

Mongolia
National Emergency Management Agency (NEMA)

**THE PROJECT FOR STRENGTHENING
THE NATIONAL CAPACITY OF EARTHQUAKE
DISASTER PROTECTION AND PREVENTION
IN MONGOLIA**

PROJECT COMPLETION REPORT

ANNEX I

JANUARY 2020

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

KOKUSAI KOGYO CO., LTD.

OYO INTERNATIONAL CORPORATION

URBAN DISASTER RESEARCH INSTITUTE

GE
JR
19-077

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PROJECT COMPLETION REPORT

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ANNEX I

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ANNEX I

ANNEX 1 Results of the Project

Assignment title	Name	AFFILIATION	Trips	Fiscal Year 2016			Fiscal Year 2017			Fiscal Year 2018			Fiscal Year 2019			Total days	Site Domestic				
				Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct			Nov	Dec	Jan	Feb
Team Leader/integrated disaster management I	Kiyotaka OHDA	OCG	Plan Actual record	2.0.10															18	0.90	
				11.22(1)	12.22(1)	3.21	3.22	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)											18
Disaster management plan I	Osamu NISHII	OIC	Plan Actual record	2.0.10																21	1.05
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								21	1.05
Disaster management information II	Akhiro FUJITA	OCG	Plan Actual record	2.0.10																2	0.10
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								2	0.10
Earthquake resistance design	Seiichiro FUMISHIMA	OCG (BK)	Plan Actual record	2.0.10																28	1.40
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								28	1.40
Earthquake resistance design	Hideo OMINE	OCG (pret. operati. col)	Plan Actual record	2.0.10																2	0.10
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								2	0.10
DRR education I	MIKI KODAMA	AMRC	Plan Actual record	2.0.10																30	1.50
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								30	1.50
Community disaster management / project coordination I	Toshiyazu IWAKI	OCG	Plan Actual record	2.0.10																6	0.30
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								6	0.30
Development of disaster management teaching materials I	Yoko OTA	OCG	Plan Actual record	2.0.10																8	0.40
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								8	0.40
Development of disaster management teaching materials II / project coordination II	Amar Jergal MAYANMATH	OCG (CTI)	Plan Actual record	2.0.10																150	7.50
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								150	7.50
Training management	Yoko OTA	OCG	Plan Actual record	2.0.10																15	0.75
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								15	0.75
Domestic training work 1	Toshiyazu IWAKI	OCG	Plan Actual record	2.0.10																10	0.50
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								10	0.50
Domestic training work 2	Yoko OTA	OCG	Plan Actual record	2.0.10																10	0.50
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								10	0.50
Domestic training work 3	Kohei MOTO	OIC	Plan Actual record	2.0.10																10	0.50
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								10	0.50
DRR Education 2	Seiji SUWA	AMRC	Plan Actual record	2.0.10																0.00	0.00
				11.22(1)	12.22(1)	3.21	3.22(1)	3.26-3.27(1)	10.18-10.11(2)	12.7-12.8(2)	9.23-9.28(4)	12.8-4, 12.8, 12.11-14(7)								0.00	0.00
Report etc.	Submission																		1.33	0.07	
				Project Plan/Work plan			Progress Report 1			Progress Report 2			Domestic work subtotal (Plan)			Domestic work subtotal (Actual record)			15.50 14.50		
				Monitoring Sheet			Monitoring Sheet			Monitoring Sheet			Monitoring Sheet			Monitoring Sheet			79.20 94.70		

Explanatory note : Work engagement plan
 Work engagement record
 Work engagement record (Domestic work)

ANNEX 1-2 List of Counterparts

1. The administration of authorities of the Project is as following,

(a) Project Director:

D.Batsaikhan, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinator

B. Vanchindorj, Policy Coordination and Cooperation Department, NEMA

2. The member list of the C/P for each WG

(a) Member of Sub-Group of WG1

Sub-WG	Name	Job Title
Coordinator for WG1	D.Bazarragchaa	Disaster Risk Management Dep., NEMA
Disaster Risk Assessment (WG1-1)	D.Serjmyadag	Disaster Research Institute, NEMA
	D.Bazarragchaa	Disaster Risk Management Dep., NEMA
	B.Khishigbaatar	Disaster Operation Dep., NEMA
Disaster Protection Planning (WG1-2)	B.Bayanmunkh	Policy Coordination and Cooperation Dep., NEMA
	Ch.Otgontugs	Fire Dep., NEMA
	B.Khishigbaatar	Disaster Operation Department, NEMA
Disaster Reduction Agreement (WG1-3)	B.Duvshin	Disaster Risk Management Dep., NEMA
	T.Bilguun	Policy Coordination and Cooperation Department, NEMA
White Paper (WG1-4)	O.Tsend-Ayush	Disaster Prevention Dep., NEMA
Disaster Database (WG1-5)	B.Purevnyam	Public Announcement and Emergency Administration Centre, NEMA
	D. Sodnomragchaa	Spatial Information and Technology Division, NEMA
	B. Boldkhuu	Public Announcement and Emergency Administration Centre, NEMA
	D. Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA

(b) Member of Sub-Group of WG2

Sub-WG	Name	Job Title
Coordinator for WG2	B.Gantulga	Ministry of Construction and Urban Development (MCUD)
Seismic Diagnosis of Buildings (WG2-1)	B.Gantulga	MCUD
	O.Bayarbaatar	MCUD
	B.Bayardulam	Land Management, Geodesy and Cartography Agency, MCUD
	N.Ganchimeg	General Agency for. Specialized Inspection (GASI)
	N.Tamir	Master Planning Agency of Capital City
	Ts.Khulan	Master Planning Agency of Capital City
	G.Saruultuya	Construction Development Center
	S.Munkhdul	Construction Development Center
	T.Galbadrakh	Finance and Logistics Dep., NEMA
Seismic Diagnosis of Infrastructures and Lifelines (WG2-2)	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD
	O.Bayarbaatar	MCUD
	N.Ganchimeg	GASI
	B.Munkhsaikhan	GASI
Design for Seismic Strengthening (WG2-3)	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD
	O.Bayarbaatar	MCUD
	N.Ganchimeg	GASI
	N.Tamir	Master Planning Agency of Capital City
	Ts.Khulan	Master Planning Agency of Capital City
	S.Munkhdul	Construction Development Center

(c) Member of Sub-Group of WG3 (As of May, 2019)

Sub-WG	Name	Job Title
Coordinator for WG3	D.Bat-Erdene	Disaster Prevention Dep., NEMA
School DRR Education (WG3-1)	J.Myagmar	Ministry of Education, Culture, Science and Sports (MECSS)
	Ch.Gantsetseg	MECSS
	P.Baljinnyam	MECSS
	A.Enkhtogtokh	Education Research Institute (ERI), MECSS
	B.Erdenechimeg	ERI, MECSS
	G.Mongolkhatan	ERI, MECSS
	G.Khaliun	ERI, MECSS
	N.Munkhbayar	Institute of Teacher Professional Development
	D.Bat-Erdene	Disaster Prevention Dep., NEMA
	G.Enkhtsolmon	Disaster Prevention Dep., NEMA
Community DRR Education (WG3-2)	D.Bat-Erdene	Disaster Prevention Dep., NEMA
	D.Khadbaatar	Disaster Prevention Department, NEMA
	D.Dulamsuren	Public Information Center, Disaster Prevention Dep., NEMA
	S.Doljinsuren	EMDC
	B.Chinbat	EMDC

