNEX V**.

V. INTRODUCTION TO TABLE TOP EXERCISE (TTX), AND BASELINE SCENARIO AND GUIDELINES, ETC.

9. Dr. Prasit Wuthisuthimethawee, the Project Team, provided introduction to TTX. He also explained baseline scenario and guidelines for TTX. Dr. Phumin Silapunt, briefed the participants on the system for request and receive international assistance in Thailand, because the first RCD will be conducted in accordance with the Thai system. Presentations of this session can be found in **ANNEX VI**.

VI. TABLE-TOP EXERCISE (TTX)

10. TTX was conducted facilitated by Thai task team. Three provincial public health emergency operating centre (PHEOC) and one national EOC/EMTCC were set in separate rooms. After arriving at the Suwannapumi Airport, emergency medical teams (EMT) from AMS submitted WHO EMT registration form and took necessary procedure at Receiving and Departure Centre (RCD) conducted by Department of Disaster Prevention and Mitigation (DDPM), Thailand. Then, RDC allocated EMT to the provinces. The participants learned the formats required to the field activities and coordination such as medical record, tally sheet, daily report, patient referral form, and exit report.

VII. INTRODUCTION TO THE FIELD EXERCISE

11. Dr. Prasit Wuthisuthimethawee make presentation on introduction to the field exercise including schedule, field layout, and logistics. Dr. Yasushi Nakajima presented the overall objectives of the series of RCD based on lessons learned from the start-up drill and will contribute to One AESEAN, One Response. Their presentation is included in **ANNEX VI**.

VIII. FIELD EXERCISE

12. The field exercise was conducted in the Phuket Mining Museum. EMT dispatched to three provinces and provide medical services as Type 1 fixed. Only Japan EMT played Type 2. Each team also visited the nearby village for health needs assessment. EMT referred the patients under coordination of provincial PHEOC. National EOC/EMT Coordination Cell (EMTCC) and Regional EOC collected and integrated information and reports.

IX. REVIEW WORKSHOP

13. The review workshop was conducted as the follow-up reflection of TTX and the field exercise, to review the exercises to identify the gaps, challenges and difficulties of each country team, as well as draw lessons learned for the following RCDs and the other project activities including development of regional collaboration tools and trainings.

a. National PHEOC/EMTCC Meeting Demonstration

14. The session comprised representatives from Provincial PHEOC from Krabi, Phangnga and Phuket in addition to representatives from eleven countries' EMT. Then, simulated meetings were demonstrated between them and Surat Thani Regional PHEOC, and Bureau of Public Health in Emergency Response of Ministry of Public Health (BPHER) as National PHEOC.

1) Krabi PHEOC

15. The following feedbacks were received from EMT from Malaysia, Brunei and Indonesia which were operating in Ao Nang, Koh Lanta and Phi Phi Island districts, and Krabi PHEOC.

- There was a delay in transportation process due to confusion in communication during the referral process. EMT would like PHEOC to give more attention to the referral process.
- Each stage of actions and processes needed frequent communications from PHEOC to EMT members to keep everyone at the same pace. One translation may not be enough to explain the sense of simulation.
- PHEOC suggested that because in actual disaster situation, mobilization of helicopter, ambulance and other transport could be slow, communication should be effective to enhance patient transportation. Under such severe situation, management of transportations may be difficult.

2) Phangnga PHEOC

16. The following feedbacks were received from EMT team from Singapore, Vietnam, Philippine, Thailand which were operating in Koh Pratong, Thai Meung, Khaolak and Ban Nam Kem districts, and Phangnga PHEOC.

- Due to severe damage of the health centre, impact to the local population was a certain level.

- National PHEOC was tense in the day-to-day operation due to high number of patients to be transferred. Therefore, patient transportation had to be done on foot, although vehicle should be provided in the actual situation. Because the number of medical personnel was not sufficient against the number of patients, EMT faced difficulty in site management.
- Because the shelter was too crowded and foreign volunteers had registration problem, the situation was getting worse. Some shelters (especially Khaolak affected by Tsunami) were too overwhelmed to control the situation and manage the environment, especially the water and sanitation issues. In addition, other problematic issues were there such as inadequate food, communication, road accessibility, irritating insects and rabies. Vaccination and medication should have been more well-equipped.
- As the spectrum of disease changed from acute phase to the later phase, EMT should be aware of it and adapt their services accordingly.

b. Phuket PHEOC

17. The following feedbacks were received from EMT team from Japan, Laos, Myanmar, Cambodia which were operating in Patong Beach, Kamala Beach and Mai Khao Beach districts, and Phuket PHEOC.

- Patient referral information should have been more clearly communicated from one EMT to another. In this event, because Japan EMT (type 2) received referred patients with little or no information from other type 1 EMT, operation of Japan EMT was affected to be less efficient.
- Security should be kept in mind during site operation. Considering the incidence that the Japanese EMT team leader was kidnaped, measures need to be taken to ensure EMT security. Security information should be communicated to all PHEOC and EMT in a reliable manner.
- In addition to the speed of referral process, the information regarding the vehicle load per trip was important in terms of planning and management of the number and severity of the patients.
- Language is the most common barrier during the operation.
- Foreign/Local volunteers and other health personals can be enhanced for effective contribution in emergency.

c. BPHER

18. The reports of the international EMT (I-EMT) deployment, operation and the management in three southern provinces were reported by Surat Thani Regional PHEOC to BPHER, National PHEOC with the observation of WHO. Surat Thani Regional PHEOC reported the status of impacts on casualty, I-EMT deployment capacity, infectious disease, and other public health problems, as well as challenges. Highlighted problems were communication among EMT and PHEOC, and ineffective transportation system. BPHER recommended to collaborate with the Regional Infection Control Office. Another administration challenge reflected from the field was the completion of standardized

forms for I-EMT which could interrupt the treatment. The suggestion from BPHER was to assist the I-EMT in explaining the form.

19. At the final stage, all I-EMT submitted the exit report to RDC at Suvarnabhumi Airport and left the country.

20. Ms. Sutapak Sulsabai, Policy and Plan Analysis from DDPM, appreciate the first RCD as it was important for Thai DDPM to be able to coordinate with health sector in emergency. Active participations of all EMT were very much beneficial for an effective drill. In actual disaster event, there would be other issues including physical and mental health issue when dealing with loss of family member and disability, therefore, collaboration is cross sectorial which DDPM would have to further their learning to include other sectors especially at the multi-national level.

21. On behalf of WHO, Dr. Richard Brown expressed appreciation to JICA and MOPH who invited several parties to the first RCD. As South East Asia is a disaster-prone region and the challenge on the scale and complexity of disaster, the drill would benefit the region's emergency response to disaster in collaboration with other countries. Although EMT at the national level are well-trained and prepared, the capacity may not be enough given the impact of vast areas. ARCH Project is crucial in supporting and empowering regional level coordination to achieve familiarity and guidance on practical steps towards I-EMT deployment. Spirit of AMS towards the One ASEAN, One Response initiative is prominent. Additional inputs to be considered could be the inclusion of clinicians on infectious disease to prevent post-disaster disaster outbreak. However, WHO is in full support for the project in response to WHO's EMT Initiative.

X. COUNTRY PRESENTATIONS

22. Following the group discussion in accordance with brainstorming guidance and template, each AMS presented the results of the group discussion. The guidance and template for the brainstorming are presented in **Annex VII**. And presentations of AMS could be referred in **ANNEX VIII**.

a. Brunei

23. **Program Evaluation:** Brunei reflected that the venue, the length, the format of the program was appropriate, especially the drill scenario was well-simulated and prepared although it needed more facilitation.

24. **Capacity Building:** Brunei may need more capacity building as the team is lacking all aspects of EMT coordination both in receiving and offering, thus trainings are needed.

25. **Coordination Process:** In the EMT coordination for this event, the process was clearly explained and simple although Custom, Immigration and Quarantine (CIQ) process should be acknowledged before the deployment. Communication between EMT and PHEOC, referral system and transportation were common challenges of the drill. For example, the number of people which can be loaded in certain vehicle (ship/boat/helicopter/ambulance) should be clearly stated.

26. **Reporting Form:** The registration form was easy to understand but not clear whom to submit to. Brunei team did not use forms of EMT-Minimum Data Set (MDS), Daily Report and Situation Report. The Referral Form was too complicated and not clearly explained; particularly the patient history part was difficult to find information. There should be free-text room in the medical record section. The Health Need Assessment (HNA) Form had some duplication and contains too many text boxes.

b. Indonesia

27. **Programe Evaluation:** Tsunami was a challenging scenario for the operation, but it was well-prepared. The overall program was successful.

28. **Capacity Building:** In management aspect, capacity to operate under a standard operating procedure (SOP), legal issue and WHO technical guidance should be developed. In addition to the AMS training by ARCH Project in the first stage, more knowledge can be obtained through academic conference and student exchange through scholarship grant.

29. **Coordination Process:** Logistic and other supporting technicians would make coordination process smoother. The process for EMT coordination among other sectors such as public health, security and social welfare should be clearer.

30. **Reporting Forms:** In MDS Statistics, referral patient in Type1 EMT should be included in outpatient or new admission. As for HNA format, the estimated total number of population should be included and indicator for food availability maybe revised other than the type of food provided. Also, the type of vaccination, serum and medication for dog and snake bites should be more described. Medical staff types can be categorised more detail. In the environmental health section for instance, cleanliness of water which may not be tested with bare eyes, confirmation will be need from public health sector.

c. Japan

31. **Program Evaluation:** TTX was useful to prepare teams for field exercise. The field exercise can be longer to reflect the actual field operation. In this case, presentations can be shortened to allow longer Q&A session and accommodate more time for the field exercise.

32. **Capacity Building:** JDR is the only type 2 EMT which all severe patients were referred to although the team did not have sufficient equipment. In the actual operation, type 2 EMT will not be adequate for covering the all trauma cases.

33. **Coordination Process:** Patients were being transferred with little/no background information. Referral system can be more developed for smoother operation. The management of public health issues such as animal bites, food poisoning, and management of corps as well as security-related issues required further development.

34. **Reporting Form:** Some terminologies in the referral form need to more clarifications, such as “assistance device provided”. In the referral form, “contact person” was recommended to be used

instead of "focal point", JDR is developing an e-tally sheet to make daily report automatically. In future, it could be shared through a cloud server.

d. Lao PDR

35. **Program Evaluation**: All aspects of program are satisfactory.

36. **Capacity Building:** Capacity development programmes are necessary for legal matters, EMT coordination, institutional settings, international deployment arrangements, and roles and responsibilities of affected country for EMT coordination.

37. **Coordination Process:** There's no further recommendation on the EMT coordination process as it was already well-organized.

38. **Reporting Form:** Some forms can be revised to be more concise, but those still keep important points.

e. Malaysia

39. **Program Evaluation:** The overall exercise was well-organized especially the usefulness of TTX. However, feedback may need more time for further improvement. In addition, the availability of tools can be more explained for more effective use with considering the influx of patients.

40. **Capacity Building:** There should be a standardized training material for new member in EMT on SOP. It would also benefit EMT to know function of other agencies under ASEAN during disaster within and outside the health sectors to avoid duplication and streamline the operations.

41. **EMT coordination process:** The well-versed instructions on command, control, coordinate, communicate can be useful in the overall operation. Health Need Assessment done by EMT can be quite overwhelming as EMT has a medical discipline, trainings on HNA will useful in familiarizing EMTs with the assessment. The result of the assessment should anyway be confirmed from the public health personals.

42. **Reporting Form:** The Medical Record should use bigger fonts and provide free-text space. Malaysia reflected that patients' names required in the exit form is unnecessary and suggest change to only total number of patient. There was confusion in EMT registration form queries to whether it refers to in-country relationship or receiving country relationship. To make the flow of information goes more naturally, EMT member details should be placed in earlier section of staff details.

f. Cambodia

43. **Program Evaluation:** Overall arrangement of the program including venue, drill scenario, facilitation and instructions are satisfactory.

44. **Capacity Building:** Some training courses should be introduced for public health personnel such as legal provision, liability concern, SOP, and roles and responsibility on EMT coordination of the

affected country. Cambodia highlighted that curriculum of the regional training courses and student exchange programs among AMS need to be developed for long-term capacity building.

45. **Coordination Process:** There's no further recommendation in the EMT coordination process as all are satisfactory for Cambodia.

46. 26. **Report Form:** All EMT should ensure capacity to complete the relevant forms. In the Exit Form, part E, F and G are not necessary. Additionally, the font of farms particularly Tally Sheet should be bigger.

g. Myanmar

47. **Program Evaluation:** The field exercise should be three days for practicing actual reflection, trail- and error-process, actual clinical assessment. Shelters could be prepared with considering patients who had difficulty in working. In the preparation process, access to electricity should be ensured to enable communication devices including satellite phones and internet. Other aspect of the drill was very well prepared

48. **Capacity Building:** EMT were required basic knowledge to operate under legal agreement, SASOP, and other international cooperation arrangement. Given that different countries have different EMT capacity, international deployment agreement may not be complied by every country.

49. **Coordination Process:** In the case of phone communication loss, alternative communication approach e.g. satellite phone or radio should be considered.

50. **Reporting Forms**: Several forms required too many data which caused stress to the EMT. Guidance for forms completion can be attached at the back of forms or as separate attachment. Myanmar EMT had the problem completing the registration form as the team does not comply with several items. Exit form and HNA form were already well developed.

h. Singapore

51. **Program Evaluation:** The overall arrangement on venue and facility is good. The drill was very well executed although it was a one-week load of incident condensed into one day.

52. **Capacity Building:** A standardized step-by-step approach and simplified flow of work should be established to facilitate the process. Singapore suggested a set of instruction card for each action which are easily drown out such as supply request procedures, evacuation, radio operation, patient referral and others. However, TTX helped smother work flow in the ground. The briefing from PHEOC should be done using a map as reference. In addition, other EMT operating in surrounding area should be acknowledged about the existence of one another in case assistance needed.

53. **Coordination Process:** Communication among EMTs and EOC can be enhanced by two-way communication approach. Singapore's concern was on how EMT link with logistic supply. The

transport to and from the venue should be guided by local authorities. With the language barrier, patient identifications were difficult to obtained.

54. **Reporting Form:** The possibility of cloud or web based document template should be considered where the area has Wifi coverage to increase reliability and accuracy of entered information. Clarification of children's age is needed e.g. 5 year or older. The Exit Form and HNA form need free text space.

i. Thailand

55. **Program Evaluation:** The presentations should be shortened to allocate more time to the exercises. Form completion should be demonstrated and well-guided.

56. **Capacity Building:** Thailand agreed to all capacity building program listed by ARCH Project. However, additional subjects were proposed such as preparedness and measures for robbery, suicide attempts, electricity black-out. The authority responsible for curtain issues should be clearly identified e.g. PHEOC, local government and others.

57. **Coordination Process:** Radio can be one option, but the radio channel should be managed not to interfere each other. In the referral system, time and logistics management were paramount. Referral units should be able to calculate time consumption for each transportation as well as the suitable areas to load patients.

58. **Reporting Forms**: Type 1 and Type 2 EMT should have separate set of form to avoid confusion. Registration form may include information of all team members. Daily Report can be made more concise to cope with the number of patients that EMT need to concentrate on. The management among team should be better to handle Exit Report as there should be one person who can report the overview of the situation even though one may not be there from the beginning.

j. Philippine

59. **Program Evaluation:** There was a shortage of ambulance and the availability of supply. There should be more clarification on the role of entities involved in the referral process i.e., EOC, referral team, and referral hospital. For this, the referral directory can be useful, in addition to the establishment of Incident Command Center (ICC) as coordination point. CIQ should have a separate station to enhance the learning.

60. **Coordination Process:** It is suggested that universal radio language code to enhance effective communication especially the referral process among EMT. Moreover, protocol for reporting back to PHEOC should be strictly followed by EMT.

61. **Reporting Form:** Common feedbacks to the reporting forms are to increase font size, bold lines in each section. In Daily Report form, the answer boxes are very specific to EMT type 1 fixed and 2; several items are not applicable to EMT type 1 mobile. The risk assessment in the reporting form does not clearly reflect on the tally sheet. The HNA form should be filled in separately from one

village to another to include top ten consultations for mortalities and morbidities, solid and liquid waste management and breast feeding facility, source of water, types of toilet facility, number of population by age breakdown and others.

62. **Capacity Building:** EMT member should be trained according to the skill pyramid in the training courses which include radio operation and trauma management that fit EMT competencies.

k. Vietnam

63. **Program Evaluation**: Check list of availability of supply should be developed such as medical equipment especially pain killer and injection. Regarding the drill arrangement, facilitator skills can be enhanced to properly guide the flow of activities.

64. **Capacity Building:** Training Course on SOP and EMT Coordination could be introduced for the public health personnel in ASEAN.

65. **Coordination process**: There was a lack regular communication as well as local human resources, staff and availability of equipment and facilities. CIQ can be enhanced to inform the process to EMT in advance.

66. **Reporting form**: Rapid Neurology Assessment (AVPU) practice could be adopted in one of the reporting form. It is still unclear if EMT refers to WHO accredited type as referred to in several reporting forms such as EMT-MDS.

67. After all the presentations, representative from WHO mentioned that Registration form and the inquiry process are very useful within the team for both receiving country for tasking and the EMT that can be reflected in Registration form. As EMT type 2 referred patients to other location, such referral information should be reported to EMTCC in Exit Report. EMTCC observed that the referral process could be done correctly. However, the information received by all EMT types will post crucial information for EMTCC. In addition, EMTCC should emphasize facilitation on coordination of N-EMT and I-EMT as well as guiding throughout the process.

68. AHA Centre congratulated the Project Team for successful simulation exercise which had built capacity AMS in deployment experience. The design of the exercise was excellent, from TTX to the field exercise in rotations to many tasks and missions. An idea to consider for next drill was to have a debriefing session to allow EMT to reflect on their own operation to foster learning. Emergency response is as if a project management in brief timeline where management of team member, resources and time are to be considered. This time, F imitates actual disaster situation where challenges related to communication media, security, supplies, sanitation, food and shelter occurred. These issues can be considered to improve preparation of the next RCD. Disaster Health Management is an important initiative which includes not only emergency medicine but also other aspects such as public health, communicable disease control, media management, and security.

Nonetheless, all aspects need integration under All Hazard One Approach and One ASEAN, One Response.

XI. SUMMARY

69. Ms. Keiko Nagai made a final summary of the after-action review of the first RCD with the highlighted objective to conduct the test on the use of common forms. According to the cycle of Plan, Do, Check, Act (PDCA) framework, the first RCD has achieved all target. During the planning process, Thailand PHEOC has collaborated with other sectors including DDPM and MOFA. The plan was put into action through TTX and the field exercise. Through the review session, all the participants and the Project Team could draw valuable lessons to achieve the exercise objective, to practice the use the common forms. Thailand will share the experience in hosting RCD to Viet Nam and the Philippines which will host the second and third RCD consecutively. The presentation document can be referred in **ANNEX IX.**

XII. CLOSING REMARKS

70. Dr. Jirot Sindhvananda delivered a closing remark by expressing sincere appreciation and gratitude for every party which contributed to the success of the first RCD. The experience on the drill will guide EMT with different backgrounds to common expectations, preparation and training towards effective coordination in the field.

Part 2 Project Working Group (PWG) Meetings

XIII. OPENING REMARKS

1. Dr. Jirot Sindhvananda, the chair, delivered welcome remarks. The second meeting of PWG 1 which was held in May 2017 covered discussions on the draft regional collaboration tools and the ASEAN Leaders' Declaration on Disaster Health Management. The first meeting of PWG 2 in January 2017 had discussed the plan for the first AMS Training which was conducted in May 2017. Both PWG 1 and 2 meetings would continue the discussions on the mentioned topics with PWG 1 objective to gather feedbacks on the latest version of four tools and PWG 2 objective to discuss further planning of AMS Training. The chair declared the opening of the meetings and wish participants for fruitful results.

XIV. OVERVIEW OF ARCH PROJECT

2. Dr. Phumin Silapunt presented background, relevant ASEAN initiatives, scope, objective, expected outputs, and implementation process of ARCH Project. The presentation document can be referred to in **ANNEX X.**

XV. CONCLUSION AND RECOMMENDATION FROM THE FIRST REGIONAL COLLABORATION DRILL

3. Dr. Yasashi Nakajima made a presentation on review of the Start-up Drill and the first RCD. The review the Start-up Drill was intended to identify gaps of both individual and team assessing 1) team capacity; 2) individual capacity; 3) intra-team collaboration and; 4) inter-team collaboration using common forms. All capacities and skills will constitute ARCH Project pyramid model from the first, second and third layer underlying the One ASEAN, One Response. In the review of the first RCD, all teams provided feedbacks based on; 1) program evaluation, 2) coordination process, 3) capacity building, and 4) reporting forms. Through the presentation by each country team, some comments were made for further improvement of the relevant forms, management of referral system, further capacity development on necessary knowledge and skills. In addition, the knowledge about other agencies that function within ASEAN will enable EMTs to operate more effectively in the field. Based on discussion in the review workshop, some key factors of the pyramid model were modified. The presentation document can be referred to in **ANNEX XI.**

XVI. THE THIRD PWG 1 MEETING

a. Session 1: Introduction

4. After the self-introduction of participants, Dr. Jirot Sindhvananda, reviewed and summarized the agreed points from the second Meeting of PWG 1 in May with a focus on the four (4) kinds of Regional Collaboration Tools; SOP for Coordination of EMT in ASEAN, Health Need Assessment (HNA) Framework, Database of EMTs in ASEAN, and Minimum Requirements for EMT Members. Then, Dr. Sindhvananda presented the objectives of this third Meeting of PWG 1, which are to discuss the Regional Collaboration Tools, to provide inputs for further development of the tools, and to reach consensus and agree on the way forward until the next meeting of PWG 1 in November 2017. The presentation document can be referred to in **ANNEX XII.**

b. b. Session 2: Regional Collaboration Tool (1) - Standard Operating Procedure (SOP) for Coordination of EMT in ASEAN

5. Ms. Junko Yamada explained the progress of development of SOP. The current draft version 0 was developed by incorporating the inputs and feedback from the second Meeting of PWG 1 as far as possible. The inputs included 1) SOP is a component of and aligned to SASOP and AJDRP; and 2) Project Team will consolidate feedback from the Meeting, and consider: a) Articulation of scope and limitation of the SOP in the introduction section; b) Presentation of process flowcharts; and c) Role of affected and assisting countries.

6. Then, Ms. Yamada presented the draft version 0 by focusing Chapters I. Introduction, II. Institutions, III. Disaster Preparedness and IV Emergency Response. The presentation can be referred to in **ANNEX XIII.**

7. To collect necessary information for Section A “National Focal Points for Emergency Medical Team (EMT) Coordination” of Chapter III., AMS representatives were asked to present its in-country mechanism of EMT coordination including the national focal point. The presentations were made based on the format which was created by the Project Team. The presentations can be referred to in **ANNEX XIV.**

8. The points of discussion are summarized as followings:

   - The scope of the SOP needs to be further defined. Currently it is illustrated in Figure 1, and briefly indicated in Paragraph 4 (‘areas covered’). It is suggested that these are further elaborated. Also, in practice, national and international EMT interact and cooperate in the field. Connecting National EMT (N-EMT) and International EMT (I-EMT) through an arrow is suggested.
   - There are operational linkages with the ASEAN EMT and military medical services. Re-phrase Paragraph 5 to indicate coordination with military EMT, as well as EMT of other organisations.

- ASEAN EMT register with health authorities of the affected country and/or through AHA Centre. Revise Paragraph 18.
- Form 7 of SASOP (Final Report from Assisting Entity to AHA Centre) shall serve as reference for ASEAN EMT in the preparation of final report to be submitted to their own National Disaster Management Office (NDMO).
- The Public Health Emergency Operations Center (PHEOC) referred to in the SOP are Emergency Operations Center (EOC) at different levels that under the Ministry of Health/health authorities responsible for the coordination and management of health aspects of disasters. This is may need to be highlighted considering that these are named differently by AMS.
- Considering procedures in offering and receiving international assistance, which engages diplomatic/policy, as well as operational (in this case sector health) channels, the SOP may consider mechanisms that facilitate expedient activation and deployment of EMT.

9. Regarding the next step, PWG 1 members will provide feedback to the draft version 0 by 11 August 2017. The Project Team will draft the version 1 by incorporating the inputs and comments from PWG 1 members. The draft version 1 will be distributed to PWG 1 members by October. By the 4th Meeting of PWG 1 in November, PWG 1 members will provide inputs to the draft version 1.

c. Session 3: Regional Collaboration Tool (2) - Health Needs Assessment (HNA) Framework

10. Ms. Yumiko Kashiba presented the recommendations on the draft HNA version 0 and agreed points on the HNA framework in the second PWG1 meeting. The key points of suggestions and recommendations include: 1) HNA should focus on health aspects related to EMT activities and should be more concise; 2) the users of the information collected through HNA should be clearly identified; 3) HNA should be designed to complement and not duplicate the task of ASEAN ERAT; and 4) the main role of EMTs is to provide medical services and save lives, therefore HNA should be a supporting role of EMTs. The agreed timing to conduct HNA could be after the acute phase of disaster; however, it can be conducted at any critical time of disaster if required or requested by local authorities.

11. The revised draft, version 1 is more concise, focusing on health aspects, but also includes water, sanitation and hygiene (WASH), food security, nutrition and shelter. The version 1 was tested in the first RCD and feedbacks were received from each AMS team. Many of the drill participants think that HNA should be a supplemental role of EMT. Other feedback and recommendations were: 1) public health personal should be included in EMT if EMT are required to conduct HNA; 2) training for selected members of EMT in HNA may be needed; 3) coordination with other clusters should be considered; 4) the information on other clusters should not to be too detailed in the HNA form; and 5) the current draft form should be improved and some of the definitions and indicators should be refined. The comments received from this third PWG1 meeting will be incorporated into the HNA draft version 2. The revision will be shared with the PWG1 members in August and further

comments will be expected by mid-September. The revised HNA draft version 2 will be tested in the second RCD in March 2018. The final draft version will be presented in October 2019. The presentation document can be referred to in **ANNEX XV.**

12. The meeting had discussed and provided the following comments;

- The chair suggested that the instruction or guide which showed how to conduct HNA be attached to the NHA form.
- Psychological and mental aspects of EMT members should be addressed.
- The age categories in the draft HNA form should be changed according to those widely used for mortality, e.g., Under 5 Mortality.
- Although only a concern of duplication of work between ERAT and HNA by EMTs was raised, two parties can complement each other and work together.
- Local PHEOC may request EMT to do HNA, and in that case, EMTs should have capacity for HNA.
- The function of EMT to conduct assessment was not stated in WHO EMT guideline, so EMT should focus on deviling health services. Instead, the receiving country should conduct HNA to dispatch EMT to appropriate areas.
- It is true that affected countries conduct a rapid assessment; however, HNA by EMT will complement such assessment and also ERAT; so if EMTs have time and capacity, HNA by EMT will be helpful.
- The chair stated that the main role of EMT was to provide medical services so that conducting an assessment can be one of the options for EMT. However, in the field, if someone can do an assessment, that will benefit to the others.
- EMT may provide both clinical and public health services. In fact, “EMT plus” includes public health services including NHA on the top of the WHO EMT definition.
- According to the WHO diagram, the situation in the affected area will quickly shift from the trauma cases during the first two weeks to more public health needs such as infectious diseases. Therefore, in terms of the role of EMTs in HNA, we should consider timing and length of period of the deployment (e.g., a few weeks or a few/several months), which might depend on their capacity and decision of the authority. Also, it will be ideal that public health personnel with emergency experience is a part of EMT.
- If EMT will have a role of HNA, the training for EMT should include public health aspects. It should be build consensus among AMS.
- Reliability of information of could be concerned. EMT can conduct HNA within an available capacity under limited resources, but the information should be later confirmed with public health teams or concerned cluster teams. And the operation should be left to such concerned teams in case there is no public health personal in the deployed EMTs.
- The type of food cited in the NHA form should be revised according to ASEAN context.

- HNA information could be useful to EOC. Among three options proposed by the Project Team, handing detailed information of HNA to PHEOC may be agreed. However, it should be discussed further.

d. Session 4: Regional Collaboration Tool (3) - EMT Database in ASEAN

13. Ms. Junko Yamada reviewed the agreed points at the second meeting of PWG1 in May 2017 and introduced the objectives of this session. This session aims 1) to present a proposal from the Project Team based on the result of consultation with the AHA Centre; and 2) to discuss and agree on the way forward of database. Then, she presented the proposal for the database development. The Project Team proposed that the database be managed by the Project Team and the data collection be conducted by the PWG 1 members in total of four times during the project period. An exit strategy will be discussed for an endorsement by RCC. The database will include data on government military and non-governmental EMT organization. However, the scope of data collection will be at the discretion of each member state.

14. The purposes of database were proposed as follows: 1) to strengthen the regional disaster preparedness by providing the up-to-date information on EMT assets and capacities potentially available for deployments to the affected country; 2) to inform the discussion for setting up the coordination platform on disaster health management (Output 1 of ARCH Project); 3) to facilitate the identification of EMT assets and capacities for mobilization and the future decision making and action for enhancing EMT assets and capacities by stocktaking the current status and update of the progress; 4) to enhance health response to disasters by providing information about EMTs in advance; 5) Complement AJDRP by possibly speeding up the process of identification of EMT assets and capacities and; 6) contribute to the operationalization of SASOP and the implementation of AJDRP for the realization of “One ASEAN, One Response” in the spirit of AADMER.

15. The Project Team also proposed the schedule of database development. According to the proposed schedule, the draft version 0 will be presented in the fourth meeting of PWG 1 in November 2017. Finally, the draft database is to be prepared with defined criteria and data categories and approved by the third RCC in March 2018. The presentation document can be referred to in **ANNEX XVI.**

16. The points of discussion are summarized as followings:

- The database intends to capture EMT regardless of WHO Global Classification status.
- Proposed EMT DB matrix contain limited information, more data categories need to be included, as well as inclusion criteria for organisations to be included in the DB (particularly NGO).

e. Session 4: Regional Collaboration Tool (4) - Minimum Requirements for EMT Members

17. Ms. Junko Yamada presented the progress of the development of the Minimum Requirements for EMT members. The objectives of the session are; 1) to review the draft version 0 and seek comments and feedback from the PWG 1 members; and 2) to agree on the next step until the 4th

Meeting of PWG 1 in November. Subsequently, Ms. Yamada presented the draft version 0 which was developed based on the results of questionnaire survey in April 2017.

18. The Minimum Requirements consists of 3 Tiers as already presented in the previous two PWG 1 meetings; Tier 1 Professional competence and license to practice; Tier 2 Adaptation of technical and non-technical professional capacities into low resource and emergency context and; Tier 3 Preparation for and effective team performance in the field. The current draft version 0 covers Tier 1 and has five (5) chapters including purpose, scope, key terms and terminology, structure of the document, and Tier 1. After the brief explanation of each chapter, the Project team invited the PWG 1 members for their comments and inputs.

19. Lastly, Ms. Yamada presented the next step until the 4th Meeting in November. The PWG 1 members will provide inputs and feedback to the draft Version 0 by 11 August 2017. The Project Team will incorporate inputs and feedback into the draft version 1 and distribute it to the PWG 1 members for review in October 2017. The presentation document can be referred to in **ANNEX XVII.**

20. The points of discussion are summarized as followings:

- Current version focuses on Tier 1 of the minimum requirements. Tiers 2 and 3 will be further defined in future versions.
- Each deployed EMT is expected to be self-sufficient. Therefore, EMT composition includes logistics, administrative and other non-health staff.
- Some AMS have medical teams which are fully operated by health staff. The ASEAN may need to explore mechanisms in the provision of logistics and admin support.

f. Summary of Discussions and Agreements

21. The Project Working Group 1 members had discussed and agreed on the details of four Regional Collaboration Tools; SOP, HNA Framework, Minimum Requirements, and Database of EMT in ASEAN. The summary of decisions and agreements is as follows:

1) SOP for the Coordination of EMT in the ASEAN

- AMS that have not completed the 'request for information on in-country mechanism for EMT coordination' to submit accomplished form by 11 August 2017.
- AMS will provide feedback on the draft SOP via e-mail by 11 August 2017.
- Project Team will circulate updated version to PWG 1 Members in October, after incorporating feedback from PWG 1 Members, and participants of the First Regional Collaboration Drill.

2) Health needs assessment framework

- ASEAN EMT role is primarily the delivery of medical services. The delivery of public health services is an option depending on their capacity. Hence, the conduct of health needs assessment is supportive and if there is capacity to address pressing needs assessment gaps.

- Revise the form to be aligned with ASEAN context (such as food basket composition) with instructions and guidelines.
- Revised form will be shared with PWG 1 Members in 11 August.
- PWG 1 Members to provide feedback by 08 September.

3) Database of EMT in ASEAN

- PWG 1 Members to propose categories for the database, and criteria for inclusion of organisations in the database by 11 August.
- Project Team to review inputs and propose a data collection form, and circulate the draft form by 15 September.
- PWG 1 Members/AMS to provide feedback on the form by 02 October.
- Project Team to finalise the form and circulate to PWG 1 Members/AMS for collection of data by 09 October.
- PWG 1/AMS to submit completed form by 27 October.

4) Minimum requirements for EMT Members

- PWG 1 Members to submit feedback to the draft minimum requirements by 11 August.
- Project Team to consolidate feedback and produce version 1 by 20 October.

5) Next Meeting

- The fourth meeting of PWG 1 was proposed by the Project Team from 2 to 3 November 2017 (1.5 days). PWG 1 Members will internally consult with their offices and get back within a week (by 27 July) on their availability of these dates. If there are conflicts in schedule, PWG 1 members shall propose alternate dates between 30 October and 3 November.

XVII. THE SECOND PWG 2 MEETING

a. Introduction

22. Dr.Narain Chogirosniramit, the chair greeted all participants of the second meeting of PWG 2. He reiterated program and agenda of the meeting as for; 1) to share the outcomes and feedback of the first AMS Training in May 2017, 2) to discuss and agree on the plan of the second AMS Training in November 2017, and 3) to discuss and agree on the revised plan of upcoming meeting of PWG 2. The presentation document can be referred to in **ANNEX XVIII.**

b. Report on the First AMS Training

23. Dr.Narain Chogirosniramit began the session with a review of the first AMS Training in Chiang Mai, Thailand between from 22 to 26 May 2017. Twenty five (25) participants were engaged and lecturers were invited from Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam and Japan. The presentation can be referred to in **ANNEX XIX.**

24. Day 1 offered a chance for each AMS to introduce the current system of human resource development on disaster health management, both pre-service and continuing professional development (CPD). Day 2 involved the discussion on best practices in both pre-service training and CPD. On Day 3, the current CPD system of Japan was introduced and an educational simulation game in the form of TTX called “Thai Sim” was executed. The entire Day 4 was dedicated to a site visit at Faculty of Medicine, Chiang Mai University. Sessions on the last day were workshop on the “standardized” training/knowledge in disaster health management for both the national level of each AMS and the regional level. Course evaluation was carried out by the end of the session.

25. Dr.Narain Chogirosniramit explained the objectives of the first AMS training. The objectives were set as; 1) To understand the current training system for human resource development in disaster health management; 2) To identify the issues and challenges of the current training system in each country; 3) To share the best practices in capacity development and related training courses conducted by other countries and stakeholders; 4) To identify the priority areas in each country for planning effective human resource development program to strengthen capacity of AMS on disaster health management; and 5) To understand how to set up the training system on disaster health management system.

a. Highlights of each training days

26. The highlighted activities and training content of each day included the following;

Day 1: A presentation from each AMS on current training system in DHM and challenges within the country received a positive feedback from participants in term of experience sharing.

Day 2: Presentations on Best Practices in Pre-service Training and CPD in ASEAN were carried out with lecturers invited from 5 different countries on 5 interesting topics, namely;

- Indonesia: Disaster Management for Health Cluster Faculties in University of Indonesia

- Malaysia: Advanced Diploma in Emergency Care
- Philippines: Country Adaptation of the ADPCs PHEMAP Training
- Singapore: EMS and EMT Training in Singapore Civil Defence Force
- Viet Nam: Basic Public Health and Emergency Management Course for Bachelor of Public Health Students

Day 3: In the morning session, lectures on CPD in Japan were presented by 3 presenters, focusing on human resource development for disaster medicine, disaster nursing and the role of Japanese Disaster Medical Assistance Team (DMAT).

In the afternoon, a tabletop exercise relating to CPD in Thailand called "Thai Sim" was conducted with assistance from Thai Side. This educational game aimed for the participants to learn about real time disaster management. The session received a positive feedback from all participants such as acknowledgement on differences among AMS in managing disaster medicine and better understanding on the procedures during disaster response.

Day 4: Participants paid a visit to Faculty of Medicine, Chiang Mai University. Three main topics focused on the day were 1) Disaster preparedness for Earthquake in Chiang Mai 2) Drill 2017 for mass emergency response in Maharaj Nakorn Chiang Mai hospital 3) Visit Emergency Care Room.

Day 5: In the morning, there were two discussions. Firstly, discussion was held by country to answer whether they got some new idea during this AMS Training and how to apply those newly-acquired in each country. Then, a following discussion was divided into 4 groups (by profession) to attempt to answer whether it is necessary to establish the common module in ASEAN for human resource development in DHM. All groups addressed the necessity to establish the common module in ASEAN.

c. Participants' Feedbacks from the first AMS Training

27. The number of respondents to the questionnaire survey of the first AMS training was 19 out of 25 participants. The results are as indicated below. For extensive detail, please refer to **ANNEX XX.**

28. Main responses from the evaluation on program output are as followed; 1) good sharing experiences among AMS 2) valuable chance to learn how to conduct DHM course as well as develop curriculum, certification system and skill standard. Nevertheless, there were some participants who still did not fully understand about the training system and need further clarification on the subject.

29. On program design, the feedbacks were as followed; 1) the design of training course was appropriate to achieve the course objectives 2) the length of the training was appropriate with some disagreement that the course was a little too long 3) the number of participants was appropriate 4) the course allowed each member to have enough direct experiences such as site visit and practices. However, 3 from 19 participants felt the opportunities were a little too few. 5) Almost all of

participants had enough opportunities to participate actively. 6) All participant saw the quality of the lectures was good enough to understand clearly.

30. Requests for the second AMS Training were made on 1) modified or simplified version of DMAT or MERT training 2) the next training should focus on how to develop EMT and train them 3) AMS must possess useful tools, skill and knowledge needed for EMT responding to a disaster in other country 4) AMS should focus on the most feasible goal. That is for each AMS to have at least one Type 1 mobile team or Type 1 fixed team that could respond both in the local setting and in international deployment. 5) Database, logistic deployment plan, and standardized DTM must be developed. And lastly, 6) participants of the second AMS training should consist of medical team, EMT team leader, same participants as the first AMS Training (for continuity in action), developer of EMT (for proper guidance), and more doctors and nurses who work directly in DHM.

31. The feedback included important suggestions such as developing clear objectives on scope of training before the implementation such as setting a focus on acute or delayed phase.

d. Plan for the Second AMS Training

32. Ms. Junko Sato began with the session's objectives that were to discuss and agree on the detailed plan, as well as to share the schedule of the second AMS training in November 2017. She restated the overall goal of the AMS training and expected the national capacity would be strengthened after the completion of all four trainings. The presentation and reference documents can be referred to in **ANNEX XXI.**

33. Proposed dates of the second training will be November 5th – 8th, 2017. All participants are asked to share any objections before the confirmation. This upcoming event will consist of 4, instead of 5 training days and the 5th day will be dedicated to the third PWG2 meeting. The venue will in Bangkok, Thailand and there will be 3 representatives from each AMS.

34. The theme of the training will be on Capacity Development of Emergency Medical Team with a special focus on "On-site Team Management". There are 4 tentative objectives as followed; 1) To understand what EMT is expected to do when deployed to disaster area 2) To get knowledge and skills required for team management when deployed 3) To learn the training system of EMT and 4) To evaluate this training course as a first step for standardized ASEAN EMT Training. Since there was no standard training mojo in ASEAN for DHM, all participants from the first AMS training agreed to have a standardized version of the training program.

35. Representatives from the Philippines suggested to add competency into 2) objectives to build an effective domain for right directions of disaster management. Targeted participants from each AMS, in principle, consist of 1 doctor, 1 nurse and 1 paramedic. Due to differences among AMS, it is ultimately up to the countries to choose their representatives. Preferably, there should be at least 1 person who can train EMT in each team (e.g person who completed the initial. Selection criteria of each attendance are as followed; 1) At least 3 years' experience on DHM and emergency medical

system, 2) At least Bachelor's degree holder in health sector, 3) Good command of spoken and written English, 4) Must attend all 4-day-training program, 5) To be under 55 years of age, and 6) Use for non-military purpose.

- Current duties: The Philippines suggested to specify the exact role of each participants from AMS to get different perspectives i.e. 1 team leader (to set directions), 1 team member, 1 actual deployment person. Agreed by other AMS, selection criteria should rather not be based on profession, but on actual responsibility. Language skill of nurses and paramedics in some AMS can be the barrier of training. Thailand added that good English proficiency of each participant must be compulsory.
- Educational background: In some AMS, nurses and paramedics may not obtain bachelor degree. Thus, the agreement was made to have at least one of the three members, who holds a bachelor degree. Malaysia suggested to add the word, "Preferable" into the selection criteria to have more flexibility for each AMS condition.
- Age: Singapore disagreed with age criteria as it is a form of discrimination. Putting "preferable" would be a good solution on this issue.
- Use for non-military purpose: ASEAN secretariat required on clarification of the use for non-military purpose. The chairperson explained that this is the requirement from JICA that all trainings and developments will not be used in the military purpose. The agreement was made to rephrase it to be non-military personnel.

36. In sum, the chairperson suggested to divide the selection criteria into 2 categories as;

- Compulsory: Good language skills, Attendance must attend the entire 4-day-training, Non-military personnel
- Preferable: Current duties (and profession), Educational background, Under the age of 55

37. Before the morning session ended, group discussion was separated into 3 groups and each one Japanese advisory committee member joined in each group namely;

    Group A: Indonesia, Philippines, Thailand
    Group B: Brunei, Malaysia, Singapore
    Group C: Cambodia, Lao PDR, Myanmar, Viet Nam

38. The objectives were to discuss possible topics for the second AMS Training and the outline of tentative program with the main theme of team management capacity. Each group must select one presenter, one facilitator and one note taker for the upcoming presentation.

e. Presentation on Plan for AMS Training

39. The proposed plan by each group is summarized as follows:

GROUP C: Cambodia, Lao PDR, Myanmar, Viet Nam

The proposed plan was separated into two categories; skills and knowledge and practice. Despise some disagreement among group members; Group C produced the summary as follows:

Table: Training Topics on Skill and knowledge

No.	Topics	Duration (hours)
1	On-site assessment (Situation analysis, health need assessment)	1
2	Emergency practical skills (the 3T – Triage, Treatment & Transport)	2
3	Team management skills (Leadership, team building)	1
4	Safety & Security	1
5	Documentary management skills (Recording, reporting and analysis)	2
6	Communication equipment use	1
7	Coordination and collaboration	1
8	Supplies & Logistics Preparedness	2
9	Survival skills in the affected areas	1
Total		**12**

For practical aspect, Group C emphasized on the practice of 3"T" Simulation, Communication Equipment Use, Reporting (standard form), Coordination (among team members and among different teams), Field Visit (EMS Center) and Tenting or Camping. Each topic takes approximately 20 minutes.

GROUP B: Brunei, Malaysia, Singapore

The proposed plan was brainstormed through the major medical events and incident activation process of each AMS of group B. The presenter proposed different topics on skill and knowledge requirement to be lectured during the morning sessions of Day 2 and Day 3, while the afternoon sessions of both days will be dedicated on tabletop exercises. Day 4 will see a simulation on disaster management. Details of Group B discussion are as follows:

Day 2: Morning lecture will focus on 1) Activation and response when disaster occurs, focusing on domestic disaster 2) Roles of medical team consisting of doctor, nurse and paramedics as well as leadership assignment 3) Preparation of medical team on physical equipment and psychological condition and 4) Reporting on disaster site. Lecture on each topic will take approximately 30 minutes.

In the afternoon session, the first 2 hours will focus on putting skill and knowledge from the AM session into tabletop exercise such as activation and response when domestic disaster occurs, deployment of medical teams and reporting from the site. The last hour of the session will be a class lecture on radio communication and actual demonstration on how to use the walkie-talkie radio device.

Day 3: Morning lectures will focus on On-site Process, or CSCATTT concept (Command and Control, Safety, Communication, Assessment, Triage, Treatment, Transport) Skill stations will be conducted in the first 2 hours of afternoon session with 25 minutes in each session. Topics are as followed; 1) radio communication 2) field triage 3) patient assessment and treatment 4) medical record (documentation). Afterwards, the table-top exercise will focus on evacuation process of the patients.

Day 4: A huge simulation will be conducted, which allows participants to apply the skills and knowledge from the first two days into practice. Training members will be divided into groups and participate in the simulation as a whole scenario.

GROUP A: Indonesia, Philippines, Thailand

Day 1: In addition to the topics that have been mentioned in the outline, Group A members suggested to add some other topics such as legal basis for EMT, ICS country adaptation, EMT-based structure/organization, and example of practice (drill, exercise, tabletop and simulation). The objectives are to learn from the experience of each AMS, and to prioritize on fundamental sessions. Each AMS will have 10 minutes for presentation, and 5 minutes of Q&A session. Facilitators will synthesize and summarize after all presentations.

Day 2 and Day 3: The focus will be on EMT management for on-site team deployment. Mission is defined for each EMT on what to do and how to deploy. The discussion is summarized into the following table.

Table: Summary of Proposed Curriculum

Curriculum	Reason
Definition, mission/objective of EMT	• To define for each EMT on what to do and how to deploy.
Team dynamics	
• Team Composition/ Team Building	• To put an order on EMT deployment in a given scenario (which team goes first, next and last) • To support communication among team members and among different teams
• Competencies – Basic Knowledge, Skills, attitude each EMT member (Interpersonal Skills)	• To identify appropriate team with specific skills to match the need during the actual disaster • To prevent conflicts that may arise due to lack of interpersonal skills
• Roles and Responsibilities	• To determine team leader and roles/responsibility of each EMT member.
Guidelines and procedures for team deployment including safety, security, welfare of the team	• To emphasize on step-by-step procedure on team organization and deployment, by following checklists

Curriculum	Reason
Basic principles on the various systems for team deployment	
• Information Management System	• To ensure team members know what, when, how and to whom to report to, during the deployment.
• MCI Management: Cs = command + control, coordination, communication, and collaboration • 3 Ts = Triage, Treatment, and Transport	• To ensure familiarity on the MCI Management for all EMT members
• Logistic management system	• To identify minimum requirement for deployment during disaster to be self-sufficient and self-reliant
• Code alert system	• To determine the best time to deploy
Post deployment evaluation (including PFA)	• To evaluate on how well the EMT responded in the event and to identify strength, weakness and suggestion for protocol development and improvement
Scenario building	• To train participants on how to conduct future training

Day 4: Both morning and afternoon sessions will focus on the application of acquired skill and knowledge into practice on how to manage scenario, and to decide which type of EMT to be deployed. The sessions' emphasis is on basic principles in responding to special situation. Then, advance deployment procedures will be in play. For example, CBRNE, outbreak/epidemics, emerging or re-emerging infection disease.

40. After presentations of all group were completed, suggestions and comments were made;

- Many similar topics were found among the suggestions from all the three groups such as team management skill and preparation of medical team.
- ASEAN secretariat representative though the presentations from three groups were very comprehensive and questioned whether the participant tended to focus more on response aspect, rather than team building aspect.
- Team preparation should include both physical aspect (person equipment) and psychological aspect (stress coping).

f. Proposed Plan for the Second AMS Training

41. After the break, Dr. Chogirosniramit proposed the draft topics to be lectured/ discussed during the second AMS Training as shown in the following table.

Table: Summary of Proposed Draft Training Programme

Days	Topics
Day 2	1. Definition/ mission / objective of EMT Role of the medical team: leadership, composition and responsibility 2. Preparation of the medical team: equipment, competency building, psychological preparation 3. Activation and response: deployment of the medical team On-site assessment (situation analysis, health need assessment) 4. Supplies and logistic preparation 5. Documentary management skill (recording, reporting and analysis)

Days	Topics
	6. Security: survival skill, welfare of the team, PFA (Psychological first aids to the responder and community) 7. Management of dead and missing person CBRNE (Scenario based)
Day 3	1. CSCATTT concept C - Command and control / C - Communication / T – Triage S - Safety / A - Assessment / T - Treatment T- Transport
	2. Practice 1) Communication tools (Radio: How to talk) 2) Field triage 3) Documentation (Forms) 4) Transportation/referral/coordination 5) Tenting (Shelter)
Day 4	Morning session: simulation day Afternoon session: after-action review (AAR) and wrap-up

42. Some comments and suggestions were made for adjusting the proposed plan of the second AMS Training.

- Some of the proposed lectures should be conducted as scenario-based discussion, due to limited attention span from long lecture session.
- Transportation should end with referral because you need to transfer in the end.
- Suggested topics for Day 1 training will be assessed and the final schedule of Day 1 will be sent to participants for review/approval.
- Representative from Brunei stressed the importance of radio communication as necessary skills to be learned and practice (how to identify yourself and address the matter) to avoid radio jam during disaster event.
- Post-incident evaluation should be conducted at the end of day 4.

g. Plan of Upcoming Activities of PWG 2

43. Ms. Sato informed the objective of the session, which is to discuss and agree on the proposed/revised plan of PWG2 activities. There were two agenda as for; 1) AMS Training and 2) PWG2 Meeting.

1) AMS Training: 1st Training: May 2017 (completed)
2nd Training: November 2017
3rd Training: May 2018
4th Training: November 2018

The theme of the second AMS Training is on capacity development of emergency medical team. While initially the theme of the third AMS Training was on capacity development of government, it has not been confirmed as the theme can be amended based on the output of second AMS

Training. The theme of the fourth AMS Training will be discussed in the third PWG2 meeting. The presentation can be referred in **ANNEX XXII**.

2) PWG2 Meeting

Ms. Sato proposed to add two more PWG2 meetings (five in total) and to change Day 5 of the second AMS Training (conducted on November 2017) to be the third PWG2 meeting. There was no objection on the two additional meetings.

XVIII. SUMMARY OF DISCUSSIONS AND AGREEMENTS

44. Dr. Chogirosniramit wrapped up the second PWG2 Meeting. Main discussions included participant introduction, feedback on first AMS training, group discussion for 2.5-day programme (Day 2, 3 and 4) in the second AMS training to be held from 5 to 8 November 2017, and finalizing date of the third meeting of PGW 2 on 9 November 2017. The Project Team will finalize the schedule and name of the lecturers, before sending to participants for approval. The invitation letters of the above events will be separated because participants of the training and the meeting are not the same persons. The Invitations of the third meeting of PWG 2 and the second AMS training will be sent around 8 weeks before the event. Lastly, Dr. Chogirosniramit closed the meeting and showed appreciation to all participants.

Part 3 Regional Coordination Committee Meeting

I. OPENING REMARKS

1. 4. Dr. Jirot Sinhvananda, greeted and express appreciation to AMS, ASEAN Secretariat, JICA, and the Project Team. RCC is the coordinating body which oversees the implementation of ARCH Project. In the second RCC, the committee member gathered to acknowledge progress of the past nine months since the first meeting of RCC, as well as to exchange views on the on-going project activities and the ASEAN Declaration on Disaster Health Management. The meeting had paved the way forward to achieve the outcome of ARCH Project as well as the recognise on the initiative of One ASEAN, One Response.

II. OVERALL PROGRESS OF ARFCH PROJECT

2. Ms. Keiko Nagai outlined the framework of ARCH Project and reported progresses along with the five expected outcomes as follows:

   Output 1 Coordination Platform: The first and second RCC meetings were conducted. TOR of RCC was endorsed in the second ASEAN Health Cluster 2 Meeting on November 2016.

   Output 2 Regional Collaboration Framework: The Start-up Drill was conducted to develop a prototype of RCD (January 2017). The first RCD was designed and conducted under strong initiative of Thai Project Team (July 2017). Some AMS have presented their interest to host the second and third RCD.

   Output 3 Regional Collaboration Tools: The draft version 0 of SOP, Minimum Requirement, and Health Needs Assessment have been prepared and shared with PWG 1 members. The content and management of database for EMT are under discussion.

   Output 4 Academic Networking: The project outline was to be presented in the 13th Asia-Pacific Conference on Disaster Medicine (APCDM) in Bangkok, of Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) in South Korean, Japanese Association for Disaster Medicine (JADM) in Japan, and World Association for Disaster and Emergency Medicine (WADEM) in Canada.

   Output 5 Capacity Development: The first AMS training was held focusing on human resource development for emergency medical team by the planning of PWG 2 members. The second AMS training in November 2017 has been under preparation.

3. Ms. Nagai also mentioned that the major upcoming activities in November 2017 are the fourth PWG1 meeting, the third PWG2 meeting (newly proposed), and the second AMS Training. PWG 2 proposed to have two additional meetings to ensure the completion of training content. Proposed period of the additional PWG 2 meeting are November 2017 and after March 2018 (tentative).

4. During the second RCC meeting, discussions and acknowledgement would like to be met on the following topics: communication approach among AMS; official focal points of ARCH project in each AMS; and future vision of the regional coordination platform on Disaster Health Management. The presentation document for this section can be referred in **ANNEX XXIII.**

5. ASEAN Secretariat mentioned that the progress and outputs of ARCH Project and the draft ASEAN Declaration on Disaster Health Management have been recognised and updated to ASEAN Joint Task Force on Humanitarian Assistance and Disaster Response (HADR).

III. REPORT ON THE START-UP DRILL AND THE FIRST RCD

6. Based on the inputs provided by AMS, Dr. Yasushi Nagajima presented the modification of the four-layered pyramid model of ARCH Project which reflected targeted capacities and tools necessary for AMS to achieve. The modifications were made in the previous model as follows. The presentation document can be referred to in **ANNEX XXIV**.

   The first level: Five items were adjusted to include; 1) intercultural skill, 2) compliance with quality accountability standard, 3) coordination conflict resolution skill, 4) language skill, and 5) IT communication skill.

   The second level: Three items were adjusted to include; 1) Information management including IT, 2) Austere critical care and field medicine, and 3) Reporting with MDS

   The third level: Two items were adjusted to include; 1) Common SOP and minimum requirement for EMT and 2) EOC EMTCC system

7. The modified pyramid model of ARCH Project demonstrates complex relationships with vertical and horizontal relevance which present linkage among all the project activities. It will be modified according to the latest discussions and experiences throughout of ARHC Project.

8. The discussions following this section are summarized below;

- A proposal was raised regarding radio as a mean of communication especially for the referral system. For that purpose, radio operation skills should be provided for EMT members; for example, basic operation, international radio language, and frequency given to each AMS.
- A concern was raised toward a necessary skill of EMT members to adopt themselves to natural and manmade environment in the field which may include unexpected situation. A stress management kit may be one of the possible solutions.
- Life support skills could include; Basic Life Support (BLS), Advanced Life Support (ALS), Advanced Trauma Life Support (ALTS), Disaster Life Support (DLS), and Mental Health and Psychosocial Support (MHPSS).

- ASEAN Secretariat commented that it will be appreciated for all the stakeholders to be able to study relationship among items in the pyramid model through a brief document. Then, the Project Team will prepare and share it.
- An item on evaluation and research can be included in the third layer. The consolidation of lesson learned and feedbacks are necessary for policy review and enhance further development process.
- An item on logistic and management skills may be included as logistic team is essential either provided by central PHEOC or within EMT.

IV. PROGRESS AND OUTPUTS OF PWG 1

9. Dr. Jirot Sindhvananda, Chair of PWG 1, presented progress and outputs of PWG 1. Regarding draft regional collaboration tools, version 0 of SOP for Coordination of EMT in ASEAN and Minimum Requirements have been developed. PWG 1 members will provide feedback on these drafts by 11 August 2017 and the revised drafts will be circulated in October 2017. The draft Health Needs Assessment Framework will be revised and circulated with draft instructions and guidelines by 11 August 2017 for feedback from the members by 8 September 2017. As for Database of EMT in ASEAN, PWG 1 members will propose categories and inclusion criteria in the database by 11 August 2017. The Project Team will propose the data collection form by 15 September 2017 and start data collection in October 2017. The presentation document for this section can be referred in **ANNEX XXV**.

V. PROGRESS AND OUTPUTS OF PWG2

10. Dr. Navin Surapakdee, made a presentation on progress and outputs of PWG 2. And two additional meetings were proposed because the existing plan cannot accommodate the content of the work to meet the set timeline. The presentation document for this section can be referred in **ANNEX XXVI.**

11. RCC did not have objections towards the proposal, therefore two additional meetings of PWG 2 were granted by the meeting.

12. Discussion points following the session are summarized below;

- Regarding the 5th PWG 2 meeting, it shall be held together with the fourth AMS training (November, 2018) to save time and resources. The date shall be finalised with participants but should be within the decided month to align with other activities set within the project timeline.
- Any plans regarding the training shall not be held during the first and second week of June 2018 as it would be inconvenient for Muslim participants.
- Cambodian delegates cannot attend if the dates are decided later than the first week of June 2018 as officials are not allow to exit the country due to the general election.
- The training period shall be later decided after the confirmation from AMS. However, AMS can arrange their personals to fit their appropriate time, for example, some can attend the training while other attends the PWG 2 meeting.

- AHA Centre suggested that the second AMS training may include logistic coordination using Incident Command System (ICS).
- The training will reflect elements according to the ARCH pyramid model. Certain training should be responding to the objectives and covered by the end of the training programme. The trained personals in ARCH Project should be equipped with adequate skills for EMT deployment as well as capable of training their team members.

VI. ASEAN LEADERS' DECLARATION ON DISASTER HEALTH MANAGEMENT

13. Dr. Phumin Silapunt presented the progress of the ASEAN Leaders' Declaration on Disaster Health Management which draft version 0 was presented in during the second PWG1 meeting in May 2017. It is currently under the process of consolidating comments.

14. The declaration needs a few steps to be taken. In June 2017, inputs were provided by ASEAN Health Cluster 2 via referendum. In July 2017, inputs were received by Senior Officials Meeting on Health Development (SOMHD). Then, it will be submitted for endorsement by Senior Officials Meeting for the ASEAN Socio-Cultural Community (ASCC) (SOCA) in September 2017. The declaration is expected to be adopted in the 31st ASEAN Summit in November 2017.

15. The chair encouraged AMS delegates to facilitate the internal process for in-country representative to submit the third referendum to Health Cluster 2 to endorse the declaration by the end of July 2017. After the adoption, the declaration will be operationalized by a plan which will be developed under SOMHD in consultation with other sectors and ASEAN partners including Japan, the ministries of foreign affairs, and military medicine sector. The presentation and documents for this section can be referred in **ANNEX XXVII.**

VII. HOSTING OF THE UPCOMING REGIONAL COLLABORATION DRILLS

16. Ms. Nagai updates of the relevant situation to host countries of the project events. During the first meetings of PWG1 and 2 in January 2017, the Project Team invited AMS to submit a proposal to host upcoming RCD. The Philippines submitted a proposal to host the third RCD and later Viet Nam showed an interest to host the second RCD. Both AMS were invited to observe the preparation of the first RCD in Thailand while informal discussions were made. After the review of Philippine's proposal, the Project Team had acknowledged the capacity to host the third RCD, whereas Viet Nam was required to submit proposal by middle of August 2017. Philippine and Viet Nam were invited to make presentation on their proposals or conceptual plan. The presentations document for this section can be referred in **ANNEX XXVIII.**

17. According to the proposal of the Philippines, the proposed RCD will not only be useful for AMS for the EMT deployment preparation under ARCH Project, but will also be beneficial for Metro Manila to be prepared for high impact of the possible West Valley Fault earthquake. The proposed venue is at the Armed Force facility of the Philippine Grand Stand, Metro Manila. Tentative duration is

within the second to third week of October 2018. The Project Team will visit Philippines in later September 2017 for initial preparation.

18. Viet Nam is interested in hosting of the second RCD and therefore, was invited to observe the planning of the first RCD. Viet Nam has learned a lot from Thailand and glad to host the next RCD. Ministry of Health of Viet Nam and People's Committee of Danang City granted approval for the hosting of the second RCD. The next step will be an approval of the Prime Minister's Office. The second RCD objective will be defined along the development process through discussion with the Project Team. Viet Nam believe that the drill will raise awareness and preparation of concerned personals including police, fire department, local authority and others on disaster health management issue.

19. RCC members endorsed the Philippines to host the third RCD as they have adequate capacity and willingness. As regards the proposal from Viet Nam for hosting the second RCD, the referendum will be conducted through online basis by September 2017, once official reviews by the Project Team finish.

VIII. RELEVANT EVENTS IN ASEAN

20. AHA Centre provided the overview of the ASEAN Disaster Emergency Response Simulation Exercise (ARDEX). The presentation document for this section can be referred in **ANNEX XXIX.**

21. As for the next ARDEX in November 2018 in Indonesia, AMS health sector will be invited to Jakarta for the preparatory meeting. Although the timing between ARDEX and third RCD may not match, the gap between both exercises should be more than four weeks so that AMS attend both exercises to learn and improve from one another.

IX. COMMUNICATION CHANNEL OF ARCH PROJECT, AND OTHER RELATED ISSUES ON DISASTER HEALTH MANAGEMENT

22. Dr. Phumin Silapunt invited discussions regarding the method for communication under ARCH Project. The Project Team proposed a parallel information communication channel; formal flow via ASEAN Secretariat, and informal one to exchange technical information and resource persons, as well as facilitate the application process. The presentation document for this section can be referred in **ANNEX XXX.**

23. ASEAN Secretariat will communicate to ASEAN Health Cluster 2 Country Coordinators for the designation of contact points for ARCH Project activities. And the Project Team can communicate with identified resource persons based on agreements with/endorsement by relevant PWG. ASEAN Secretariat may be copied for information or potential follow up. When these focal points will take roles as national focal points for Disaster Health Management, terms of reference should be reviewed.

X. WRAP UP AND WAY FORWARD

24. The second RCC meeting had summarised and demonstrated the progression of the ARCH project activities during nine months after the first RCC meeting in September 2016. The activities are namely the start-up and the regional collaboration drills, AMS training, PWG1 and 2 meetings, development of regional collaboration tools.

25. Highlighted proposals and agreements included two additional meetings requested by PWG 2 to be held in November 2017 and 2018.

26. The ASEAN Declaration on Disaster Health Management is in the process of endorsement by AMS Health Cluster 2 which will be acknowledged and enforced at the 31st ASEAN Summit in November 2017. AMS delegate shall facilitate the in-country process for endorsement.

27. The RCC meeting had approved the proposal of the Philippines to host the third RCD in October 2018, while the approval of Viet Nam to host the second RCD will be requested through online basis.

28. The agreement regarding communication channel of ARCH Project was that the project focal point would formally be designated by facilitation of ASEAN Secretariat. The next RCC meeting will be held in Danang City, Viet Nam, after the second RCD. Key Discussions and Action Points can be referred in **ANNEX XXX.**

XI. CLOSING REMARKS

29. Dr. Achariya Pangma, expressed gratitude for JICA for facilitating ARCH Project in close collaboration with NIEM. In this event, the first RCC as well as RCD were planned and executed very well with kind advice from Japan. Delegates from AMS have so far contributed in the drafting process of SOP, Minimum Requirement, HNA and database to complement SASOP. The ASEAN Leader Declaration on Disaster Health Management will soon be enforced to operationalize the mechanism. The AMS training was held for the first time in May, providing them with useful skills and the later training will be developed according to the recommended framework. Philippine was endorsed the official hosting of third RCD and Vietnam to be endorsed for the second RCD in March 2018. All project future activities from this point will also be expected to contribute to the One ASEAN, One Response, seeking mutual contribution which other AMS can obtain. On behalf of the Project Team, Dr. Achariya encouraged constant active participation of AMS and appreciated that support of all stakeholders for successful outcome.

End

List of Annex

Attachment 10：

Conclusions and Recommendations of the 1st RCD

Project Team
Dr Yasushi Nakajima

Conclusions, Recommendations from the First Regional Collaboration Drill

Conclusions, Recommendations from the First RCD

1. Review of the Start-Up Drill
2. Review of the first Regional Collaboration Drill

1. Review of the Start-Up Drill

Checkup Sheet

- To identify the gaps of the teams/individuals
  - How About Table Top Exercise /Field Exercise?
  - What have you learned from Table Top Exercise /Field Exercise?
  - What will you improve on the lessons learnt?

A. Team Capacity Building (Possible Topics for the AMS Trainings)	**C. Team/Collaboration Capacity Building** (ARCH Project Tools: SOP)
B. Personal Capacity Building (ARCH Project Tools: Minimum Requirements)	**D. Collaboration Capacity Building** (e.g. ASEAN SOPs/ WHO EMTCC Handbook)

A. Team Capacity Building

- Toward the common activity goal, development of training using **common** text, terms, medical information management and medical treatment methods
  - Training for EMT, EMTCC Team, Rapid Health Assessment Team, risk management and disaster management
  - Leadership and teamwork
  - Surviving, self-safety and sanitation skills
  - Learn to adapt in a disaster situation (working/living in disaster affected areas)
- Equipment for survival/ medical operation
- Logistics and supply management
- Communication management (basic use of radio)
- FDA-accreditation and referral system of each country
  (*FDA=food and drug administration)

B. Personal Capacity Building

- Skills comply with the **Standard Protocols** for
  - Health Emergencies Management (focused on medical treatment)
  - Basic Skills required for advance trauma life support for doctors and nurses
  - Public Health Emergencies Management
  - Risk Assessment (safety and survival skills)
- Understandings of
  - **ICS concepts**
  - International Standards on Quality and Accountability on Humanitarian Assistance (Sphere standard, Core Humanitarian Standard, Good enough guide etc.)
- Share the latest international trend and disaster response experiences

C. Team/Collaboration Capacity Building

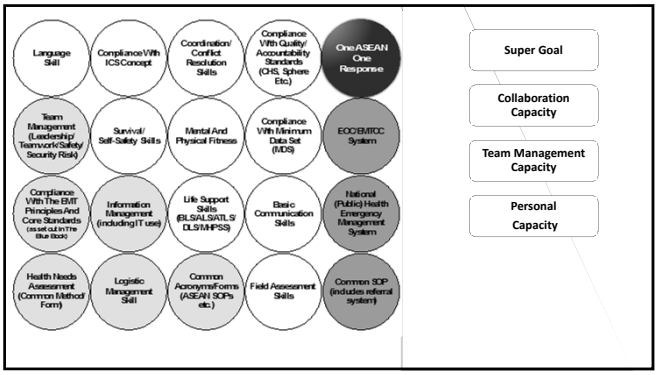
- Using the **same standard forms**
  - Daily reporting
  - Registration form
  - Rapid health assessment form
  - Medical record form
  - Referral form
  - Summary reporting form
- SOP between EMTs (Type 1, 2, 3)
- SOP among coordination organizations (EMTCC, EOC, AHA Centre, UN OCHA etc.)
- **Information management and sharing methods**
- Conflict resolutions

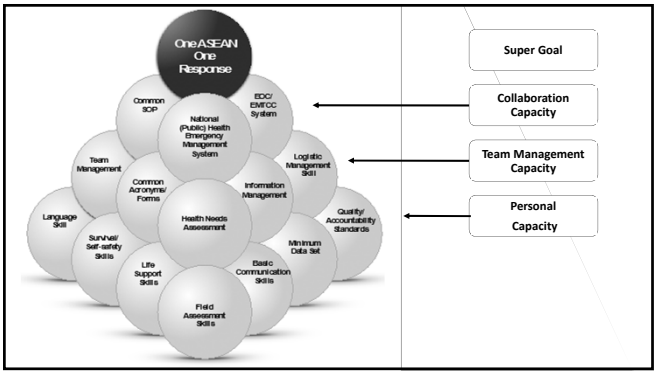
D. Collaboration Capacity Building

- SOP for collaboration in ASEAN because AMS belong to two WHO Regions; SEARO and WPRO
- Essential information package for international EMT
- Available SOPs and handbook should be concise and informative
- Development of common glossary including acronyms and technical terms
- **Standardization of forms:** assessment form, medical record forms, and daily Reporting forms in ASEAN Region. And it must be compatible with existing international (WHO-MDS) and regional (AHA Centre) formats.
- Balance between "standardization" and "contextualization". Contextualization should come after standardization; but it still must be easily understandable for each international EMTs.
- Collecting and sharing the good practice on EMT coordination

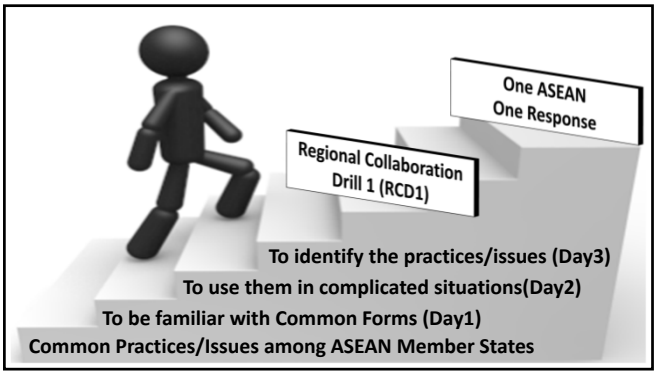
Issues to be Considered

- To involve all AMS to participate in the training
- To extend drill period and conduct the training annually
- Practical training by participating in teams from multiple countries
- Good cooperation under SOP with WHO, JDR, AHA Centre, and other organizations
- Sending report of the training to MOH
- Dissemination the lessons learned to health facilities
- Meeting with MOH on how to set up and develop EMS and EMT
- Funding and support for EMT
- Making/Upgrading existing trainings to be the one for registered volunteers





2. Review of the first Regional Collaboration Drill



Expectations of the Regional Collaboration Drill

- Feedback
  - Using common report forms
  - Using draft Health need assessment form
    - Framework of form
    - Items/topics
    - Situation to use etc.
  - Revising Pyramid model
    - Changing items' name/ categories' name
    - Adding new items
    - Moving the levels/layers of items etc.

Analytic Framework

Program Evaluation	Reporting Forms
EMT Coordination Process	Capacity Building


Program Evaluation

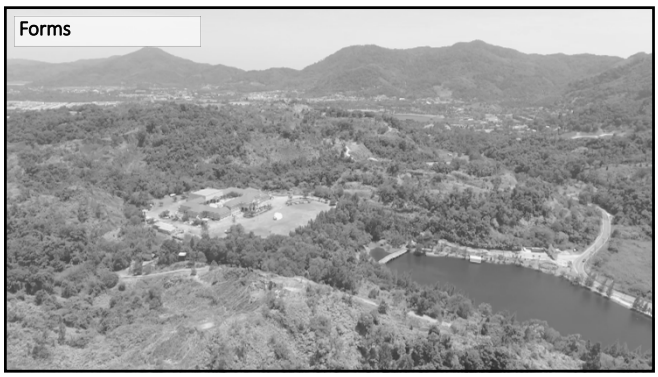
Good Points

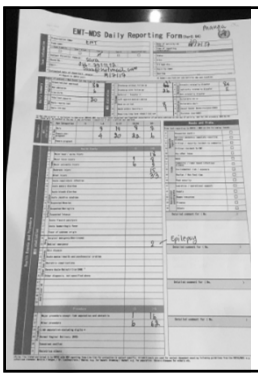
- Time and Venue
- Accommodation & transportation
- Introduction session
- Scenario well planned, table top → field exercise
- Format/Well prepared forms
- Presenter/Facilitators

Opportunities

- EMT type summary
- Task of HNA
- More facilitators, common focus, experienced, skills
- Longer FTX, Clinical enhancement, overlap of team in same area
- Standardize the common communication discipline, exercise, manual
- Discussion how to use the form
- Realistic CIQ processes
- Supply area/Recreation station
- Referral system/More referral hospital
- Medical checklist

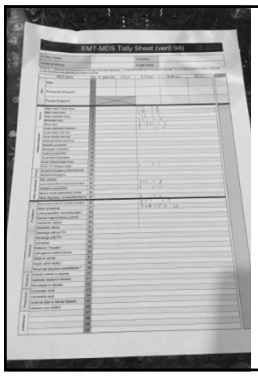
Forms





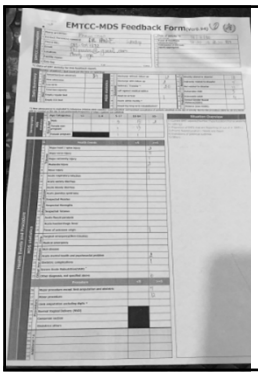
EMT-MDS Daily Reporting Form

- Duplicate and change to tick box
- Should be revise
- O to T not in tally sheet
- Terminology/definition is unclear
- Categorize, increase font size



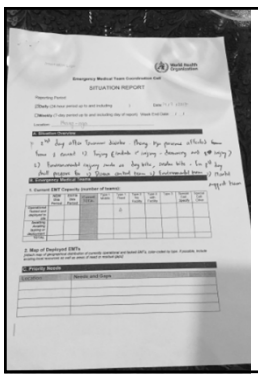
EMT-MDS Tally Sheet

- OK
- Version 0.94 is better than version 0.94a



EMTCC-MDS Feedback Form

- Daily summary box not suitable for EMT type I mobile

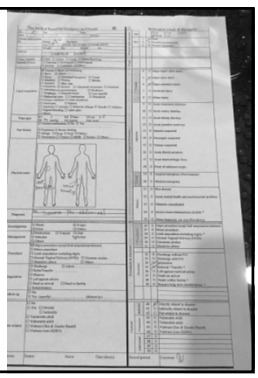


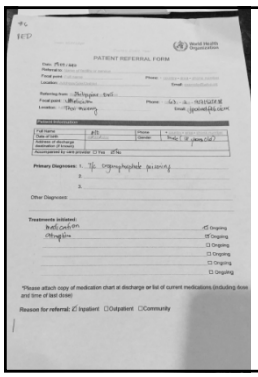
EMTCC Situation Report

- Almost agree

Thai Medical Record for Emergency and Disaster

- Blank the chief complaint
- Font too small, lack of space to write additional information, arrange CC in alphabetical

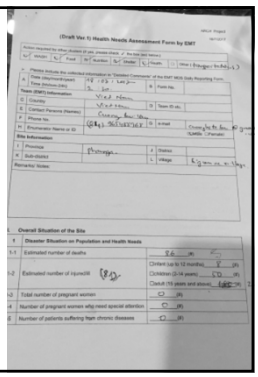




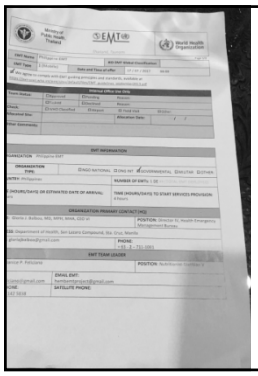
Patient Referral Form

- Some detail unclear
- No part where can fill in the history
- Confusion “referral to” and “focal point”

Health Needs Assessment Form by EMT



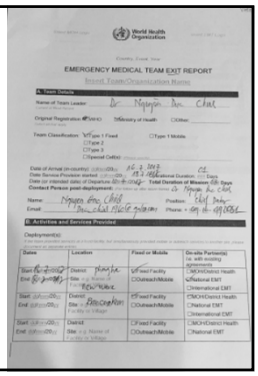
- Duplication
- Should add estimated number of patient
- Material, drugs, vaccines, and supplier should be more described
- Indicators for food availability
- Address the outbreak
- Separate village and shelter
- Include more information



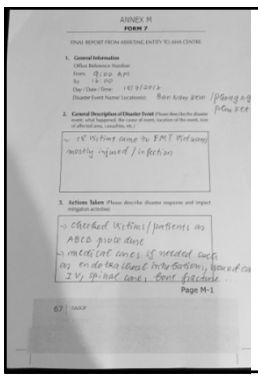
Registration From

- Easy to every country or agreed forms
- Easy to understand
- More space for free text
- Do we send the documents with the registration forms?
- Who verifies?
- Multiple queries

Emergency Medical Team Exit Report



- Excellent
- A lot of detail
- Part E F G not necessary
- Revise (transferred patient)
- Increase column



SASOP FORM 7

- Good and concise

Electronic Forms, Cloud, App based

To be more user friendly

Coordination processes

- With others; SAR, social welfare, ERAT
- Referral system
- Public health
- RDC; more information
- Standard protocol were not followed
- Good organized
- Language barrier
- Alternative communication

Capacity building

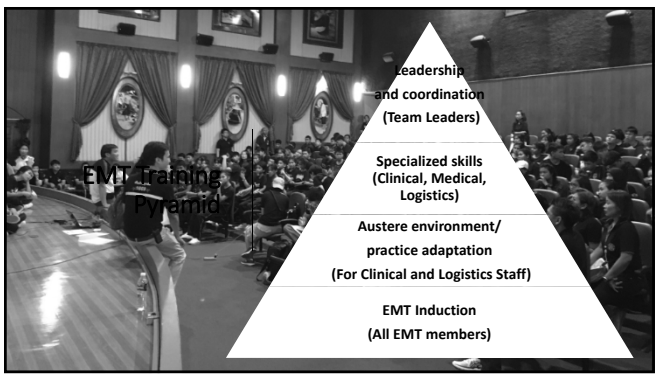
- Management aspect
  - EMTCC, EOC, EMT coordination
  - Team management
  - Know the functions of other agencies under ASEAN during disaster
  - Workflow of working

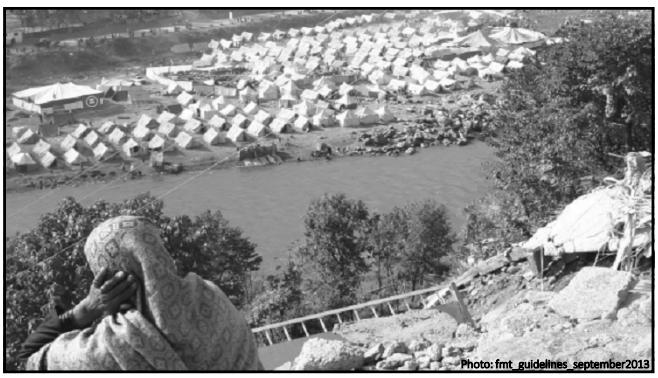
Capacity building

- Technical aspect
  - SOP for EMT
  - Checklist for tasks and action card (roles & responsibilities)
  - Standardize equipment & pharmacy
  - Legal provision
  - Basic skills, exchange student
  - Academic conference and seminar

Capacity building

- Technical aspect (cont'd)
  - EMT curriculum (clinical lead, nursing lead), classification
  - 5Cs (command, control, coordinate, communicate, cooperation)
  - Standardize triage categories





Attachment 11：

Advisory note by the Japan Advisory Committee

Advisory Note from Japanese Advisory Committee

ARCH Project
The 1st Regional Collaboration Drill

17 -19 July, 2017

The Japanese Advisory Committee congratulates NIEM, MOPH Thailand, and all stakeholders who dedicated to organize the 1st Regional Collaboration Drill on the successful implementation and achieving its purpose.