Sub-WG	Name	Job Title
	D.Munkhbat	EMDC
	B.Uuriingegee	EMDC
	B.Ariunchimeg	National Center for Long life Education

ANNEX 1-3 List of Trainings

1. 1st Training Mar. 20-29, 2017

1) Participants

No	Name	Job Title
1.	Mr. Badral Tuvshin	Director at National emergency management agency
2.	Ms. Sayanaa Lkhagvasuren	Adviser to Deputy Prime Minister
3.	Mr. Ganzorig Barkhas	Cabinet Secretariat
4.	Mr. Zanabazar Dondovtseren	MCUD
5.	Ms. Myagmar Jadambaa	MECSS
6.	Mr. Uuganbayar Batmunkh	Disaster Prevention Dep., NEMA
7.	Mr. Batsaikhan Dorj	NEMA, Monitoring / Evaluation / Internal Audit Section Manager
8.	Mr. Khurelbaatar Gurbadam	EMDC
9.	Mr. Bat-Erdene Genen	Policy Coordination and Cooperation Dep., NEMA
10.	Mr. Altankhishig Erdene-Ochir	Policy Coordination and Cooperation Dep., NEMA
11.	Ms. Uranchimeg Shuushingaa	GASI
12.	Ms. Tsend-Ayush Badmaev	Master Planning Agency of Capital City

2) Program of training

Date	Time	Activity
03/20(Mon)		Arriving Narita
03/21(Tue)	9:00 - 10:30	Briefing
	10:30 - 11:30	Disaster prevention and economic growth
	13:30 - 13:45	Courtesy call and exchange of opinions(Cabinet Office, Vice Minister Matsumoto)
	14:00 - 14:50	Disaster prevention lectures and exchange of opinions
	16:20 - 17:20	Securing sustainable disaster prevention administration and investment for disaster prevention
03/22(Wed)	17:30 - 18:00	Introduction of Japan Bosai Platform (JBP) activities
	9:30 - 9:40	Courtesy call(Nanajyou Technical counselor)
	9:40 - 10:40	Building Standard Act in Japan
	10:40 - 11:20	Prioritizing earthquake resistance of government buildings (public facilities)
	11:20 - 12:00	Guidelines for seismic diagnosis of infrastructure and lifeline, guidelines for seismic reinforcement (draft)
	13:30 - 15:00	Comprehensive disaster prevention in Tokyo, disaster prevention city planning, building earthquake resistance
03/23(Thu)	15:00 - 16:10	Seismic building in Tokyo
	9:30 - 11:50	Ministry of Education, Culture, Sports, Science and Technology (Disaster prevention measures at school facilities and disaster prevention education at schools)
	13:30 - 14:25	Visit to Honjo Life safety Learning Center(Management / Management Lecture)
	14:30 - 16:20	Visit to Honjo Life safety Learning Center(Program experience)
03/24(Fri)	9:30 - 10:30	UR Takashimadaira housing complex(Seismic retrofit and case study)
	11:00 - 11:40	Itabashi school, public facilities earthquake-resistant repair
	12:00 - 12:30	Courtesy call (Mayor Itabashi)
	13:30 - 16:00	Itabashi Ward (earthquake resistance measures, regional disaster prevention plan, community disaster prevention)

Date	Time	Activity
03/25(Sat)	9:30 - 11:00	Visit to the Fire Museum (visit to disaster prevention awareness facility)
	11:30 - 13:00	Tour in Tokyo Rinkai Disaster Prevention Park (Sona Area Tokyo) (visiting disaster prevention awareness facilities)
03/26(Sun)	9:00 - 12:00	Transfer from Shinagawa to Shin-Kobe
	14:00 - 16:00	Plus Arts (Tools and programs for effective disaster prevention awareness and education)
03/27(Mon)	9:30 - 11:45	Hyogo Prefectural Board of Education (disaster prevention education in Hyogo Prefecture)
	13:30 - 15:30	Hyogo Prefectural Emergency Management and Training Center (Function of Wide Area Disaster Prevention Base)
	15:40 - 17:00	Visit to Hyogo Earthquake Research Center (E-defense) (E defense facility introduction)
03/28(Tue)	9:30 - 10:10	Visit to Disaster Reduction and Human Renovation Institute(Facility overview)
	10:10 - 11:15	Visit to Disaster Reduction and Human Renovation Institute (Earthquake disaster prevention education / enlightenment facility tour)
	11:15 - 12:45	Visit to Disaster Reduction and Human Renovation Institute(Q & A regarding facility management)
	13:30 - 15:00	Shiga University (Device to incorporate disaster prevention into school education)
	15:00 - 17:15	Wrap-up Meeting with JICA Project team members
	17:15 - 17:50	Closing Ceremony
03/29(Wed)	6:15 - 7:30	Depart from Japan

2. 2nd Training for Output 3 C/P

1) Participants

No	Name	Job Title
1.	Mr. Dovchin Munkhbat	Disaster Prevention Dep., NEMA
2.	Ms. Chodin Gantsetseg	MECSS
3.	Ms. Amgalan Enkhtogtokh	Education Research Institute (ERI), MECSS
4.	Ms. Begzsuren Erdenechimeg	ERI, MECSS
5.	Ms. Gunsen Mongolkhatan	ERI, MECSS
6.	Ms. Ganbaatar Khaliun	ERI, MECSS
7.	Ms. Navaan Munkhbayar	Institute of Teacher Professional Development
8.	Mr. Dulmaa Bat-Erdene	Disaster Prevention Dep., NEMA
9.	Mr. Batmunkh Chinbat	EMDC
10.	Mr. Bat-Erdene Uuriingegee	DRR Training Center, EMDC

2) Program of Training

Date	Time	Activity
10/29(Sun)		Arrive at Japan
10/30(Mon)	9:00 - 10:15	Briefing, Disaster prevention and economic growth
	10:15 - 10:45	Orientation
	11:00 - 12:30	Promotion of disaster prevention measures in Japan and disaster prevention awareness and education
	14:30 - 17:45	Disaster prevention training facility for citizens: Honjo Life safety Learning Center (Development of training programs)
10/31(Tue)	9:30 - 11:30	Efforts to improve disaster prevention capabilities of local residents and local governments
	13:30 - 15:00	Disaster prevention education at junior high school (visiting classes, discussion with teachers)
	17:00 - 18:00	Program orientation

Date	Time	Activity
11/1(Wed)		Transfer from Tokyo to Sendai
	13:45 - 14:30	Disaster prevention education at elementary school (class tour)
	14:30 - 16:00	Efforts for disaster prevention education in the Department of Disaster Prevention and Safety (elementary school)
11/2(Thu)	10:30 - 12:00	Systematization and practice of disaster prevention education in teacher training courses
	12:00 - 12:30	Facilities that pass on disasters and local memories: Visit to Sendai 3.11 the Memorial Community Center
	14:00 -	The role of schools in the event of a disaster: relics of the earthquake (Arahama Elementary School, Sendai City)
	14:00 - 15:00	Remains of the earthquake disaster Sendai City Arahama Elementary School
	15:20	Hiwayama-Nakano 5-chome Tsunami Evacuation Tower (car window)
	16:30 - 18:00	First half program review workshop
11/3(Fri)		Transfer from Sendai to Kobe
11/4(Sat)	9:30 - 12:00	Disaster prevention training facility for citizens: Kyoto City Disaster Prevention Center (strong wind experience, emergency training, etc.)
	13:30 - 17:00	Cultural heritage and disaster prevention: Historical buildings and earthquake resistance: Sanjusangendo, historical buildings and disaster prevention measures: Kinkakuji
11/5(Sun)	9:00 - 12:00	Disaster prevention activities by local residents (Fureai Disaster Prevention Sports Tournament)
	14:30 - 16:30	Visit to Disaster Reduction and Human Renovation Institute(Disaster prevention education facility that conveys the experience of catastrophes)
11/6(Mon)	10:00 - 12:00	Promotion of school disaster prevention education in Hyogo Prefecture and training for school staff on disaster prevention
	14:00 - 16:00	Preparation and practice examples of disaster prevention education at kindergartens, elementary schools and junior high schools
11/7(Tue)	10:00 - 12:00	Promotion of school disaster prevention education
	14:00 - 16:00	School disaster prevention education simulation class (workshop)
11/8(Wed)		Transfer from Kobe to Nagoya
	11:00 - 12:30	Development of disaster prevention education / enlightenment tools (Bururu-kun,etc) and facilities Maintenance
	12:30 - 16:00	Disaster prevention education facilities in collaboration with universities and research institutions: Disaster Reduction Hall
		Transfer from Nagoya to Kobe
11/9(Thu)	10:00 - 12:00	Preschool children (at nursery school) disaster prevention education
	13:30 - 15:30	Development and practice of disaster prevention education program in line with the region
11/10(Fri)	10:00 - 11:30	Disaster prevention awareness to residents through exhibition of disaster prevention goods and awareness tools
	13:00 - 15:00	Review workshop
	15:00 - 16:30	Evaluation meeting, closing ceremony
11/11(Sat)		Depart from Japan

3. 3rd Training for Output 2 C/P

1) Participants

	Name	Job Title
1.	Mr. Battulga Zayaabaatar	Disaster Operation Dep., NEMA
2.	Mr. Gantulga Baatar	Land Management, Geodesy and Cartography Agency, MCUD
3.	Mr. Erkhembayar Gansukh	MCUD
4.	Mr. Galbadrakh Tuvshinbayar	Finance and Logistics Dep., NEMA
5.	Ms. Saruultuya Gantumur	Construction Development Center
6.	Mr. Munkhsaikhan Batdorj	GASI
7.	Ms. Ganchimeg Namsrai	GASI
8.	Ms. Tsend-Ayush Badmaev	Master Planning Agency of Capital City
9.	Ms. Khulan Tsogtbayar	Master Planning Agency of Capital City

2) Program of Training

Date	Time	Activity
11/12(Sun)		Arrive at Tokyo, Japan
11/13(Mon)	10:00 - 11:30	Briefing, Disaster prevention and economic growth
	11:30 - 12:00	Orientation
	13:30 - 15:00	Building confirmation and building examination
	15:15 - 17:15	Seismic resistance of apartment buildings with floor wall PC
11/14(Tue)	9:30 - 11:30	About earthquake hazard
	13:00 - 14:30	Seismic evaluation of infrastructure pipeline
	15:00 - 16:30	Learn infrastructure diagnostics
11/15(Wed)	10:00 - 12:00	Practice of building seismic diagnosis method
	13:30 - 14:30	Learn about earthquake-resistant diagnosis and reinforcement of buildings
	15:00 - 15:45	Overview of seismic diagnosis in Itabashi Ward
	15:15 - 16:30	Examples and explanations of seismic diagnosis of buildings
11/16(Thu)	10:00 - 12:00	Learn about masonry seismic reinforcement
11/17(Fri)	10:00 - 12:00	Learn about earthquake damage and seismic retrofit
	13:00 - 15:40	Visit to seismic observation equipment, building laboratory and base-isolated building
	15:50 - 16:50	Seismic and tremor observation of buildings and ground and the benefit of observation data
	16:50 - 17:20	Overview of earthquake-resistant buildings in Kazakhstan and Armenia
11/18(Sat)	9:00 - 16:00	Touching Japanese culture (Buikan-Furukawa)
11/19(Sun)	-	Information collection
11/20(Mon)	10:00 - 11:00	The actual situation and lessons learned from the Great East Japan Earthquake
	11:15 - 11:55	Disaster response in the Great East Japan Earthquake and post-earthquake
	14:00 - 14:30	Overview of the inspection building
	14:30 - 16:30	Examples of seismic diagnosis and retrofitting of buildings on the Aobayama campus
	17:30 - 19:00	Social gathering (Organized by Tohoku University)
11/21(Tue)	10:00 - 11:30	Seismic reinforcement example, construction tour
	13:00 - 15:00	Review meeting and presentation
	15:00 - 16:00	Evaluation
	16:30	Closing Ceremony
11/22(Wed)		Departing from Japan

4. 4th Training for Output 1 C/P

1) Participants

	Name	Job Title
1.	Ms. Serjmyadag Dalai	Disaster Research Institute, NEMA
2.	Ms. Amarzaya Purev	Disaster Research Institute, NEMA
3.	Mr. Batbayar Batjargal	Disaster Risk Management Dep., NEMA
4.	Mr. Bayanmunkh Buyantogtokh	Policy Coordination and Cooperation Dep., NEMA
5.	Mr. Myagmardorj Batsuuri	Disaster Operation Dep., NEMA
6.	Mr. Otgontugs Chimed	Fire Dep., NEMA
7.	Mr. Dashnyam Altantuya	EMDC
8.	Mr. Turbileg Tsogtbaatar	Disaster Operation Dep., NEMA
9.	Ms. Duvshin Byambasuren	Disaster Risk Management Dep., NEMA
10.	Mr. Purevnyam Baljinyam	Public Announcement and Emergency Administration Centre, NEMA
11.	Mr. D.Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA
12.	Mr. Sodnomragchaa Dagva	Disaster Research Institute, NEMA
13.	Mr. Boldkhuu Batkhuyag	Public Announcement and Emergency Administration Centre, NEMA

2) Program of Training

Date	Time	Activity
12/6(Wed)		Arrive at Tokyo, Japan
12/7(Thu)	9:00 - 9:30	Sendai Framework for Disaster Risk Reduction and Global Target
	9:30 - 10:00	Orientation
	10:00 - 11:40	Briefing
	13:30 - 15:00	Crisis management in Tokyo
	15:15 - 16:10	About the initial bulletin board of the Tokyo Metropolitan Government Disaster Prevention Section
12/8(Fri)	9:20 - 11:00	Itabashi ward disaster prevention organization and fire brigade
	11:10 - 12:00	Itabashi District Disaster Prevention Plan System
	13:30 - 16:30	Specific contents of the Itabashi-ku regional disaster prevention plan and evacuation center management about
12/9(Sat)	10:00 - 11:30	Tour in Tokyo Rinkai Disaster Prevention Park (Sona Area Tokyo) (visiting disaster prevention awareness facilities)
	14:30 - 16:00	Visit to the Fire Museum (visit to disaster prevention awareness facility)
12/10(Sun)		Transfer from Tokyo to Sapporo
12/11(Mon)	9:30 - 11:00	Sapporo Civic Disaster Prevention Center, earthquake, smoke, strong wind, fire-fighting experience
	13:00 - 14:20	Regional disaster prevention plan for snowy cold regions
	14:00 - 16:00	Disaster prevention activities at home and community in Sapporo
12/12(Tue)	9:00 - 11:30	About disaster prevention in Hokkaido
	15:30 -	Transfer from Sapporo to Tokyo
12/13(Wed)	9:30 - 12:00	Evaluation method of earthquake disaster risk and utilization for disaster prevention plan
	13:30 - 15:00	Advanced research on utilization of disaster information
	15:00 - 16:30	Introduction to the National Institute of Disaster Prevention, tour of shaking table and rain test facility
12/14(Thu)	9:00 - 11:00	About utilization of disaster information
	13:30 - 16:30	Application examples of Fujisawa City's e-community map
12/15(Fri)	9:00 - 12:30	Earthquake disaster countermeasures in Japan