We are highly grateful for all of your good planning, tireless work, and significant hospitality to lead this outstanding result.

This advisory note is provided from the Japanese Advisory Committee to the ARCH project team members, the exercise controllers, and the exercise players to be developed for the next drills; and to optimize Thai ECO system in the future.

25 September, 2017

Tatsuro Kai

Signed by Dr. Tatsuro KAI on behalf of;

Japanese Advisory Committee to the ARCH Project,

Dr. Tatsuro KAI
Dr. Yuichi KOIDO
Dr. Satoshi YAMANOUCHI
Dr. Tomoaki NATSUKAWA
Ms. Eiko YAMADA
Mr. Yosuke TAKADA

And Dr. Tatsuhiko KUBO as the regional PHEOC(EMTCC) staff.

1 Overall

(1)Observation:

In general, the drill was very well planned, prepared, and organized to achieve its purpose. All AMS utilized the common forms, and provided valuable feedback for the sake of strengthening the regional coordination on disaster health management. However, one of the challenges was to have common exercise expectations among all drill participants. It was particularly observed in the rules of engagement, understanding of the intention of each scenario/inject, and the roles of each personnel involved in the field exercise. It was due to different backgrounds, rules, technical languages, and experiences among AMS in field exercise.

Regarding the drill environment, the venue of the field exercise on DAY2 was excellent; and it was appreciated that each tent was equipped with air conditioner. Neverthless, due to the heat weather, it was observed that some participants claimed suspected heatstroke during and after the exercise.

Regarding the performance at PHEOC(EMTCC), in general, at each provincial and regional PHEOCs (EMTCC), personnel well understood the mission and roles within the EMTCC described in the the WHO/EMTCC Handbook. Also, their performances were remarkably developed on the DAY2 (field exercise) based on the experience and the after action review on the DAY1 (TTX).

(2)Recommendation:

Given the different background and experience of each participants regarding the field exercise, it may be preferable if the scenario and the injects were simpler. For instance, if the number of severe patients would be smaller, each participant (= EMT member) could have more time to concentrate on preparing and to be familiar with the forms, which was the purpose of the 2nd RCD, rather than treatment of patients.

Also, more precise guidance on rules of engagement to the exercise may be beneficial to the participants in order to have common understanding and expectation to the scenario and exercise control. Likewise, it would be better to show some clear mark (e.g.

training bib) with the instructors/observers to let the participants identify their instructors easily.

As for the safety and security of the participants, the exercise controllers may further consider the exercise environment such as weather, temperature and humidity.

As for the performance of PHEOC(EMTCC), more familiarization and reference to the EMTCC handbook is essential to make the work of PHEOC(EMTCC) personnel easier and more effective. (e.g. Referring to the potential EMTCC meeting agenda items written in the Handbook.)

2 Observation areas in accordance with the WHO EMT Coordination Handbook.

The following 4 areas are highlighted in the WHO EMT Coordination Handbook. The Japanese Advisory Committee wish to recommend to the Thai EOC and exercise organizers for potential areas of development as well as best practice in each area, as requested by Thai side. Please refer to the attached check list for the detailed check points/criteria which the Japanese Advisory Committee set and used to observe the performance of Thai EOCs as well as the drill organizers mainly at the field exercise on DAY2 (and partially on DAY1).

➢ Informative

(1) Definition in the WHO/EMTCC Handbook:

The EMTCC has a role (or even an obligation) to disseminate relevant information to relational partners, especially to the EMTs. This information may be primary (such as situation reports generated from EMT daily reporting, or maps of EMT deployment) or secondary (such as updated security information, or visa and customs instructions where relevant).

Example:

Generating and distributing EMTCC situation reports to the EMTs and all relevant stakeholders involved in the response.

(2) Observation:

Information dissemination (in accordance with the WHO/EMTCC Handbook, this particularly means the producing of EMTCC situation report.) was well conducted, especially by the regional PHEOC(EMTCC). The provincial PHEOCs(EMTCC) also provided information to EMTs at the respective EMTCC meetings.

It was also observed that the data process was excellently conducted at both PHEOCs and the regional EMTCC. They always investigated the reliability of information gathered from EMT daily reports when they had any suspicious information. Also, at the regional PHEOC (EMTCC), the staffs succeeded in making informative graph using the EMT MDS.

It was also observed that the provincial PHEOCs(EMTCC) provided adequate and necessary briefing to EMTs on their arrival at the DAY2 field exercise.

(3)Recommendation:

It would be more helpful for PHEOC (EMTCC) if any information shared within PHEOC (EMTCC) is recorded, in addition to the verbal communication among EMTCC staff, for memory and subsequent review.

Likewise, it would be more benefit of EMTs if EMTCC post any information at suitable place with good visibility so that EMTs can have easy access for necessary information.

Also, PHEOCs (EMTCC) are encouraged to gather and analyze information for strategic operation. Moreover, PHEOCs (EMTCC) may prioritize information on safety and security, because safety and security issues reported by EMTs should be taken into consideration in order to ensure safety of EMTs.

- **Representative**

(1) Definition in the WHO/EMTCC Handbook:

This is an implicit role of the EMTCC, and is a critical coordinating function in facilitating connectivity, speed and 'visibility' of the N-EMT and I-EMT response. The EMTCC should be perceived as a representative focal point for the EMTs in the attempt to always reach a win-win status.

Example:

Presenting the concerns of I-EMTs to the coordinating bodies regarding the landing permission of I-EMTs during the initial critical hours of the response.

Reprimanding or correcting unacceptable behaviour from rogue EMTs to maintain a positive image of the EMT response.

(2) Observation:

Both regional and provincial PHEOCs (EMTCC) managed to adequately follow EMTs activities. They effectively utilized equipment such as a map and TV monitoring to grasp the

real time situation of EMT activities.

Although the planned communication equipment such as walky-talky and wire-less LAN had technical difficulties sometimes, all provincial PHEOCs could adequately report to and communicate with their supervising organization (in this drill, the regional EMTCC.) about establishment of EMTCC in their province. Also, both regional and provincial PHEOCs (EMTCC) made the contact list with other relevant sectors / stakeholders on DAY2.

The Japanese Advisory Committee did not observe one of the representative roles of EMTCC: coordination with relevant parties regarding the necessary assistance for EMTs on behalf of EMTs (e.g. Presenting the concerns of I-EMTs to the coordinating bodies regarding the landing permission of I-EMTs during the initial critical hours of the response.) However, this seemed to be performed in Thai language at the regional PHEOC(EMTCC) .

Also, the provincial PHEOCs(EMTCC) well managed transportation for patients transfer and referral.

(3) Recommendation:

In preparation for the actual deployment in the future, Thai PHEOC may consider to have an alternative method/tool to grasp the situation of EMT activities instead of real time TV monitoring. It may be difficult in a real disaster situation to follow TV while it is very good from a view point of training. For the next exercise opportunity, it is suggested to include more scenario and injects related to this role of EMTCC.

- **Advisory**

(1) Definition in the WHO/EMTCC Handbook:

The EMTCC, as a specialised cell with unique technical expertise, also holds an advisory role. Its general expertise includes the mechanisms and processes for coordinating EMTs, the EMT Classification and Minimum Standards as well as all identified areas of support required by EMTs during their deployment.

Examples:

Advising partners on the ideal mechanism for managing the arrival and registration of incoming I-EMTs.

Advising all EMTs on guidelines for improving case management or Infection Prevention and Control requirements.

(2) Observation:

Both the regional and provincial PHEOCs (EMTCC) actively and effectively gathered the wide range of information. At the regional PHEOC (EMTCC), information was gained from the EMT MDS Daily Report/Situation report. Based on those information, the provincial PHEOCs (EMTCC) provided advices to EMTs on infectious disease control, safety & security concerns, and guidelines for improving case management.

Also, the provincial PHEOCs successfully provided an important alert such as epidemic of infectious disease via situation report.

(3) Recommendation:

For easier data collection/analysis/evaluation, using equipment such as a writing sheet would be suggested.

Also, it may be better to share those important alerts by other means such as EMTCC meeting in addition to the situation report.

- **Facilitative Leadership**

(1) Definition in the WHO/EMTCC Handbook:

This is the predominant role of the EMTCC in its leadership and coordination of N-EMTs and I-EMTs. The objective is to facilitate the activities of the relational partners to the ultimate benefit of the affected population. This can be achieved by providing direct guidance or assistance to the relational partner, or by providing the linkage between partners (connectivity). While facilitative leadership is generally useful, there are situations in which the approach requires being directive rather than facilitative, that is, providing instructions (rather than guidance) in line with the requirements set by the MOH.

Examples:

- *Negotiating with other national authorities to establish a streamlined visa and customs procedure for all I-EMTs. This facilitates the rapid deployment of I-EMTs into the affected country, and reduces the workload of the national authorities in dealing with each EMT.*

(2) Observation:

In this 1st RCD, the component of scenario related to the EMTCC's role of Facilitative Leadership was limited.

END

Attachment 12：

Proceedings of the 2nd RCD

SUMMARY OF PROCEEDINGS

THE SECOND REGIONAL COLLABORATION DRILL

PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT (ARCH PROJECT)

28 March 2018

The Grand Tourane Hotel, Danang City, Vietnam

I. EMTCC MEETINGS AND PRESENTATIONS BY REGIONAL AND PROVINCIAL PHEOCS

Dr.Tomoaki Natsukawa, introduced the designated schedule of the morning session to participants from all ASEAN Member State (AMS). Firstly, the provincial Public Health Emergency Operations Center (PHEOC) would present their report to the Regional PHEOC regarding on the simulated disaster management training performed on March, 26th 2018. Then secondly, the regional PHEOC would conduct a presentation and press release on the overall picture of the situation, with a question-and-answer session by the end.

Provincial PHEOC

A representative from Danang Provincial PHEOC greeted all AMS participants and started his report by explaining the updated emergency situation. A typhoon arrived and damaged 4 central provinces of Vietnam, resulting to approximately 300 deaths and missing, and 450 injured patients. Moreover, living shelters, construction works and medical centers had been severely destroyed. There were, at the time six areas that were isolated from the rest, generating the demand for 6 Emergency Medical Teams (EMTs). The participated EMTs were from; (1) Brunei (2) Indonesia (3) Malaysia (4) Philippines (5) Singapore and (6) Vietnam, each of which was assigned to one of the six isolated areas.

Finding on the first day, there were altogether 60 patients who received the treatment, with the same proportion on gender. Thirty two of them needed to be referred to hospital while eight patients were in need for a medical follow-ups. In term of the treatment, 63% of the treatment performed was directly related to the disaster, and 23% was the indirect cases. Trauma was the main problem with 63% of the patients were suffering with, while infectious disease shared a little less than one-quarter of the patients. Nine out of sixty patients were categorized in the 'Other Key Disease' section, which included acute mental health and skin disease.

On Day 2, the number of assessed patients increased to 160, and 5% of whom were pregnant women. Thirty three patients needed medical follow-ups while 28 of them needed referrals. For the relation to the event, direct and indirect categories shared roughly the same proportion. For health events, however, infectious disease became more severe on the second day with an increased share of 46%, while the proportion of patients with trauma dropped to 41%.

The summary of Hoa Khuong village assessment was as followed; the village was located 500 meters from the beach with 2,700 residents in total. 70% of the houses in the village were completely destroyed, so were the schools and health center. Roads were ruined, making walking the only option of transportation. There were 100 deaths and missing and 70 injured. The main health concerns were trauma and infection (diarrhea). For public health, the major threat was contaminated water resource and food inadequacy.

For need and demand assessment, medical staffs and transportation were requested for the victims. Basic necessities such as clean water, food, clothes and shelters were also needed. Other demands were for example, environment management, social support, security and electricity generator. For poisoning event in Hoa Quy village, which was located 300 meter from the beach with 1,500 Gastrointestinal infection was among the most concerned health problem, resulting to 70 patients and 1 death.

In summary, the central province of Danang had been severely damaged by the typhoon. They were in an urgent need for both logistical supplies such as clean water, food, clothes and medicine and transportation for victim. Other demands included shelters, road, environment management, social support, security and electricity.

Regional PHEOC Presentation of Press Release

A representative from the regional PHEOC introduced the participants the structure of her presentation, starting with the overall situation of Day 1 and Day 2, then followed by the statistics comparison between the two days and lastly the question-and-session with the press.

On Day 1, there were altogether 120 victims, 53% of whom were male and 4% were pregnant women. In term of relation to the event, 68% of the victims were encountering the direct impact from the disaster and while 28% were for the indirect. For health events, 67% were suffering from trauma and 18% were from the infection diseases. Major kinds of disease were diarrhea (18 patients) and mental health (11 patients). There were 12 EMTs (Type 1 Fixed) operating in the designated area. Other issues arisen in Day 1 included a snake bite, contaminated water resource and lack of clean water access, language barrier, a need for a start mobile EMT service, death due to brain injury etc. Solution measures were taken in order to mitigate the impact, for example; provision of first aid and referral to the patient with snake bite, educational campaign for the citizen on clean water and sanitation and supplying clean water. Local language interpretators were made available if needed. For the mobile EMT request, plan would be made in advance and submit for approval.

On Day 2, the number of victims increased to 320, with an equal proportion of gender. Sixty percent of the victim were facing difficulties that were related directly to the disaster. The percentage of victims suffering from traumatic causes reduced to one-half, while patients with infectious diseases remained at around 35% of the total. In term of diseases, diarrhea and mental health were among the most alarming causes. There were 4 cases of limb amputation on Day 2. For the operating EMTs, the number of teams raised from 12 to 14 teams on Day 2, with additional two EMT type 1 mobile units. Other issues included the management of limb amputation, water resource contamination and access to clean water, increased snake bites cases, and one death due to unidentified causes. Solutions to these problems were, for example; the provision of first aid and referral for the limb-amputated and snake bite victims, and the provision of clean water supply. Educational campaigns for sanitation were launched for the affected victims.

In comparison between Day 1 and Day 2 of the operation, the number of victims increased by more than two folds. The percentage of indirect cause increased as the direct causes decreased. For health events, infectious disease increased by a large margin, from 18% to 35%, while trauma cases decreased from 67% in Day 1 to 52% in Day 2. A reason for increased infectious cases was due to the citizens' lack of awareness for communicable disease protection. For the comparison of kinds of disease, the number of diarrhea cases, limb amputation and mental health patients increased. Thus, the campaign for the control of spread epidemic diseases was urgently needed, so was the death management. And lastly, the number of EMTs operating in the disaster-affected area rose from 12 to 14 teams, with two additional mobile EMTs joined on Day 2.

After the press release session from Vietnamese regional PHEOC, the questioning session was conducted. Discussion points are summarized below;

- A journalist from Thailand requested some information on the IEMT deployment procedure, i.e. the focal point to contact for offering help to regional PHEOC. The PHEOC representatives appreciated the offered support and suggested IEMTs to contact Vietnam's Ministry of Health for the IEMT registration.
- A journalist from Vietnam asked about the management of overcrowded hospital and excessive need for treatment. The regional PHEOC responded that they would use the total in-town capacity

for the treatment and medical stock. If they were facing a lack of human resources, medical staffs would be requested for help from other provinces.

- Reporter from BBC asked whether the regional PHEOC had any pre-caution for travelers to the affected area. The PHEOC responded that tourists who were already in Vietnam for holidays would be contacted from their consulate authority and arranged for evacuation. For the tourist who plan to visit this area, they would be informed through mass media about the severity of the situation to make the decision on the plausible visits.
- Another reporter from BBC asked about the management of the possible outbreak of epidemic disease. The regional PHEOC responded that during disaster, their responsibility would only focus to solve the immediate problems. For indirect problems such as communicable diseases, they must make a request for supports from other agencies both nationally and internationally.

II. AFTER ACTION REVIEW AND PREPARATION FOR PRESENTATION

Dr.Yasushi Nakajima requested each AMS representatives to conduct an action review for the EMT's Standard of Procedure and prepare for the presentation in the afternoon session. The action review of each EMT was based on the tabletop exercise and drill exercise, by using the provided guidelines, namely; (1) opinion on report forms, (2) feedback on regional collaboration tools (Medical Record Form, Health Needs Assessment, and SOPs for EMT Coordination), (3) ideas on capacity building (knowledge and skill enhancement on EMT coordination during international deployment, and training courses for the public health personnel in ASEAN) and lastly (4) further idea for the next Regional Collaboration Drill (RCD).

III. PRESENTATION BY AMS

Each AMS was given 8 minutes for the group's presentation. The sequence of the presentation was randomly selected.

Vietnam: EMT 1

Dr.Ngyen Tan Dung, emergency department of Danang Hospital, the representative of EMT 1, started the presentation by offering the good points for this 2nd RCD, which included clear plan about the RCD implementation from both government and MOH, invaluable support from JICA and good collaboration among Regional PHEOC, Provincial PHEOC and EMTs. The points for improvement included communication difficulties with EOC, unclear forms, and difficulties in contacting with the victims.

For capacity development part, Vietnamese EMT 1 suggested to include 1) Team Management Capacity 2) Roles and responsibilities of affected country for EMT coordination (information, logistic, etc.), 3) EMT Classification and 4) Emergency Medical Team Coordination Cell (EMTCC) into the training course for public health personnel in ASEAN, who should be trained through (1) Regional training program, (2) Regional training course (with curriculum), (3) Exchange students program (between AMS), (4) Scholarship to study abroad, (5) Academic Conference, and (6) Seminars.

For the further ideas on the next RCD, Vietnam suggested to (1) immigrate to the 3rd hosting country of collaboration drill, (2) enhance the communication networking and (3) ask for support from government.

Singapore

Dr.Soh Poh Choong, Senior Resident Physician of Ng Teng Fong General Hospital, presented the after action review of Singapore, which are summarized in the below table.

Items	Good Points	Points for Improvement

Reporting Forms	• Comprehensive forms	• Forms labeling/ numbering in sequence to avoid confusion. • Repetition of information in forms (ie: description of disaster event in all the forms) such as in Form 12 •Overall instruction on how to fill the forms required • For Form 10, carbon copy shall be used
Medical Record Form	• Comprehensive form	• Demographics section –consolidate with WHO MDS • Chief complaints –group by system • Vital signs –bigger space for data input • Carbon copy as referral letter
Health Needs Assessment	• Very Detail	• Repetitive information on overall situation and shelter condition can consolidate
SOP for EMT Coordination	• Straightforward	• Radio communication etiquette • Handling of P0 casualties
Drill exercise	• Well organized • Kept to schedule • Realistic presentation of victims	• Communications –Walkie Talkie etiquette • Casualties can come with casualty tags with relevant information, facilitators may be too busy

For the suggestion on the capacity building, Singapore suggested to include (1) legal provision, (2) liability concern, (3) SOPs for EMT coordination, (4) SASOP, (5) international personnel deployment agreements and (6) roles and responsibilities of affected country for EM coordination. The reasons were due to the necessity to have agreement regarding the legal provisions during deployment and familiarization of the various SOPs related to deployment; including the command/control, coordination arrangements. For the methods of training, Singapore suggested a regional training program and trainer's training program so that each AMS can train one's EMT independently.

For the next RCD, Singapore suggested to conduct (1) an exercise casualty triage system and (2) an exercise communications procedure (voice procedure, communications discipline).

Indonesia

Dr.Yuddy Imowanto, Emergency Physician Consultant of Saiful Anwar General Hospital, the representative from Indonesia EMT started his presentation with the good points of the tabletop and drill exercises, which included (1) familiarization with the method of RCD such as form completion, (2) adequate post and (3) the use of internet-based Minimum Data Set daily report. The points for improvement included (1) a better provision of communication, (2) command and control during drill (due to communication failure among teams, facilitators and ROC), (3) a more carful patient handling service, (4) controller for EOC should come into play, (5) opening ceremony to be hosted indoor, and (6) daily report from health referral facilities should be supplied.

For capacity building, Indonesia suggested to include (1) Command and Control by communication tools since they experienced many problems during the drills and (2) SOP for EMT's coordination since EMT needs to work together with other EMT's and other sector's team. For the method of training, Indonesia encouraged to have regional training program with ASEAN standard curriculum.

For the next RCD, Indonesia recommended that collateral coordination (multiagency) by EOC should be exercised, based on cross cutting problems in real situations such as security issues, dead body management, search and rescue and logistic supports.

Thailand

Dr. Phummarin Saelim, Deputy Director of HRH Princess Chulabhorn Center of Disaster and Emergency Medicine, was the representative of Thailand EMT for after action review. Thailand's points are summarized into the below table.

Items	Good Points	Points for Improvement
Table top exercise	• Creative activity by using learning and teaching process • Documentation mechanism on iEMT • Knowing standard form and make team done as the same direction	• Slides and resources should be provide beforehand • The situation and mission assignment is not clear and unrealistic • Too little time to complete all forms • Teaching template/concept should be provided for all the teams • Signs and stages should be in English
Drill exercise	• Good simulated equipment • Good Cooperation from the interpreter and facilitator	• Back-up communication devices should be prepared • Risk of injury by transport equipment • Computer and internet connection should be provided for each of EMT team in order to send electronic data to EMTCC properly.
Medical post	• Sharing the same goal, and help to overcome linguistic barrier • Simplified and not too complicated	• Providing important information about the drill at an early date made the field exercise less interesting. • Limited venue space and standard patients made this drill impractical. • Real medical equipment and health care personnel should be added inside both the ambulance and the venue. • Role of the facilitators and interpreters still overlapped and needed to be clarified accordingly
SOPs and EMT Coordination	• Camera monitoring each EMT in the Control room	• EOC scenario and system of command should imitate the realistic situations such as surge capacities or resource utilization • Audiovisual equipment should be prepared in the meeting • The Roles of provincial PHEOC, Regional PHEOC, EMTCC should be tested
SASOP Form 1	-	• Contact number of the focal point should be stated in the form
SASOP Form 3	-	• Updated period should be suggested in the SOP
SASOP Form 4	-	• The offer of assistance should be combined to the WHO registration form to reduce documentation process
WHO registration form	-	• Name and position of the members of the team should be included
Medical record form :		• the letters are too small, Chief complaint might not need to be check lists, the page can be re-adjusted, Mechanism of injuries should be added to the information
Tally sheets	-	• Some number mistakes have been remarked
Health need assessment form	-	• Psycho-social support should be added • More space should be added for updating situation on water supply. • It should be the same as EMT-MDS Daily report form (Number 51-68)

For capacity building, Thailand saw that all items mentioned should be included into the curriculum. And for the method of trainings, all methods should be considered. And finally, Thailand recommended the next RCD to EMT fine tune objective of training to all EMT. The drill should be more concise and practical, with

an application of advanced technology such as TMS, APP, and satellite phone while other type of iEMT should be allowed to join field exercise.

Brunei

Brunei gave compliments on the simulated scenario's focus on the SOPs (form filling) and the opportunities given to team member to have exposure to all the forms. However, they faced some difficulties in completing all of the forms due to time limitation and felt that pre-deployment briefing at EOC could be improved such giving maps for location of IEMT station, and initial radio check upon arrival at the base.

For the ASEAN health personnel capacity development, Brunei suggested (1) legal provision, (2) liability concern, (3) SOPs for EMT coordination, (4) institutional arrangement, (5) team management capacity, (6) Roles and responsibilities of affected country for EMT coordination (information, logistic, etc.) and (7) EMTCC. Brunei noted that every EMT staff should be given a chance to participate in the drills – maybe local ones based on standard curriculum set by PWG2. For the training method, (1) regional training program and (2) regional training course (with curriculum) were recommended as trainers of each AMS should be trained in order to disseminate the knowledge to other domestic staffs. For the next RCD, there should be more twists in the scenario, and the session should not contain too many trauma cases. In addition acute medical, ILI and psychiatric cases should be included in the scenario.

Myanmar

Myanmar did not have many concerns on forms and SOPs since they have been established well. The good points included excellent arrangements, well organizing teams, good environment among AMS's EMTs, advanced IT and good surrogates. For points of improvements, clinical scenarios should be identified and attached to patient or facilitators. Communication should also be improved while maps of the region should be given to the IEMTs.

For capacity development, the following should be included in the training; (1) SOPs for EMT coordination (2) International personnel deployment agreements, (3) Roles and responsibilities of affected country for EMT coordination, and (4) EMTCC. The training should then be conducted through (1) academic conference and (2) regional training course (with curriculum). Opinions for the next RCD were to make the scenario more realistic and to follow SOPs such as Walki Talki more strictly.

Japan

Dr.Tomoki Nakamori from JDR medical team started the presentation with the good points of the first day that all EMTs had a chance to complete all 12 forms. On Day 2, the mock patients acted very well and the mock medicine and equipment were very useful for our clinical activities. Finally, the EOC member worked very well on making MDS feedback sheet since from the Japan team experience, MDS completion within the same day was very difficult to achieve. For points for improvements, more time should be allowed for filling the forms, and form filling practices should be divided among each EMT members to economize the time. For HNA form, since the form seemed to be too detailed, Japan team suggested to separate the form into two parts, namely; (1) Rapid assessment for immediate and acute medical support such as food, water and medicine and (2) Precise report for large scale support request such as infrastructure support. The daily HNA form should also be simplified, possibly by using check boxes, or prioritization method. For SASOP forms, the purpose of each form should be clearly indicated at the top of the page and free comment space should be minimized.

For capacity development, Japan suggested (1) SOPs for EMT coordination, (2) institutional arrangement and (3) EMTCC, whereas for method of training, (1) regional training program and (2) regional training course with curriculum should be conducted. And lastly, Japan recommended the next RCD to create the Rapid Assessment form and improve MDS to be applicable to Mac OS.

Malaysia

Zainal Effendy Bin Zainal Abidin, Emergency Physician from Sultan Abdul Halim Hospital mentioned that the 2nd RCD was well planned with very good actors. However the points of improvements as suggested by Malaysia included communication of EOC between EMT, clinical scenario for patients, and internet access. Moreover, there should be some specialized trainings for forms, while some changes could be made to some of the forms for better utilization, for example "Clean Water, Food, Latrine, Shelter and Others" should be included in the WASH boxes of HNA.

In order to enhance AMS health personnel's capacity, Malaysia suggested to include (1) legal provision, (2) liability concern, (3) SOPs for EMT coordination, (4) Institutional arrangement (ASEAN/each AMS), (5) AADMER & SASOP, (6) International personnel deployment agreements, (7) Team Management Capacity (8) Roles and responsibilities of affected country for EMT coordination and (9) EMTCC. The given reasons were that most had no experience in international deployment and EMT needed to know what is expected and what is to expect, with an arrangement of ASEAN. For the channel of training, Malaysia advised for (1) regional training program, (2) regional training course with curriculum, and (3) exchange students program among AMS. They were all for the benefits of cooperation improvement, breaking down barriers and personalized contact among EMT of all AMS. And lastly, the 3rd RCD should consider the interface between EMT teams, for example Type 1 versus Type 1 or Type 2 versus Type 1.

Cambodia

Cambodia complimented on the comprehensiveness of the forms and their ability to collect data, especially electronically. Nonetheless, font size in the form should be increase as it was too small. For medical report form, item number 38 and 39 should correctly be linked to EMT-MDS tally report. For HNA, despite its ability to identify the exact type and situation of disaster, there was still a few items that needed some clarifications such as that of health information staff. For the RCD, the venue, staffs and overall management were excellent, with coordinated support from the Vietnamese government. Some points for improvement were, however, that the introduction and opening session should be more concise, and PHEOC should have had some knowledge on data entry.

As to develop ASEAN health personnel on disaster management, the curriculum should include (1) SOPs, (2) Institute arrangement, (3) AADMER and SASOP, (4) International personnel deployment management, (5) team management capacity, (6) roles and responsibilities for EMTCC, and (7) EMTCC. These aforementioned factors would help to build capacity on communication, skill and knowledge on deployment and better overall management. The training and education should be conducted through (1) regional training course with curriculum, (2) exchange student program, (3) scholarship to study abroad. These methods of training would manage all EMTs to operate under the same standard and lead to an exchange of knowledge and skills. For the next RCD, drill venue should be more fully equipped with medical equipment, form, radio and internet. Additionally, more time should be allocated into the drill session and a collaboration with another iEMT would be much helpful.

Philippines

The Philippines team was delighted to learn about ASEAN disaster health management and mechanism. The facilitators played a very important role to set the mood of all participants and they did a very good job on establishing and conditioning the activity. Moreover, the introduction of MDS was a very beneficial session. For points of improvement, the Philippines recommended a provision of flow chart on the CIQ and EMTCC procedure, where all participants could be reminded of all of the steps. In addition, a kit tools including maps, directories, SOPs and other cultural reminders, should be provided. For form filling, there should be additional time allowed for this session. In SASOP 1, 3 and 4, checklists or check boxes should be applied to make the form accomplishment easier. For EMT MDS daily report form, total bed occupancy should be included, not only the capacity. For HNA, the psycho-social health support should be included into the form. For the drill, orientation on basic radio communication prior to the actual drill would be helpful to mutualize all participants on basic terms. In addition, cellular phone could be provided in the case of failed internet access for reporting completion.

For capacity training, the Philippines chose to include (1) legal provision, (2) liability concerns, (3) SOPs for EMT Coordination, (4) institutionalization arrangement and (5) roles and responsibilities. These factors mended to harmonize the terms and procedure, and to set the minimum requirement standard among iEMTs and clear coordination among AMS. The public health personnel should be educated through (1) regional training program, (2) scholarship, (3) academic conference and seminar.

Vietnam EMT 2

Vietnam team 2 found the 2nd RCD to be brief and easy to understand with highly applicable forms (MDS) and it was a good experience to share knowledge with iEMTs about disaster medicine response. Nevertheless, the communication system should be improved and PHEOC members' roles should be clearly identified. And lastly, the chief complaints of the medical record form needed to be arranged in body part's signs and symptoms.

For public health personnel's capacity building, (1) team management capacity, (2) roles and responsibilities for EMT coordination, (3) EMT classification and (6) EMTCC should be included into the course. Training and education should be conducted through (1) regional training program, (2) regional training course with curriculum, (3) exchange students program, (4) scholarship, (5)academic conference and (6) seminar.

Lao DPR

Lao DPR showed appreciation toward the improvement on the system of RCD, which provided great communication, teamwork and team management. However, the points for improvement consisted of the betterment of organization, teamwork, preparation for awareness and supporting facility.

For capacity development, the course should include (1) SOPs for EMT coordination, (2) Team Management Capacity, (3) Roles and responsibilities of affected country for EMT coordination and (4) EMTCC. The training and education should be conducted through (1) Regional training program, (2) Exchange students program (between AMS) and (3) Scholarship to study abroad.

Session Summary

Dr.Prasit Wuthisuthimethawee, Deputy-Director of Songklanagarind Hospital Thailand, showed appreciation towards all of the inputs shared by every AMS. He reiterated the importance of these suggestions and recommendations for the organizing team of both the 2nd and 3rd RCD, including the expert team.

IV. PRESENTATION BY EVALUATION TEAM

Dr.Pirinya, Emergency Physician from Maharaj Nakorn Chiangmai Hospital, and the representative of the evaluation team, introduced that the team's presentation would be divided into 3 parts, namely; (1) accommodation, (2) tabletop exercise and (3) drill exercise.

Accommodation

The selected hotel was located in a good area with nice ocean view. The hotel itself was clean, spacious and thoroughly covered with WIFI signal. Despite the fact that it was a little far from any convenient stores, the hotel provide an excellent transportation and catering service, especially the Gala Dinner.

Tabletop exercise

Firstly, for the drill organization, forms for new learning process were sent out beforehand to study, but the time for assessment was relatively too short. Thus, it would be more appropriate should more time had been given. For facilitating the events, each AMS got a chance to be facilitators and acquired some knowledge on how to fill out the forms. The developed understanding of the forms resulted to a better performance during the actual drill, as compared to the drill exercise in Phuket, in 2017. The next drill in the Philippines, however should place a focus on the procedure and knowledge in SOP, EMTCC and Health Need Assessment.

Field exercise

In term of administrative aspect, Giovanni Paolo Gimena, DRRM-H Manager of Zamboanga City Medical Centre, the Philippines gave compliments on organized bus transportation and briefing and introduction of personalities. However, due to the hot weather in AMS, the next drill's briefing could be conducted as part of the Day 1 exercise under the roof. For the venue facilities, there were adequate space, identified offices and areas, maps, tents, simulated logistics and villages, and the presence of facilitators and interpreters. Challenges included risks posed from traffic control to players and guests, and some role clarification needed for some facilitators. The evaluation team recommended to consider safety precaution and reinforce orientation of facilitators as priority in the next drill.

Exercise proper was divided into three parts. Firstly the command and control aspect, the establishment of EOC and successfully conducted EMT meeting at PHEOC were considered as good points. However, some clarification on instruction posed some challenges to the drill. Thus, the team recommended to provide briefer and concise action plan, and assign a specific role to each EMT member, for example, team leader, communication officers etc.

The second aspect was coordination. The good points included availability of communication channels, facilitators, tally sheet of victims and ambulance transport. The coordination between EOCs and EMTs did become some challenges during the drill. The recommendations were to strengthen orientation and briefing and to design for alternative data delivery method.

Communication was the third aspect. The presence of radio was good for the drill. However, there was some communication difficulty such as language barrier, radio transmission and internet connectivity. To solve the problem, alternative means of communication should be considered as well as additional communication exercise.

The EMT's drill was designed to test coordination between EMTs and PHEOC. Realist medical equipment, dedicated staffs and facilitators, and good location easy for evaluation were the factors toward the success of this event. Opportunities in improvement included (1) pre-deployment phase in the SOP, (2) better communication between EMT and PHEOC, (3) increased number of patients, and (4) some limitations should be put on resources such as hospital and ambulance to resemble the real situation.

From the perspective of participants, all EMTs can use medical record and forms and learn how to contact with EOC, following SOPs. Room for improvement included better organization for treatment zone, development of standard triage system and better acknowledgement on forms.

For PHEOC organization, the good points were the ability to create new situation to motivate PHEOC participants for learning, to solve problem and response, to coordinate with EMT, to learn E-MDS and assign an appropriate drill time. The points for improvement included structure and organization improvement. There were also not enough facilitators, furniture, stationary and office equipment in PHEOC station. More importantly, privacy and security of PHEOC room should be prioritized. The evaluation team suggested to conduct a team briefing and incident action plan before the deployment for PHEOC staffs and to install the CCTV in the exercise controlled room.

And lastly for HNA, village drill organization's good points included the presence of situation-describing picture, facilitator and interpreter for each team and data collection guide from HNA form. The

room for improvement consisted of on-site and EOC communication and coordination, and knowledge gap among EMTs for the utilization of HNA forms. More training should be conducted for using the HNA form.

Dr.Kai summarized the session by showing appreciation for Vietnamese staffs and Thai supporting team for the efforts put into this RCD. Good collaboration with other state agencies resulted to a successful drill organization. Vietnam had already conducted the first PHEOC training course, which can be spread to all over Vietnam. The 3rd RCD will be hosted in the Philippines, which offers a good opportunity to strengthen national capacity. Moreover, Dr.Kai also reiterated the importance of forms and their mechanism. Good relationship with MOH must be developed to learn about the disaster management mechanism. During the field training, all teams faced communication failures. If all AMS can manage the communication, the disaster response will definitely be a success.

V. INTRODUCTION TO 3RD RCD

Donnabelle Quindipan, DRRM-H Manager from Regional Office VI and a representative of the Philippines started her presentation by introducing a brief background of the Philippines. This archipelagic country was ranked as the 3rd disaster-prone country in the world, after only Vanuatu and Tonga. In 2013 alone, there were 16 disasters, including the famous typhoon Haiyan.

The finding of Metro Manila Earthquake Impact Reduction Study, funded by JICA, revealed that a movement of the West Valley Fault (WVF) will cause a 7.2 magnitude earthquake (with intensity VIII ground shaking) in Metro Manila and nearby provinces. The estimated active phase of the event is between 1858-2058. Geographically, Manila is a host of many national government agencies, including the department of health and NDMO, etc.

The predicted impact of the events included a dislocation of 42% of Manila residents outside the evacuation camps, and only 8,628 out of 13,751 individuals who will face life-threatening injuries would be accommodated into hospitals within Metro Manila. The rest must be transported to hospitals in other regions.

Therefore, the 3rd RCD would be a great contribution to the National Contingency Plan for The Big One (7.2 magnitude earthquake in NCR and nearby provinces) and would enhance interagency collaboration and coordination both at the National and International Response Operation activities. In addition, the mobilization of N-EMT, I-EMT and NDMO (NDRRMC) will be harmonized, contributing to the establishment of a system for Deploying Local and International EMTs.

The 3rd RCD will be hosted at the Armed Forces of the Philippines Grandstand, Quezon City, Manila between December 2 – 8, 2018.

VI. SUMMARY

Ms.Fude Takayoshi, ARCH project leader, showed the 5-minute-long version of video footage of the 2nd RCD, completed on March 26th 2018, to demonstrate the hard work, performed by all EMTs. The full version video footage will be available in April.

VII. CLOSING REMARKS

Dr. Jirot Sindhvananda, senior advisor of Thailand's MOH and the chair of RCC and PWG1 of ARCH project, greeted all AMS members of the 2nd RCD. He expressed a heart-felt gratitude for all representatives from AMS, delegates from ASEAN secretariat, AHA, JICA, NIEM, MOH OF Vietnam, Danang City, for hard-working contribution. The 2nd RCD began with introductory lectures and workshops on reporting forms on March 26th. Then, on March 27th field exercise which had been designed with great effort by Vietnamese,

Japanese, and Thai organization, was successfully completed. The drill included offering medical treatment to the simulated patients, filling reporting forms and coordination procedure with the EOC, etc. And eventually, Dr. Sindhvananda announced the conclusion of the 2nd RCD and expressed great wishes to all participants for safe journeys back home.

Attachment 13：

Proceedings of the 3rd RCD

SUMMARY OF PROCEEDINGS

THE THIRD REGIONAL COLLABORATION DRILL (RCD) MEETING

PROJECT FOR STRENGTHENING THE ASEAN REGIONAL CAPACITY ON DISASTER HEALTH MANAGEMENT (ARCH PROJET)

5 December 2018

Dusit Thani Hotel, Metro Manila, The Philippines

I. INTRODUCTION

After the field exercise for the 3rd Regional Collaboration Drill conducted on December 4, 2018 at the Philippine Army Grandstand, Taguig City, member of Emergency Medical Teams (EMT) from all ASEAN Member States (AMS), namely; (1) Brunei Darussalam, (2) Cambodia, (3) Indonesia, (4) Lao DPR, (5) Malaysia, (6) Myanmar, (7) Philippine (8) Singapore, (9) Thailand and (10) Vietnam, together with Japan Disaster Relief (JDR) team, and other coordinating bodies of the event, namely; (1) ARCH Project Team, (2) Japan International Cooperation Agency (JICA), (3) Japanese Advisory Committee Member, (4) ASEAN Secretariat and (5) observers from Ministry of Health and Welfare, Republic of China (Taiwan), participated in todays' review workshop for sharing experiences and conducting after action review for the drill.

II. PREPARATION OF EXIT REPORTS

In this session, the participants were requested to prepare two sets of Emergency Medical Team (EMT) exit report using EMT Exit Form and SASOP Form 7. During the subsequent tabletop exercise on demobilization of assistance, each AMS would be requested to submit these reports, one copy to the Philippine International Humanitarian Assistance (PIHA) and another to the Emergency Medical Team Coordination Cell (EMTCC).