	13:10 - 15:20	Review meeting and presentation
	15:30 - 16:00	Evaluation
	16:30 -	Closing Ceremony
12/16(Sat)		Depart from Japan

ANNEX 2 List of Products

ANNEX 2 List of Products

1. Guidelines for Disaster Management, Seismic Diagnosis and DRR Education, and Regulation, draft of agreement

【Output 1】

- 1-1 Guideline on Earthquake Disaster Risk Assessment (JP, MN)
- 1-2 Technical Guideline on Earthquake Disaster Risk Assessment
 - 1-2-1 Technical Guideline on Earthquake Disaster Risk Assessment (JP, MN)
 - 1-2-2 Manual of Damage Calculation (JP, MN)
 - 1-2-3 Calculation Sheet for Damage (JP, MN)
- 1-3 National Earthquake Disaster Protection Planning Guideline (JP, MN)
- 1-4 State Earthquake Disaster Protection Service Planning Guideline (JP, MN)
- 1-5 Regional Earthquake Disaster Protection Planning Guideline (JP, MN)
- 1-6 Agreement
 - 1-6-1 Manual of Preparation Procedure of the Agreement (JP, MN)
 - 1-6-2 Draft of Agreements (eleven cases) (JP, MN)
- 1-7 Guideline on Operation and Management of Spatial Information System for Disaster Risk Reduction (JP, MN)

【Output 2】

- 1-8 Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete Buildings (JP, MN)
- 1-9 Seismic Evaluation and Retrofitting Method of Existing Wall type Precast Concrete Buildings (JP, MN)
- 1-10 Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings (JP, MN)
- 1-11 Methodology of Seismic Risk Analysis Evaluation of Road, Bridge and Engineering Supply System (JP, MN)

【Output3】

- 1-12 Program for Life Safety Education (JP, MN)

2. Manual or Materials for Training on Disaster Management, Seismic Diagnosis and DRR Education

【Output2】

- 2-1 Manual to Support Training Program Implementation
 - 2-1-1 Manual to Support Training Program Implementation (RC, PC, Masonry) (JP, MN)
 - 2-1-2 Manual to Support Training Program Implementation (Infrastructure and Lifelines) (JP, MN)

【Output 3】

- 2-2 Guidebook on Life Safety Program
 - 2-2-1 Guidebook for teachers on the Life Safety (School) (JP, MN)
 - 2-2-2 Guidebook for teachers on the Life Safety (Pre-School) (JP, MN)
- 2-3 Instructor's Manual DRR Experience Program (JP, MN)

3. Draft of an Earthquake Disaster Protection Plan and a Manual of amendment of an Earthquake Disaster Protection Plan

- 3-1 The Earthquake Disaster Protection Plan of Darkhan-Uul Aimag, (JP, MN, EN)
- 3-2 The Earthquake Disaster Protection Plan of Umnugovi Aimag (JP, MN)

3-3 The Earthquake Disaster Protection Plan of Bayangol District (JP, MN)

3-4 The Earthquake Disaster Protection Plan of Chingeltei District (JP, MN)

3-5 Manual for Earthquake Disaster Risk Reduction Planning (JP, MN, EN)

4. White Paper and Manual of White Paper

4-1 White Paper (JP, MN, EN)

4-2 Creation Manual of the Disaster Risk Reduction White Paper (JP, MN, EN)

5. Dissemination Materials of the Project at International Conferences, etc (EN)

5-1 The brochure of the project distributed in the AMCDRR, 2018

5-2 Seismic Diagnosis and Formulation of Reinforcement Design Standards for Masonry Buildings in Mongolia, 16th ECEE, 2018

5-3 Development of Seismic Diagnosis and Retrofitting Standards for Existing Buildings in Mongolia, 7th ACEE, 2018

5-4 Development of Seismic Evaluation and Retrofit Standards for Existing Buildings in Mongolia, International Science Conference on Strengthening Urban Disaster Resilience in Mongolia, 2019

Note MN : Mongolia JP : Japanese EN : English

ANNEX 3 Monitoring Sheet

ANNEX 3 Monitoring Sheet

Format of Monitoring Sheet

TO Chief Representative of JICA ●● OFFICE

PROJECT MONITORING SHEET

Project Title :

Version of the Sheet: Ver.1.0 (Term: Month, Year - Month, Year)

Name:

Title: Chief Advisor

Submission Date:

I. Summary

1 Progress

1-1 Progress of Inputs

1-2 Progress of Activities

1-3 Achievement of Output

1-4 Achievement of the Project Purpose

1-5 Changes of Risks and Actions for Mitigation

1-6 Progress of Actions undertaken by JICA

1-7 Progress of Actions undertaken by Gov. of ●●

1-8 Progress of Environmental and Social Considerations (if applicable)

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

2 Delay of Work Schedule and/or Problems (if any)

2-1 Detail

2-2 Cause

2-3 Action to be taken

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of●●,etc.)

3 Modification of the Project Implementation Plan

3-1 PO

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

4 Preparation of Gov. of●● toward after completion of the Project

II. Project Monitoring Sheet I & II as Attached

Project Monitoring Sheet I

Version 1
Dated Dec. 7th, 2016

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia
Implementing Agency: National Emergency Management Agency (NEMA)
Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City


Period of Project: December 2016 to November 2019
Project Site: Mongolia

Overall Goal	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
	Seismic risk will be reduced.	<ol style="list-style-type: none"> 1. Number of the approved guideline, rules, provisions 2. Number of white paper open to public 3. Number of the executed seismic assessment 4. Number of the seismic strengthened building 5. Number of implemented activities on disaster risk reduction education 	Study by NEMA	The policy on disaster risk reduction will not be changed in Mongolia.		
Project Purpose	The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.	<ol style="list-style-type: none"> 1. The number of the approved guidelines and agreement 2. The number of the data on disaster risk reduction which newly established and improved 	Project report	NEMA expands the pilot activities in other aimags and sums.		
Outputs	<ol style="list-style-type: none"> 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced. 2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced. 	<ol style="list-style-type: none"> 1.1 The number of guidelines, operational rules, provisions which are developed. 1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements 1.3 White paper on disaster risk reduction 2.1 Guideline for seismic assessment The number of the participants in the training program on seismic assessment 2.2 Guideline for seismic strengthening The number of the training program on seismic strengthening 	Project report	<ol style="list-style-type: none"> 1. The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. 2. Participants in training programs continue to work in the same position. 3. The relation among related organizations is maintained. 4. Exchange information is maintained among the related organizations. 		