III. HEALTH CLUSTER MEETING

In this plenary session, health cluster meeting was conducted by the members of health cluster. As for the background, health cluster, led by the Department of Health (DOH) of Philippine, is one of the eleven clusters in the national disaster risk reduction and management council and its task of providing timely assistance for disaster-affected populations is separated into four sub-clusters, namely; (1) medical and public health, (2) mental health and psycho-social support, (3) water, sanitation and hygiene and (4) nutrition. The chairperson of this meeting was the Secretary of Health, DOH, represented in this occasion by Dr.Gloria J.Balboa, MPH, CESO III. Apart from the representatives from the mentioned sub-clusters, there were personnel who were responsible for planning, logistics, administration and finance.

The meeting started with an update on the current situation for the simulated large earthquake struck in Metro Manila, also known as the "Big One". For the magnitude and consequence of the disaster, there were 11 million individuals from 2 million families being affected, of whom 5.5 million were in need of immediate assistance and 1.1 million were sheltering in 1,435 evacuation centers while 500,324 individuals were residing outside the center (home-based).

Regarding to the services provided by the four sub-clusters, for (1) medical services, after the establishment of health station, Health Need Assessment (HNA) was conducted while medicines, supplies and essential consultation were provided to affected municipalities from the total of 12 EMTs (local and 11 international). The majority of the consultations were due to Acute Respiratory Infection (ARI) and fever.

For the Mental Health and Psycho-Social Support (MHPSS) Cluster, health workers from both governmental and non-governmental agencies were convened for the MHPSS orientation and crash course for the provision of MHPSS session in the evacuation centers, including psychological first aid, psycho-social interventions (stress management and debriefing), and referrals.

As for the services implemented by Water, Sanitation and Hygiene (WASH) cluster, WASH supplies (e.g. water containers, hygiene kits, women's kit, insecticide treated mosquito nets and portable toilets) and IEC materials related to WASH were provided. The WASH cluster also inspected basic sanitation facilities and coordinated with Department of Public Works and Highways (DPWH) for the construction of toilets in the evacuation centers.

Lastly, the Nutrition Cluster had conducted the nutritional assessment to children and pregnant women, gave counseling on Infant and Young Child Feeding, and provided necessary supplements (e.g. micronutrients, Zinc, and Ferrous Sulfate) to affected individuals, including pregnant women.

In conclusion, the DOH teams and partners had provided the in-need Quad Cluster Health Services with the logistics and financial supports from governmental (central and regional offices from different departments) and non-governmental agencies, including international organizations. In the next phase, service gaps would be further identified and fulfilled and disease surveillance would be intensified. Dr.Gloria J.Balboa also reiterated the importance of I-SPEED for epidemic outbreak prevention and timely response. The health cluster meeting could be held as frequent as on the daily basis, depending on the need of the situations.

IV. NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL MEETING

Dr. Ronald Law, Medical Officer V, HEMB, DOH, started the session by providing an introductory background on the National Disaster Risk Reduction and Management Council (NDRRMC) meeting. According to the Republic Act 10121, commanding as a legal framework for disaster management in the Philippines, the NDRRMC must ensure the development of the policy and plan, and implementation of actions and measures for all aspects of disaster risk reduction management, including good governance, risk assessment and early warning, and reducing underlining risk factors. The NDRRMC are the working bodies of such as Act in all aspects related to the disaster risk reduction management in the Philippines, with the office of Civil Defense (OCD) serving as the secretariat. The main thematic area of the council consist of (1) Disaster Prevention and Mitigation, (2) Disaster Preparedness, (3) Disaster Response and (4) Disaster Rehabilitation and Recovery.

Today's NDRRMC meeting was led by Edgar L. Posadas, Director of Office of Civil Defense, Philippine, and joined by members from related agencies, for example; DOH, WHO Country Office, Department of Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), Philippine Red Cross and United Nations International Children's Emergency Fund (UNICEF). After a round of introduction, the representative of DSWD provided a presentation on the consolidated report for the "Big One" Response Cluster.

For highlight of the cluster work, following the activation of the Response Cluster Operation Center, the Response Cluster Teams were deployed to the National Capital Region and the Inter-Cluster Contingency Planning was conducted. The Disaster Response Situation Map was then completed and made available online for improved accessibility. In addition, NDRRMC Disaster Operations conducted Caravan during the first week after the earthquake.

The total tally of affected population was 17.7 million individuals from 2 million families. More than 1.6 million families (cumulative) were displaced and 1.1 million of them were currently sheltering in 1,435 Evacuation Centers. The number of damaged houses was also reported and families with damaged house received 5,000 PHP for initial Emergency Shelter Assistance. For family food pass and non-food assistance,

the NDRRMC had provided 53.5 million PHP-worth of assistance and had 914.5 million PHP available for Quick Response Fund and 637 million PHP for food and non-food items.

For Emergency Telecommunications, several agencies were involved to ensure effective and timely communication for disaster management, for example; (1) OCD, (2) DSWD, (3) NTC and (4) SMART. The provided services included satellite phone system, mobile application for information dissemination, high speed internet, aperture terminal, radio facilities and electric charging stations.

Services provided by Health Cluster included; (1) deployment of 12 EMTs, (2) provision of assorted drugs, medicines, hygiene kits, water containers, water treatment solutions and family kits, (3) response team with medical personnel for stand-by, and (4) psychosocial support.

For Education Cluster, while many schools' space had been used for evacuation centers, Department of Education had prepositioned learning kits, teaching kits, and book library kits (with assistance from UNICEF). For Search, Rescue and Retrieval (SRR), after the activation of OPLAN PAGHALASA and OPLAN LISTO, SSR personnel were deployed for debris clearing operation and handling of emergency relief items, as well as to ensure security in communities and evacuation centers.

Logistics Cluster provided logistics support for the air and land transport of responders, relief items, telecommunications equipment, food etc. to the affected areas, and operated the road clearing and maintenance mission. Involving agencies included; (1) ODC, (2) DSWD, (3) PRC and (4) DPWH. PIHA on the other hand, activated the PIHARC to coordinate deployment of foreign assistance in the form of human resources, logistics, and financial assistance.

For conclusion, Dr.Ronald Law emphasized the two important points of the NDRRMC meeting, which were; (1) DSWD is the leading agency of the Response Cluster and therefore designated to consolidate different reports into one and (2) the content of the report is composed of actions done by different clusters while Health Cluster is only one of them.

IV. TABLETOP EXERCISE: DEMOBILIZATION OF ASSISTANCE

The tabletop exercise for demobilization of assistance was facilitated by Dr. Alfonso C. Danac, Chief of Medical and Professional Staff II, Department of Health and Drill Master of the 3rd RCD, who began the session by identifying the objective of the exercise as; (1) to examine the current draft regional collaboration mechanism on disaster health management and tools (developed through the ARCH Project), (2) to test electronic reporting system for ISPEED, (3) to refine EMT team operations at all levels in terms of command and control, coordination and collaboration, and communication.

For demobilization of assistance, there are altogether six steps that I-EMT shall undergo before leaving the Philippines as following; (1) NEMTCC process in which EMT will register and submit the exit report to the EMTCC Supervisor, (2) PIHARC process in which EMT will register using registration form, submit the exit report, and surrender the PIHARC IDs issued, (3) OTS/Airline Check-in process in which the luggage of the EMTs will be screened in the x-ray machine. Then the passenger will check-in, (4) Quarantine process in which if there are no medical concerns, EMT members can proceed to the immigration, (5) Custom process in which if there are no customs concerns for the EMT, they can proceed to the immigration and lastly (6) Immigration process. The response-related documents needed during the first two steps are the accomplished EMT exit form and SASOP form 7.

Injects of different usual situations that may arise during the actual procedure will be introduced during the tabletop exercise for the preparedness of the unforeseen scenarios. The injects were based on the usual issues and concerns encountered in the arrival and registration process. After the inject, EMTs will be directed to continue and complete the procedure of the acceptance and registration until the NEMTCC process, so that all members are able to experience the whole process.

For the first three countries namely; (1) Japan, (2) Singapore and (3) Lao DPR, the inject was designated for one member to request for medical assistance from the airport's medical officer due to the presence of fever. The responsible officer will then give out medicine and accompany the unwell participants to the Bureau of Quarantine for the release of health clearance.

For the second inject (another three countries, namely (1) Vietnam, (2) Brunei, and (3) Cambodia), during the National EMTCC process, one of the teams will be designated to be present without the exit report and requested to complete and submit the concerned report before being cleared to the proceeding stage.

The third inject occurs during the transport security process, where one member of the two EMTs (i.e. (1) Thailand and (2) Indonesia) is detected to be carrying 15,000 USD-worth of cash during the primary luggage screening. Upon checking of Custom Declaration Form, the concerned member will be requested for secondary screening and to provide the officers with valid reasons for bringing more than 10,000 USD. He or she will then asked to fill out the Bangko Sentral ng Pilipinas (BSP) Form and show his/her passport. Once done, the concerned member will be advised to proceed. The immigration officer will then submit the accomplished BSP Form to BSP.

For the last inject scenario, during the immigration stage one of the two remaining teams, which are (1) Malaysia and (2) Myanmar) will be found to be overstaying in the Philippines (2 months). The immigration officer, in response, will explain the usual process, which is for the team to pay the corresponding fee. However, due to the declaration of the national state of calamity, the fee will be waived based on the memo of the Bureau of Immigration. The team will then be cleared accordingly. 5

For conclusion, Dr.Alfonso C. Danac showed his gratitude toward all participants, PIHA, AHA Center, ARCH Thailand, ARCH Japan, Japanese Advisory group, JICA and all other related domestic agencies. He also congratulate all AMS for the successful completion of the drill. Dr.Danac, once again iterated the importance of regional collaboration under One ASEAN One Response concept.

V. POST-INCIDENT EVALUATION AND PREPARATION OF PRESENTATION

Dr.Prasit Wuthisuthimethawee, Deputy Director of Songklanagarind Hospital, Thailand offered a brief summary of the 3rd RCD as to be incredible works, sophisticated drill set-up, and successful drill activities. Moreover, by reiterating the importance and value of participants' input for exercise assessment and provide basis for PWG1 and PWG2 discussion, Dr. Wuthisuthimethawee gave an explanation on the two tasks that all participants needed to complete in this session, which were (1) Individual Evaluation and (2) Team Evaluation and Presentation. In the team evaluation activity, each EMT was requested to share one's opinion on; (1) the good points and points for improvement for the 3rd RCD, (2) which topics or training courses that each EMT think should be introduced to public health personnel in ASEAN to enhance their knowledge and skill on EMT coordination during international deployment, (3) how the public health personnel in ASEAN should be educated and trained on the topics that each EMT has chosen, and (4) final draft version of reporting form. Each EMT would have 8 minutes for the presentation of their discussion.

VI. PRESENTATION OF FEEDBACK BY EACH AMS

A. BRUNEI

The representative of Brunei EMT greeted all participants and started his presentation by identifying the good points of the 3rd RCD to be well organized with time-keeping and logistics, ideal location, improved communication for more proper training and helpful I-SPEED usage. For points for improvement, Brunei suggested to undergo mixed scenarios during Day 4 events, rather than focusing solely on infectious disease. For the health personnel training, Brunei suggested to include (1) Roles and responsibilities of affected country for EMT coordination (information, logistic, etc.), (2) Standard Operating Procedures

(SOPs) for EMT coordination and (3) Emergency Medical Team Coordination Cell (EMTCC), through (1) Regional training program and (2) Academic Seminar.

In addition, Brunei provided some suggestions on the final draft of reporting form as following; (1) Medical records shall contain more space for clinical notes and continuing care (if patient were to stay longer in the clinic), (2) more checkboxes in HNA, and (3) in the EMT-MDS tally sheets, the numbers do not correlate with the clinical notes. For the next RCD, Brunei recommended to have non-disaster related drills such as Chemical, Biological, Radiological or Nuclear disaster (CBRN).

B. SINGAPORE

Singapore appreciated that the 3rd RCD was well organized and structured, while having a country facilitator was helpful in real operations. And since the background was clearly given, all participants were on the same page at the executional ground. For points for improvement, the suggestions were to have logistics more clearly labeled and quantified, and arranged according to requirements (airway, breathing and circulation)

For capacity building, Singapore suggested to include; (1) SOPs for EMT coordination, (2) international personnel deployment agreements, (3) Team Management Capacity, (4) EMT Classification, and (5) EMTCC, being delivered through; (1) Regional training program, (2) Regional training course (the most efficient training method for large number of health personnel), (3) Academic Conference and (4) Seminars. Moreover, Singapore emphasized the importance of medical logistics management for I-EMT such as airport and custom process, delivery to disaster site, and subsequent supplies replacement.

In case of reporting forms, Singapore recommended to (1) have filled sample form provided for guidance, (2) add a column to include patients with unknown identity, (3) add to the medical record form a space for heat injury (common problem in ASEAN), a larger space for vital signs column, and more indication for referrals.

C. INDONESIA

Indonesia recognized performances of the 3rd RCD to be improved from previous drills, and the presentation of cluster framework in disaster was useful, which Indonesia has also adopted. For further improvement, it was suggested to have more informative scene on NHA drill (equipped with photos or real simulation stuffs), and information about necessities to perform HNA should be explained before assigning I-EMTs (by EMTCC).

For capacity building, Indonesia suggested to have (1) SOPs EMT Coordination (as it is the backbone of EMT framework for successful operation), and (2) Team Management Capacity (important to ensure EMT personnel readiness to work as a team in operation). Capacity building shall be channeled through (1) Regional training program, (2) Regional training course (through AHA Center) and (3) scholarship to study abroad. Moreover, SOP and coordination platform shall be clarified and enriched by collaborating with other related agencies (e.g. WHO and UNOCHA) and ASEAN EMTs shall be established with members from AMS.

Indonesia suggested project team to; (1) enrich RCD with medical cases related to public health problems (for EMT's knowledge improvement on HNA) and (2) to drill EMTs, of which members come from various AMS.

D. MALAYSIA

Among several good points, Malaysia pointed out the success of the 3rd RCD as to have multi-agencies involvement, less language barrier and an effective use of technology in surveillance and presenting situational updates. For further improvement, it was suggested that the patients' make-up should be consistent with the given roles, and different radios should be assigned for specific roles.

For capacity building, Malaysia recognized the importance of (1) SOPs for EMT coordination, (2) AADMER and SASOP, and (3) Roles and responsibilities of affected country for EMT coordination, all of which shall be delivered through (1) Regional training course and (2) Seminars, in order to adapt standard curriculum training among all AMS which can involve many more EMT personnel.

For the next RCD, it was recommended by Malaysia to (1) introduce the combination of disaster, for example tsunami and radiological events, (2) increase the number of AMS participants, and (3) allow observer from AMS.

E. VIETNAM

Vietnam appreciated the good points of the 3rd RCD, which were (1) activity management, (2) arrangement at CIQ as well as demobilization of assistance, improved forms comparing to the 2nd RCD, and (3) I-SPEED reporting. For points for improvement, there should in the future be (1) Checklist for materials and medicines in tents, (2) Triage tag for assessment at scene, (3) Dispatching for ambulance transportation, and (4) Country sign/flag at the tent.

For capacity building, Vietnam recommended to include (1) SOPs for EMT coordination, (2) International personnel deployment agreements (which should be submitted to authorities for approval), (3) Team Management Capacity and (4) EMT Classification, all of which should be delivered through (1) Regional training course, (2) Scholarship to study abroad, and (3) Seminars. Vietnam also suggested to have a mixed I-EMT with personnel from different AMS to learn from one another.

F. LAO PDR

Lao PDR commented on the wonderful work of all organizing staffs, hotel facilities and drill location management. The use of I-SPEED made data collection easy and appropriate and Lao DPR aimed to apply this technology in the country.

G. MYANMAR

For Myanmar, the good points were, among others, the experience in using i-SPEED mobile application, and the injects during tabletop exercise. However, it was also mentioned that the schedule of the field exercise was tight and there should be more time in the field with some modification of case scenarios, for example; a three-year old child patient without guardian.

For capacity building, Myanmar suggested (1) SOPs for EMT coordination, (2) Institutional arrangement, (3) AADMER & SASOP, (4) International Personnel Deployment, (5) Roles and responsibilities of affected country, (6) EMT Classification and (7) EMTCC, via (1) Regional training program, (2) Regional training course and (3) Academic Conference. For reporting form, Myanmar pointed out that some code numbers in medical record from did not match with the one in tally sheet. Moreover, it was also suggested that each AMS should do national and regional collaboration drill.

H. THAILAND

For Day 1, Thailand gave good comments on facilities (WIFI connection, food, etc.), and step-by-step instruction for i-SPEED application. For points of improvement, Thailand suggested that any problems occurred during the tabletop exercise should be raised up for solution finding, worse-case scenario should be included in the exercise and there should be more communication exercise.

On Day 2, Thailand saw safety, simulated equipment, and cooperation from actors and facilitator as good points. For future improvement, however Thailand suggested that space and resources should be utilized for maximum benefit, communication should be concise and spoken in English, and there should be more variety for method of information provision in regard of HNA.

I. CAMBODIA

Cambodia showed their appreciation toward the overall RCD organization, which included the event's objective, scenario, introduction, and time length. For further improvement, the suggestion was to improve communication among host country, AHA Center and AMS.

For capacity development, Cambodia regarded all of the mentioned activities as very important for public health personnel to learn about disaster response management, through (1) Regional training course, (2) Academic conference and (3) Seminars.

J. JAPAN

For health personnel‘s capacity building, Japan placed their focus on (1) EMT classification (for EMT efficient coordination with affected country), (2) EMTCC and (3) Personal capacity building (training for incoming liaison who coordinate different stakeholders is needed). Japan also suggested to establish the public health special team according to their knowledge and skills, as well as to prepare liaison system (i.e. district or province level) for rapid coordination with dealing with public health teams during the disaster. Trainings should be conducted through (1) Regional training program (diploma course on disaster management), (2) Scholarship to study in AMS and (3) Development of ASEAN-collaborated public health team. Moreover, common knowledge and skills (including on religion), as well as disaster-related experience and knowledge should be strengthened among AMS and Japan.

Regarding reporting forms, Japan mentioned that (1) referral letters were difficult to read (thus use carbon copy paper), and (2) filling HNA forms was time consuming (thus reduce the context on HNA form). In addition, patient referral form should be reconfigure into one page and there should be only one exit report (combining AHA Center and EMTCC).

According to Japan, the good points of the 3rd RCD were (1) disaster management of affected country, (2) acting patients and other equipment (3) time management (4) referral system (5) i-SPEED and (6) team facilitator. The points for improvement were (1) more time allocation for form filling, (2) for HNA form, rapid assessment and precise assessment should be separated, (3) communication devices, (4) more information about the location for settlement is needed, and (4) time to observe other EMT work shall be allocated. Moreover, Japan suggested that foreign tourists in the victims and patients should be included in the drill, non-ASEAN country/EMT or NGOs should be invited to join and evaluate the ASEAN mechanism and tools, telephone should be used instead of radio for the communication between EMTs and EMTCC and lastly the difference on roles of the EMTCC and AHA Centre should be clearly identified and explained.

K. PHILIPPINES

According to the Philippines, the good points were (1) attainment of drill objectives, (2) step-by-step orientation of participants, (3) distribution of essential documents and materials, (4) country facilitators, (5) Philippines' technical working group, (5) collaboration of different agencies during the field exercise, (6) time management, and (7) safety. For improvement, the Philippines suggested to include more training on EMTCC.

For capacity building, the Philippines suggested to include (1) Legal provision, (2) Liability concern (to inform the I-EMT especially on negligence and malpractice), (3) SOPs for EMT coordination (focusing on flow of communication and referrals of affected country), (4) International personnel deployment agreements, (5) Roles and responsibilities of affected country for EMT coordination, and (6) EMTCC. In addition, regional training program that includes medicine course and education on public health training, exchange student program, regional seminars, and regional Conferences should be executed.

VII. PRESENTATION BY ARCH PROJECT TEAM AND ARCH PHILIPPINE WORKING COMMITTEE

Dr.Weerasak Phongputta, MD EP, Thailand ARCH Project Team, started his presentation of the Thai team's evaluation on the 3rd RCD by explaining the evaluation process, which included two methods as following; (1) direct observation and (2) interactive interview with EMT members, AHA Center and MOH officers. The evaluation was divided into four phases, which were (1) pre-deployment, (2) arrival and registration (tabletop), (3) i-SPEED application, and (4) field exercise.

During the pre-deployment phase, AHA Center received the assistance request from the Philippines (SASOP Form 3) on November 29th, and distributed to all AMS's NDMOs immediately. AHA Center only received offer assistance form (SASOP Form 4) back from one AMS, which was Malaysia, on November 30th and sent it to the Philippines immediately. It could be the result of delayed or ineffective coordination between NDMO and MOH of each AMS, so ARCH project team of Thailand suggested the coordination should be made firstly through AHA Center, then directly from one country to another. Most of AMS that did not send the form back to AHA Center mentioned that they did not receive the form, which could arose from the ineffective internal coordination in some AMS.

For the tabletop exercise on arrival and registration, most AMS mentioned that accessibility and process of CIQ, PIHARC and EMTCC were clear, realistic and easy to understand. However, some suggestion for improvement was (1) during the CIQ, it is better to proceed as a group instead of one-by-one, (2) AMS EMT member license should be prepared during the preapproval process, (3) security information of the affected area should be provided and (4) there should be fast-track pass for I-EMT.

For the use of i-SPEED mobile application, it was easy to access for simulation and could replace the medical record form. However, it was suggested to add more information of physical examination, which can perform the individual patient record tracking function. In term of availability, some participants had a concern whether it could be used in some disaster situations or areas, due to the lack of telecommunication facilities.

And lastly, the field exercise was a success story due to (1) easy-to-access location, (2) proper information provided during the sub-EMTCC, (3) good facilities provided for I-EMT, (4) good communication devices, (5) applicable medical record form, and (6) clear protocol for referral system. However, there were some challenges such as overcrowded communication in sub-EMTCC, and duplication of work between i-SPEED and MDS daily report form.

Dr. Tatsuro Kai, ARCH Project Advisory Committee, congratulated all participants and organizing team members for the success of the 3rd RCD. Dr.Kai then explained the process of the drill from the beginning when Philipine government sent assistance requester to AHA Center, which passed onto each AMS's focal point. Even though EMTs had become quite familiar with the forms, there were still some difficulties on information transfer between AMS's NDMO and MOH/DOH. Dr.Kai, therefore suggested to develop an information sharing system within each AMS.

This RCD was the first time the CIQ personnel had participated in the drill, thanks to the good relationship developed between Philippine ARCH project team and the CIQ-related agencies. Dr.Kai reiterated the importance of work intersection by mentioning that EMTs must carry much weight of equipment and consumables for operations, thus collaboration with CIQ agencies would be helpful during transportation process.

VIII. SUMMARY

Janice P. Feliciano, Assistant to the Drill Master, DOH, Philippines, was the representative of the organizing teams to give a summary on comments and suggestions toward the completed 3rd RCD. She started by reiterating on the objectives of this drill as (1) to examine the current draft regional collaboration mechanism on disaster health management and tools (developed through the ARCH Project), (2) to test electronic reporting system for ISPEED and (3) to refine EMT team operations at all levels in terms of command and control, coordination and collaboration, and communication.

For pre-work, it is summarized that more works needed to be done on the connection between AMS's NDMO and MOH/DOH, as well as on the pre-arrival process of approval and other requirements. For tabletop exercise, EMTs got to experience the entering process and the requirements in responding as I-EMT. However, for better preparedness, scenario where logistics are brought to the affected countries through other means should be considered.

For field exercise, i-SPEED application was regarded as a work in progress, while there was some room for improvement on medical record form and HNA, but no more additional forms should be introduced. The exercise also led to an appreciation of the EMTCC training's value. AMS also suggested that more challenging scenario should be included such as CBRNE.

The success of the 3rd RCD was due to great collaborations from several domestic and international organizations/agencies. To name a few, they were EMTs from all AMS and Japan, ARCH Project Teams, AHA Center, ASEAN Secretariat, WHO and different bureaus and departments of the Philippines.

Fude Takayoshi, ARCH Project Team, congratulated the working team for the success of the 3rd RCD

Dr.Phumin Silapun was a representative from ARCH project team to give the summary of all RCD sessions. From the beginning of the first phase of ARCH project, which was in July 2016, the working committee had a concept of using RCD as a development mechanism for Regional Collaboration Tools and AMS Training for capacity building.

The Regional Collaboration Tools consisted of (1) SOP for the Coordination of EMT in the ASEAN, (2) Minimum Requirements and Qualification for Members of EMT, (3) Database of EMT, (4) Health Needs Assessment Framework, and (5) Medical Record Form, while AMS Training consisted of four major topics, which were; (1) Human Resource Development, (2) Capacity Development of EMT, (3) International EMT, and (4) EMTCC.

In regard of RCD, the first session was called the Start-Up Drill, which was held in Bangkok, Thailand on January 17th-19 th, 2017. The objective of the start-up drill was to help ASEAN member states

identify gaps and challenges between medical procedures provided at a hospital and in the field of the country that has been affected by the disaster and generate the understandings on regional coordination and collaboration tools in health sector.

- Six month after the start-up drill, the first RCD was then held in Phuket Thailand, on July 17-19, 2017 with an objective to (1) oversee the reporting process among and between EMTs, EMTCC and other responsible organizations through the set of common reporting forms while (2) identify the challenges during the operation of International EMTs (I-EMTs) in the disaster-affected country.

Then in March 2018, the 2nd RCD took place in Danang, Vietnam. The objective was to validate the emergency assistance procedures set forth in the Standard Operating Procedure for ASEAN, and to obtain feedbacks on the common report formats such as; medical record, daily report and health needs assessment by providing practical experiences of reporting the team activities to the local public health emergency operation centre (PHEOC) and/or the national PHEOC/EMTCC.

The 3rd RCD was hosted in Manila, the Philippines between December 3-5, 2018. The objective of this last RCD of the first phase was to examine the current regional collaboration mechanism on disaster health management, and tools developed through the ARCH Project. On the other hand, its secondary objective is 1) to test electronic reporting system for i-SPEED, and 2) to refine EMT team operations at all levels in terms of command and control, coordination and collaboration, and communication.

Throughout four RCD sessions, all of the regional collaboration tools have been continuously tested and adjusted while the development of SOP, HNA and Medical Record form are currently at more than 90% completion and there are EMT database collected from 10 AMS. A mobile application for WHO-MDS has been successfully developed and tested with positive feedbacks from its users.

Dr. Silapun reiterated the importance of the integration of all developed tools into SASOP, which would enable these tools to be officially recognized and adopted during the disaster events. The integration shall be done through Health Cluster 2 meeting (August 2019), SOMHD meeting (April 2020), ARDEX 2020 and ACDM 2020.

IV. CLOSING REMARKS

Dr.Jirot Sinthuwanont offered a closing remarks by congratulating all of the 3rd RCD participants and showing appreciation on all dedication of everyone involved in this ARCH project from the first step, as well as the host of the event, Philippine. Throughout the drill, there have been fruitful participations with various creative learning approaches from all participants such as with i-SPEED application and radio communication. For moving forward, Dr.Sinthuwanont specifically mentioned the significance of further learning on what others are doing to minimize the risk in disaster management and all AMS shall conduct the drill host country would have great opportunities to test the country’s system for future improvement.

Attachment 14：

Proceedings of the 1st PWG1

The Start-Up Drill and the First Project Working Group (PWG) 1 and 2 Meetings on the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project)

17 – 20 January 2017
Radisson Blue Plaza Bangkok, Bangkok, Thailand

Summary of Proceedings

The Start-Up Drill and the first Project Working Group (PWG) 1 and 2 meetings on the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) were held in Bangkok, Thailand from 17 to 20 January 2017. The overall programme of activities is presented in Annex I.

The Start-Up Drill and the first PWG 1 and 2 Meetings were attended by participants from ASEAN Member States (AMS): Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Viet Nam, along with the Project Team consisting of the National Institute of Emergency Medicine (NIEM) of Thailand and Japanese expert team, as well as representatives of the Department of Disaster Prevention and Mitigation (DDPM) of Thailand, ASEAN Secretariat (ASEC), ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), the World Health Organization (WHO) Thailand Representative Office, the Japanese Advisory Committee, and the Japan International Cooperation Agency (JICA). The list of participants is enclosed in Annex II.

I. Start-Up Drill

1. Table-Top Exercise

A Table Top Exercise on Tuesday, 17 January 2017 was conducted to allow participants to study Standard Operating Procedures (SOP) prior the field exercise. Additionally, participants can explore concepts, meaning and practical options for international emergency response in health via different platforms. The details of Day 1 activities are summarized as follows.

(1) Opening Remarks / Group Photo

Dr. Anucha Sethastien, Secretary General of the National Institute for Emergency Medicine (NIEM), greeted and welcomed participants and honored guests. As Thailand often struggles with heavy rain resulting floods in different parts especially in the south, the drills conducted by ARCH Project will simulate real emergency response practices in a well-coordinated manner in ASEAN countries. And since many countries in ASEAN region are disaster prone as one of their prominent characteristics, this Start-Up Drill allows us, relief workers, to know the coordination procedures in compliance with the One ASEAN One Response Declaration. Dr. Anucha hopes that disaster relief networks among ASEAN countries are created and strongly bonded as the result of this workshop, along with procedure skills-set which would strengthen future collaborations.

The Start-Up Drill consisted of participants from the Japan International Cooperation Agency (JICA), Japanese Advisory Committee, Expert Team, Japan Disaster Relief (JDR) Team, ASEAN Secretariat, ASEAN Coordinating Centre for Humanitarian Assistance (AHA Centre), eight ASEAN Member States (AMS); Brunei, Cambodia, Laos PDR, Malaysia, Indonesia, Philippines, Thailand, and Viet Nam.

(2) Introduction to Start-Up Drill

Dr. Yasushi Nakajima, JICA Expert, made an introduction to the Start-Up Drill as the first of four drills throughout ARCH Project. For the participants to take part in the exercise, participants' role will be identified by different colored stickers on their name tags. The presentation of Dr. Nakajima can be found in Annex III.

The start-up drill is scheduled in three sessions including; 1) Table top exercise (Day1), 2) Field Exercise (Day 2) and 3) Review Workshop (Day 3). Day 1 objective is the deployment of the EMT and its procedure. Day 2 objective focuses on team management. The field exercise consists of five operating stations in which each country rotates in turn. Day 3 is the workshop with the objective to review and reflects all sessions. The methodology for the review will be participatory discussion (A.M) and presentation (P.M.). The presentation session in the afternoon will include the lesson learns, gaps and solutions derived from the start-up drill. At the end of the sessions, the Check-Up sheet will be provided for member countries to identify reflect lesson learns and identify challenges by individuals and teams.

(3) Coordination Procedure for Disaster Response in ASEAN

Mr. Arnel Capule Capilli, Director of Operation of AHA Centre, started by presenting the core message of the One ASEAN, One Response Declaration that each ASEAN member states had committed to contribute to other members on humanitarian relief in time of disaster. His presentation is shown in Annex IV.

Mr. Arnel emphasized the essence of assistance that assistance can be from any countries, sectors and organization as long as there are assistances from good will. With SOP platform, response is made easily and effectively by the principal of 3Ss; Speed, Scale, and Solidarity.

The Standard Operating Procedure for Regional Standby Arrangement and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) was established in 2009 and would be revised in February 2017. The ASEAN Disaster Emergency Response Simulation Exercise (ARDEX) using SASOP platform is conducted every two years. It was previously hosted by Brunei in November 2016 and would be hosted next by Indonesia in 2018. Mr. Arnel explained that Chapter 6 in SASOP regarding collaboration with the military which allows assisting entities to overcome challenges when working with the military. As far as military collaboration's concern, national sovereignty of the affected countries is one point to keep into account. In principal, the assistant entities are required to fulfill the tasks as supporter of the National Disaster Management Office (NDMO), but are not expected to take the lead. In the revised version, the military's principal for relief work was inserted as Chapter 6. It is that military is dispatched only when the situation is not yet under control by civilians and will pull off if the situation is under control.

SASOP mechanisms allow ASEAN Member States to coordinate through standardized Forms (Form 1 to 6) throughout the disaster cycle of request for assistance, offer of assistance, deployment, operation and final reporting through AHA Centre as the focal point.

Moreover, AHA Centre has a web-based information sharing platform called WebEOC to share information to the registered members who currently are health organizations, national Emergency Medical Team (EMT), some NGOs and civilian counterparts.

Q&A 1 (participant from Indonesia): Concerns are raised on the accessibility issues especially to the non-registered entities, for instance NGOs, on the WebEOC platform. Mr. Arnel responded by ensuring that contact details are available, but admitted that AHA Centre had previously been working only with NDMO which could be considered rather exclusive to partners in other actors in that sense. He agreed that inclusiveness in essential and assured that the mechanism will be improved to enhance inclusiveness.

Q&A 2 (participant from Japan): Inquiry is made regarding the accessibilities to the general public and for un-related partners for the purpose of statistical collection or research. Response to this concern was that the WebEOC is not available for the general public but accessible to the Japanese Governmental Agencies that provided technical and financial assistance for the WebEOC.

(4) ASEAN Joint Disaster Response Plan

Mr. Arnel Capule Capilli, continued by explaining the Joint Operation and Coordination Centre for ASEAN (JOCCA) that the center acts as physically shared space for deployed workers in the field. His presentation is enclosed in Annex V.

An example on Typhoon Haiyan was the initiating point of the concept when two EMT teams from Brunei and Malaysia showed that working in close collaboration brought great results. JOCCA's main objectives are; 1) to support NDMO and EMT to establish an on-site coordination system, 2) to act as a physical space/base for deployed response workers, and 3) to established coordination interface with relevant agencies such as UN agencies, other international organizations, civil and military entities. As regards JOCCA's principals, there are five operation principals as follow; 1) JOCCA is activated based on the consent of the AMS, 2) JOCCA is to support and work under the leadership of NDMO, 3) Inclusive and Coordination, 4) JOCCA operates in a dynamic and flexible manner by respecting national local mechanism, and 5) JOCCA mechanism can be updated and revised based on the lesson learns from previous disaster events.

(5) Introduction to WHO EMT Initiative and EMT Coordination Cell (EMTCC)

Dr. Richard Brown, WHO Thailand Office, explained that EMT is a Global Initiatives and the Emergency Medical Team Coordinating Cells (EMTCC) is new terminology and concept. The presentation of Dr. Brown can be found in Annex VI.

By definition, EMT refers to groups of health professionals that direct clinical support to the population affected by disaster to support local health systems from small local units, national units, to international NGOs units. WHO had classified the operational structure of medical teams into three different types.: Type 1 is the lowest

capacity, largely to perform primary examination and health care service; Type 2 is essentially primary health care with additional capacity to perform more complex operations such as a field hospital; and Type 3 involves surgical and/or clinical specialists for more complex medical examination and treatments. These three types are classified so by matching with existing operational systems practiced commonly.

The objectives of the EMT Initiative are; 1) to facilitate the expansion of global and regional health emergency cooperation and partnership, 2) to set standards, verify, approve and assure health emergency procedures or SOP and to create knowledge hub, 3) to implement capacity building and training, 4) to collect data for research and development, and sharing of those SOP and best practice to improve response procedures, and 5) to response to affected area in a timely manner. The mapping of EMT by regions shows that EMT coordination and exchanges of services are largely among three regions which are; 1) among the North and South American region, 2) among the Western and Eastern Europe, and African regions, and 3) Central, South, East and South East Asian and the Pacific. The EMT Initiative was ignited by the Earthquake in Haiti when around 300 teams were deployed and the needs to manage and organize coordination systems are identified. Furthermore, the Ebola Outbreak post a new paradigm for EMTs as it requires surgical focus as well as adaptability to work in pandemic context.

The Global Health Emergency Workforce is the bigger umbrella that focuses on building national capacity as national EMT teams have the biggest engagement in health emergency response. The EMT Global Classification allows organization to declare their compliance with the classification and minimum standards for emergency medical teams through mentorship and verification (M&V) program with the timeline of minimum three to maximum 12 months. The WHO concept on EMT is to support national EMT system, not to lead or create parallel systems. Global Health Emergency Workforce can include national and international NGO and UN agencies, experts and response network which deal with, for instance, emergency medicine, epidemiology, chemical lab, communication, logistics, etc.

In summary, the EMT initiatives provide standardized self-reliance clinical care deployed during emergencies, as well as the availability of training and capacity building with particular focus on national capacity.

Q&A 1 (participant from Japan): A concern was raised that with the EMT initiative is having high standard which lead the question of how NGOs can adopt the standard. The recommendation for the concern was to ensure that coordination to agree on an acceptable standard among national entities and NGOs. Practically, in an emergency, the national standard of the affected country may not be equivalent or adopted to the international standard recommended by WHO. Therefore, agreeable sets of standard that are compatible and harmonized among certain countries could be adopted.

Q&A 2 (participant from Indonesia): As an affected country with AHA Centre and WHO has available options, a question is raised on what is the basis for the EOC to decide which platform to file the request. Dr. Brown explained that WHO is a global initiative which EMT's high standards can ensure receiving countries quality EMT performance. However, with WHO's EMT initiative being a global platform, the dispatched teams may not well understand operating context of Southeast Asia in comparison with JOCCA platform. Mr. Arnel (AHA Centre representative) added that while AHA Centre currently does not have sufficient expertise in health sector, its familiar context of operation suits ASEAN context of emergency relief. Nevertheless,

both options are open for member state to decide what suit their situation the best. As regards the provision of logistics management from EMTCC, the provision of such service as transportation arrangement, food, team member's medical insurance, daily functional coordination, is very limited. Hence, EMT are expected to be self-reliance to some extent.

Q&A 3 Ms. Jenifer Frances de la Rosa (ASEAN Secretariat): An inquiry is made as regards to WHO's mentoring service for AMS to apply to have qualified EMT as well as WHO's compliance with standards and policies at the national level. This raises a concern about the difficulty to find qualified health worker to volunteer in the emergency situation. Dr. Brown explained that WHO set a high standard for certain EMT to be qualified as well as having the transparent verification process by its nature; this would ensure receiving countries that EMT deployed into their countries would serve at the agreed standard. However, to reach WHO's goal to register 200 teams in the near future, involvement in regional level must be considered by starting a leading mentoring role.

(6) Introduction to Table Top Exercise and Baseline Scenario of Thai Domestic Response

Dr. Prasit Wuthisuthimethawee, Prince of Songkla University, directed participants to the Table Top Exercise. The exercise was designed to simulate coordination in health emergency among AMS based on the real story of the Thailand 2011 Mega Flood. His presentation is shown in Annex VII.

(7) Table-Top Exercise (TTX)

AHA Centre received request message from Thai EOC. AHA Centre acknowledged the requested and prepared to send notification message to AMS. Later, AHA Center issued situation update (No.001) from Thailand that it had requested boats, water, food, mobile toilets and medical supplies. Shortly after, the second situation update (No.002) was issued stating request to have type 2 medical teams deployed to eight sites with special request for special vehicles with medical capabilities. Offer messages from AMS started to come in from Indonesia, Malaysia, Laos, Cambodia, Viet Nam, Myanmar, Philippine, Brunei, and Japan respectively, and then Thailand accepted all offers. The arrival of all teams went through customs, Ministry of Foreign Affairs (MOFA) and the Registration Declaration Center (RDC) to declare composition and equipment of the teams. The teams were, later, directed to Thai EOC and EMTCC for situation briefing and receiving missions' detail. While EMTs operated in the affected area, daily operation reports were filled in to update Thai EOC and AHA Centre. In the departure, EMTs make final reports to summarize the operations.

Summary of documentation in SASOP procedure:

Thai EOC notify AHA Centre about the disaster (Form 1) -> AHA Centre disseminate situation update (Form 2) ->AMS request of assistance (Form 3) -> Thai EOC approved for AMS assistance (Form 4) -> Deployment (through MOFA and RDC) -> Thai EOC and EMTCC (briefing and designation) ->Contractual arrangement*[1] (Form 5) -> Deployed EMT make Daily Operation Report (Form 6) ->Final Report for departure (Form 7)

[1] Contract (Form 5) is initially signed between AHA Centre and the affected country's EOC. Additional contracts are signed between the EOC and the assistance EMTs on behalf of AHA Centre.

(8) Introduction to the Field Exercise

Dr. Nakajima presented introduction of the field exercise in Day 2. His presentation is enclosed in Annex VIII.

Then, Dr. Yuichi Koido, Japanese Advisory Committee, demonstrated procedures using "ABCDE" approach which first aid examination should practice to identify disorders with details in Station 4 in Day 2. Dr. Koido's presentation can be found in Annex IX.

Day 1 Table Top Exercise was ended by the feedback of today's session. The exercise was individually evaluated by the Check-up form to reflect on the lesson learned, gaps and challenges. Day 2 exercise method and logistic arrangement with the participants was clarified.

2. Field Exercise

The field exercise was conducted in the compound of Ministry of Public Health (MOPH), Nonthaburi.

3. Review Workshop

The review workshop was conducted as the follow-up reflection of Day 1 & 2, to review the exercises to identify the gaps, challenges and difficulties of each country team, as well as make recommendation for improvement of the following drills.

(1) Identifying gaps, good practices and actions taken among the teams/individuals

Dr. Nakajima greeted the participants and expressed appreciation for hard work of the participant in Day 2. The presentation of Dr. Nakajima is shown in Annex X.

Day 3 objectives were, once again, reiterated as 1) Identify the challenge as team/individual; and 2) Identify challenge on coordination and collaboration among the teams. Then, he explained the methodology: each team has group discussion and prepare presentation to be submitted to the Project Team before lunch break; and representative of each team, ASEC and AHA Centre presents good points and recommendation for improvement on Day 1 and 2. Additionally, the Project Team presents summary of gaps and challenges identified by the teams.

(2) Gaps and Challenges consolidated in the Matrix

Presentations by each country were made to reflect good points and points for improvements from the Table Top and Field Exercises conducted in Day 1 and Day 2. The presentations from AMS, ASEC and AHA Centre can be found in Annex XI.

1) Brunei: Dr. Lena Binti Mat Salleh, Medical Officer of Ministry of Health

Good Points: As Brunei doesn't have experiences on critical disaster, the exercise grants better understanding towards disaster response especially in terms of the overall process in of the Emergency Medical Team (EMT) deployment and coordination. It also allowed the opportunity for Brunei to meet with other more experienced teams, and allowed them to find their own gaps and limitations.

Points for Improvements: There were areas where clarifications were needed, especially in the forms to avoid missing vital information. Additionally, in the Table Top Exercise, a briefing was needed on what to expect from Brunei side in the given timeframe.

2) Cambodia: Mr. Kong Narith, Chief ASEAN Affair Bureau of Ministry of Health

Good Points: From the Start-Up drill, Cambodia delegates gained more experiences on disaster response from other AMS which also allowed them to improve communications and collaboration among AMS for future collaboration.

Points for Improvements: Cambodia recommended four points of improvements. Firstly, standardized procedures such as guidelines, Standard Operating Procedure (SOP), and Terms of References (TOR) should be disseminated and studied for better operation. Secondly, more detailed instructions should be provided by the affected country before EMT is deployed. Thirdly, the regional cooperation drills should be continuously conducted once a year or every two years in AMS rotation. Lastly, capacity building should be provided to countries with low capacities as Cambodia realized the lack of human resources.

3) Indonesia: Dr. Arifin Sudiman Maraudin, Senior Health Administrator of Ministry of Health

Good points: The overall operation of the drill ran smoothly as all problems were explained and solved well by the facilitator. Indonesia appreciated the opportunity to learn from such experienced team as Japan Disaster Relief (JDR) team.

Points for Improvements: Various situations could be added to make the drill more completed which related to the inclusion of other non-health sectors in the coordination process. Moreover, clearer instructions to complete the forms could be made in accordance with the timeline. It would be also appreciated if more guidance is made in each steps to complete forms.

4) Lao PDR: Ms. Pathoumphone Sitaphone, Ministry of Health

Good points: Lao PDR was impressed by good regional cooperation response model supported by AHA Centre and international platform coordinated by WHO may be well considered by the ARCH Project. The complexity of the form completion process was explained well by the facilitator. And the exercises were facilitated well by the facilitators.

Points for Improvements: There were some unclear points such as the announcement from AHA Centre. Additionally, the font size of the document should be bigger.

5) Malaysia: Dr. Rosemawati Ariffin, Public Health Physician from Ministry of Health

Good Points: The briefing of the overall process and SASOP procedure were clear and the operations flowed smoothly. The exercise allowed the team to gain more experiences on the Disaster Risk Reduction and to identify their own strengths and weaknesses. Regards team performance, Malaysia team completed the required assignments prior to the drill.

Point for Improvements: Time should be allowed for each member to understand the ground situation and familiarize themselves with the roles. The SOP which would be developed by the ARCH Project, and would

hopefully be used to avoid confusions and misunderstanding in the future. Moreover, Malaysia recommended full scale exercise with more realistic (ground zero) setting in the next drill.

6) Philippines: Ms. Rosanna Rosell, Healthcare Emergency Management Coordinator of Department of Health

Good Points: As the country with 7000 islands, the Philippine is experienced in disaster health management. In this exercises, the use of realistic 2011 mega flood in Thailand was good as it allowed participants to refer to real situations. In terms of time management, the exercises allowed good amount of time for briefing. The Philippines was particularly impressed by the process to obtain lesson learned and results such the team briefing, situation briefing and debriefing which could be adopted for their own practices. The availability of supplies and equipment in station four were abundant and the mentoring from the Japan Disaster Relief (JDR) team on EMT Type 2 gave the sense of professionalism.

Point for Improvements: The scenario for the table-top exercise could be made more realistic by paying attention to the synchronization of dates, the familiarity of actors toward the nuance of the scenario, the language used in scenario (realistically, patients couldn't use English) as well as separate set of logistic guidance for different EMT type. It was also suggested that the facilitator should be more careful to avoid confusions. The use of the following items could be useful to facilitate more understanding; 1) sample note on how to fill the form, 2) patient referral system flowchart, 3) sequential order or events during scenario build-up, 4) the use of tarpaulin instead of A4 size picture with information on status.

7) Thailand: Dr. Repeeporn Rojsaengroen, Emergency Doctor from Vajira Hospital

Good Points: The exercises were well-prepared. It assisted their understandings of the concepts, objectives as well as procedures of the regional coordination for the EMT deployment.

Points for Improvements: Regarding the role Thailand Emergency Operation Center (EOC) in the exercise, specific details on affected locations could be more thought through to facilitate information flow to other EMTs' operation.

8) Vietnam: Dr. Nguyen Hoang Long, Deputy Director of Viet Duc Hospital

Good Points: Viet Nam was satisfied by good organization, good guidance and professionalism of the exercise program and had no points for improvements.

9) Japan: Dr. Toru Yoneda from Japan Disaster Relief (JDR) team

Good Points: JDR team was impressed by strong will and good participations of each AMS participant. The exercise was the opportunity for AMS as well as JDR to develop network for future collaboration. It also allowed JDR team to understand the differences among the countries that could be referred in future operations. The overview of each step allowed them to see the connections and the flows of procedure sequence (e.g. team-building, deployment, custom process, registration, operation, collaborating with EMT type 1 and type 2, and data management). JDR had the impression that each station was well-prepared which gave the sense of realistic scenario.

Points for Improvements: JDR was expecting to learn if each country developed new findings or good practices. It is also suggested that each country's EMT should have common medical understanding for better cooperation. The standardized format for field assessment, medical record and reporting format which can be anticipated by ARCH Project would be much appreciated. Furthermore, the information of the custom and registration should be well-provided prior to the deployment.

10) ASEC and AHA Centre: Ms. Jennifer France de la Rosa, Health Division, ASEC

ASEC had pointed out four key messages as follows:

1) Emergency response should be nationally-led and supported by regional and international community. This was a reiteration from the World Humanitarian Summit in Turkey in May 2016.
2) The ARCH Project and ASEAN disaster health management shall contribute to the "One ASEAN, One Response" initiative as AHA Centre is the primary regional coordination agency (Point 3 of the Declaration)
3) Disaster health management is one of the priorities identified by AMS during the Post-2015 Health Development Agenda which the ARCH Project supports.
4) The ARCH Project should, therefore, consider the followings:
   i) Ensure the alignment and consistency between the drills scenarios and the ASEAN Mechanism by ensuring the engagement of ASEC and AHA Centre in the planning and;
   ii) Support deeper understanding of AMS team on the EMT concepts, its operationalization as well as on the ASEAN response system, processes and tools.

(3) Summaries of the Challenges and Possible Topic for Project Working Group (PWG) 1 &2

Dr. Prasit Wuthisuthimethawee, representative of the Project Team, consolidated the gaps and challenges identified by all the teams into the matrix as the basis for possible topics for discussions in PWG 1 and 2 meetings. The presentation of Dr. Prasit can be found in Annex XII.

Then, Dr. Prasit summarized issues for future consideration as follows:

1) The reports of this training should be disseminated to the Ministry of Health for each AMS;
2) Lesson learned derived by the training should be disseminated to health facilities;
3) Meeting should be held with the Ministry of Health on how to develop EMSs and EMTs;
4) All ASEAN member states should be included to participate in the training;
5) Drill period should be lengthen;
6) Training should include coordinated teams from multiple countries to reflect real scenarios;
7) Ongoing training should be taken as a registered volunteer of a given training course;
8) Cooperation should be made on SOP with WHO, JDR, AHA Centre and other; and
9) Advocacy for EMT's funding and support should be conducted by each AMS.

(4) Conclusion

Dr. Tatsuro Kai, representative from the Japanese Advisory Committee, made a conclusion on the three days of the Start-Up Drill. He started by expressing appreciation and gratitude to NIEM, ASEAN Secretariat, the Japanese Advisory Committee and all participants from AMS.

On Day1, AHA Centre presented the process of regional assistance using SASOP and JOCCA. The presentation from WHO (by Dr. Brown) also verified that EMT became a global trend and the WHO accredited EMTs must meet certain standards of treatment, minimum requirement and logistic which AMS can apply. Table-top exercise enabled participants to understand the notification procedures in times of disasters, deployment of EMTs and SASOP documenting procedures.

On Day 2, participants trained in the field exercises and concepts were put into actions by four stations i.e. information management in Station 1, rapid health assessment in Station 2, operation within EMT Type 1 in Station 3, and operation within EMT Type 2 in Station 4.

Dr. Wiwat Seetamanotch, Executive Advisor to Board of NIEM, expressed appreciation for the support of Japanese Expert Team, AHA Center and ASEAN Secretariat, as well as commitment and hard work of NIEM staffs, participants from health sector in Thailand and other AMS who contributed to the event's success by co-organizing and actively participating in this event. Dr. Wiwat highlighted the importance of friendships. He believes that knowing one another bring great wisdom. This implies the coordination among member state is the greatest component in regional cooperation on disaster response. The highlight of the event was not only technical transfer of knowledge, but also the lively display of friendship atmosphere. Dr. Wiwat hoped that lesson learned could be taken back for actual practices and collectively moved towards common goals.

(5) Closing Remarks

The closing remarks were delivered by Mr. Hiroo Tanaka, Chief Representative of JICA Thailand. Mr. Tanaka expressed sincere appreciation for NIEM Secretary General, ASEAN Secretariat, AHA Centre and honorable delegates as well as congratulated on the success of the project's event. Tremendous skills, experiences and knowledge were gained throughout the three days. Knowledge on the procedure of the EMT deployment was deepen on the Day 1, while practical knowledge of the ground operation was attained on Day 2, and finally on Day 3 valuable thoughts and insights were gain though discussions. Overall achievement of the project was clearly noticeable as the set objectives were obtained and friendships were developed. As for the Japanese, Himeji earthquake was the pivotal point for Japan disaster work to establish with the mission to save more life. On behalf of the Japanese, Mr. Tanaka invited continuous contribution on disaster management work in ASEAN to fulfill the save more live mission.

II. Project Working Group (PWG) Meetings

4. Joint Session (1)

(1) Welcome Remarks

Dr. Jirot Sindhvananda, Senior Advisor, Office of Permanent Secretary, Ministry of Public Health, Thailand, welcomed the participants from the ASEAN Member States (AMS) for the first Project Working Group (PWG) 1 and 2 meetings. He reiterated the overviews and objectives of the Project for the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) by recalling that ARCH Project was initiated by the Japan International Cooperation Agency (JICA) and the National Institute for Emergency Medicine (NIEM), Thailand to strengthen the regional disaster response network, and build capacity of disaster health personnel in the ASEAN region. PWG 1 and 2 are responsible for activities under ARCH Project to develop various regional collaboration tools and design training courses for health personnel in AMS. The Ministry of Public Health, Thailand, hopes that PWG 1 and 2 become the back bones of emergency and disaster management system in the region and create a network which can be adopted and replicated to other regions.

(2) Project Overview

Ms. Keiko Nagai, Team Leader, ARCH Project, presented the overview of the project. ARCH Project was formulated based on the results of a survey conducted from December 2014 to March 2015 targeting all AMS. In addition to the in-country survey, three regional meetings were held in Phuket, Tokyo and Bangkok. As a result, the common understanding on the challenges surrounding disaster health management in the ASEAN region was formed. One major challenge identified from the survey was that although different parts of the region confront different disaster challenges, collaboration in disaster and emergency response in the health sector was needed. Hence, ARCH Project was designed accordingly.

ARCH Project mainly focuses on the coordination among Emergency Medical Teams (EMTs) and the offering and receiving countries, and team management of EMTs. The intended outputs of the project are; 1) coordination platform on disaster health management, 2) framework of regional collaboration practices, 3) tools for effective regional collaboration on disaster health management, 4) academic network on disaster health management in AMS, and 5) capacity development activities implemented for each AMS. The presentation of Ms. Nagai is attached as Annex XIII.

(3) Inputs from the Start-Up Drill

Dr. Yasushi Nakajima from the Project Team provided PWG 1 and 2 members with consolidated inputs from the Start-Up Drill. Dr. Nakajima stated that experiences and knowledge in the field would be less valuable if EMTs lack coordination and collaboration capacity. The Start-Up Drill from 17 to 19 January 2017 was designed for the participants to understand the importance of coordination capacity. The drill included 1) Table Top Exercise on Day 1, 2) Field Exercise (5 stations) on Day 2 and 3) Review Workshop on Day 3.

The sessions on Day 3 allowed the participants to identify their strengths, weaknesses, challenges and necessary improvements from the Table Top and Field Exercise. To do so, the participants were provided with the Check-

Up Sheet to answer three questions; 1) How was the exercise, 2) What have you learned from the exercises, and 3) What will you improve on the lessons learned. The results were consolidated and categorized in the form of matrix. The matrix included; 1) team capacity building, 2) team collaboration and capacity building, 3) personal capacity building and, 4) collaboration capacity building. PWG 1 and 2 will incorporate the consolidated results of the Start-Up drill into their works. The presentation of Dr. Nakajima is provided as Annex XIV.

After the joint session, the participants were divided into PWG 1 and 2 for each meeting.

5. First PWG 1 Meeting

(1) Introduction of PWG 1 Members

Dr. Jirot Sindhvananda, Chairperson of PWG 1 meeting, invited the PWG 1 members and observers to introduce themselves.

(2) Overview of PWG 1

Dr. Phumin Silapunt, Secretary General, NIEM presented the overview of PWG 1 based on the Terms of Reference (TOR) of PWG 1. The purpose of PWG 1 is to develop tools necessary for effective regional collaboration on disaster health management. The work of PWG 1's falls under Outputs 2 and 3 which include the development of 1) framework of regional collaboration practices and 2) tools for effective regional collaboration on disaster health management.

The scope of PWG 1's activities includes the development of regional collaboration tools as well as the designing and planning of Regional Collaboration Drills to be executed three times during the project period. The draft tools will be piloted, evaluated and revised through the Regional Collaboration Drills. The expected outcomes of PWG 1 are 1) a draft Standard Operating Procedure (SOP) for coordination in disaster health management, 2) draft minimum requirements of EMTs members, 3) a draft database of EMTs and, 4) a draft health needs assessment (HNA) framework. Four draft tools will be reviewed and approved by the Regional Coordination Committee (RCC) which, later, be submitted for endorsement to the ASEAN Health Cluster 2, and the Senior Official Meeting on Health Development (SOMHD) for final endorsement.

According to the TOR of PWG 1, the PWG 1 meetings are scheduled six (6) times throughout the project period. The first PWG 1 meeting is being held to kick-off and agree on the purpose, goal, targets and work plan of each tool. The process of draft revision will continue until the final draft is concluded for RCC consideration in the final PWG 1 meeting.

Based on the necessity to plan the first Regional Collaboration Drill which will be conducted in July 2017 and to discuss draft regional collaboration tools before July, the Project Team proposed to hold an additional PWG 1 meeting in April or May. The members agreed to hold an additional PWG 1 meeting in between the first and second meeting. As regards the date of the additional (second) PWG 1 meeting, the Project Team proposed tentatively from 8 to 9 May 2017 for one and a half days. A confirmation will be made to AMS at least six (6) weeks before the date of the meeting. The presentation of Dr. Silapunt can be found in Annex XV.

Mr. Arnel Capule Capili from AHA Centre proposed to hold the Regional Collaboration Drill in 2018 jointly with the next ASEAN Disaster Emergency Response for Simulation Exercise (ARDEX), which will be held in Indonesia in March or October 2018. Mr. Capule Capili stated that this proposed joint drill would benefit both ARCH Project and ARDEX and it also would provide ARCH Project a good opportunity to understand the coordination platform for disaster management. The joint hosting would also provide an opportunity to break down the silos towards more integrated and horizontal disaster response. However, the logistics and financial aspects should be taken into consideration.

Dr. Arifin Sudirman Maraudin from Indonesia responded to the AHA Centre's proposal that ARDEX's focal point in Indonesia is the National Disaster Management Agency (BNPB), while the Ministry of Health (MOH) is not directly involved in ARDEX. The Indonesian delegate will consult both BNPB and MOH. If the Indonesian side decides to host the Regional Collaboration Drill jointly with ARDEX, a proposal will be submitted based on the guidance which will be given in the afternoon session.

Dr. Phumin Silapunt from Thailand agreed with AHA Centre for the possible benefits of joint hosting. Dr. Phumin Silapunt, however, stressed that the decision on hosting the drill depends on the host country. He added that the next RCC would endorse the selection of the host country for the next year. The prerequisites of the host country will be shared later in the afternoon session.

Dr. Jirot Sindhvananda, Chairperson, acknowledged the points of discussion on the joint drill combining the Regional Collaboration Drill and ARDEX. He hoped that, to some extent, the two platforms could be merged for effective collaboration, and all activities of ARCH Project would relate to SOMHD and be incorporated to the activities of AHA Centre. However, AHA Centre and ARCH Project need to discuss concerns over logistical arrangements and scheduling.

Dr. Suriya Wongkongkathep from Thailand (observer) proposed that PWG 1 should discuss in the future how to establish an official channel between ARCH Project and AHA Center in order to broaden the scope of cooperation. In relation to the joint hosting of drill, if SOMHD notifies AHA Centre that the health sector is ready to join a drill organized by AHA Center such as ARDEX, every drill could be conducted with the cooperation from the health sector including ARCH Project.

(3) Regional Collaboration Tool: Standard Operating Procedure (SOP)

At the beginning, Ms. Junko Yamada from the Project Team explained that the objectives of the following four (4) sessions on the regional collaboration tools are 1) to identify the inputs from the Start-Up Drill and 2) to agree on the purpose, goal, targets and work plan of each tool. Then, Ms. Yamada presented the details of SOP and later invited the floor for discussion.

The purpose of SOP is to ensure the quality and consistency of EMT operations in the affected AMS in order to realize the vision "One ASEAN, One Response" and also to complement the existing operating procedures and tools. Therefore, SOP should be in line with the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) and

other relevant frameworks and protocols such as EAS Toolkit and WHO's EMT Coordination Cell (EMTCC) Handbook.

The inputs from the Start-Up Drill include: 1) a need for developing SOP among EMTs, 2) a need for SOP among coordination bodies (e.g. EMTCC, Emergency Operations Center, AHA Centre, UN Office for the Coordination of Humanitarian Affairs), and 3) a need for using the common standard formats (e.g. daily report, registration form, rapid health assessment form, medical record form, referral form). The Project Team is in the process of examining the results of the Start-Up Drill to better capture the inputs and to better scope SOP.

PWG 1 aims to develop a draft SOP to be approved by RCC in March 2019. The target in each year is as follows:

By November 2017:	Scope, contents and format of SOP are agreed and first draft is created.
By October 2018:	Draft SOP is piloted, evaluated and further developed through the second and third Regional Collaboration Drills.
In March 2019:	A draft SOP is approved by RCC.

In the next step, the Project Team will draft SOP format and content and plan development process by the end of February 2017. The draft will be distributed to the PWG 1 members for their comments from March to April 2017. The Project Team will then incorporate the comments from PWG 1 members into the draft. The next PWG 1 meeting in May 2017 will discuss and agree on SOP format, content and development process. The presentation of Ms. Yamada is provided as Annex XVI.

Dr. Arifin Sudirman Maraudin from Indonesia commented on the purpose of SOP that it should include the coordination of EMTs with the non-health sectors such as shelter and food and also with public health response teams. He also commented on the scope that it should include the disaster phase from preparedness to post-disaster phase.

Ms. Janice Feliciano from the Philippines proposed to include public health aspects especially for rapid health needs assessment as we experienced at Station 2 in the Start-Up Drill.

Dr. Phumin Silapunt from Thailand inquired about the definition of "public health" in the context of EMTs. He asked whether the context of EMTs has included public health aspects and whether the SOP should include public health aspects.

In response to the Dr. Phumin's comment, Mr. Yosuke Takada from the Japanese Advisory Committee commented that EMTs should collect such data as water and sanitation which relate to public health in the affected area. The Minimum Data Set (MDS) Daily Reporting Form includes public health information for this purpose.

Dr. Suriya Wongkongkathep from Thailand (observer) proposed to develop two separate SOPs, medical SOP and public health SOP, to avoid complexity. A public health SOP should be developed only when time and other conditions allow.

Mr. Jim Catampongan from ASEAN Secretariat stressed that the focus of SOP should be on the coordination and deployment of EMTs taking into account the different elements in the emergency health response.

Dr. Prasit Wuthisuthimethawee from the Project Team commented that there are two (2) different types of SOP, i.e. coordination SOP and clinical SOP. He mentioned that public health SOP would be categorized in clinical SOP.

Mr. Kol Hero from Cambodia suggested that SOP should be clear for EMTs to operate in different phases on a day-by-day basis as situations develop.

Mr. Arnel Capule Capili from AHA Centre inquired if this SOP would be included as a part of SASOP after the endorsement by SOMHD.

Dr. Phumin Silapunt from Thailand responded that this SOP could be a part of SASOP to fill in the missing parts on medical operations.

Ms. Junko Yamada from the Project Team appreciated the comments from the members and stated that the Project Team would consider the comments in developing a draft while maintaining the focus on the purpose of ARCH Project.

Dr. Jirot Sindhvananda, Chairperson, concluded the discussion and summarized that the floor requested the inclusion of public health aspects and the disaster phase from preparedness to post-disaster phase in SOP.

(4) Regional Collaboration Tool: Minimum Requirements

Ms. Junko Yamada, expert, ARCH Project, presented the details on minimum requirements. To begin with, Ms. Yamada explained that the minimum standards of EMTs have already been developed by WHO in "Classification and Minimum Standard for Foreign Medical Teams in Sudden Onset Disaster (2013)", also known as "Blue Book". However, in the Blue Book, minimum standards or requirements for individual team members are not specifically defined. Currently, it is the EMT organizations or agencies that establish the criteria for members to be on the roster. In this context, the need for the development of minimum requirements for individual team members was identified during the preliminary survey.

The purpose of minimum requirements is to provide clear and appropriate eligible standards for AMS to develop and strengthen their human resources for EMTs to be deployed internationally in order to realize the vision "One ASEAN, One Response".

Ms. Yamada presented the draft idea of the components of minimum requirements. The components of minimum requirements can be divided into three (3) main areas; 1) Professional competence and license to practice, 2) Adaptation of technical and non-technical professional capacities into low-resource and emergency context and 3) Preparation for an effective team performance in the field. Each area can be further divided into two categories: role-specific and common requirements. In summary, the minimum requirements can be broken down into six (6) component areas.

The inputs from the Start-Up Drill include the skills related to 1) health emergency management (focus on medical treatment), 2) public health emergency management, and 3) risk assessment (safety and survival skills). However, some of the inputs are not clear enough. The Project Team, therefore, will continue examining the results of Start-Up Drill to identify the inputs to minimum requirements.

The work process in relation to the component areas is proposed as follows:

1) Identify the inputs from the Start-Up Drill and conduct a questionnaire survey to understand the current requirements for EMT members in AMS;
2) Identify and prioritize component areas to work on and decide the development process; and
3) Develop minimum requirements by each area. Identify the inputs from Regional Collaboration Drills and incorporate them into the draft.

PWG 1 aims to develop draft minimum requirements to be approved by RCC in March 2019. The target in each year is as follows:

By November 2017: Current requirements for EMT members in AMS are clarified. Areas to focus on for development are identified. The first draft is completed (three component areas are covered).
By October 2018: Six (6) component areas are covered in the draft.
In March 2019: Draft minimum requirements for EMT members are approved by RCC.

In the next step, the Project Team will distribute the questionnaire to PWG 1 members from AMS on 30 January 2017. The due date for returning the completed questionnaire form will be on 24 March 2017. In April, the Project Team will compile the survey results and identify areas of focus to decide the development process. The second PWG 1 meeting in May 2017 will agree on the component areas to focus on and development process. The presentation of Ms. Yamada can be found as Annex XVII.

Dr. Rosemawati Ariffin from Malaysia suggested to clarify a competent professional body and functions of supporting staff such as logistician in the context of EMTs.

Dr. Jirot Sindhvananda, Chairperson, suggested to include language competencies as the language barrier is one of the challenges of coordination.

Dr. Linawati Haji Jumat from Brunei added that minimum requirements should indicate the number of members in each role. In addition, “relevant experience in disaster and emergency response” should be clarified in the draft.

Mr. Jim Catampongan, ASEAN Secretariat, inquired whether the outputs of this project is the finished tools ready for intended users to use, or the outputs delivered to RCC within the project period.

Dr. Phumin Silapunt from Thailand responded that the drafts would be delivered to RCC in March 2019 for approval, before submitting to SOMHD for endorsement. The actual utilization of the tools would be beyond the project period.

Dr. Jirot Sindhvananda, Chairperson, added that the draft SOP and other draft tools would be delivered to RCC for approval and later to SOMHD. However, it would be more effective, if the finished outputs are delivered earlier for SOMHD's endorsement within the project period. If a disaster occurs within the project period, the project can also consider testing draft tools for actual insights as inputs.

Dr. Rosemawati Ariffin from Malaysia proposed that the draft minimum requirements should include the safety aspect.

Dr. Phumin Silapunt from Thailand stated that although minimum requirements should be in compliance with the WHO's standards, ASEAN's specific requirements or contents should be included in order for the EMTs of AMS to gain an edge on the EMTs from other countries.

Ms. Janice Feliciano from the Philippines proposed to include the definitions of nutritionist and mental health provider and also the points to confirm personal fitness of team members.

(5) Regional Collaboration Tool: Health Needs Assessment Framework

Ms. Yumiko Kashiba from the Project Team presented the details on Health Needs Assessment (HNA) Framework and later invited the floor for discussion.

HNA is required to match the needs of the affected population with the available resources from national and international EMTs. It also ensures a needs-based response which is one of the guiding principles of WHO's "Classifications and Minimum Standards for Foreign Medical Teams in Sudden Onset Disaster (2013)". HNA serves as rapid assessments over emergency situation to identify the immediate impacts of the crisis and as estimation of the vital needs of the affected population and definition of priorities for emergency health response for both national and international EMTs.

The roles of HNA include measuring present and potential health impacts, assessing adequacy of existing response capacity and immediate needs of affected populations, recommending priorities actions for immediate response to national and international EMTs and predicting future needs. HNA can generally be derived from the following methodologies: 1) secondary data reviews (pre/post disaster), 2) primary data collection and community level assessment (observations, interview methods), 3) inter sectorial analysis and strategic humanitarian actions, and 4) dissemination of outputs and situation analysis report to related bodies.

PWG 1 aims to develop a draft framework of HNA to be approved by RCC in March 2019. The target in each year is as follows:

By July 2017:	Draft version 0 of a better coordinated and clearly defined procedure of HNA in line with SASOP
By March 2018:	Draft version 1

By October 2018: Draft version 2
By March 2019: Final draft version

The HNA framework will cover the period of four (4) weeks after the occurrence of the disaster.

The project team proposed that HNA should include two types of operation. First, initial assessment and situation updates by local authorities, primarily the Ministry of Health of the affected country in order to request and mobilize emergency assistance teams, especially EMTs, both national EMTs (N-EMTs) and international EMTs (I-EMTs). That is appropriate to the significance of the impact and consistent with the needs of the affected community. Second, the joint assessment on site by N-EMTs and I-EMTs in order to facilitate coordinated actions for the needs based emergency health response.

The recommendations from the Start-Up Drill are to have common and standardized tools, check-list and forms among EMTs. There should also be assessment instruction guides as well as a list of equipment for field assessments. In addition, the ASEAN-ERAT format will be useful. The presentation of Ms. Kashiba appears as Annex XVIII.

Mr. Arnel Capule Capili from AHA Centre inquired about a team to conduct a health needs assessment: whether EMTs are expected to conduct the assessment or a separate team like ERAT is expected to conduct the assessment. If this is the former, HNA will be a part of SOP.

Ms. Yumiko Kashiba from the Project Team responded that EMTs are expected to conduct a health needs assessment. Ms. Junko Yamada from the Project Team further clarified that the affected country's MOH including central, regional and local levels is normally expected to conduct an assessment. When MOH is not able to conduct an assessment, EMT could complement MOH.

Dr. Phumin Silapunt from Thailand emphasized that HNA would not focus on who has the role to assess, but would focus more on what types of information/data to be collected.

Dr. Arifin Sudirman Maraudin from Indonesia proposed that NHA should include public health aspects, as assessment should be done in coordination with other sectors as we understand from the experience at Station 2 in the Start-Up Drill. Dr. Sudirman Maraudin also proposed to change the title from *"Health Needs Assessment"* to *"Rapid Health Needs Assessment"* by adding "rapid" and pointed out that with regards to "the period of NHA to be covered", *sudden onset of disaster* should be changed to *critical time of the disaster,* as damage caused by some types of disaster such as flood might continue for some period of time.

Chairperson, Dr. Jirot Sindhvananda, concluded that framework needed to be clearly discussed on whether public health aspects should be included or not, who would conduct assessment, what were the mandates of affected countries; moreover, the content of HNA needed to be discussed.

(6) Regional Collaboration Tool: A Database of Emergency Medical Teams (EMTs)

Ms. Junko Yamada, expert, ARCH Project, presented the details of a database of Emergency Medical Teams (EMTs) of AMS including the purpose, terminology, goal, target, operational rules and work plan.

There is a need to identify in advance the assets and capacities of EMTs of AMS in order to strengthen the regional disaster preparedness and response. Therefore, a draft database of EMTs of AMS will be developed to strengthen the regional disaster preparedness and response by providing information on EMT assets and capacities available for deployment to the affected country as well as to contribute to the operationalization of SASOP and the implementation of the ASEAN Joint Disaster Response Plan (AJDRP) in the spirit of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER).

PWG 1 aims to develop a draft database of EMTs of AMS to be approved by RCC in March 2019. The target in each year was proposed as follows:

By November 2017:	Data categories and criteria to be registered in the database are agreed. The current status of EMTs of AMS is clarified.
By October 2018:	Data collection and reporting system is established (at least twice a year in January and July). Exit plan for database management is agreed by PWG 1 and RCC.
In March 2019:	The draft database of EMTs of AMS is approved by RCC.

The format of database will be based on "Matrix of Module for Standby Agreement" developed by AHA Centre and the Project Team will consult with AHA Centre and ASEC in developing the format. As a next step, the Project Team proposed to distribute a data collection form to AMS by 30 January. The presentation of Ms. Yamada can be found as Annex XIX.

Ms. Janice Feliciano from the Philippines stated that EMTs in the Philippines are still in the process of WHO classification and the result will not be notified until April 2017. Therefore, Ms. Feliciano proposed to postpone the data collection so that the Philippines knows its EMTs status and the Project Team can receive accurate data. In response to Ms. Feliciano's comment, Ms. Yamada from the Project Team responded that the data collection will not limit the classification status but distinguishes the status by inquiring the information.

Dr. Phumin Silapunt from Thailand added that Thailand currently does not have any EMTs verified by WHO and the EMT status is uncertain. Therefore, Thailand agrees to postpone the data collection.

Ms. Feliciano from the Philippines inquired about the details of the exit plan for database management. Ms. Yamada from the Project Team responded that the details of the exit plan will be discussed and agreed in the later stage of PWG 1 meeting.

Mr. Arnel Capule Capili, AHA Centre, suggested streamlining the data collection to avoid duplication and reduce the burden of AMS. For this purpose, AHA Centre will have an internal consultation with the Health Division of ASEC to decide the best approach to collect data including the data collection channel. As for the strategy for database management, AHA Centre can install the database but the concern is the personnel with equipped skills to maintain the database. Regarding the format, AHA Centre needs technical inputs from ARCH Project which has expertise in the health sector.

Ms. Yamada from the Project Team agreed to postpone the data collection until the decision is made by AHA Centre and ASEC. In the meantime, the Project Team will work on the format in consultation with AHA Centre and ASEC to be finalized in April.

(7) Wrap-up and Way Forward

Dr. Phumin Silapunt from Thailand presented the summary of discussions as follows:

1) The members agreed to hold an additional PWG 1 meeting from 8 to 9 May 2017 (tentative).
2) AHA Centre proposed to hold jointly the Regional Coordination Drill and ARDEX in Indonesia in 2018. Schedule and other conditions have to be discussed.
3) Regarding SOP, the inclusion of public health aspects in the scope of SOP was suggested by the members.
4) As for minimum requirements, the members requested a clarification of some terminologies (e.g. a competent professional body and logistics) and an inclusion of some requirements such as language competencies and health status of the team members.
5) Regarding a database of EMTs, the agreement was reached to postpone the data collection until the format is developed. AHA Centre and ASEC will discuss internally the streamlined approach to data collection to reduce the burden on AMS.
6) Regarding health needs assessment, it was recommended that the title should be changed from *health needs assessment* to *rapid health needs assessment*.

6. First PWG 2 Meeting

(1) Introduction of PWG 2 Members

Dr. Narain Chogirosniramt, Chairperson of the PWG 2 meeting, started the meeting with the introduction of PWG 2 members.

(2) Overview of PWG 2

Dr. Narain Chogirosniramt explained the purpose of PWG 2, scope of activities, expected outcomes, responsibilities of the members, membership, etc. according to Terms of Reference (TOR) for PWG 2. All the presentations for the first PWG 2 meeting is enclosed in Annex XX-1.

(3) Overview of Training Programs for AMS

At the beginning of the session, Ms. Junko Sato, Japanese Expert explained the objectives of the meeting. The objectives were set as; 1) to agree on overall training plan for ASEAN member states (AMS), 2) to discuss and agree on detailed plan for the 1st AMS training, 3) to share the schedule for conducting the 1st AMS training, and 4) to discuss on the themes for 2nd, 3rd, and 4th AMS trainings.

Ms. Sato led the session by the introduction of overall training plan for AMS. She explained that capacity development for AMS was the scope of activities to reach the overall goal that is ‘to strengthen the national capacity to fulfill the minimum requirements through the establishment of national disaster medical system, human resource development, and improvement of operational capacity of the medical system’.

Ms.Sato stressed that the minimum requirement under the ARCH capacity development activities refer to minimum requirement as a team, which is different from the Draft Minimum Requirement for individuals that PWG 1 is assigned to develop. WHO has already developed the minimum standard of EMTs and ARCH training program will be aligned with such international framework.

The schedule of AMS trainings was proposed. As for the forth training, it was agreed to change the original schedule from July 2018 to November 2018 in order to have enough time to prepare the training.

Besides the trainings, a study tour in Japan would be scheduled in 2018. Details of the study tour, such as theme and resources, would be discussed in the 2nd PWG 2 Meeting scheduled in July 2017.

(4) Detailed plan of the First Training for AMS

The outline of the First AMS Training is presented by Ms. Sato summarized as the table below and the details can be found in Annex XX-2.

1. Schedule	May 22 to 26, 2017 (5 days)
2. Place	Bangkok, Thailand
3. Participants	Representatives from AMS - In principle, 3 persons from each AMS - Resource persons ➡ A total of 38 persons
4. Theme	Human Resource Development

Main points raised in the discussion regarding the training objectives included:

- Training period

Five days training period might not be enough for strengthening the capacity of participants, but at least the training would provide opportunities for thinking human resource development in each country. The project expects participants to bring back the findings and reflect the feedback in the training systems at each country.

- Participants

This is a kind of TOT (Training of Trainers) because the number of participants is only 3 persons. They would be future trainers or people developing curriculum. Responding to the inquiry if the participants in the 1st training could include PWG 1 and PWG 2 members or others, Ms. Sato informed that the project did not define who should be the participants. Members of PWG 1 or 2 could be the key persons for the training.

- "Pre-service Training

"Pre-service" training refer to any structured activity aiming at developing or reinforcing knowledge and skills before health care professionals enters public health service or private practice, which include courses for graduates as well as those for undergraduates. The definition will be provided in the training program to avoid the confusion.

- Consistency with EMT Classification

Regarding objective 4), it is necessary to articulate which type of EMT (e.g. type I, type II) the first AMS training targets. It was agreed that the training will be related to common training system for EMT in general instead of focusing on any particular type of EMT.

- Direction of the Training

The training should be conducted to realize the "One ASEAN, One Response", and the training objective should indicate it clearly. Therefore, (6) is included in the training objectives

Then, Ms. Sato proposed each module for the training as shown in the table below.

DAY	Module
DAY 1	Module 1: Current system of human resource development in disaster health management (both pre-service and CPD)
DAY 2	Module 2: Best practices in Pre-service Training
	Module 3: Best practices in continuous professional development (CPD)
DAY 3	Module 4: Certification system and skills standard for medical personnel in disaster health management
	Module 5: Introduction of related training course provided by international organizations and NGOs.
DAY 4	Module 6: CPD in Thailand (site visit) Site visit: training institute or hospital(s) which provide CPD on disaster health management
DAY 5	Module 7: Making a recommendation "Priority in human resource development in your country"
	Module 8: Presenting a recommendation
	Module 9: Course evaluation and way forward for the 2nd AMS training

In module 1 for DAY 1, each AMS is requested to make a brief presentation (each has 20 minutes for presentation and 10 minutes for Q&A) on current system of human resource development in disaster health management (both pre-service and CPD) in each country. It was agreed that the presentation will include the following contents (the template will be distributed to each AMS with an invitation letter).