<p>3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.</p>	<p>3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project 3.2 The number of visitors in Training Center</p>	<p>Ordinance of Ministry of Education, Culture and Science Ordinance of NEMA</p>
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Activities	Inputs	The Japanese Side	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1)) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2)) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p>	<p>The Mongolian Side</p> <p>Assignment of counterparts - Project Director - Project Managers - Project Coordinator - Project Members</p> <p>For Output 1 - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC)</p>	<p>The Japanese Side</p> <p>Dispatch of Experts - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction Education - Disaster Risk Reduction at Community Level - Educational Material Development</p>	
		<p>Provision of Equipment - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table</p> <p>Training in Japan and/or the third countries</p>	

<p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-5))</p> <p>2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p>	<p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency 	<p style="text-align: center;">Pre-Conditions</p>
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<p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergarten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergarten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training Institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	
		<p style="background-color: yellow; padding: 5px;"><issues and countermeasures></p>

Notes
 1-1) Amended Law of Disaster Protection "8.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc..

- 1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM
- 1-3) National level, UB city and two provinces are the target areas
- 1-4) Improvement of existing "Disaster Information Sharing System"
- 1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)
- 2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities
- 2-2) Guidelines are regarded as operational guidelines by Resolution of Minister
- 2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.
- 3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certificated teacher's instructors
- 3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring of nationwide implementation of education and training program to all the necessary target stakeholders
- 3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency Management Departments of Cities, Provinces, and Districts, (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels, (3) Heads of governor's offices of Provinces, Soms, and Districts (4) Heads of Bags and Khorroos, (5) Coordinators of civil activities in Provinces, Districts, and Khorroos and (6*) Volunteers (*only in pilot areas)
- 3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.

Project Title: The Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia

Inputs	Year	2016				2017				2018				2019				2020				Remarks	Issue	Solution	
		IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV							
Expert Kyotaka OWADA Akihiro FURUTA Osamu NISHII Kensuke ICHIKAWA Shinru MAKITA Yoshihiko YAMAZAKI Tadashi ISE Seichiro FUKUSHIMA Jun MATSUJO Masahide AOKI Shigeki KITA Hirotaka OMINE Miki KODAMA Yujiro OGAWA Toshikazu HIWAKI Yoko OTA Ameljajgal NAYANBAATAR	Plan																								
	Actual																								
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Equipment

Equipment for seismic assessment

Earthquake simulation experience equipment for Training Center and local study table

Training in Japan

Comprehensive disaster risk reduction (tentative)

In-country/Third country Training

Training in Mongolia: O F N I M Y I T I F M A K O K O I H O N A W A R S H K K E T T I D A W A A A I K A K I W A A

Activities	Year	2016				2017				2018				2019				2020				Responsible Organization	Achievements	Issue & Countermeasures
Sub-Activities	Year	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	Japan	GOM				
Output 1: 1.1. To identify problems and challenges on implementation of legal frameworks of disaster risk reduction	Plan																							
	Actual																							
1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction	Plan																							
	Actual																							

1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of Law of disaster protection	Plan																				
	Actual	○																			
1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations	Plan		○																		
	Actual			○																	
1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction	Plan			○																	
	Actual				○																
1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels	Plan				○																
	Actual					○															
1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan	Plan					○															
	Actual						○														
1.3.3 To improve the present system which collect and analyze information on disaster risk reduction	Plan						○														
	Actual							○													
1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2	Plan																				
	Actual																				
1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline.	Plan																				
	Actual																				

2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version	Plan																				
	Actual																				
2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment	Plan																				
	Actual																				
2.1.3 To implement training programs for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline	Plan																				
	Actual																				
2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings	Plan																				
	Actual																				
2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot	Plan																				
	Actual																				

<p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p>																																
<p>Plan</p>																																
<p>Actual</p>																																
<p>Plan</p>																																
<p>Actual</p>																																
<p>Plan</p>																																
<p>Actual</p>																																

Duration / Phasing	Plan Actual	2017				2018				2019				2020				Remarks	Issue	Solution
		IV	I	II	III	IV	I	II	III	IV	I	II	III	IV						
Monitoring Plan	Year																			
Monitoring	Plan																			
Joint Coordinating Committee	Actual																			
Set-up the Detailed Plan of Operation	Plan																			
Submission of Monitoring Sheet	Actual																			
Monitoring Mission from Japan	Plan																			
Joint Monitoring	Actual																			
Post Monitoring	Plan																			
Actual	Actual																			
Reports/Documents	Plan																			
Actual	Actual																			
Project Completion Report	Plan																			
Actual	Actual																			
Public Relations	Plan																			
Actual	Actual																			

Summary and Draft Project Monitoring Sheet I & II “Ver. 2”

TO Chief Representative of JICA Mongolia OFFICE

PROJECT MONITORING SHEET

**Project Title : Project for Strengthening the National Capacity of Earthquake
Disaster Protection and Prevention in Mongolia**

Version of the Sheet: Ver. 2.0 (Term: November, 2016 - May, 2017)

Name: Uuganbayar

**Title: Director of Disaster Prevention
Department, NEMA**

Name: Kiyotaka Owada

**Title: Team leader / Integrated disaster
management I**

Submission Date: June 29, 2017

I. Summary

1. Progress

1-1 Progress of Inputs

(1)Dispatch of Experts

The following Experts from Japanese side were assigned in this term.

	Area of responsibility	Experts name	Period of assignment
Project Management Group	Team Leader / Integrated Disaster Risk Management I	Kiyotaka OWADA	Nov. 23 - Dec. 17, 2016 Feb. 1 – Feb. 26, 2017 Apr. 3 – Apr. 30, 2017
	Deputy Team Leader / Integrated Disaster Risk Management II	Akihiro FURUTA	Nov.23-Dec.12, 2016 Mar.15-Apr.15,2017 May.22-June.17,2017
OUTPUT1: Disaster Management Plan	Disaster Management Plan I	Osamu NISHII	Jan.30-Feb.24,2017 Apr.06.-May 05,2017
	Disaster Management Plan II	Kensuke ICHIKAWA	Nov.23-Dec.17,2016
	Disaster Management system I	Yoshitaka YAMAZAKI	Jan.30-Feb.18,2017
	Disaster management system II	Shiro MAKITA	Nov.25 - Dec.17,2016 Apr.09 - Apr.29,2017
	Disaster management information I	Tadashi ISE	Nov.25-Dec.5,2016 Apr.05 – Apr.17,2017
	Disaster management information II	Akihiro FURUTA	Dec.13-Dec.17, 2017
Output 2:	Seismic-Resistance	Seiichiro	Nov.23 – Dec.17,2016