1. Medical Doctors
   - General
   - Disaster Health Management (DHM) curriculum/program in
     Pre-service (university)
     CPD (Post-graduate courses, In-service training, etc.)
2. Nurses
   - General
   - DHM curriculum/program in
     Pre-service (university)

CPD (Post-graduate courses, In-service training, etc.)

3. Paramedics/Emergency Medical Technicians (EMT)

- General
- DHM curriculum/program in

Pre-service (university)

CPD (Post-graduate courses, In-service training, etc.)

4. Other Cadre (if any)
5. Advantage
6. Challenge

Before ending the morning session, Dr. Narain asked the participants to think about possible topics and resources for DAY 2 and DAY 3. ARCH Project team prepared white boards in which tables put to get possible topics and resources for each module.

In the afternoon, the participants were instructed to have brainstorming sessions to address best practices/interesting topics and possible resources for each training day. Each participant could write topics and resources directly on the boards or on post-it paper. The outputs of the topics and possible resources for each module are shown in the tables below.

Training DAY 2 (AM)		
Module	**Topic**	**Possible Resource**
Best practices in pre-service training	Curriculum development on disaster heath management (DHM) in medical/nursing/paramedic education	Singapore
	DHM in national curriculum in medical/nursing education (5 hours)	Cambodia
	Disaster prevention and disaster management in bachelor course in public health in Vietnam (12 credits	Vietnam (Institute of Public Health)
	Integrated community health care and non-healthcare provider (DPPH) training in disaster	ADPC/Thailand
	Disaster management in curriculum for all health personnel (MD, nurse, etc.) in Indonesia (12 hours)	Indonesia
	Basic life support (BLS)	Indonesia

Training Day 2 (PM)		
Module	**Topic**	**Possible Resource**
Best practices in continuous professional development (CPD)	Advanced diploma course on disaster management for healthcare professional (1year)	Malaysia
	Disaster nursing to assist people in shelter and mobile clinics (1-2 days)	Japan
	Development of a module on DHM for doctors, nurses in health center and rural hospitals	Cambodia
	Risk assessment and EMT deployment	Japan, Singapore, Philippines, Indonesia
	Triage system in disaster event	Thailand

Training Day 2 (PM)		
Module	**Topic**	**Possible Resource**
	• EMSS (Emergency Medical Service System) • ATLS (Advanced Trauma Life Support) • ACLS (Advanced Cardiac Life Support)	Indonesia
	• Emergency medical team response training • Incident command system	Thailand, Indonesia, Japan
	• Disaster preparedness, including emergency medicine curriculum • Institutionalization of Public Health and Emergency Management in Asia and the Pacific (PHEMAP) Course • Training on model standards for public health in emergency course i.e. SPEED, NHBS, NiE, reproduction, etc. • On-going standardization of Basic Life Support (BLS), Emergency Medical Team (EMT) basic courses	Philippines
	Development of curriculum (MD, nurses, and paramedics)	Japan

Training Day 3		
Module	**Topic**	**Possible Resource**
Introduction of related training course provided by international organizations and NGOs	• Advanced Major Incident Medical Management and Support (MIMMS) course • Basic MIMMS course	Australia/England
	• Basic disaster life support • Advanced disaster life support	USA
	• Thai Disaster Medical Assistance Team (DMAT) • Japanese DMAT	Thailand Japan
	Public health emergency	ADPC
	General life support certification	ADPC
	Basic health emergency life supports for public (BHELP)	Japan

For Certification system and skill standard for medical personnel in disaster health management module (DAY 3 Module 4), Dr. Narain explained that this module focused on certification system and does not provide certificates for participants. This module need further clarification to avoid confusion.

Ms. Sato explained that the Project will consider the training program based on the proposed training topics by taking into consideration of availability and accessibility of training resources and consistency with the theme (some topics should be picked up in the 2nd AMS training, which will focus on team management). As for training resource(s) from Singapore, the ARCH Project will request its cooperation through ASEC. AMS members could be both training resources and trainee at the same time.

(5) Selection criteria for trainees

Mr. Senda presented the selection criteria for trainees. He insisted the expectations of the ARCH Project on trained personnel to continue to work and contribute to human resource development in disaster health management in each country.

Ms. Nakaji from JICA HQ explained that JICA expect trained personnel to use the training outcome for non-military purpose by taking into consideration the policy of Ministry of Foreign Affairs, Japan. Each AMS needs to keep in mind in selecting participants.

Then, all participants agreed on the selection criteria.

(6) Preparation for the 1st AMS training

Mr. Senda continued the session by explaining the tentative schedule of preparation for the 1st AMS training as shown in the table below.

Activities	Deadline	Focal Point
To submit "concept sheet", which include the objective and description of proposed training topic	Feb. 10	PWG 2 member
To draft the training plan and distribute to PWG 2 members for comments/feedback	Feb. 17	ARCH Project
To send comments/feedback on the drat training plan	Mar.3	All PWG 2 members
To send official invitation to each AMS through ASEC	Mar.10	Project ASEC
To apply for the training	Apr. 14	Each member state
The 1st AMS Training	May 22-26	ARCH Project

(7) Themes of the 2nd, 3rd and 4th AMS training

It was agreed that the themes of the following AMS training programs will be focus on the following themes;

Second AMS training: Capacity Development of Emergency Medical Team (e.g. team management, information management)

Third AMS training: Capacity Development of Government (e.g. policy and system)

Forth AMS training: To be discussed based on outputs of the regional collaboration drills and PWG 1 activities

(8) Wrap up

Dr. Narain wrapped up PWG 2 discussions. Main discussions included the detailed plan for the 1st AMS training, the selection criteria for trainees, preparation schedule and the themes of the 2nd, 3rd and 4th AMS training.

Ms.Sato informed that the ARCH Project team would finalize the plan of the 1st AMS training and share with the participants for consensus and feedback before finalization. She requested the participants to submit "concept sheet", which include the objective and description of proposed training topic (the format will be sent to participants later). The training topics will be decided based on the concept sheet.

For the topics, the project team would work on and ask for more topics and/or other details from the participants later.

7. Joint Session (2)

(1) Output Sharing of PWG 1 and PWG 2

The Chairpersons from PWG 1 and 2 meetings shared the results of discussions in the meetings as follows:

1) PWG 1

The PWG 1 members agreed to hold an additional PWG 1 meeting from 8 to 9 May 2017 (tentative) to plan the first Regional Collaboration Drill and to discuss the draft regional collaboration tools.

The PWG 1 members agreed on the purpose, goal, targets and work plan of the following four (4) collaboration tools: 1) SOP, 2) minimum requirements, 3) health needs assessment framework and 4) database of EMTs of ASEAN. The meeting outputs of PWG1 is enclosed in Annex XXI.

2) PWG 2

The work plan was presented as 1) four (4) AMS trainings and one (1) study tour program in Japan. The first AMS training will be conducted as follows:

Theme: Human	Resource Development
Schedule:	22-26 May 2017 (5 days)
Place:	Bangkok, Thailand

The meeting outputs of PWG1 can be found in Annex XXII.

(2) Pre-Requisite/ Condition for Hosting of the Project Events

Ms. Keiko Nagai, Team Leader, ARCH Project, invited AMS to submit a proposal to host ARCH events by the end of February 2017. A proposal should include a venue (field/ meeting room), accommodation, equipment, personnel and conceptual design of drill, and schedule. The cost will be shared by the project on specific items such as air tickets. The proposals will be reviewed by the Project Team. The final decision on the host country will be made at the second RCC meeting in July 2017. The details is describes in Annex XXIII.

(3) Closing Remarks

The closing remarks were delivered by Dr. Jirot Sindhbananda by expressing appreciations for active participations. The meeting objectives were accomplished beyond expectation and the regional network of disaster health management was strengthened. After all, the outputs derived from this Start-Up Drill, discussions and meetings as the result of AMS effort would be good resource for future implementation of the project.

END

Annexes

Annex I:	Programme of Activities
Annex II:	List of Participants
Annex III:	Introduction to SUD
Annex IV:	SASOP
Annex V:	JOCCA
Annex VI:	WHO EMT Initiative and EMT Coordination Cell
Annex VII:	Table-top Exercise

Annex VIII: Field Exercise
Annex IX: Standard Medical Treatment Procedure in the First-aid Station in Disaster Site
Annex X: Instructions of Day3
Annex XI: AMS Summary and ASEC&AHAC Exercise Observations
Annex XII: Consolidated Matrix
Annex XIII: ARCH Overview
Annex XIV: Start-Up Drill Results
Annex XV: Overview of PWG1
Annex XVI: PWG1 SOP
Annex XVII: PWG1 Minimum Requirements
Annex XVIII: PWG1 Health Needs Assessment
Annex XIX: PWG1 EMT Database
Annex XX: PWG2 and 1st AMS Training Topics
Annex XXI: PWG1 Sharing of Outputs
Annex XXII: PWG2 Sharing of Outputs
Annex XXIII: Requirements for Hosting the Regional Collaboration Drill, Regional Coordination Meeting and Project Working Group Meetings

Attachment 15 :

SOP and Minimum Requirement

Standard Operating Procedure (SOP)
for Coordination of Emergency Medical Teams (EMTs) in ASEAN
(Working Title)

Version: 2
Date: 13 December 2018

Table of Contents:

List of Acronyms & Abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACDM	ASEAN Committee on Disaster Management
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AJDRP	ASEAN Joint Disaster Response Plan
AMS	ASEAN Member States
CIQ	Custom, Immigration and Quarantine
DOH	Department of Health
EMTs	Emergency Medical Teams
EMTCC	Emergency Medical Team Coordination Cell
ERAT	Emergency Response and Assessment Team
HNA	Health Needs Assessment
I-EMT	International Emergency Medical Team
MDS	Minimum Dataset
MOH	Ministry of Health

MOPH	Ministry of Public Health
N-EMT	National Emergency Medical Team
NDMO	National Disaster Management Organization
OSOCC	On-Site Operations Coordination Center
PHEOC	Public Health Emergency Operations Center
RDC	Reception and Departure Center
SASOP	Standard Operating Procedure for Regional Standby Arrangements and Coordination Of Joint Disaster Relief and Emergency Response Operation
VOSOCC	Virtual On-Site Operations Coordination Center

I. Introduction

1. ASEAN Member States have been committed to provide effective mechanisms to achieve substantial reduction of disaster losses, and to jointly respond to disaster emergencies through concerted national efforts and intensified regional and international cooperation as stipulated in the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) under the vision of "One ASEAN, One Response" as adopted in the ASEAN Declaration on One ASEAN, One Response: ASEAN Responding to Disasters as One in The Region and Outside The Region on 6 September 2016.

2. Emergency medical responses provided by Emergency Medical Teams (EMTs) have a critical role to play in saving lives and reducing mortality and morbidity. To ensure that EMT operations are reliable and trustworthy and their operations meet the needs of the affected populations, concerted and explicit coordination and collaboration among both international and national EMTs directed by the Ministry of Health of the affected country is indispensable.

3. This Standard Operating Procedure (SOP) aims (i) to ensure the quality and consistency of EMT operations in the affected country in order to contribute to the vision "One ASEAN, One Response" and (ii) to complement the operating procedures and protocols developed by the international community and the ASEAN and East Asia regions.

4. As the health sector's contribution to the vision 'One ASEAN, One Response', this SOP is a component of the ASEAN Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP). This SOP covers the area shown in the figure below.

5. This SOP applies specifically to civilian EMTs with no consideration whether civilian EMTs might utilize military assets and capacities to support team operations. The facilitation and utilization of military assets and capacities including military EMTs is set out in Chapter VI of SASOP.

II. Institutions

A. Ministry of Health/Ministry of Public Health/Department of Health

6. The terms Ministry of Health (MOH)/ Ministry of Public Health (MOPH) and Department of Health (DOH) in this SOP will collectively be referred as Ministry of Health (MOH). The MOH shall be the primary entity responsible for the overall coordination of National Emergency Medical Teams (N-EMTs) and International Emergency Medical Teams (I-EMTs) which are deployed to support N-EMTs.

B. Public Health Emergency Operations Center (PHEOC)

7. A public health emergency operations center (PHEOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and events. PHEOCs provide communication and information tools and services and a management system during a response to an emergency or event. PHEOCs also provide other essential functions to support decision-making and implementation, coordination, and collaboration[1]. PHEOCs can be established and managed by both national and local authorities (which is referred to in this SOP as local PHEOC), depending on the administration of the MOH of the affected country.

C. Emergency Medical Team Coordination Cell (EMTCC)

8. The core purpose of the Emergency Medical Team Coordination Cell (EMTCC) is the overall coordination of the surge of responding EMTs (both National and International) to best meet the excess healthcare needs resulting from increased morbidity due to the emergency, or from damage to existing capacity. The EMTCC should be activated, managed and staffed by trained and experienced personnel.

9. Integration of the EMTCC within the existing national PHEOC is ideal for an effective integration of the I-EMTs with existing national health services. The EMTCC can be established and managed in the local level (which is referred to in this SOP as Sub-EMTCC) if the local PHEOC is activated.

D. Emergency Medical Team (EMT)

10. The Emergency Medical Team (EMT) refers to groups of health professionals and supporting staff aiming to provide direct clinical care to populations affected by disasters or outbreaks and emergencies as surge capacity to support the local health system[2]. In this SOP, EMTs include government civilian and non-governmental EMTs and they can be subclassified as either National (N-EMT) or International (I-EMT) depending on area of response.

E. AHA Centre

11. The AHA Centre shall facilitate cooperation and coordination among the relevant entities including the affected and assisting countries, and with relevant United Nations and international organizations, in promoting regional collaboration.

III. Disaster Preparedness

A. National Focal Units for Emergency Medical Team (EMT) Coordination

12. The MOH shall identify the first contact point responsible for managing offers and requests for EMT deployments. The national focal units for EMT coordination in times of disaster should be officially designated in MOH/MOPH structure. The list of contact information is provided in **Annex 1**.

B. Inventory of Emergency Medical Team (EMT) Assets and Capacities

13. The inventory of EMT assets and capacities is managed by the AHA Centre as part of ASEAN Standby Arrangements. The AHA Centre requests the ASEAN Committee on Disaster Management (ACDM) Focal Units or Heads of National Disaster Management Office (NDMO) to list all resources for the ASEAN Standby Arrangements including EMT assets and capacities in the form of List of Modules of ASEAN Joint Disaster Response Plan (AJDRP).

[1] WHO, A Systematic Review of Public Health Emergency Operations Centre (EOC), 2013.
[2] Ibid.

14. The MOH shall identify EMT assets and capacities and submit relevant information and data on EMT assets and capacities to respective NDMO in a timely manner when required.

C. Emergency Medical Team (EMT) Capacity Building and Strengthening

15. The MOH shall ensure that the EMTs achieve and maintain the EMT minimum standards as set out in Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters (WHO, 2013) and other relevant existing national and regional standards and requirements.

16. The MOH shall take necessary measures to enhance EMT assets and capacities and to facilitate the EMT organizations to register their EMTs within existing national coordinating structure or on the EMT Global Classification.

IV. Emergency Response

A. Request for Assistance/Offer of Assistance and Registration of EMTs

17. The MOH shall send the request for assistance or initiate the offer of assistance through the NDMO, following the procedures stipulated in the existing SASOP.

18. Information sharing and coordination with all assisting entities should be initiated as soon as possible.

B. Mobilisation of Emergency Medical Teams (EMTs)

19. When mobilising EMTs, the organizations which deploy EMTs shall ensure that the assets and capacities of EMTs provided to the affected country meet the standards set out in Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters (WHO, 2013) and other relevant existing standards and requirements of the affected country. The organizations shall also ensure that EMTs are self-sufficient with their subsistence requirements so as not to further burden the affected country in the course of operating within its territory.

20. The I-EMTs shall obtain essential information for mobilisation including registration requirements, visa and customs procedures and other information as provided in **Annex 2** via Virtual On-Site Operations Coordination Centre (VOSOCC) or AHA Centre's mechanisms such as ASEAN WebEOC or National Focal Units of the affected country.

21. The I-EMTs shall submit EMT registration form to the affected country's MOH, NDMO and AHA Centre to complete the official registration. The registration and official clearance from the affected country shall be done prior to departure from origin country.

22. To ensure the effective and timely response of assistance upon the confirmation of the request for assistance, the EMTs shall ensure coordinated efforts are made with the MOH for the immediate response.

23. The I-EMTs arriving in the territory of the receiving country via air, land or sea entry checkpoints shall immediately proceed to the Customs, Immigration and Quarantine (CIQ) facility for necessary immigration procedures, customs clearance and quarantine checks. In this regard, the MOH shall coordinate with relevant entities to facilitate the CIQ processes and also ensure that the National focal units or their designated representatives are available on standby during the clearance process of the medical supplies and equipment brought to the territory of the requesting country.

24. The MOH shall designate official(s) to provide an initial briefing to the I-EMTs at a staging point or Reception and Departure Center (RDC), where ASEAN-ERAT will support the process,

immediately after the completion of the CIQ processes, to ensure seamless on-site coordination. The incoming I-EMTs shall be registered at the staging point or RDC and shall obtain essential information including the EMTCC location and contact details, and coordination meeting locations and times.

25. The I-EMTs shall report to the EMTCC to complete EMT registration and submit required documents including **EMT Registration Form (Annex 3)**, copies of passport of each team member and other registration requirements as referred in Annex 2.

26. Regarding the authorization to practice for medical professionals, I-EMT registration needs an approval from relevant Health Professional Regulatory Authorities through National Focal Points facilitating mechanism. The I-EMTs shall follow the regulation of the receiving country. If the I-EMTs would like to receive the authorization prior to their deployment, the I-EMTs can request the receiving country, through National Focal Units, to facilitate the approval process.

27. The EMTCC shall liaise with the EMTs to match and task them to an identified area based on the EMT type and capabilities and the identified needs or gaps. The EMTCC shall also facilitate in-country movement of I-EMTs to disaster sites.

28. Full registration, authorization to practice for medical professionals, and tasking processes may be conducted at the RDC if the affected country has enough capabilities.

C. On-Site Operations of Emergency Medical Teams (EMTs)

29. The I-EMTs shall report to the local PHEOC, if existing and activated, to receive their assignment and essential information for on-site operations.

30. The EMTCC or Sub-EMTCC, if established shall provide the I-EMTs essential information for on-site operations such as situation update to the extent known, secured access to operating grounds and others as provided in **Annex 4**.

31. The EMTCC or Sub-EMTCC, if established, shall support the operations of the I-EMTs such as providing local medical coordinator, language interpreters and others as provided in **Annex 5**.

32. The EMTCC or Sub-EMTCC, if established, shall organize EMT coordination meetings for information sharing and effective and efficient coordination among EMTs and relevant entities.

33. If EMTCC is not established, the I-EMTs shall organize regular meetings with other EMTs to share information and resources and also to collectively plan EMT operations such as setting up Patient Referral System.

34. All the EMTs operated in the affected area shall utilize standard triage system.

35. The EMTs shall maintain adequate patient notes and discharge and referral documents after starting its operations. For the ease of compiling Emergency Medical Team - Minimum Dataset (MDS) Daily Reporting Form (Annex 10), the EMTs shall use the standardized **Medical Record Form (Annex 6)** and **EMT-MDS Tally Sheet (Annex 7).** Also, in case of patient referral, the EMTs shall use **Patient Referral Form (Annex 8)**.

36. The EMTs shall prepare and confirm its Operational Plan and Exit Strategy and inform the EMTCC or Sub-EMTCC of anticipated transition or departure date.

D. Health Needs Assessment

37. The I-EMTs shall provide additional Health Needs Assessment when requested by the EMTCC **[Annex 9]**.

E. Direction and Coordination of Assistance

38. The MOH through the EMTCC or Sub-EMTCC shall conduct the overall direction, coordination and supervision of the EMTs operations within its territory.

39. The EMTCC or Sub-EMTCC shall map in real-time all EMT deployments and keep track of all anticipated EMT transition and departure; establish and maintain regular contacts with EMTs and local authorities; and conduct field quality assurance and support visits to EMTs.

F. Periodic Reporting/Daily Report

40. The EMTs shall submit **Minimum Dataset (MDS) Daily Report Form (Annex 10)** to the EMTCC or Sub-EMTCC to report their activities on daily basis.

41. The EMTCC or Sub-EMTCC shall submit **EMTCC Situation Report (Annex 11)** to the PHEOC of the MOH at the end of the first day and the third day. Thereafter, a reporting frequency shall be determined by context and need. Also, EMTCC shall send feedback form to I-EMTs in timely manner.

G. Demobilisation of Assistance

42. The EMTs shall inform the EMTCC or Sub-EMTCC the anticipated end-of-operation date as early as possible, or at least 1 to 2 weeks prior to that date if different from the one initially communicated at the time of the registration.

43. The EMTs shall implement an exit strategy including plans for handover of all medical documentation, donation of any medical equipment, transfer of care for any residual inpatient and others in accordance to the affected country by liaising with the EMTCC for the withdrawal of the team from the operations.

H. Reporting (Handover and Exit Phase)

44. The EMTs shall submit to the EMTCC or Sub-EMTCC with **Emergency Medical Team Exit Report (Annex 12)** which contains transferred patients at exit list, donated medication list and donated equipment or supply list to specify the details of the handover or re-tasking of duties and record of the operational tasks performed during the deployment before its final withdrawal from the site.

45. The I-EMTs shall also upon final withdrawal prepare their final report using **FORM 7 of SASOP (Annex 13)** as reference and furnish them to the AHA Centre via their MOH and the NDMO for consolidation within two weeks of departure from the affected country.

I. Review of Operations, Experiences and Lessons Learnt (Post-deactivation Phase)

46. I-EMTs shall conduct Operational reviews of EMT response and share the report to all AMS to support learning as well as revision.

V. Review

47. SOP for Coordination of Emergency Medical Teams (EMTs) in ASEAN member states shall be revised and updated concurrent with SASOP and/or as necessary.

VI. ANNEXES

		Note
Annex 1	List of National Focal Units for EMT Coordination and Information on PHEOC	Information will be collected by the Project to complete the list.
Annex 2	List of Essential Information for Mobilisation	
Annex 3	Emergency Medical Team Registration Form	WHO EMTCC Handbook
Annex 4	List of Essential Information for On-site Operation	
Annex 5	List of Supporting Functions of the EMTCC or Sub-EMTCC	
Annex 6	Medical Record Form	
Annex 7	Emergency Medical Team (EMT) - Minimum Dataset (MDS) Tally Sheet	WHO EMT MDS Working Group Report
Annex 8	Patient Referral Form	WHO EMTCC Handbook
Annex 9	Forms for (Rapid) Health Needs Assessment	
Annex 10	Emergency Medical Team - Minimum Dataset (MDS) Daily Reporting Form	WHO EMTCC Handbook
Annex 11	EMTCC Situation Report	WHO EMTCC Handbook
Annex 12	Emergency Medical Team Exit Report	WHO EMTCC Handbook
Annex 13	Form 7 of SASOP	-

Reference

- Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) (ASEAN, 2010)
- Emergency Medical Team Coordination Cell (EMTCC) Coordination Handbook (Version 0.12) (WHO, June 2017)

ANNEX 2

List of Essential Information for Mobilisation

Topic

1. Registration requirements
   - EMT Registration Form
   - Copies of passport of each team member
   - Authorization to practice for medical professionals
   - Malpractice insurance
   - etc.
2. Visa and customs procedures
3. Authorization to practice for medical professionals
4. Situation overview to the extent known
5. Identification of health services which assistances might need
6. General information of incident area including geography, weather, language, politics and government, religion, culture and prohibited activities
7. Essential information on the arrival and registration procedures at RDC
8. Airport/port procedures and services
9. EMTCC/OSOCC location
10. National Focal Units and Contact information
11. Primary and secondary risks associated with the event in each location
12. Available communication channels

ANNEX 4

List of Essential Information for On-site Operations

	Topic
1.	Situation update to the extent known
2.	Secured access to operating grounds
3.	Status of health facilities in the affected area
4.	Details on the coordination with local hospitals for patient referral
5.	EMTs in operations
6.	Meeting schedule and venue
7.	Details on the coordination with EMTCC
8.	Medical waste management
9.	Management of dead bodies in disaster
10.	Provincial medical incident command system and local authorities
11.	Maps and information on incident sites, operation sites, law enforcement station, drug store, shops, patrol stations.
12.	Contact person/focal units/liaison personnel/interpreter
13.	Available channels of communication
14.	Sanitation concern including epidemic disease, endemic disease, sporadic disease, tap water purification, excretion and toilet management
15.	Security and mobile escort

ANNEX 5

List of Supporting Functions of the EMTCC or Sub-EMTCC (if existing and capable)

	Topic
1.	Provide language interpreters
2.	Oversee securities
3.	Set up communication channels
4.	Facilitate patient referral to local hospitals
5.	Provide local medical coordinator

Minimum Requirements and Qualifications for Members of Emergency Medical Team (EMT)

Version: 2
Date: 19 April 2018

I. Purpose

This document sets out the minimum requirements and qualifications for ASEAN Member States and relevant organizations for the selection and registration of health professionals as members of emergency medical team (EMT). These minimum requirements aim at providing guidance for ASEAN Member States to develop and strengthen their EMTs to be deployed to the affected foreign country in order to realize the vision "One ASEAN, One Response".

The capacity of individual members is equally important as that of the team as a whole and is vital to ensure the quality of care provided by EMTs. These minimum requirements are developed to provide clear and appropriate minimum eligibility standards for EMT members with the aim of ensuring that EMT is composed of eligible members.

II. Scope

As is clear from its purpose, this document focuses on minimum requirements and qualifications for individual EMT members. The minimum requirements for EMT as a team are not covered in this document as they are defined in *the Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters* (Blue Book) (WHO 2013). The Blue Book provides the standards for a team as a whole such as the team composition (e.g. at least three doctors trained in emergency and primary care for Type 1), but does not refer in detail to the capacity of individual team members.

In addition, given that government military and non-governmental (NGO) EMT organizations have their own criteria to recruit and register their members, these minimum requirements primarily targeted governmental civilian EMTs to be deployed both domestically and internationally.

III. Key Terms and Terminology

For the purpose of this document, the key terms are defined below.

Minimum Requirements

The lowest level of acceptable education, training and experience needed to be enrolled as a member of emergency medical team (EMT) which can be deployed domestically and internationally.

Emergency Medical Teams (EMT)

The term Emergency Medical Teams (EMTs) refers to groups of health professionals and supporting staff aiming to provide direct clinical care to populations affected by disasters or outbreaks and emergencies as surge capacity to support the local health system. They include governmental (both civilian and military) and non-governmental teams and can be subclassified as either National or International dependent on area of response[1].

EMT Members

In general, EMTs are composed of: 1) Medical Doctors/Physicians, 2) Nurses, 3) Allied Health

[1] WHO, Emergency Medical Team Coordination Cell (EMTCC) Coordination Handbook, Version 0.12, June 2017.

Personnel, 4) Logistics and Operational Support Staff, and 5) Administrative and Other Staff[2].

IV. Structure of the document

This document is organized based on the three tiers of the minimum requirements as clarified below and in figure 1;

Tier 1. Professional competence and basic knowledge of disaster medicine and EMT operations
Tier 1 has to be ensured by EMT organizations before anyone to be registered as a member.

Tier 2. Adaptation of technical and non-technical professional capacities into low-resource and emergency context
Tier 2 has to be ensured by EMT organizations before domestic deployment of members.

Tier 3. Preparation for an effective team performance in foreign countries
Tier 3 has to be ensured by EMT organizations before international deployment of members.

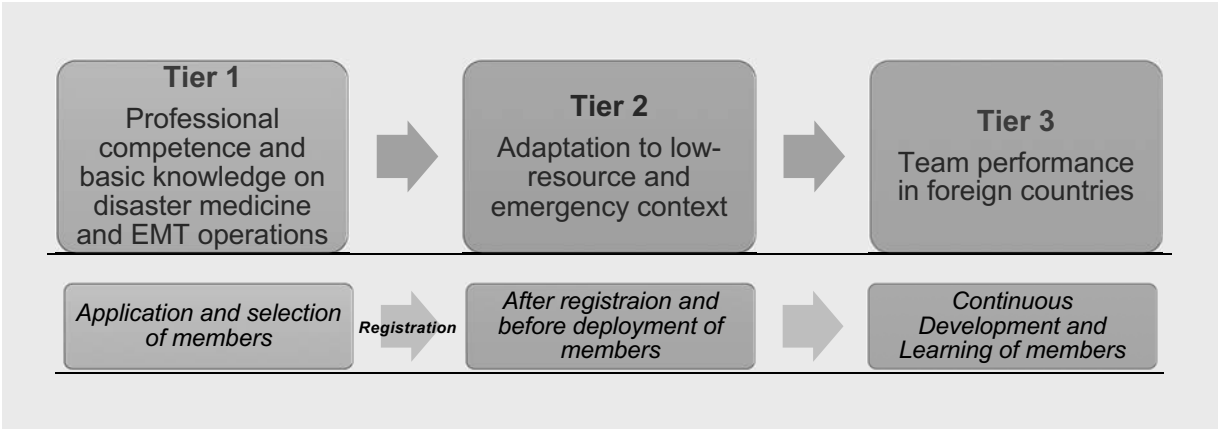


Figure 1. Tiers of Minimum Requirements

Tier 1 (can be registered as a member of EMT)

This section presents the minimum requirements and qualifications of Tier 1, which are relevant to the individuals at the stages of recruitment and selection before placing them on a roster of EMT organizations.

a. Age

Preference between 20 to 60 years old.

b. License

EMT organizations must ensure that all team members are registered and licensed to practice in their home country[3].

[2] WHO, Emergency Medical Team Coordination Cell (EMTCC) Coordination Handbook, Draft Version 10, 2016.
[3] WHO, Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters, 2013.

c. Specialty

EMT organizations must ensure that all team members are specialists in their field[4].

The specialists required for EMT depend on its size, capability and capacity. The medical specialists include: medical doctors trained in emergency and primary care, general surgery, orthopedics, orthoplastic reconstruction, anesthetics, intensive care, obstetrics, pediatrics, and rehabilitation. In addition, nurses, paramedics, laboratory technicians, logistic staff and other support staff are included depending on the type of EMT. The specialty of EMT members must be registered in each country.

d. Practical Experience

EMT organizations must ensure that the majority of EMT members to be deployed internationally have experience in domestic or international deployment to disaster affected area. However, applicants who lack experience in actual disaster response may not necessarily be excluded from registration. By organizing a team of members with different professional backgrounds, skills, grades, qualifications, expertise and experience, or by skill mix, EMT organizations can accept inexperienced applicants with appropriate qualification.

e. Training (as part of requirements)

EMT members are required to successfully complete Basic Life Support (BLS) and Standard First Aid Training.

f. Training (as part of selection process)

EMT members are required to successfully complete an induction or pre-registration course such as Basic Disaster Management, etc. Applicants are required to undertake theoretical courses and/or workshops, provided by EMT organizations, to enhance their knowledge on disaster medicine and EMT operations. Each ASEAN Member State can set out their own curriculum as appropriate or collectively develop a standardized curriculum among ASEAN Member States.

g. Physical and Mental Fitness

Deployment to and delivering care in austere and resource-poor environments require physical and mental fitness. EMT organizations must ensure that team members are physically and mentally able to perform required tasks.

The status of physical and mental fitness is often self-declared at the stage of application and will be evaluated in the later stage during an induction course or by a pre-deployment health screening.

[4] Ibid.

V. Tier 2 (ready to deploy domestically)

a. Pre- requisite

EMT members must pass the registration requirement as demonstrated in Tier 1.

b. Training course

EMT members that have successfully completed the registration must undertake field training courses and/or field training exercises such as Incident Command System (ICS), Self-sufficiency in Disaster, Working in Limited Resources, etc. to practice their skills and learn how to operate within low-resource and emergency context. Each ASEAN member state can set out their own curriculum as appropriate or collectively develop a standardized curriculum among ASEAN member states.

c. Teamwork

EMT members must be able to work well with others as a part of the team. Therefore, they should concentrate on building up teamwork and fostering team-to-team communication and collaboration.

VI. Tier 3 (ready to deploy to any members states)

a. Pre- requisite

EMT members must pass the registration requirement and qualification as demonstrated in Tier 1 and Tier 2.

b. Training course

I-EMT members must complete a standardized training curriculum which has been widely accepted by all ASEAN Member States.

As a consequence, the EMT members who have undertaken this curriculum would be qualified to operate in every ASEAN Member States. The content of this training curriculum may consist of relevant topics including Intercultural Management, Resource Management, Communication Skill, Health care System in ASEAN Member States, AADMER, SASOP, Standard Operating Procedure (SOP) for Coordination of Emergency Medical Teams (EMTs) in ASEAN and Team Coordination (e.g. SASOP and EMTCC), etc.

c. Teamwork

EMT members must be able to work well with others as a part of the team. Therefore, applicants should concentrate on building up teamwork and fostering good communication and collaboration with the EMTs of the affected countries and between International Emergency Medical Teams (I-EMTs).

d. Language Skills

For the purpose of international deployments, some EMT members are required to have language skills, especially English language skills. EMT members must have a TOEIC score of a minimum ??? (The issue will be discussed in the 6th Meeting of PWG1). In the case where the required language proficiency score cannot be met, EMT members can still be deployed internationally if there is a narrator in the team.

e. Vaccination

In the case where some vaccine-preventable communicable diseases are found to be endemic to the affected country, EMT members are required to either obtain or provide documented proof that they have received the following vaccinations.

Attachment 16 :

EMT Data Base Format

Database of Emergency Medical Teams (EMTs) in ASEAN
Data Collection Sheet

Version: 1
Date: 11 January 2018

Respondent

Date (dd/mm/yy):		**Country:**	
Name:		**Title and Position:**	
Organisation:		**Email address:**	

** If there are more than three (3) EMT organisations, please copy and paste the table below to add more organisations.*

EMT Organisation #1

1. Organisation and Contact Information

1-1	Organisation Name		
1-2	Organisation Type *Tick only one box*	☐ Government Civilian ☐ Government Military ☐ National NGO ☐ International NGO ☐ Other (specify)_____	
1-3	Team Name		
1-4	Organisation Headquarters Contact	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-5	Organisation Operation Contact (if different from 1-4)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-6	Organisation Donor or Government Official Contact (if applicable)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-7	First point of contact for deployment requests *Tick only one box*	☐ Organisation Headquarters Contact (1-4) ☐ Organisation Operation Contact (1-5) ☐ Organisation Donor or Government Official Contact (1-6) ☐ Other (specify) _____	

2. EMT Information

		EMT Type[1]	Number of Available Teams
2-1	Available EMTs within the organisation	Type 1 Mobile	
		Type 1 Fixed	
		Type 2 with Health Facility	
		Type 3	
		Specialised Cell	
		Not specified as above	

[1] See "Specification of EMT Type" in "Instructions for Data Collection".

2-2	Specialised cell details (if applicable)	
2-3	Maximum number of EMTs that the organisation can deploy simultaneously	( ) teams
3. Operational Capacity and Willingness		
3-1	Operational willingness to deploy; geographical region *Tick only one box*	☐ Globally ☐ ASEAN Region only ☐ Asia-Pacific Region only ☐ Other (specify)_____
3-2	Emergency situation in which the team is currently capable to deploy *Tick all that apply*	☐ Sudden Onset Disaster (SOD) ☐ Protracted crisis ☐ Conflict/complex emergencies ☐ Outbreak ☐ Chemical, biological, radiological, or nuclear (CBRN) events ☐ Other (specify)_____
3-3	Duration of operational capacity	( ) days
3-4	Organisation operational language(s)	
4. Deployment History		
4-1	International deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*
4-2	International deployment experience **If there were more than three events, please add more rows.*	**Event** / **Date** (dd/mm/yy) / **Country of deployment**
4-3	Domestic deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*
4-4	Domestic deployment experience **If there were more than three events, please add more rows.*	**Event** / **Date** (dd/mm/yy)
5. Global Classification Status		
5-1	WHO EMT Global Classification Status *Tick only one box*	☐ Not Applicable (N/A) ☐ Expression of Interest (EOI) submitted ☐ Mentorship ☐ Classified

EMT Organisation #2

1. Organisation and Contact Information

1-1	Organisation Name		
1-2	Organisation Type *Tick only one box*	☐ Government Civilian ☐ Government Military ☐ National NGO ☐ International NGO ☐ Other (specify)_____	
1-3	Team Name		
1-4	Organisation Headquarters Contact	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-5	Organisation Operation Contact (if different from 1-4)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-6	Organisation Donor or Government Official Contact (if applicable)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-7	First point of contact for deployment requests *Tick only one box*	☐ Organisation Headquarters Contact (1-4) ☐ Organisation Operation Contact (1-5) ☐ Organisation Donor or Government Official Contact (1-6) ☐ Other (specify) _____	

2. EMT Information

		EMT Type[2]	Number of Available Teams
2-1	Available EMTs within the organisation	Type 1 Mobile	
		Type 1 Fixed	
		Type 2 with Health Facility	
		Type 3	
		Specialised Cell	
		Not specified as above	
2-2	Specialised cell details (if applicable)		
2-3	Maximum number of EMTs that the organisation can deploy simultaneously	( ) teams	

3. Operational Capacity and Willingness

3-1	Operational willingness to deploy; geographical region *Tick only one box*	☐ Globally ☐ ASEAN Region only ☐ Asia-Pacific Region only ☐ Other (specify)_____
3-2	Emergency situation in which the team is currently capable to deploy *Tick all that apply*	☐ Sudden Onset Disaster (SOD) ☐ Protracted crisis ☐ Conflict/complex emergencies ☐ Outbreak ☐ Chemical, biological, radiological, or nuclear (CBRN) events ☐ Other (specify)_____
3-3	Duration of operational capacity	( ) days

[2] See "Specification of EMT Type" in "Instructions for Data Collection".

3-4	Organisation operational language(s)			
4. Deployment History				
4-1	International deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*		
4-2	International deployment experience **If there were more than three events, please add more rows.*	**Event**	**Date** (dd/mm/yy)	**Country of deployment**
4-3	Domestic deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*		
4-4	Domestic deployment experience **If there were more than three events, please add more rows.*	**Event**		**Date** (dd/mm/yy)
5. Global Classification Status				
5-1	WHO EMT Global Classification Status *Tick only one box*	☐ Not Applicable (N/A) ☐ Expression of Interest (EOI) submitted ☐ Mentorship ☐ Classified		

EMT Organisation #3

1. Organisation and Contact Information

1-1	Organisation Name		
1-2	Organisation Type *Tick only one box*	☐ Government Civilian ☐ Government Military ☐ National NGO ☐ International NGO ☐ Other (specify)_____	
1-3	Team Name		
1-4	Organisation Headquarters Contact	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-5	Organisation Operation Contact (if different from 1-4)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-6	Organisation Donor or Government Official Contact (if applicable)	Contact Name	
		Contact Position	
		Email	
		Telephone	
1-7	First point of contact for deployment requests *Tick only one box*	☐ Organisation Headquarters Contact (1-4) ☐ Organisation Operation Contact (1-5) ☐ Organisation Donor or Government Official Contact (1-6) ☐ Other (specify) _____	

2. EMT Information

		EMT Type[3]	Number of Available Teams
2-1	Available EMTs within the organisation	Type 1 Mobile	
		Type 1 Fixed	
		Type 2 with Health Facility	
		Type 3	
		Specialised Cell	
		Not specified as above	
2-2	Specialised cell details (if applicable)		
2-3	Maximum number of EMTs that the organisation can deploy simultaneously	( ) teams	

3. Operational Capacity and Willingness

3-1	Operational willingness to deploy; geographical region *Tick only one box*	☐ Globally ☐ ASEAN Region only ☐ Asia-Pacific Region only ☐ Other (specify)_____
3-2	Emergency situation in which the team is currently capable to deploy *Tick all that apply*	☐ Sudden Onset Disaster (SOD) ☐ Protracted crisis ☐ Conflict/complex emergencies ☐ Outbreak ☐ Chemical, biological, radiological, or nuclear (CBRN) events ☐ Other (specify)_____
3-3	Duration of operational capacity	( ) days

[3] See "Specification of EMT Type" in "Instructions for Data Collection".