Monitoring Sheet Summary

	Area of responsibility	Experts name	Period of assignment
Seismic Resistance		FUKUSHIMA	Apr.06 – May 05,2017
	Seismic Diagnosis of Infrastructures and Lifelines	Jun MATSUO	Jan.30-Feb.13.2017 March.27 - Apr.08 2017
	Seismic Diagnosis of Buildings / Seismic Strengthening I (RC, PC)	Masahide AOKI	Nov.23 – Dec.12,2016 Jan.30 – Feb.20,2017
	Seismic Diagnosis of Buildings / Seismic Strengthening II (Masonry)	Shigeki KITA	Nov.23 – Dec.4,2016 Apr.30 – May13, 2017
	Seismic-Resistant Design	Hideto OMINE	Nov.23 – Dec.12,2016
Output 3: DRR Education	DRR Education I	Miki KODAMA	Nov.23 – Dec.8,2016 May.09 – May 24,2017
	DRR Education II	Yujiro OGAWA	Nov.27 – Dec.2, 2016 Jan.30 – Feb.15,2017 March.31-Apr.21 2017
	Community-Based Disaster Management / Project Coordination I	Toshikazu HIWAKI	Nov.23 – Dec.17,2016 Jan.30 – Feb.26 ,2017
	Development of Disaster Management Teaching Materials I	Yoko OTA	May.08 – May.27.2017
	Development of Disaster Management Teaching Materials II / Project coordination II	Amarjargal NAYANBAATAR	Nov. 23 – Dec. 17, 2016 Jan. 30 – Feb. 10, 2017 Feb. 14 – Feb. 16, 2017 Apr. 11 – Apr. 14, 2017

(2) Assignment of counterparts

The current administration of authorities concerned of Mongolia is as following,

(a) Project Director:

B. Uuganbyar, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinators

Z.Battulga, Disaster Operation Department, NEMA

D.Bazarragchaa, Disaster Risk Management Department, NEMA

The Project Director approved in the Record of Discussions (hereinafter referred to as “R/D”) on the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia (hereinafter referred to as “the Project”) signed on July 8, 2016 was amended twice as following,

Original signed on July 8, 2016	Deputy Chief of NEMA will be responsible for overall administration and implementation of the Project
Amended on January 5, 2017	Director of Disaster Operation Department of NEMA will be responsible for overall administration and implementation of the Project

Amended on April 14, 2017	Director of Disaster Prevention Department of NEMA will be responsible for overall administration and implementation of the Project
<p>Reason: Since Disaster Prevention Department is responsible for basic coordination and operation of nationwide disaster risk reduction (hereinafter referred to as “DRR”) activities including capacity enhancement of NEMA officers and implementation of DRR education and training for school and regional administrative officers, from this point of view of the project purpose, Disaster Prevention Department is closely associated with national capacity enhancement of earthquake disaster prevention, therefore Project Director is to be changed from Director of Disaster Operation Department of NEMA to Director of Disaster Prevention Department under the order of the Chief of NEMA.</p>	

According to the R/D, the project organization of Mongolia side includes the counterpart (hereinafter referred to as “C/P”) of working groups (hereinafter referred to as “WG”) in order to implement project activities at output level of the Project.

In the second Joint Coordinating Committee (hereinafter referred to as “JCC”) on April 14, 2017, Mongolian side submitted the member list of the C/P for each WG that was amended from the member list approved in the first JCC on December 7, 2016 in order to take their share of responsibility for each sub-WG activity and work closely with JICA Expert team. JCC members agreed the members of WG as shown below.

WG	Member	Job title
WG1: Disaster Management Plan	D.Bazarragchaa (Coordinator for WG1)	Disaster Risk Management Department, NEMA
	D.Serjmyadag	Law Enforcement University of Mongolia
	P.Amarzaya	Disaster Research Institute, NEMA
	B.Batbayar	Disaster Risk Management Department, NEMA
	B.Bayanmunkh	Policy Coordination and Cooperation Department, NEMA
	B.Myagmardorj	Disaster Operation Department, NEMA
	Ch.Otgontugs	Fire Department, NEMA
	B.Khishigbaatar	Disaster Operation Department, NEMA
	E.Batbayar	EMDC
	B.Purevnyam	Disaster Operation Department, NEMA
	D.Badamsuren	Disaster Research Institute, NEMA
	D. Sodnomragchaa	Disaster Research Institute, NEMA
	B.Boldkhuu	Disaster Operation Department, NEMA
	E.Altankhishig	Policy Coordination And Cooperation Department, NEMA
B.Duvshin	Disaster Risk Management Department, NEMA	
WG2: Seismic Resistance	D.Zanabazar (Coordinator for WG2)	MCUD
	Z.Battulga (Coordinator for WG2)	Disaster Operation Department, NEMA

WG	Member	Job title	
	Sh.Uranchimeg	Inspection Agency	
	B.Tsend-Ayush	Master Planning Agency of Capital City, Construction Quality and Safety Department	
	G.Saruultuya	Construction Development Center	
	T.Galbadrakh	Finance and Logistics Department, NEMA	
	G.Erkhembayar	MCUD	
	B.Gantulga	Land Management, Survey and Mapping Agency, MCUD	
	M.Oyunchimeg	Mongolian University of Science and Technology	
	B.Munkhsaikhan	Inspection Agency	
WG3: Education	DRR	D.Munkhbat (Coordinator for WG3)	Disaster Prevention Department, NEMA
		J.Myagmar	MECSS
		Ch.Gantsetseg	MECSS
		P.Baljinnyam	MECSS
		Ts.Chimedlkham	MECSS
		G.Mongolkhatan	Education Research Institute, MECSS
		B.Erdenechimeg	Education Research Institute, MECSS
		A.Enkhtogtokh	Education Research Institute, MECSS
		O.Tsend-Ayush	Disaster Prevention Department, NEMA
		D.Bat-Erdene	Disaster Prevention Department, NEMA
		B.Uuriingegee	EMDC
		B.Unenbaatar	EMDC
		D.Dulamsuren	Public Information Center, Disaster Prevention Department, NEMA
		S.Amgalan	Administrative Management Department, NEMA
M.Amartungalag	MECSS		
WG for the Survey of Procuring Equipment	S.Amgalan (Double as WG3)	Administrative Management Department, NEMA	
	T.Galbadrakh (Double as WG2)	Finance and Logistics Department, NEMA	
	Khurelbaatar	DRR Training Center, EMDC	

1-2 Progress of Activities

(1) Overall of Project

1) Implementation of Joint Coordination Committee (JCC)

JCC for the Project held twice in this term on December 7, 2016 and on April 14, 2017.

For the first JCC, there were totally 28 participants from Japanese side and Mongolian side. The work plan for the Project, Monitoring Sheet I & II “Ver. 1”, the WG members and

the amendment of Project Director were discussed mainly and the agreement was made at the meeting as shown in Annex-1.

For the second JCC, there were totally 37 participants from both sides. The change of WG members, second amendment of Project Director, procuring equipment, and training in Japan were discussed mainly and the agreement was made at the meeting as shown in Annex-2.

2) Provision of Equipment

As identified in the work plan of the Project which was approved by the first JCC, the equipment for seismic diagnosis and the earthquake simulation experience equipment for the Disaster Risk Reduction (hereinafter referred to as “DRR”) Training Center (temporary name) are supposed to be procured and donated by JICA.

The Mongolian side proposed the Operation and Maintenance (hereinafter referred to as “O&M”) plans for installation of equipment in Mongolia and those plans were submitted to JICA Mongolian Office with the official letter signed by head of NEMA.

At the second JCC, the Japanese side gave a response about this matter and pointed out the need to add in the explanations for DRR strategic background to introduce such equipment in Mongolia and to clarify main bodies of O&M activities. Then JICA explained that they plan to send the official letter to request additional contents identified in the O&M plans.

3) Training in Japan and/or the third countries

The training in Japan named “Disaster Risk Reduction and Management” was conducted from March 20th to 29th, 2017. The fifteen persons from Mongolian side had been selected as participants in this training. However, three candidates canceled their participation in the training without detailed explanation to Japanese side at the final minutes and finally twelve counterparts took part in the training.

For sharing the lesson learned from the training in Japan with WG members and related officers in NEMA and other organizations, persons in charge of each WG member who attended in the training made their presentations about knowledge and experiences which were obtained through the training and how to reflect the lesson learned to the WG activity in the presence of Chief Representative of JICA Mongolia Office at the steering committee held on April 12th, 2017.

The Mongolian side requested the second training in Japan in order to learn specific

knowledge and technical approach which will be directly utilized to prepare guidelines, agreements, training programs in the activities of each WG. For this request from Mongolian side, the Japanese side requested that obtained knowledge and experiences through the above-mentioned training in Japan should be reflected in the WG activities firstly. And detailed training items are identified in each WG activity by the next JCC held on June, 2017.

(2) Output1

Activity 1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction

The WG1 member examined existing status of formulation of guidelines and manuals for disaster management plan and gathered information about rules and regulations for disaster risk reduction in order to reveal a plan to develop guidelines in the Project. This result showed that rules and regulations concerning emergency response plans were focused currently, and it became clear that the rules and regulations on disaster prevention, recovery and reconstruction are not sufficient in Mongolia. Due to the enforcement of the amended law of disaster protection, NEMA needs to develop new rules and regulations or to revise existing rules and regulations in order to establish the detailed enforcement system of the law. Although it was confirmed that there is the instruction manual for utilization of disaster management plan form (Order of Chief of the NEMA, 2013), the contents directed in this manual is not in detail; the necessity to develop a new guideline for disaster management plan was confirmed.

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction

The framework and the configuration of the risk assessment guideline were confirmed in the WG1. Due to the enforcement of the amended law of disaster protection, NEMA is undertaking to revise the regulation for implementation of disaster vulnerability and risk Assessment (Annex of the Cabinet decision of 176, 2006). The WG1 member decided that how to merge this regulation and the risk assessment guideline which will be formulated in the Project is being discussed continuously.

The basic content which should be included in the guideline of disaster management plan was confirmed in the WG1. As clarified in Activity 1.1.1, there is the instruction manual for utilization of disaster management plan form (Order of Head of the NEMA, 2013) in

Mongolia and It is instructed to prepare the disaster management plans in aimags, the capital city, soums, districts, large enterprises, institutions and organizations based on this instruction manual. In this existing instruction manual, the format of the disaster management plan and the items are incorporated, but there is no practical guidance which will be guide to prepare the own disaster management plan by organizations concerned, so it was confirmed that it is difficult for each organization to prepare the disaster management plan using this instruction manual only. For this reason, the WG1 member confirmed that the new guideline that forms the basic formulation of disaster management plan on behalf of the existing instruction manual, and a policy to gain an approval for enforcement of the new guideline from Head of the NEMA was agreed in the WG1.

At the start of the Project, it was considered the formulation of the guideline for preparation system and the guideline for disaster prevention as one of activities in Activity 1.1.2 based on the contents of the Project Design Matrix (hereinafter referred to as "PDM") which was developed and approved when the amended law of disaster protection was still a draft one.

It was assumed that the guideline for preparation system was supposed to deal with setting levels of disaster preparation and preliminary measures according to the level of preparation, and the guideline for disaster prevention was mainly supposed to deal with management concerning investment for damage mitigation assumed at the time of earthquake. However, the articles and the contents of rules and regulations directed to be formulated in a draft of amended law which became occasions to prepare the both guidelines was modified in the official amended law of disaster protection, and the policy of preparation of both guidelines in the Project needs to be changed. Currently, the WG1 member is discussing how to prepare the both guidelines.

Regarding the database guideline, it was confirmed to compile the operational framework of the disaster related information management system, database specifications and procedure of data sharing with related organizations which are supposed to develop through Activity 1.3.3 as a guideline.

Activity 1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection

As obviously shown in Activity 1.1.1, it is necessary to establish and revise the rules and regulations based on the obligation and authority of NEMA specified in the amended law of disaster protection. The WG1 member verified the articles of the amended law of disaster protection mainly from the viewpoint of risk assessment, disaster management

plan, preparation system, and disaster prevention, and investigated the necessity to establish new rules and regulations and revise existing rules and regulations. As a result, it was confirmed that the establishment and revision of eleven rules and regulations are necessary. In addition, the WG1 member analyzed the concepts of extracted rules and regulations and confirmed NEMA's plan to establish new rules and regulations or revise existing rules and regulations. For the regulation for implementation of disaster vulnerability and risk Assessment (Annex of the Cabinet decision of 176, 2006), the revision work of this regulation has been already started by the NEMA, and the Japan Expert Team (hereinafter referred to as "JET") has inputted Japanese experiences for a procedure of seismic risk assessment for this revision work.

The WG1 member confirmed that NEMA takes an initiative in implementing the work of newly establishing and revising rules and regulations and the JET inputs continuously knowledge and experience in Japan on demand from NEMA. Meanwhile, for the development of guidelines complementing the practical operation of rules and regulations, the WG1 member confirmed that those guidelines are prepared by WG1 member as the main body.

Activity 1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations

In the WG1, it was clarified that twenty five (25) agreements will be required to conclude among NEMA and twenty seven (27) related organizations based on the survey results by NEMA. Since those agreements should cover a lot of contents and target fields, the draft manual of agreement preparation procedure has been prepared based on the comparison and analysis of the existing agreements in Mongolia and Japan for the purpose of showing the standard procedure to formulate of an agreement.

In addition, the field of Information and communication was selected as the first target field to conclude an agreement, WG1 member is trying to consult with related organizations for preparation of an agreement in accordance with the draft manual of agreement preparation procedure.

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

As described in Activity 1.1.1, the WG1 member reviewed the current disaster management plans mainly for seismic disaster in national level, Ulaanbaatar (UB) city, aimag and soum level and summarized the issues of those plans. Regarding the current national disaster management plan, the contents of emergency response for each

disaster are mainly described and there are few descriptions about disaster prevention and preparation. Therefore, the JET shared the document of "Countermeasures Common to All Disaster Types" in the basic disaster management plan in Japan with WG1 member as reference. Based on this input from the JET, Mongolian side C/P is considering some items which should be included in national disaster management plan in Mongolia from the standpoint of disaster prevention and preparation.

As shown in Activity 1.1.1, regional disaster management plans of UB city, aimag and soum level were basically prepared based on the instruction manual for utilization of disaster management plan form (Order of Head of the NEMA, 2013). And it was found that those plans are described not only in a structured way but abstract terms such as simple enumeration of the items in the instruction manual. As mentioned in Activity 1.1.2, the new guideline that forms the basic formulation of disaster management plan is being prepared in the WG1 and the policy to revise the regional disaster management prevention plans based on this guideline was confirmed.

Activity 1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan

As described in Activity 1.3.1, Mongolian side C/P started the revision work of mainly adding the contents of disaster prevention and preparation in the national disaster management plan with reference to the basic disaster prevention plan in Japan.

Activity 1.3.3 To improve the present system which collect and analyze information on disaster risk reduction

According to the Article 14 "Creating a Disaster Database" of the amended law of disaster protection, NEMA is responsible for improving database for disaster related data. Currently, the disaster research institute in NEMA is gathering and managing historical record data for disaster events, but the types of databases that can be utilized for disaster management plans and the white paper preparation are limited. In addition, it was found that the information sharing and collaboration of databases with the local disaster management departments and related institutions, and disclosure of information to the public has not progressed sufficiently.