3-4	Organisation operational language(s)			
4. Deployment History				
4-1	International deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*		
4-2	International deployment experience **If there were more than three events, please add more rows.*	**Event**	**Date** (dd/mm/yy)	**Country of deployment**
4-3	Domestic deployment experience *Tick only one box*	☐ Yes ☐ No *If Yes, please provide information below:*		
4-4	Domestic deployment experience **If there were more than three events, please add more rows.*	**Event**		**Date** (dd/mm/yy)
5. Global Classification Status				
5-1	WHO EMT Global Classification Status *Tick only one box*	☐ Not Applicable (N/A) ☐ Expression of Interest (EOI) submitted ☐ Mentorship ☐ Classified		

15 September 2017

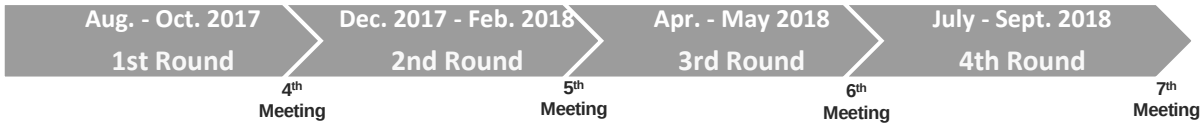
Database of Emergency Medical Teams (EMTs) in ASEAN
Instructions for Data Collection (draft)

Introduction

The database of Emergency Medical Teams (EMTs) in ASEAN is among the four (4) regional collaboration tools which are being developed by the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project). The database has the following objectives:

- To strengthen the regional disaster preparedness by facilitating 1) the identification of EMT assets and capacities for mobilization; and 2) the future decision making and action taking for enhancing EMT assets and capacities by stocktaking of the current status and update of the progress;
- To enhance the regional health response to disasters by providing the up-to-date information on EMTs in advance to the Ministry of Health (MOH) or equivalent of ASEAN Member States and other parties concerned;
- To inform the discussion for setting up the coordination platform on disaster health management[1];
- To complement the ASEAN Joint Disaster Response Plan (AJDRP) by possibly speeding up the process of identification of EMT assets and capacities potentially available for deployments to the affected foreign country; and
- Eventually to contribute to the operationalization of the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) and the implementation of AJDRP for the realization of "One ASEAN, One Response" in the spirit of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER).

The database will be managed by the Project Team during the project period. The data collection and/or update will be conducted by the PWG 1 members before each meeting of PWG 1. There will be a total of four (4) rounds as shown below.



Instructions for completing the data collection sheet

The attached data collection sheet is designed primarily for use by the PWG 1 members in collaboration with stakeholders responsible for EMT organisation management. Completion of this sheet may require input from professionals and representatives from organisations other than the MOH or equivalent. Data collection should be conducted by the PWG 1 members in collaboration with these personnel.

The scope of database is not limited to government civilian EMT organisations but will include data on government military and non-governmental (NGO) EMT organisations. Inclusion of EMT organisations other than those of government civilian is at discretion of ASEAN Member States. However, the criteria for inclusion of government military and NGO EMT organisations are proposed as follows:

- The NGO EMT organisations should be registered under the Government of the country they operate in and be accountable to the MOH or equivalent;
- The NGO EMT organisations should have a mandate to deploy EMT(s) to provide direct clinical care to populations affected by disasters;
- The NGO or government military EMT organisations should have operational willingness to deploy internationally;
- The NGO or government military EMT organisations should have a liaison with the MOH or equivalent and provide necessary information on EMT management and operations; and
- The NGO or government military EMT organisations should comply with the EMT guiding principles and standards[2] and other relevant regional and national standards.

[1] Output 1 of ARCH Project
[2] http://www.who.int/hac/global_health_cluster/fmt_guidelines_september2013.pdf

Specification of EMT Type[3]

EMT Type 1 Mobile	Provide outpatient initial emergency care of injuries and other significant health care needs. Teams must be capable of treating at least 50 outpatients per day and function during the daytime. Key services include triage, first aid, stabilisation, referral of severe trauma, nontrauma emergencies, and care for minor trauma injuries. Type 1 mobile teams do not work out of a fixed structure and the team, including all equipment, can be easily moved throughout the mission deployment.
EMT Type 1 Fixed	Provide outpatient initial emergency care of injuries and other significant health care needs. Services include: triage, assessment, first aid, stabilisation + referral of severe trauma and nontrauma emergencies, definite care for minor trauma and nontrauma emergencies. Capacities include: 100 outpatients/day for 2 weeks. If facility provided: rapidly deployable temporary shelter care for outpatient capacity of that EMT, or mobile. Day time services. Main components include: At least 3 doctors trained in emergency and primary care, with the remainder nurses, paramedics and logistic staff. (Ideally doctor: nurse ratio = 1:3). Staff skilled in emergency and trauma care, maternal and child health, knowledge of endemic disease management.
EMT Type 2	Provide inpatient acute care, general and obstetric surgery for trauma and other major conditions. Services provided include: Surgical triage, assessment and advanced life support, definitive wound and basic fracture management, damage control surgery, emergency general and obstetric surgery, inpatient care for non-trauma emergencies basic anaesthesia, X-ray, blood transfusion, lab and rehab services acceptance and referral services. Capacities include: 1 operating theatre with 1 operating room: 20 inpatient beds; 7 major or 15 minor operations per day. If facility provided, at least 20 inpatient beds and 1 operating theatre and 1 table. Day and night services. Main components include: staffing comprises of: Personnel: Including doctors skilled in emergency and general medical care (including paediatrics and maternal health), surgical and anaesthetic staff for theatre, and medical, nursing and logistic staff to manage inpatients. Ratios must reach or exceed; anaesthetic technician/anaesthetist ratio 1:1 with surgeons, 5 operating room technical staff per operating theatre table. Nursing ratio of at least 1 nurse: 8 ward beds (24 hours).
EMT Type 3	Provide complex inpatient referral surgical care including intensive care capacity. In addition to type 2 services, a type 3 EMT provides: complex reconstructive wound and orthopaedic care, enhanced, X-ray, blood transfusion, lab and rehab services, high level paediatric and adult anaesthesia, intensive care beds with 24 h monitoring and ability to ventilate, acceptance and referral services. Capacities include: 1 operating theatre with at least 2 operating rooms: 40 inpatient beds; 15 major or 30 minor operations per day, 4–6 intensive care beds. If facility provided: wards, operating theatre (2+ tables), outpatient plus intensive care area, Day and night services. Main components include: Staffing comprises of: Personnel must comply with EMT Type 2 size and ratios plus; orthoplastic reconstruction surgeon(s). Nursing ratio 1:2 beds for Intensive care (24 hours). Logistics and allied health including rehabilitation to reflect the increased size and complexity.
Specialised Cell	Specialises in a specific medical area. These teams may be as small as two or three senior specialists that provide additional specialised care embedded within Type 2 or 3 EMTs or a national hospital. They must bring appropriate equipment, maintenance and supplies adequate to their specialty area. Specialised cell includes: Burn Care, Dialysis, Maternal & Child Health, Public Health Care, Psycho-social care, Reconstructive surgery, Rehabilitations and others.

[3] Specifications of EMT Type 1 Fixed, Type 2 and Type 3 were adopted from the specification of List of Modules for Standby Arrangements. Specifications of EMT Type 1 Mobile and Specialised Cell were adopted from https://extranet.who.int/emt/faq-page#n138.

Attachment 17 :

Health Needs Assessment Forms and Guidance Note

Date(DD/MM/YYYY)	

Health Needs Assessment Form by EMT

- It is **NOT** mandatory to fill out all the questions; only relevant and available information in the site or shelter(s) can be collected.
- After the assessment, please fill out the **HNA Summary Report** and submit it to the concerned authorities, EMTCC/PHEOC/MOH, etc.

EMT Information			
Country / Organization			
Contact Persons (Names)			
Phone No.		e-mail	

＊This HNA Form is for: Please check either “village/town etc.” or “shelter” below.

☐ **village/town etc.**	→Fill out A: Site Information	☐ **shelter**	Fill out A: Site Information B: Shelter Information

A. Site Information					
A	Province		D	Village	
B	District		E	City/Town	
C	Sub-district		F	Other	
Access and Security					
G	Road access	☐Yes ☐No			
H	Special arrangement required	Transportation (e.g., 4WD, boat) ☐Yes	☐No		
		Communication tool (e.g., satellite phone) ☐Yes	☐No		
I	Any other security concerns	☐Yes	☐No		
Remarks/ Notes:					

B: Shelter Information			
A	Shelter Name:	B	Location of Shelter: (GPS Coordinates)
C	Type of Shelter	☐Public ☐Pre-existing building ☐Temporary structure ☐Other (specify)_____	
D	Capacity	☐Adequate (>3.5m$^{2/}$person) ☐Not adequate	

Overall Situation of the Site or Shelter

1	**Disaster Situation on Population and Health Needs**	
1-1	Estimated number of total population	_____(#)
1-2	Estimated number of death	_____(#)
1-3	Main causes of death by the disaster	▪ ▪
1-4	Estimated number of injured/ill	☐infant & children (Under 5 years) _____(#) ☐children & adolescent (aged 6-19) _____(#) ☐adult (older than 19 years of age)_____(#)
1-5	Total number of pregnant women	_____(#)
1-6	Number of patients suffering from chronic diseases	_____(#)
1-7	Any unusual increased illness or rumors of outbreaks	☐Yes (specify)_____ ☐No
1-8	Number of people with mental health and psychosocial problems	_____(#)
1-9	Main health concerns	1._____ 2._____ 3._____
Remarks/ Notes: Observation points/Significance/Possible action and follow-ups etc.		

2	**Public Health**	
Water		
2-1	Main sources of water for drinking	☐piped water ☐tube well ☐spring ☐bottled water ☐other _____
2-2	Main sources of water for basic hygiene practices (bathing etc.)	☐piped water ☐tube well ☐spring ☐rainwater ☐other _____
2-3	Safe water for drinking	☐Adequate (2.5-3ℓ/person/day) (last for_____day/month) ☐Not Adequate
2-4	Safe water for basic hygiene practices	☐Adequate (2-6ℓ/person/day) (last for_____day/month) ☐Not Adequate
2-5	Potential risk of water contamination	☐Yes (_____) ☐No
Remarks/ Notes: Observation points/Significance/Possible action and follow-ups etc.		

Sanitation and Hygiene			
2-6	Shortage of functional latrine or toilet (20 persons/toilet)	☐Yes	☐No
2-7	Problem with garbage/waste	☐Yes	☐No
2-8	Stagnate water in the area	☐Yes	☐No
2-9	Vector problem (e.g. mosquitoes, dogs, snakes)	☐Yes	☐No
Remarks/ Notes: Observation points/Significance/Possible action and follow-ups etc.			

Food Security and Nutrition			
2-10	Number of population required food	_____(#)	
2-11	Any food assistance since the event	☐Yes (go to 2-12, 13)	☐No (go to 2-13)
2-12	For how long provided food sufficient	☐days_____	☐weeks_____
2-13	What kinds of food available or provided	☐Rice, Wheat, Noodle, etc. (Carbohydrate) ☐Chicken, Other Meat, Fish, Eggs, etc. (Protein) ☐Cooking oil, Other fats, etc. (Fats) ☐Fruits, Vegetables (Vitamin, Fiber) ☐Complementary food ☐Other_____ ☐No food stocks	
2-14	Food and Nutrition	☐Adequate ➢ (e.g.) People eating 3 meals a day. Babies get enough milk.	
		☐Not adequate ➢ (e.g.) People eating smaller meals since the event. People eating fewer meals a day. People eating limited varieties of foods.	
2-15	Obvious signs of undernutrition in children aged 6-59 months	☐Yes	☐No
Remarks/ Notes: Observation points/Significance/Possible action and follow-ups etc.			

3	Health Facilities and Services			
Type of Facility *Pls. write the type of facility where necessary. (Name of Facility)		Hospital * ( )	Primary Care Unit (e.g.) * ( )	Other * ( )
3-1. Impact on Health Facilities		☐Functioning ☐Partially functioning ☐Not functioning	☐Functioning ☐Partially functioning ☐Not functioning	☐Functioning ☐Partially functioning ☐Not functioning
3-2. Is the health facility accessible?		☐Yes, by what means? (_____) ☐No	☐Yes, by what means? (_____) ☐No	☐Yes, by what means? (_____) ☐No
3-3. Availability of	Electricity	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
	Water	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
	Medical Gas	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
	Communication	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
	Transportation	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
3-4. Availability of	Essential Drugs	☐Yes ☐No (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)
	Vaccines	☐Yes ☐No (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)
	Medical Equipment	☐Yes ☐No (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)
	Medical Supplies	☐Yes ☐No (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)
	Other (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)	☐Yes ☐No (_____)
3-5. Health Staff Working *Pls. Check either (#) or (%) /or both only if possible.*	Doctor	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Nurse	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Pharmacist	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Lab technician	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Midwife	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Community Health Worker	_____persons (#)	_____persons (#)	_____persons (#)
		☐< 50% ☐> 50%	☐< 50% ☐> 50%	☐< 50% ☐> 50%
	Remarks/Notes			

Draft Health Needs Assessment (HNA) Summary Report

1. EMT Information

EMT Information	Country / Organization:	Contact Person:
	Contact No:	Email:

2. HNA Site/Shelter Information

Date of Assessment (dd/mm/yy)		Date of Submission (dd/mm/yy)	
This HNA was done in: Pls. check the Box below & write the location of the site or shelter.			
☐ Site ☐ Shelter			
Security concerns or other information if any			

3. Critical Areas for Support

Action required by other clusters (if yes, please check ✓ the box (es) below.)

☐	**Health**	◇	Communicable Diseases	◇	Child Health	◇	Sexual& Reproductive Health	◇	MHPSS*	◇	Non-communicable Diseases	◇	Other health issue ( )
☐	**WASH****	☐	**Food Security**	☐	**Nutrition**	☐	**Shelter**	☐	**Other** ( )				

*MHPSS: Mental Health and Psychological Support, **WASH: Water, Sanitation and Hygiene

4. Situation of the Site / Shelter

Cluster	Critical Problem	Action Required by Local Authority

【Remarks if any】

20/4/2018

(Version-1-1)

Regional Collaboration Tool

Guidance Note for Health Needs Assessment

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1. Framework of Health Needs Assessment by EMTs

Objective of Conducting Health Needs Assessment (HNA)

To collect primary data which will identify the vital needs of the affected population and define the needs based response.

The information from HNA can be useful to mitigate the crisis impacts and take precaution for potential health risks. The relevant information can be shared with the local authority and other clusters/sectors for coordinated action

Role in Standard Operating Procedure (SOP)

One of the on-site operations described in “Emergency Response” in the draft SOP.

Primary Users

Emergency Medical Teams (EMT)

Consensus among AMS on HNA by EMTs

Although HNA by EMTs can be useful in actual operation:

- The main role of EMTs is to provide medical services so that conducting HNA is not compulsory; HNA can be one of the options for EMTs; and
- EMTs shall conduct HNA only if/when they have capacity (time, personnel and skills) and depending on the needs and decision of the local authority or the receiving country.

Intended Timing of Conducting HNA

EMTs may conduct HNA at any critical time of the disaster as required and/or requested by a local authority (e.g. PHEOC). However, it is more likely that EMTs conduct HNA after the acute phase of the disaster, as the main task of EMTs is to provide medical service to save lives in disaster affected areas.

Methodology

Primary Data Collection: The field data collected through community-level assessment.

The specific data collection techniques for Primary Data Collection are as follows.[1]

a. Direct Observation (DO): Structured (looking for) and unstructured (looking at) observation of the impact and situation of the affected community and population.
b. Key Informant Interview (KII) (and/or Community Interview): An individual with prior knowledge of the affected community is questioned to gather key information on the impact of the disaster and on priority community needs.

Please see Annex I and II for the brief descriptions of DO and KII.
Please see Annex III for the list of supplies and equipment for the field assessment.

Suggested Contents

The contents of HNA will include the following health and public health aspects (health related clusters[2]).

- Health Impact and Condition of the Affected Population
- Health Facilities and Services
- WASH (Water, Sanitation and Hygiene)
- Food Security
- Nutrition
- Shelter/Living Condition

Reporting Options

The results of HNA should be presented to the local authority and other concerned parties so as to take prompt and appropriate action. The information on other clusters should be later confirmed with public health teams or concerned cluster teams, and necessary operation/action should be left to them in case there is no public health personnel in the deployed EMTs.

The following are the suggested reporting options.

Option 1. Submit the filled HNA Form (This can be an attachment to the EMT-MDS Form)

Option 2. Incorporate the collected information into the EMT-MDS Daily Reporting Form, "Needs and Risks" Part as shown below

[1] Other technique will be Community Group Discussion, an interview of a group of individuals to obtain information through group interaction.

[2] Clusters are groups of humanitarian organizations, both UN and non-UN, in each of the main sectors of humanitarian action, e.g. water, sanitation, hygiene (WASH), health, food security, nutrition, shelter, logistics, protection, education etc. They are designated by the Inter-Agency Standing Committee (IASC) and have clear responsibilities for coordination.

Needs and Risks							
Immediate Report	51	☐	Unexpected death	Risks	59	☐	Shelter/Non food Item
	52	☐	National mandatory reporting diseases		60	☐	Food security
	53	☐	Critical / security incident to community	Operational Constrains	61	☐	Logistics /Operational support
	54	☐	Critical incident to EMT		62	☐	Supply
Risks	55	☐	Any other issue		63	☐	Human resources
	56	☐	WASH		64	☐	Finance
	57	☐	Community/rumor based infectious diseases		65	☐	Others
	58	☐	Environmental risk or exposure				
Detailed Comment for (No.)							
Detailed Comment for (No.)							
Detailed Comment for (No.)							

"EMT-MDS Daily Reporting Form (Ver0.94)"

Option 3. A revised draft HNA Summary Format will be tested in the 3rd Regional Collaboration Drill.

Option 4. If a local authority has an existing reporting format, EMTs may also utilize it.

Submission of HNA Summary Report

The EMT will submit a HNA Summary Report to EMTCC/PHEOC/MOH of the area of operation.

2. Interpretation of Some of the Terms

① A Draft HNA Form

Overall

-Additional information from each question can be reflected in the remarks/notes section under each set of questions.

-In the collection of data for specific questions, the interviewees (key informants) may be identified and noted down where required.

Page1

✓ **Site Information**

Since the administrative divisions vary country to country, replace the terms with ones most suitable in the local setting.

✓ **Access and Security**

"I" Any other security concerns

Examples can be the existence of hazardous objects and unexclusive ordinance, a tension among the population, environmental destruction (e.g., landslides) etc.

Page3

2. Public Health

✓ **Water**

2-1 Main sources of water for drinking

List of the sources for drinking water

- Piped water
- Public tap/standpipe
- Water well/ borehole (A borehole is a long, narrow well drilled to access underground water. The borehole is covered with a hand-pump to prevent contamination and to ease access.)
- Dug well (If a dug wells are open and unprotected, they can become very contaminated from spilt water, animal excreta and objects thrown into the well, posing a major risk to public health.)
- Spring
- Rainwater collection
- Bottled water
- Vendor-provided water
- Tanker truck water
- Surface water (river, stream, dam, lake, pond, canal, irrigation channel)

Sources: UNICEF, Projectacwa,

Basic Survival Water Use

Survival needs: Water intake (drinking and food)	2.5-3 litres per day	Depending on the climate and individual physiology
Basic hygiene practices	2-6 litres per day	Depending on social and cultural norms
Basic cooking needs	3-6 litres per day	Depending on food type and social and cultural norms
Total basic water needs	7.5-15 litres per day	

Source: The Sphere Project, p98

Page 4

✓ **Sanitation and Hygiene**

2-7 Problem with garbage/waste

All waste generated by populations living in the settlements is removed from the immediate living environment on a daily basis. If waste is to be buried on-site, it should be covered daily with a thin layer of earth to prevent it attracting vectors such as flies and rodents.

2-8 Stagnant water in the area

Stagnant water provides a better incubator than running water for many kinds of bacteria and parasites and can become a breeding ground for the mosquitoes.

✓ **Food Security and Nutrition**

2-13 What kinds of food available or provided

The food items listed here can be replaced with ones most suitable to the local context.

2-14 Food and Nutrition

Assess the changes in frequency, quantity and quality of meals compared to the situation before disaster.

2-15 Obvious signs of undernutrition in children aged 6-59 months

The most widely accepted practice is to assess malnutrition levels in children aged 6-59 months as a proxy for the population as a whole.

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3. Health Facilities and Services

For Type of Facility, please write appropriate name of the facility according to the country context.

3-5. Health Staff Working

Either the number or % of staff working can be filled out. Where possible, both the number and % can be filled out.

② A Draft Summary Report

Page2

3. Critical Areas for Support

On completion of the HNA, check the boxes of the Clusters in which action or furtherer assessment by concerned local authorities and/or agencies are required. For the Health Cluster, also check the sub-sectors as necessary. (i.e., Communicable Diseases; Child Health, Sexual & Reproductive Health, MHPSS-Mental Health and Psychological Support**,** Non-communicable Diseases and Other) .

Annexes

Annex I: Direct Observation Guidance Note

Annex II: Key Informant Interview Guidance Note

Annex III: Checklist of Supplies and Equipment for the Field Assessment

Annex I

Guidance Note of Direct Observation

**This is a general description of the Direct Observation.*

1. Brief Description of Direct Observation

Direct observation (DO) is a process of observing objects, people, events and relationships. Observation provides immediate information on water points, health facilities and other infrastructure such as public services and sanitation systems. It can be an easy means of gathering data on people's physical condition, activities and economic circumstances, power relationships within the community as well as coping mechanisms and access to aid. Direct observation can be done individually or with community members.

DO is used throughout the assessment process. It includes "structured (looking for) and unstructured (looking at) observation (sounds, smells, visual impression, taste and touch)." It is the fastest way to gather data in the immediate aftermath of an emergency, although it must be complemented by and verified against secondary data and local knowledge. It can be carried out in three ways: on foot, in ground vehicles, or by aerial observation. If possible, pre-crisis baselines should be established in order to ensure that observational analysis does not confuse acute and chronic problems.

Observation is a continuous process. However, certain points should be recorded systematically. These observations should be used to validate information obtained from other sources, for instance finding that what people say may be different from what they do. DO should pay additional attention to risks to impact affected communities. Observation can also provide new areas of investigation and sources of information (e.g. help identify key informants and how they interact with the community).

2. Strengths and Limitations

As explained, direct observation is a quick and cost-effective data collection method in an emergency. It helps to frame future discussions and cross-check people's answers in case of inconsistency between what you see and what you are told during interviews. However, as a data collection technique, it only provides a snapshot of the situation and has therefore limited use when the crisis evolves rapidly. Similarly, it provides only partial information about community's capacities and priorities. Finally, while it does not require specific training, some preparation is necessary to ensure that the observers are aware that their own perceptions and expectations are subjective and have an impact upon how they report and interpret their observations.

3. Process and Basic Principles of Direct Observation

The following is the process and basic principles of conducting DO.

<u>STEP1: Decide what areas you are going to focus your observations on</u>

While the team should always be carrying out informal observation, make a list of things to look for specifically.

STEP 2: Assign tasks

Make sure that all members of the team are assigned to observe certain things, although all members should be observing all aspects as well. By assigning specific areas to different team members, the team will ensure that all aspects are covered.

STEP 3: Start observation

The observer explains why they want to observe people at the site, asks permission from the people living there, and explains how the information collected will be used. A respectful entry to the affected area will aid in securing access and cooperation. Invite people living at the site to join the observation. Ask them questions about what you observe on the way and why things are as they are.

It is important to observe and detect conditions and particular features of the affected area from a range of viewpoints and places in order to get a representative view of the site, including an overall impression of the urgency of the situation. Look at what is there, what is not there and what should be. Depending on the security situation, walking across the site along a transect that does not follow existing lines such as roads or paths will provide a cross section of points for observation and provide a balanced view of conditions. Household visits should also be included if necessary.

Observation can be done on the area, demography, infrastructure, health, sanitation, water and other essential services, daily activities, visible vulnerabilities and capacities of the affected population etc. (For EMTs, observation may be focused more on health related aspects.). Key sites for observation include water collection points, markets, food distribution queues, latrines, communal showers, storage facilities, grave sites, and drug stocks in health facilities. If feasible, compare the observation with the key informant interviews as much as possible.

STEP 4: Record the data and review the progress

The team should be constantly observing, whether in a structured way or informally, and always take notes as details as possible. This will help the team to remember the context and increase the validity of the observation.

The team should aim to meet up at least once during the fieldwork at each site, to review progress and decide which parts of the checklist or which sources of information still need attention before leaving the site, so as to avoid gaps in essential data or avoidable uncertainty about important points. The team will probably not be completely effective during the first site visit. There are likely to be a number of problems such as the time allocations at the site, roles and responsibilities within the team, assessment methods etc. that should be addressed before moving on to the next location. After every successive site visit, there should always be a rapid team meeting to review progress and ensure the most effective use of precious time in the field.

Step 5: Debrief and summarize the information

Finally, a debriefing with all team members should be organized to tally up observations and pull together the final conclusions, as a first level analysis. Areas where team observations and population responses do not match can be highlighted so that discrepancies can be analyzed and triangulation needs identified.

At the end of the day, all notes should be put in a clean and concise format. This should be done by each individual so that the entire group will be able to understand the observations made during the data systematization. Careful recording and systematization of the information will contribute significantly to proper verification of the information by the community.

4. Aspects and Points of Observation

The following checklist helps to pick up visual clues. This is an overall list of observation, not limiting to health and health related aspects.

■ General area observations

- Terrain (dessert, mountain, etc.)
- Ground cover (grassy, sandy, barren, etc.)
- Presence of surface water (lakes, rivers)
- Status of local crops and vegetation
- Green spaces and playgrounds
- Road types and conditions, road blocks, amount of traffic
- Signs of flooding, environmental degradation, etc.
- Signs of fighting, landmines

■ Affected area observations

- Layout and organization (esp. living areas)
- Size and possibility for expansion
- Density (crowding)
- Population movements
- Geographic location (on hill, in valley, etc.)
- Air condition (too cold/too hot)
- Markets
- Religion – churches, mosques, temples, etc.
- Location of health facilities
- Water sources and sanitation
- Condition of electricity supply
- Condition of roads both at present and in rain
- Overall cleanliness
- Signs of gardens (crops) and animals (in field or roaming loose)
- Level of relief agency activity (e.g., people working, presence of relief supplies, trucks, etc.

■ Location observations

Visualize the information by a rough drawing of a map.

- Proximity to: any important site (e.g. border, main road, port, river)
- Towns/villages

- Roads/railways
- Surface water (lakes, rivers)

■ Affected population observations

- Overall condition (healthy, active, obviously malnourished, etc.)
- Friendliness/hostility/fear/depression
- Presence and appearance of children less than 5 years (skinny/oedema/normal)
- Presence and appearance of pregnant and lactating women
- Presence of elderly
- Appearance of wounded / traumatized

■ Detailed observations per sector

- Shelter: type, materials, number of shelter and number of homeless or other affected population displacement patterns
- Water: source, distance, quality and quantity, queuing, storage, spillage
- Sanitation and Hygiene: number, type and usage of defecation facilities, cleanliness, drainage and stagnant water, refuse disposal, availability of running water, functionality and type, washing facilities, soap availability and usage, vectors (flies, mosquitoes and rodents)
- Food and Food Security: presence of food stock at household level, malnourishment, markets, food distributions
- Health Services: number and types of facilities and level of functioning, number of patients waiting, staff presence, drug stocks
- Logistics and Security: condition of roads, transport, communication means, power supply, number, size and condition of warehouses, conditions of storage (pallets, temperature, etc.), supplies on hand, evidence of pests, security (guards, fences, lightening) and record keeping.

Annex II

Guidance Note of Key Informant Interview

1. Brief Description of Key Informant Interview

In addition to direct observation, Key Informant interview (KII) is a commonly used data collection technique for rapid or initial assessments. A KII is one where an individual with prior knowledge of the affected community is questioned to gather key information on the impact of the disaster and on priority community needs. KIIs can provide information about a community in a fairly short period of time and without a large number of people needing to be interviewed. It is important to carefully select informants so as to minimize bias in the assessment results. When time allows, more individual interviews should be conducted to get a range of opinions. Furthermore, cross-checking is necessary and should include a few interviews with members of vulnerable groups, wherever possible.

2. Strengths and Limitations

KIIs can be organized quickly and carried out with few resources. They have particular value in gaining a perspective of the impact of the disaster on a community where access to affected populations has been compromised or is difficult. They also provide a holistic and qualitative overview of the impact of a disaster on community members. The greatest limitation of a KI interview is that it provides a subjective perspective on the impact of a disaster. As with all individual responses, information will have both an individual and a cultural bias which needs to be considered when analyzing KII responses.

3. Process and Basic Principles of Key Informant Interview

<u>Step1: Before the assessment</u>

Plan the field data collection carefully. It is important for the team to inform the authorities of the assessment itinerary and bring credential letters to the assessment locations which explain the assessment objectives. Team members should be briefed on and understand the objectives, methodology and principles of the rapid assessment and the possible interventions that could be implemented as a result of it. Upon arrival in a location, the team should meet with community leaders to explain the visit and assessment methodology and request the leaders' support. Where there are no such obvious starting points, contacts with people in the street or in/around the administrative place can help identify people knowledgeable on the community situation

Step2: During the assessment

Selection of Key Informants (KIs)

The number of key informants (KIs) selected per site will depend on the range of issues about which each one has expertise/perspective. KIs must be selected to cover population profiles and figures/trends, security/access, protection, as well as water, environment and sanitation, food security/nutrition, shelter and health. When identifying KIs, remember to arrange interviews with individuals of different genders, ages, and religious and/or ethnic minorities to ensure a full picture of the affected community. Traditionally, KIs are religious or community leaders, or representatives of community-based organizations. Other KIs at each site would normally include health workers, teachers, community development workers, relief workers, traders and NGO program managers. All are likely to be sources of important information. Regular citizens can also be valuable KIs because they can share their representative and personal experience. For example, a young female household head may be able to highlight priority needs from the perspective of a mother.

Key Informants Checklist

- government officials / authorities
- embassies / donors
- UN Agency like UNHCR, UNICEF
- director of health, representative of Ministry of Health, health workers
- WFP and/or food distributors / relief agency
- administrator / senior relief officer
- representative humanitarian agency
- police/army/fire service/rescue services
- representatives of community (formal and informal leaders/members)
- village elders
- religious leaders
- doctors/nurses
- traditional birth attendants (TBAs)
- evacuation center focal point
- teachers, etc.

Conducting Interviews

After selecting KIs, give them an introduction to make sure that they understand the objectives of the interview and get their informed consent. Arrange place and time convenient for KIs.

The introduction includes:

- The survey objectives
- The estimated duration of the interview (no longer than 50 min)

- What the respondent can expect from the interview (compensation etc.)
- Information on how the survey results will be used and how the respondent can access the findings
- Confidentiality of the interview
- Informed consent:
  - All respondents know how the information will be used, why it is being collected, and by whom.
  - All are guaranteed that their participation will not jeopardize their safety or security.

All team members should convey a sense of empathy and respect. Good eye contact, confidence, and an approachable demeanor are all ways to achieve a positive interview experience. Express interest in the respondent's answers and be an active listener while remaining patient if/when an interviewee is having a difficult time answering questions. Start the interview with general questions about the situation and allow the interviewee to raise issues of concern to them before guiding the conversation to the subjects of interest to the assessment team. Be flexible and allow a natural flow of the discussion. Pausing allows respondents to think more about the questions. Take notes throughout the interview.

Combine interviews with observation to verify information and correct inconsistencies. Consider the needs of different groups and individuals, seek out marginalized groups and ensure their interests are taken into account. However, do not ask questions that may stigmatize people or endanger them and be careful not to raise unrealistic expectations of aid. Do not interpret, correct, argue, discuss, or judge respondents. When an interview does not yield the overall perspective needed, politely bring the discussion to an end, thank the interviewees for their time, and seek other KIs to talk with. Do not limit information to one KI's response. Triangulate by asking other KIs until you are confident that there is consensus on this point. At the end, make sure you summaries and feedback the most important points. Do not prevent KIs from asking you questions at the end of the interview. Finish with an informal chat and thank your respondent.

<u>STEP3: After the assessment</u>

Record metadata (such as date, location of interview, social role of interviewee, group represented by the interviewee, etc.) for each KI, as this information will be used in the interpretation of the data. As with direct observation, a debriefing should be organized to give team members the opportunity to discuss the strengths and weaknesses of the interviews and the interview process and compare findings, views and impressions. The team leader should gather observational information, anecdotes, or concerns not captured in the data collection form. Consider the reliability of the key informants as well as the team bias. All of this information should be considered and included in the final report.

Annex III

(Suggested) Checklist of Supplies and Equipment for the Field Assessment

The field assessment teams (EMTs) require appropriate logistics, administrative planning and support to complete the job properly and safely. The following is a suggested checklist with supplies and equipment the team may need while carrying out primary data collection in the field.

	No	✓	Note
Team Supplies			
Name tag, badge, or an identification/authorization from the local or health department etc.			
Visibility material (t-shirts, flags, stickers)			
Backpack			
First aid kit, Hand sanitizer			
Radio and/or satellite phone			
Cell phones and chargers, SIM card, phone credits			
Flashlights (torches)			
Camera			
Compass/GPS unit/area maps (plastic, if available)			
Laptop computer (if security conditions permit and power is available)			
Spare batteries and chargers for all devices			
Fuel			
Water and food (snacks), if supplies may be difficult to obtain in the areas to be visited			
Mosquito nets and/or repellants, if needed			
Internet sticks, backup storage devices			
List of contacts			
Items for Each Team Member's Use for Data Entry			
Phone/smartphone+applications (if applicable)			
Clipboard			
Paper			
Notebooks/notepads			
Calculator			
Pens, pencils and pencil sharpeners			
Erasers			
Stapler and pins			
Ruler			
Items for Community level Interviews			
Sufficient copies of:			
Key informant interview guide and HNA form			
Observation (transect walk) guide and checklist			

Reference Materials

- The ASEAN - Emergency Response and Assessment Team (ERAT) Guideline
- Multi-Cluster/Sector Initial Rapid Assessment (MIRA) - the United Nations Disaster Assessment and Coordination (UNDAC)
- Initial Rapid Assessment (IRA) materials by Inter-Agency Standing Committee-IASC
- Initial rapid multi-sectoral assessment materials of International Federation of Red Cross and Red Crescent Societies
- Assessment materials by the Assessment Capacities Project (ACAPS), Medicins Sans Frontieres (MSF) and others
- Community Assessment for Public Health Emergency Response (CASPER) Toolkit –Second Edition (Centers for Disease Control and Prevention National Center for Environmental Health Environmental Hazards and Health Effects Health Studies Branch)
- Rapid Health Assessment Form (Indonesia)
- Regional Rapid Health Assessment (Health Emergency Management Bureau, Republic of the Philippines Department of Health)
- The Sphere Project, Humanitarian Charter Minimum Standards in Humanitarian Response (2011)

Attachment 18：

APCDM Bangkok Presentations

ARCH Project

THE PROJECT FOR STRENGTHENING
THE ASEAN REGIONAL CAPACITY
ON DISASTER HEALTH MANAGEMENT

The 13th Asia Pacific Conference on Disaster Medicine
7 November 2016, Bangkok, Thailand

CONTENTS

1. Background
2. Outlines
3. Activities

BACKGROUND OF THE ARCH PROJECT

BASIC SURVEY

(THE SURVEY ON THE CURRENT SITUATION OF DISASTER/EMERGENCY MEDICINE SYSTEM IN THE ASEAN REGION)

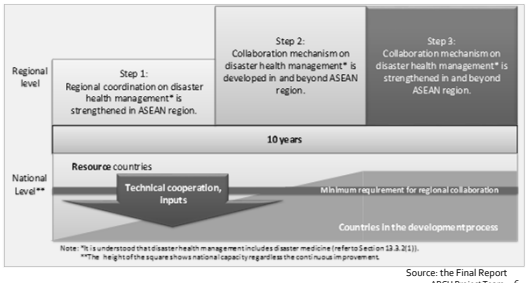
1. Period: Nov. 2014 – Aug. 2015
2. Methodology
   - ① In-country survey in all AMS (Dec. 2014 – Mar. 2015)
     - Field visit for three to five days per country
     - Document review
   - ② Collection of relevant international trends (UN, WHO, ASEAN, etc.)
   - ③ Meetings
     - The First Regional Meeting (Phuket, December 2014)
     - The Second Regional Meeting (Tokyo, March 2015)
     - The Third Regional Meeting (Bangkok, July 2015)

BASIC SURVEY: FINDINGS

- Every country has different situation; needs, priority, capacity, development plans, institutional arrangements, human resources, etc. (refer to "Summary of the Results of the In-country Survey")
- Needs for collaboration mechanism on disaster health management to exchange information in peacetime and emergency were pointed by many interviewees.
- Disaster health management should be well coordinated with other sectors, especially disaster management and emergency response.

BASIC SURVEY: RECOMMENDATIONS (1)

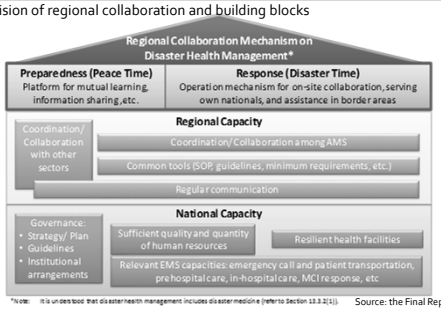
- To develop a regional collaboration mechanism in which regional EMTs are able to collectively respond to disasters occur in the region.



Source: the Final Report

BASIC SURVEY: RECOMMENDATIONS (2)

• Future vision of regional collaboration and building blocks



Source: the Final Report

RATIONALE

- June 2014, the 4th ASEAN Plus Three SOMHD, in Thailand, identified Disaster Medicine as one of the priorities under the ASEAN Plus Three Cooperation.
- Ministers' Meeting (AHMM), in Hanoi, **Disaster Health Management** was endorsed as one of the 20 Health Priority Areas of the ASEAN Post-2015 Health Development Agenda.
- The ASEAN Health Cooperation on Disaster Health Management currently being implemented through the ASEAN-Japan Collaboration Programme on Disaster Medicine spearheaded by Thailand; NIEM, and Viet Nam.

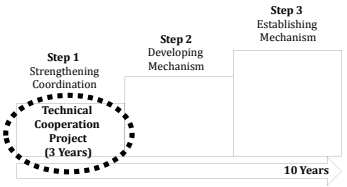
PROJECT FORMULATION

- July-August 2015, NIEM and JICA collaboratively propose The Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management
- September 2015, NIEM, as a representative of Thailand, proposed the said project to 10th SOMHD, Dalat, Vietnam, and the project was perfectly **endorsed.**
- February 19th, 2016, Secretary-General of NIEM and Chief Representative of JICA Thailand Office signed the Record of Discussion (R/D).

OBJECTIVES OF THE ARCH PROJECT

STEPS TO ASEAN COLLABORATION MECHANISM

(1) Steps



1st step aims at

a) Strengthening the regional coordination

b) Enhancing the capacity of each AMS

SCOPE OF ARCH PROJECT

- The Project mainly focuses on:
  - Coordination among emergency medical teams and the recipient, and team management relevant to disaster response in the health sector implemented by emergency medical teams.
- Type and scale of disaster mainly supposed in the project are:
  - Acute stage of sudden on-set disaster which may be supposed natural disaster, not limited, and may require external emergency assistance.

OVERVIEW OF ARCH PROJECT

- Period : from June 2016 to August 2019
- Executing Agency: National Institute for Emergency Medicine (NIEM), Thailand
- Major Concerned Agencies
  - Ministries of Health in ASEAN Member States
  - ASEAN Secretariat (Health Division and Disaster Management and Humanitarian Assistance Division)
  - ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)

OBJECTIVES OF ARCH PROJECT

- Project Purpose
  Regional coordination on disaster health management is strengthened in ASEAN.
- Outputs
  Output 1: Coordination platform on disaster health management is set up.
  Output 2: Framework of regional collaboration practices is developed.
  Output 3: Tools for effective regional collaboration on disaster health management are developed.
  Output 4: Academic network on disaster health management in AMS is enhanced.
  Output 5: Capacity development activities for each AMS are implemented.

ACTIVITIES OF ARCH PROJECT

ACTIVITIES OF ARCH PROJECT (1)

Major Activities	Outlines	Relevant outputs
Regional Coordination Committee (RCC) Meeting	• Overviewing project progress • Making recommendations on future coordination on disaster health management in ASEAN	1 Coordination platform
Joint Regional Drill	• Identifying challenges and issues on coordination among EMTs and team management through joint exercise • Testing draft coordination tools	2 Regional collaboration framework
PWG1 Meeting	• Developing draft coordination tools (SOP, minimum requirements, rapid health needs assessment, list of EMT personnel, etc.)	

ACTIVITIES OF ARCH PROJECT (2)

Major Activities	Outlines	Relevant outputs
PWG2 Meeting	• Planning and conducting trainings for AMS on disaster health management	5 Capacity development
Training for AMS	• Five-days training on team management, policy, human resource development relevant to disaster health management	
Study Tour in Japan	• Five-days tour to observe inter-sectoral coordination on disaster medical response in Japan	
Monitoring Survey	• Two-weeks survey to visit selected AMS to monitor effectiveness of the project activities and future challenges by the project team	
Academic Conference	• Participation/Presentation in APCMD, JADM and WADEM by the representatives of the project team	4 Network

FIRST RCC MEETING

- Date:
  29 and 30 September 2016
- Place:
  Bangkok, Thailand
- Participants:
  AMS, ASEAN Sec., AHA Centre, JICA
- Conclusions:
  TOR of RCC and PWG were finalized.

START-UP DRILL

- Date and place: 17 – 19 January 2016, Bangkok, Thailand

Attachment 19 :

REMPAN Presentations

ARCH project on strengthening regional preparedness to health emergencies in ASEAN Member States

The 2nd Asian REMPAN Workshop
on Public Health Response to Radiation Emergencies, Inchon, Korea
06 December 2016

Keiko Nagai, Team Leader, ARCH Project

Background

- In the ASEAN region, a total of 425,000 people were dead and 675,000 people were injured with an economic loss of US$122 billion due to natural disasters from 1975 to 2015, which disturbed economic growth, human security and well-being.
- The ASEAN formulated the ASEAN on Disaster Management and Emergency Response (AADMER) in 2005 and the ASEAN Declaration on Enhancing Cooperation in Disaster Management in 2013.
- The ASEAN defined disaster health management as one of the priority issues in the health sector in **the ASEAN Post-2015 Health Agenda**.
- Basic survey on disaster medicine and emergency medical services in ASEAN was conducted from 2014 to 2015.
  (Final Report: http://libopac.jica.go.jp/images/report/12237384.pdf)

ASEAN Post 2015 Health Development Agenda for 2016 to 2020

Cluster	Goal 2020	Health Priorities
1. Promoting health lifestyle	a) To achieve maximal health potential of ASEAN community through promoting health lifestyle b) To ensure health lives and promote well being for at all ages	I. Prevention and control of non-communicable diseases (NCDs) II. Reduction of tobacco consumption and harmful use of alcohol III. Prevention of injuries IV. Promotion of occupational health V. Promotion of mental health VI. Promotion of healthy and active aging VII. Promotion of good nutrition and healthy diet
2. Responding to all hazards and emerging threats	a) To promote resilient health system in response to communicable diseases, emerging infectious diseases, and neglected tropical diseases b) To respond environmental health threats, hazards and disaster, and to ensure effective preparedness for disaster health management in the region	VIII. Prevention and control of communicable diseases, emerging infectious diseases and neglected tropical diseases IX. Strengthening laboratory capacity X. Combating antimicrobial resistance (AMR) XI. Environmental health and health impact assessment (HIA) XII. Disaster Health Management
3. Strengthening health system and access to care	a) The ASEAN community has universal access to [essential] health care, safe and good quality medical products including traditional and complementary medicines b) To achieve the unfinished health related millennium development goals (MDGs), in light with sustainable development goal (SDG)	XIII. Traditional medicine XIV. Health related MDGs (4,5,6) XV. Universal Health Coverage (UHC) XVI. Migrants' health XVII. Pharmaceutical development XVIII. Human resources development XIX. Healthcare financing
4. Ensuring food safety	a) To promote access to safe food, safe drinking water and sanitation	XX. Food safety

Relevant Progress in ASEAN

- ARCH Project was endorsed through ad referendum at the level of SOMHD and Committee of Permanent Representatives to ASEAN by December 2015.
- The first Meeting of Health Cluster 2 in July 2016, as hosted and chaired by SOMHD Malaysia, included ARCH Project in its Work Plan for 2016 to 2020.
- Declaration on One ASEAN One Response was signed by ASEAN Summit Leaders on 6 Sept 2016 in Vientiane, Lao PDR.
- The second Meeting of Health Cluster 2 in 29-30 November 2016 will further refine the cluster-approved Work Plan.

Project Information

- **Project Tytle:**
  The Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project)
- **Period:** July 2016 – August 2019
- **Type:** Technical Cooperation
  (Japan International Cooperation Agency: JICA)
- **Target:** ASEAN Member States (Lead countries: Thailand and Viet Nam)
- **Executing Agency:**
  National Institute for Emergency Medicine (NIEM), Thailand
- **Major Concerned Agencies:**
  - Ministries of Health in ASEAN Member States
  - ASEAN Secretariat (Health Division and Disaster Management and Humanitarian Assistance Division)
  - ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)
- **Project Purpose:**
  Regional coordination on disaster health management is strengthened in ASEAN.

Scope of ARCH Project

- Preparedness, especially;
  - **coordination** among emergency medical teams and the recipient, and
  - **team management** relevant to disaster response in the health sector implemented by emergency medical teams.
- Type and scale of disaster mainly supposed in ARCH project are:
  - **Acute stage** of **sudden on-set disaster** which may be supposed **natural disaster, not limited,** and may require external emergency assistance.

Expected Outputs

1. **Coordination platform** on disaster health management is set up.
2. **Framework of regional collaboration** practices developed.
3. **Tools for effective regional collaboration** on disaster health management are developed.
4. **Academic network** on disaster health management in AMS is enhanced.
5. **Capacity development** activities for each AMS are implemented.

Activities for Output 1: Coordination Platform

1. **Organizing Regional Coordination Committee Meeting**
   - Participated by 2 each from AMS and relevant stakeholders
   - Share the conceptual framework, outlines and work plan of the project;
   - Oversee and facilitate progress of project activities;
   - Exchange views and decide on any major issues that arise through the project activities, including the regional collaboration drills, development of regional collaboration tools and trainings;
   - Review, provide guidance and approve the draft regional collaboration tools;
   - Discuss and provide direction for relevant issues in order to promote regional coordination on disaster health management, especially disaster medicine; and
   - Make appropriate recommendations to ASEAN, through the Health Cluster 2 and Senior Officers' Meeting for Health Development (SOMHD), for the future collaboration mechanism on disaster health management.

Activities for Output 2: Regional Coordination Framework

1. Designing and implementing the regional collaboration drill
2. Compiling recommendations on regional collaboration on disaster health management based on the discussion and knowledge sharing through project activities

Activities for Output 3: Regional Collaboration Tools

1. Developing;
   - Draft regional SOP,
   - Draft minimum requirements of emergency medical team (EMT) members, and
   - Draft framework of health needs assessment in emergencies

   ➡ to be submitted to ASEAN
2. Preparing databases of emergency medical teams of AMS

Activities for Output 4: Academic Networking

1. Presenting progress/ outputs of ARCH Project in relevant academic conference
   - Asia Pacific Conference on Disaster Medicine (APCDM)
   - Japan Association for Disaster Medicine (JADM)
   - World Association for Disaster and Emergency Medicine (WADEM)

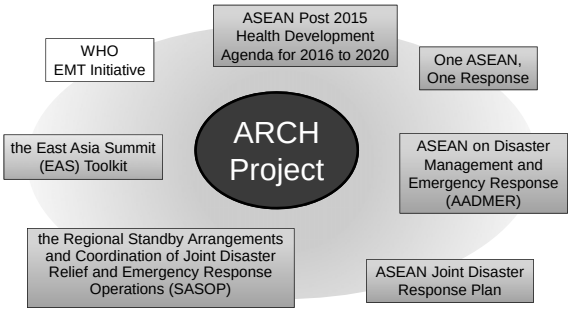
Activities for Output 5: Human Resource Development

1. Designing and conducting training program on disaster health management and emergency medical system
2. Conducting monitoring survey in selected ASEAN Member States on effectiveness of the trainings and project activities
3. Conduct a study tour in Japan

Progress of ARCH Project

- The first Regional Coordination Committee Meeting, 29-30 Sep. 2016
  - Final draft TOR for the Regional Coordination Committee, Project Working Group 1 & 2 were agreed.
- Presented the project outline in 13th APCDM, Bangkok, Thailand,6-8 Nov. 2016
- The Start-up Drill and the first meetings of Project Working Group 1&2, 17-20 Jan. 2017

ARCH Project references to ...



Thank you!

Attachment 20：

JADM Presentations

ARCH Project

THE PROJECT FOR STRENGTHENING

THE ASEAN REGIONAL CAPACITY

ON DISASTER HEALTH MANAGEMENT

The 22th Annual Meeting of Japanese Association for Disaster Medicine
14 January 2017, Nagoya, JAPAN

ARCH Project

ASEAN災害医療連携強化プロジェクト

The 22th Annual Meeting of Japanese Association for Disaster Medicine
14 January 2017, Nagoya, JAPAN

ONE ASEAN ONE RESPONSE

ASEAN Declaration on One ASEAN One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region" at the 28th ASEAN Summit in Vientiane

2016年9月13日採択

本プロジェクトの背景

- ASEAN災害医療・救急医療に係る情報収集・確認調査
  - 期間：2014年11月～ 2015年8月
  - 方法
  1) ASEAN10カ国における国別現地調査 (2014年12月 – 2015年3月)
  2) 上記の国別調査結果および国際潮流の分析から課題を抽出
  3) 3 回にわたって開催された地域会合における協議

『ASEAN災害医療・救急医療に係る情報収集・確認調査』の成果

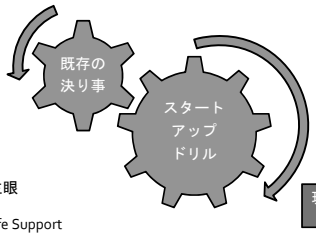
- 各国の多様な実情を共有
  - 災害医療のニーズ、優先順位、現有能力と強化計画、施設、人的資源等
  - 基本となる救急医療の整備状況や運用方法等
- 「保健における災害管理 （disaster health management）」に関する連携の仕組み構築のために、平時の情報交換の必要性の確認
- 各国の災害対応体制下で、他セクターとの十分な調整が「保健における災害管理」の実効性を担保することの共通認識

START-UP DRILL 2017/1/17-19

・Video

プロジェクトの進め方

• 既存の仕組み/ 取り決め
（SASOP/ EAS toolkit/ WHO EMT standard 等）



シナリオの主眼
• 情報管理
• Disaster Life Support

現状の課題・問題点
の抽出と共有

チェックアップ・シートの活用

- 机上訓練/野外訓練はどうでしたか？
- 机上訓練/野外訓練から何を学びましたか？
- 学んだことを基にして何を改善しますか？

スタートアップドリルの成果

チームの能力強化	チーム間協力に関する能力強化
隊員の能力強化	地域内での協力に関する能力強化

チームの能力強化

- 共通した用語・医療情報管理・治療方法に基づく活動
  - 緊急医療チーム、緊急医療チームの調整チーム（EMTCC Team）、公衆衛生評価チーム、災害管理やリスクマネージメント等の訓練
  - リーダーシップやチームワークの涵養技術の習得
  - サバイヴァルや自己安全や飲料水確保の技術習得
  - 被災地に合わせた活動や生活方法の技術習得
- 生活および医療活動のための装備・資機材
- ロジスティックスの確保と在庫管理
- 情報共有の仕組み（無線の使用方法）
- 各国が所有する米国FDA承認認証を受けた医薬品・医療機器や患者搬送体制への配慮

隊員の能力強化

- 標準運用手順の準拠
  - Advance Trauma Life Support (ATLS)（医師および看護師）
  - 健康危機管理（public health emergency management）
  - リスク評価と安全管理・サヴァイヴァル技術
- 共通理解すべき項目
  - ICS の考え方
  - 共通の行動規範に基づく活動の標準化
    Sphere standard, Core Humanitarian Standard, Good enough guide 等
- 国際潮流と実災害対応の共有

チーム間協力に関する能力強化

- 共通書式の使用
  - 日報
  - チーム登録
  - 公衆衛生に関する評価結果
  - 診療録
  - 患者紹介
  - 報告のまとめ
- 標準運用手順の確立
  - 緊急医療チーム(Type 1, 2, 3)
  - 調整組織（EMTCC, EOC, AHAセンター, UN OCHA 等.）
- 情報管理と共有の方法
- 競合や矛盾の解決（Conflict resolutions）

地域内での協力に関する能力強化

- ２つのWHO地域事務所でASEAN10カ国が分割されている現状を踏まえた協力体制の標準運用手順
- 各国の国際派遣医療チームの情報共有
- 現行の標準運用手順やハンドブックの簡素化と周知
- 用語や略語の統一
- 国際標準（WHO-MDS）や地域基準に準拠したアセスメント様式、診療記録および日報の標準化
- 標準化された対応と臨機応変な対応のバランスの取り方
- 国際派遣緊急医療チーム間の協力に関する好事例の収集と共有

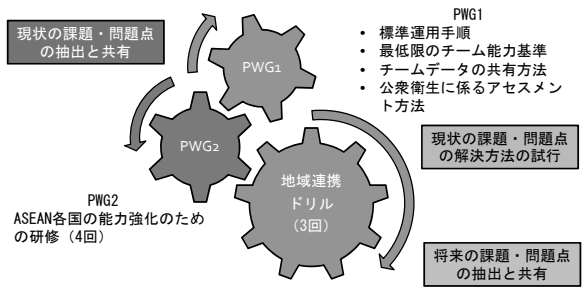
今後の検討課題

- 全ASEAN加盟国の参加（今回はミャンマーとシンガポールは不参加）
- ドリル期間の延長と毎年のドリル開催
- 各国混成チームによる実践訓練
- WHO, JDR, AHA Centre等の多機関の協力体制の標準運用手順の構築
- 各国の保健省へのドリル参加報告
- 国内の医療機関へのドリル経験の周知
- 国内での国際派遣医療チームの整備・発展
- 救急医療体制への支援
- 緊急時の医療対応への住民の参画

各ドリルにおける目的

スタートアップ ドリル	• 病院内と被災地での診療提供の方法の違いを明確化する • 既存の仕組み/ 取り決め（SASOP/ EAS toolkit/ WHO EMT standard 等）を理解し、それらに従った地域連携と協力を行う
第１回地域連携ドリル	• 共通した報告様式を用いて各緊急医療チームの活動を保健省や緊急医療チーム調整グループ(EMTCC)に報告する
第２回地域連携ドリル	• 共通した診療録を用いて緊急医療チーム間の患者転送を実施する
第３回地域連携ドリル	• 共通したアセスメント方法を用いて被災コミュニティーの状況を評価する

プロジェクトの進め方



PWG: Project Working Group

ARCH PROJECTは
４回のドリルを通じて成長していく

Attachment 21 :

WADEM Presentations

WADEM

CS35-02:

Overview of The Project for Strengthening
the ASEAN Regional Capacity on Disaster Health Management

ARCH Project

Mr. PHUMIN SILAPUNT, M.D.

Mr. Yasushi Nakajima, M.D.

WADEM

CS35-02 : Overview of The Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management

The authors declare there is no conflict of interest.

Presenting Author: Mr.Phumin Silapunt, M.D.

Co-Authors: Mr.Yasushi Nakajima, M.D.

WADEM

ARCH Project

A project conducted by
National Institute for Emergency Medicine, Thailand (NIEM)
and Japan International Coordination Agency (JICA)
under ASEAN – Japan health collaboration.

WADEM

ONE ASEAN ONE RESPONSE

ASEAN Declaration on One ASEAN One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region.

The 28th ASEAN Summit in Vientiane, September 13, 2016

WADEM

The Survey on the Current Situation of Disaster/ Emergency Medicine System in the ASEAN Region

- Every country has different situation; needs, priority, capacity, development plans, institutional arrangements, human resources, etc.
- Needs for collaboration mechanism on disaster health management to exchange information in peacetime and emergency were pointed by many interviewees.
- Disaster health management should be well coordinated with other sectors, especially disaster management and emergency response.

WADEM

Scope of ARCH project

•The Project mainly focuses on:

–Coordination among emergency medical teams and the recipient, and team management relevant to disaster response in the health sector implemented by emergency medical teams.

• Type and scale of disaster mainly supposed in the project are:

–Acute stage of sudden on-set disaster which may be supposed natural disaster, not limited, and may require external emergency assistance.

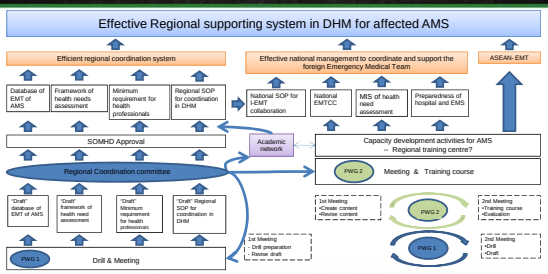
WADEM

Objectives of ARCH project

- Project Purpose
  Regional coordination on disaster health management is strengthened in ASEAN.

- Outputs
  Output 1: Coordination platform on disaster health management is set up.
  Output 2: Framework of regional collaboration practices is developed.
  Output 3: Tools for effective regional collaboration on disaster health management are developed.
  Output 4: Academic network on disaster health management in AMS is enhanced.
  Output 5: Capacity development activities for each AMS are implemented.

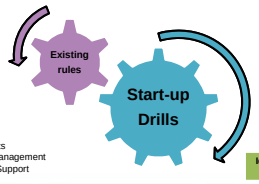
WADEM



WADEM

Process of The Project

- Existing mechanism / platform / tools such as the SASOP/ EAS toolkit/ WHO EMT standard



Scenario Concepts
- Information Management
- Disaster Life Support

Identifying/Sharing the Challenges

WADEM

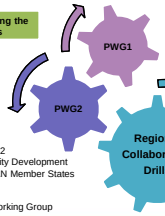
Result of The Start-up Drill

Team Capacity Building	Team Collaboration Capacity Building
Personal Capacity Building	Collaboration Capacity Building

WADEM

Process to The Goal

Identifying/Sharing the Challenges



PWG1
- Standard Operation Procedure
- Minimum Requirements
- Database
- Health Needs

Trials for Solutions on the Challenges

PWG2
- Training on Capacity Development Activities for ASEAN Member States

Identifying/Sharing the Further Challenges

PWG: Project Working Group

WADEM

The Project will Flourish through the four Drills

WADEM

Any
Question?

Thank you so much
for your kind attention.

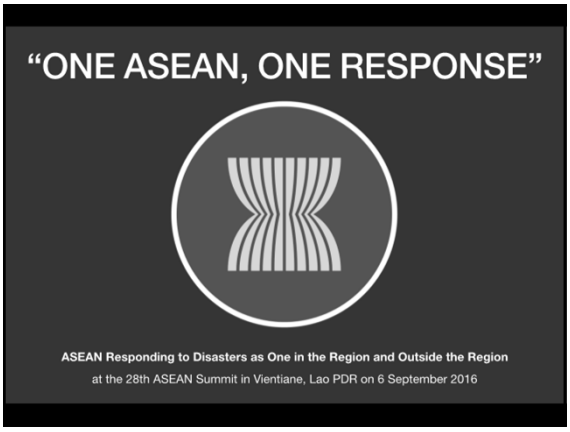
Attachment 22 :

JADM Presentations

ASEAN-Japan collaboration for future vision of ASEAN Disaster Medical System

Introduction

ARCH project
中島康



ARCH project

ASEAN REGIONAL CAPACITY
ON DISASTER HEALTH MANAGEMENT
project

ASEAN災害医療連携強化プロジェクト

ARCH プロジェクトの立ち位置

- **期間：2016年7月から3年間**
- **技術協力プロジェクト：**
  タイと日本の二国間合意
- **ASEAN公式案件：保健分野の成果**
- **目標：ASEAN地域の災害医療に係る**
  調整機能が強化される

ARCH プロジェクトの５つの成果

- **協力の調整を担う場ができ上がる**
- **地域連携の実践訓練を行う**
- **地域連携の仕組みが育まれる**
- **学術的な交流が活性化される**
- **各国の災害対応能力強化が促進される**

ARCH

REGIONAL CAPACITY

地域内で手を携えて災害対応するには
派遣された緊急医療チーム (I-EMT) の
調整・協力のための共通した対応手順
(Standard Operating Procedure: SOP)を
共同開発する必要がある

ARCH

地域連携ドリル

Dr Prasit Wuthisuthimethawee

- 協力の調整を担う場ができ上がる
- 地域連携の実践訓練を行う
- 地域連携の仕組みが育まれる
- 学術的な交流が活性化される
- 各国の災害対応能力強化が促進される

ARCH

DISASTER HEALTH MANAGEMENT

災害多発地域であるASEANにおいて
保健医療分野における災害対応の準備を
推進していくための
地域連携の枠組みと教育・訓練体制を
創造していく必要がある

ARCH

ASEAN災害医療システム

Dr Phumin Silapunt

- 協力の調整を担う場ができ上がる
- 地域連携の実践訓練を行う
- 地域連携の仕組みが育まれる
- 学術的な交流が活性化される
- 各国の災害対応能力強化が促進される

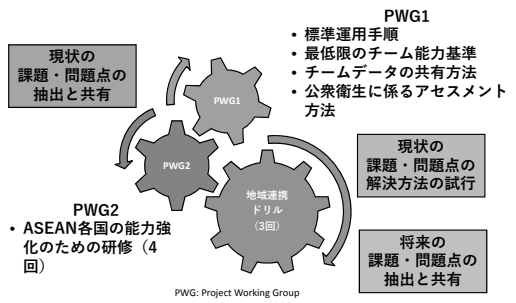
地域連携ドリル

これまでのドリルの概要と今後の展望

Dr Prasit Wuthisuthimethawee

本プロジェクトは、
4つのドリルを通じて発展する

目標達成プロセス

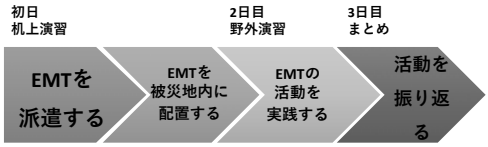


PWG: Project Working Group

各ドリルで使用されたツール

1. スタートアップドリル（SD）、および種々のギャップを明らかにするため
   - SASOP、EASツールキットおよびWHOのEMTガイドラインなどの既存ツール
2. 地域連携ドリル1（RCD1）
   - 共通報告フォーム、WHOのEMTCCハンドブック、医療ニーズアセスメントフォーム
3. 地域連携ドリル2（RCD2）
   - 共通診療記録フォーム、WHOのEMTCCハンドブック、医療ニーズアセスメント　フォーム
4. 地域連携ドリル3（RCD3）
   - 共通アセスメントツール

ドリルの日程



スタートアップドリル

スタートアップドリルの4ステーション

ステーション1：EMTCCとAHAセンター

ステーション2：タイプ1　訪問診療

ステーション3：タイプ1　クリニック

ステーション4：タイプ2　日本（JDR01/02）と共同

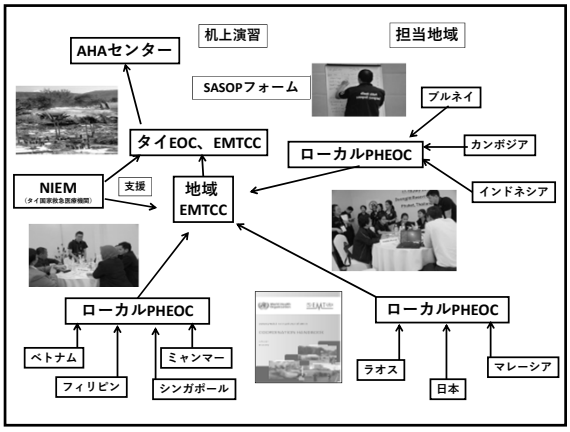
（JDR:国際緊急援助隊）

見えてきた課題

チーム能力の強化（ASEAN加盟国向け研修トピック）	チームならびに調整能力の強化（標準手順書）
• ASEAN加盟国（AMS）の防災トレーニング • 災害時の診療マネジメントを標準化する	• 災害対応を改善するために、AMSの参加者が頻繁に合同トレーニングを行う
個人能力の強化（ミニマム・リクアイアメント）	**調整能力の強化（例：ASEAN標準手順書、WHOのEMTCCハンドブック）**
• 災害時の生命維持 • 災害状況に順応することを学ぶ • 自己完結であること • 基本的なサバイバル術を学ぶ	• AMSに研修モジュールを普及させる • EMTCC/EOCハンドブックを全AMSに配布する • ガイドラインをすべてのAMSに配布する

見えてきた課題

将来のための検討事項
• 今回のトレーニングの報告書を各国の保健省に送付する
• 今回習得した内容を各国で医療施設に普及させる
• 救急医療サービスを設立し、EMTを養成する方法について、保健省と会合を持つ
• すべてのASEAN加盟国をこのトレーニングに参加させる
• ドリル日程の延長する
• 複数の国からチームで参加する実践的なトレーニングを企画する
• 所定のトレーニングコースの登録ボランティアとして、実施中のトレーニングを受ける
• WHO、JDRおよびAHAセンターとの、良質な協力標準手順書をつくる
• EMTへの出資および支援が得られる



良かった点	改善すべき点
• 日時および開催地	
• 宿泊施設および交通機関	
• 導入セッション	• EMTタイプまとめ • 患者照会システム
• プレゼンター	
• フォーマット	• 医療ニーズアセスメントの業務
• ファシリテーター	• より多くのファシリテーター、共通目的意識、経験、技量
• 机上演習から野外演習まで、シナリオがよく練られていた	• より長い野外演習、臨床の強化、同一地域にチームが重複
• しっかりと準備されたフォーム類	

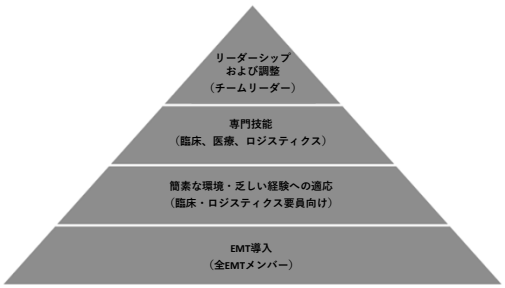
良かった点	改善すべき点
	• 共通のコミュニケーション規範、演習および手順書を普及させる
• 目的が達成された	• フォームの使い方に関する議論 • 現実的な税関・出入国管理・検疫の手続き • 供給地域 • レクリエーション用ステーション • より多くの照会医療施設
	• 医療チェックリスト

フォーム	調整プロセス
• 重複のない、簡潔なものであるべき • 明確な定義 • 文字サイズ拡大 • クラウド、アプリケーション、電子化されたフォーム	• 関連他組織との調整 • 患者照会システム • 代替コミュニケーション
技術的能力向上	**マネジメント能力強化**
• 基本技能 • 医療器材ならびに医薬品の標準化 • 業務並びにアクションカード用のチェックリスト • トリアージ・システムの標準化 • 5Cトレーニング	• チームマネジメント • EMTCC、EOCならびにEMTの調整 • ワークフロー

能力強化

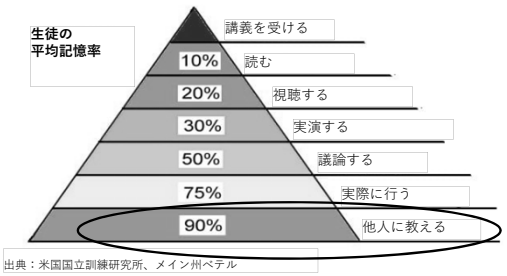
- 技術面
  - EMTカリキュラム、分類（臨床指導、看護指導）
  - EMT向け標準手順書
  - 5C： 指令（command）、統制（control）、調整（coordination）、伝達（communicate）、協力（cooperation）
  - トリアージ・カテゴリーの標準化

EMTのトレーニング階層



第2回地域連携ドリルのコンセプト

学習ピラミッド



出典：米国国立訓練研究所、メイン州ベテル

今後の展望

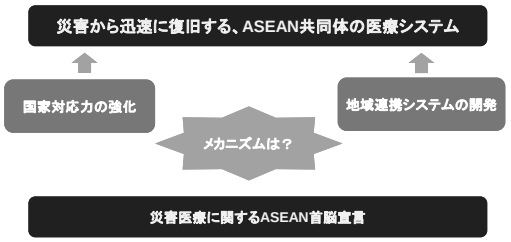
- AHAセンター調整
- 共通トリアージ・システム
- EMTCCの調整における活動の強化

ASEAN
災害医療システム

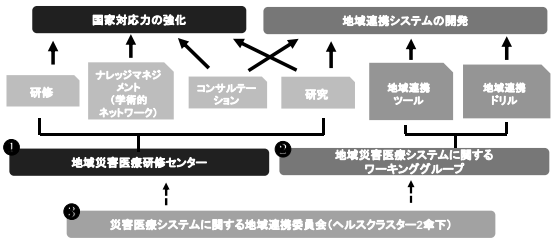
ビジョンの実現に向けて

Dr. Phumin Silapunt

最終目標



メカニズム



2025年までのビジョン

「ASEANは、災害から迅速に復旧する医療システムを持続的に開発するために、効果的な地域協力メカニズムを保有する」

メカニズム

1) 地域災害医療トレーニングセンター
2) 地域災害医療システムに関するワーキンググループ
3) 災害医療に関する地域調整委員会

共に歩むには？

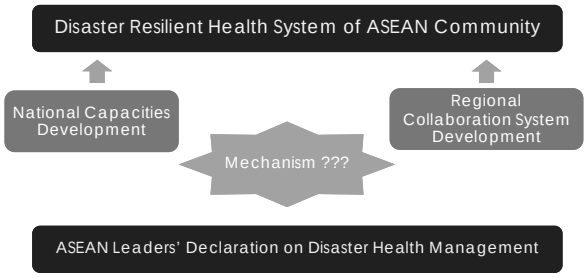
1) 学術的ネットワーク
2) コンサルテーション・グループ
3) トレーニング
4) 共同研究推進

ASEAN
DISASTER MEDICAL SYSTEM

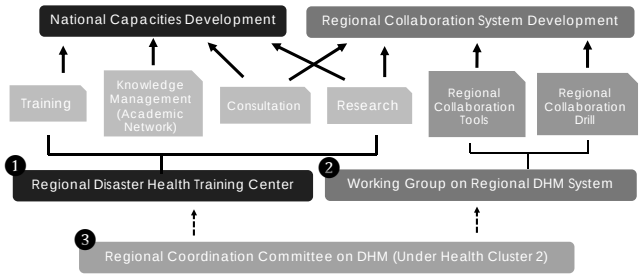
How does vision become reality?

Dr. Phumin Silapunt

ULTIMATE GOAL



MECHANISM



VISION by 2025

"ASEAN has the effective regional collaborative mechanism for the sustainable development of disaster resilient health system."

MECHANISM

1) Regional Disaster Health Training Center
2) Working Group on Regional Disaster Health Management System
3) Regional Coordination Committee on Disaster Health Management

HOW CAN WE WALK TOGETHER?

1) Academic Network
2) Consultation Group
3) Training
4) Co-conducting Research

THANK YOU

Regional Collaboration Drill

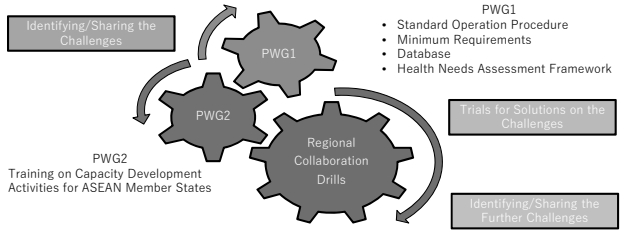
Overview from previous drills and the way forward

The Project will flourish through the four Drills

Objectives of the Four Drills

1. **Start-up Drill (SD)**
   - To identify different gaps between medical procedures provided at a hospital and in the field.
   - To understand that the regional coordination and collaboration tools in the health sector need to be more in details than the existing tools such as the SASOP/EAS toolkit/ the EMT guidelines.
2. **Regional Collaboration Drill 1 (RCD1)**
   - To report the activities of each team to the EMTCC using a common reporting form.
3. **Regional Collaboration Drill 2 (RCD2)**
   - To provide a referral between the teams using a common medical record form.
4. **Regional Collaboration Drill 3 (RCD3)**
   - To assess the situations of affected communities using the common assessment tools.

Process to THE Goal



PWG: Project Working Group

Tools Used in Each Drill

1. **Start-up Drill (SD)**, and to identify diversities of the gaps

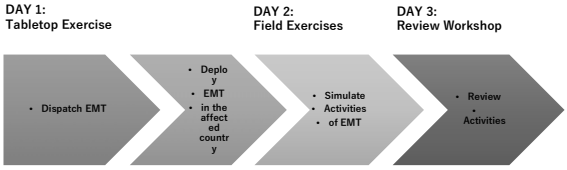
   - Existing tools such as SASOP/ EAS toolkit/ WHO EMT guidelines
2. **Regional Collaboration Drill 1 (RCD1)**

   - Common reporting form, WHO EMTCC handbook, Health need assessment form
3. **Regional Collaboration Drill 2 (RCD2)**

   - Common medical record form, WHO EMTCC handbook, Health need assessment form
4. **Regional Collaboration Drill 3 (RCD3)**

   - Common assessment tools

Drill Schedule



Start-up Drill

The most important drill in the project

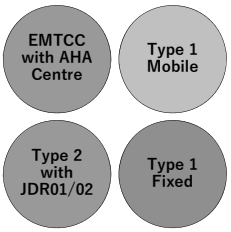
Four Stations in the Start-up Drill

Station 1: EMTCC with AHA Center

Station 2: Type 1 Mobile

Station 3: Type 1 Fixed

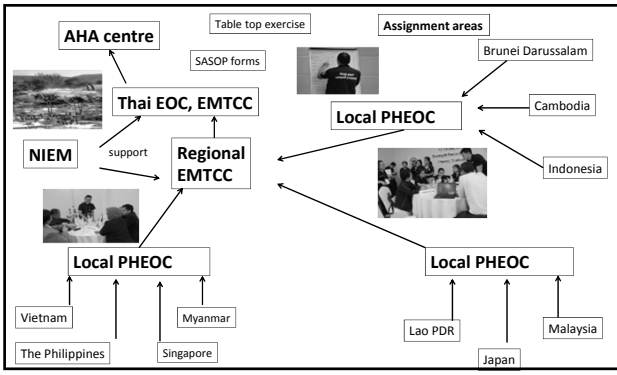
Station 4: Type 2 with Japan (JDR) 01/02



Malaysia Team Capacity Building (Possible Topics for the AMS Trainings)	Team/Collaboration Capacity Building (ARCH Project Tools: SOP)
Disaster training among AMS Standardise clinical management bin disaster	- For AMS participants to frequently train together to improve our response during disaster.
Personal Capacity Building (ARCH Project Tools: Minimum Requirements)	**Collaboration Capacity Building (e.g. ASEAN SOPs/ WHO EMTCC Handbook)**
• Disaster Life Support • Learn to adapt in a disaster situation (working/living in disaster affected areas) • Learn to be self-sufficient, and basic survival skills	• Standardise training module among AMS • EMTCC/EOC functions handbook distribute to all AMS • Guidelines distribute to all AMS

Issues for the future consideration

- Send report of this training to MOH .
- Dissemination this lessons learned to Health facility
- Meeting with MOH how to set up and develop EMSs and EMT
- To include all AMS to participate in the training
- To lengthen drill period
- Practical training by participating in teams from multiple countries
- Taking ongoing training as a registered volunteer of a given training course
- Good cooperation SOP with WHO, JDR, and AHA Centre
- Funding and support for EMT



Good	Opportunity
Time and Venue	
Accommodation & transportation	
Introduction session	EMT type summary Referral system
Presenter	
Format	Task of HNA
Facilitators	More facilitators, common focus, experienced, skills
Scenario well planned, table top → field exercise	Longer FTX, Clinical enhancement, overlap of team in same area
Well prepared forms	

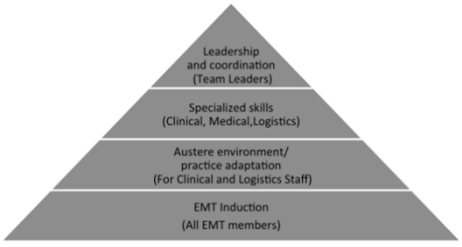
Good	Opportunity
	Standardize the common communication discipline, exercise, manual
Objective is achieved	Discussion how to use the form Realistic CIQ processes Supply area Recreation station More referral hospital
	Medical checklist

Forms	Coordination processes
Should be concise, no duplication Clear definition Increase text size Cloud, Application, Electronic forms	Coordination with other relevant organizations Referral system Alternative communication
Technical Capacity Building	**Management Capacity Building**
• Basic skills • Standardize equipment and medicine • Checklist for tasks and action cards • Standardize triage system • 5Cs training	• Team management • EMTCC/EOC/EMT coordination • Workflow

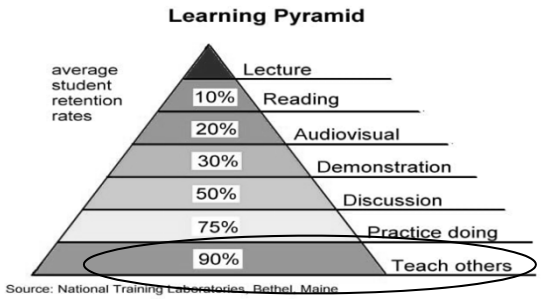
Capacity building

- **Technical aspect**
  - **EMT curriculum, classification (clinical lead, nursing lead)**
  - **SOP for EMT**
  - **5Cs (command, control, coordinate, communicate, cooperation)**
  - **Standardize triage categories**

EMT Training Pyramid



Concept of 2nd RCD



The Way Forward

- The AHA centre coordination
- Common triage system
- More activities in EMTCC coordination and