As a result of discussion for the improvement policy of the current system in the WG1, there was a request from the Mongolian side C/P for information sharing based on the map data, and the WG1 member have confirmed to develop a database of disaster related information based on Geographic Information System (hereinafter referred to as "GIS"). The JET introduces the e-comi map system which is web-based GIS developed by

the National Research Institute for Earth Science and Disaster Resilience in Japan (hereinafter referred to as "NIED"), and the WG1 member decided to install the e-comi map system to the Mongolian National Data Center (hereinafter referred to as "NDC") from the viewpoint of security and ensuring the system operation continuity by NEMA. Now is at the stage of installation work of the e-comi map system.

Activity 1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2

In the WG1, a draft format of the white paper on disaster management in Mongolia was reviewed by reference to the table of contents of the white paper on disaster management in Japan

Based on this draft format, the Mongolian side C/P has drawn up a work plan to prepare the white paper in Mongolia and has obtained approval of this work plan from the Head of NEMA. According to this work plan, the department in charge and the schedule of data collection are specified for each item of contents in the table, and also instructions on collection of data will be issued to each director of department.

(3) Output2

Activity 2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version

The challenges and suggestions for improvement of the current instruction for seismic assessment of buildings and lifelines are identified in the WG2.

The targeted existing instructions are as follows: "Instruction of seismic diagnosis for existing buildings (Building Rules 31-102-00) "and "Instruction of the building passport activation aimed at seismically active zones (Building Rules 31-103-00)". It was found as challenges that the purpose of diagnosis was weighted in deterioration and construction quality evaluation and the procedure of diagnosis is based on qualitative method depending on the diagnosis technician. And the contents of those instructions are old and cannot reflect current situation. As an improvement plan, it was confirmed to prepare quantitative seismic diagnostic standards based on Japan's standards, and include a diagnostic methodology in consideration of different types of building structures based on the field survey.

The targeted existing instructions on infrastructures are "Standards for the period of usage,

inspection and maintenance of buildings and lifelines (Building rules 13-04-03)" and "Vulnerability evaluation report and checklist prepared by National Inspector Agency". These instructions are mainly used for evaluation of deterioration and they are not targeted for seismic evaluation. On the other hand, the infrastructures and pipelines in Mongolia get older and the progress of aging and the reduction of seismic resistance are interrelated. In consideration of this point, as an improvement plan, it was confirmed to add standards for seismic damage evaluation of infrastructures and lifelines in building rules 13-04-03.

Activity 2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment

On the basis of the results of Activity 2.1.2, the policy and framework of the guidelines for seismic evaluation of buildings, which types divided in the reinforced concrete structure (hereinafter referred to as "RC"), the precast concrete structure (hereinafter referred to as "PC") and the masonry, lifelines, pipelines were reviewed and draft guidelines were prepared in the WG2.

It was confirmed that the standards for seismic diagnosis of buildings and the standards for seismic damage evaluation of infrastructures and lifelines which become key elements in the guidelines is developed, evaluated and authorized by the standard procedure in Ministry of Construction Urban Development (hereinafter referred to as "MCUD"). This procedure will be carried out by Consulting Service Team (hereinafter referred to as "CST") that is an organization selected by Construction Development Center to establish standards. Prior to the selection of CST, it is necessary to prepare the terms of reference (hereinafter referred to as "TOR") related to standards creation and to get an approval of the TOR at the technical committee. Currently, it is the stage where the TOR was prepared in the WG2 and the approval of the technical committee was obtained. Based on this TOR, the consulting team will be selected under the guidance of MCUD. Furthermore, the JET is implementing a technical seminar to input concepts and concrete procedures of seismic diagnosis for the WG2 member and candidate organizations of the consulting team.

In consideration of the procedure to authorize standards of seismic diagnosis as described above, the way of technology transfer concerning the development of standards of seismic diagnosis in the WG2 was discussed. As a result, it was confirmed that the WG2 member and consulting team collaborated on the activities of standards development to promote technology transfer to the WG2 member.

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

In Mongolia there are few examples of seismic strengthening and reconstruction of buildings, so the JET is implementing a technical seminar to input concepts and concrete procedures of seismic strengthening for the WG2 member and candidate organizations of the consulting team.

(4) Output3

Activity 3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection

The activity for preparation of the guideline for DRR education in pre-school, elementary school and junior high school is going on based on the work plan agreed by the WG3 member at the start of the project

The JET shared the document in which descriptions for DRR in the guideline for DRR education, curriculum guidelines and school textbooks in Japan and good practices for DRR education were listed with the WG3 member. The WG3 member agreed to compile the current status of DRR education in Mongolia with reference to this document and prepare specific contents of the guideline by themselves after clarification of the missing parts of the guideline.

In addition, Ms. Myagmar, the Head of Department of Ministry of Education, Culture, Science and Sports (hereinafter referred to as "MECSS"), inputted the necessity of teacher's training for enhancement of their capacity to implement DRR education and the necessity of cooperation among related organizations along with the preparation of the guideline for DRR education based on the knowledge and experiences obtained from the training in Japan.

Activity 3.2.1 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels

The WG3 member began to consider the management and operation system of the comprehensive schedule for DRR education and raising awareness with the aim of unified management and efficient information sharing for activities of DRR education and raising awareness carried out by various organizations, and discussed these matters with leading organizations in Mongolia. It was confirmed that the disaster prevention department in NEMA takes leadership for the management and operation for the comprehensive

schedule. And also, the basic policy to utilize the operational framework of the web system developed by the Asian Disaster Preparedness Center (hereinafter referred to as “ADPC”) which has been ahead of similar activities in NEMA was confirmed. The activities to revise the web system and make the mailing list are going on in the WG3.

Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

The current status of development of materials for the training on DRR education and raising awareness by the United Nations Development Programme (hereinafter referred to as “UNDP”) and World Vision Mongolia were surveyed in the WG3. As a result of the survey, it became clear that UNDP's curriculum of DRR education and raising awareness had been approved by Head of NEMA, and World Vision Mongolia started to prepare teaching materials based on the UNDP's educational curriculum. Considering such a situation, the policy of activities to develop teaching materials in the Project was discussed in the WG3, and teaching materials to promote the understanding of residents based on the UNDP's educational curriculum will be created after clarifying a demarcation of works for development of teaching materials with World Vision Mongolia. Coordination for the division of the activities between the Project and World Vision Mongolia is ongoing under leadership of the disaster prevention department in NEMA.

Activity 3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center

The discussion on the training program for DRR Training Center (temporary name) in the UB city was started. It was agreed to prepare the report on how to improve the current training program in the WG3.

1-3 Achievement of Output

(1) Output1

The following three indicators are applied to evaluate the achievement of the Output 1 based on the PDM.

1.1 The number of guidelines, operational rules, provisions which are developed.

Achievement in this term: The WG1 has just created the basic frameworks of the guideline of risk assessment and the guideline of disaster management plan, and it has not reached the stage of evaluation with quantitative indicators.

1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements

Achievement in this term: The WG1 has created the draft manual of agreement preparation procedure and started to create an agreement on the field of Information and communication.

1.3 White paper on disaster risk reduction

Achievement in this term: The WG1 has gotten an approval of the work plan to prepare the white paper from Chief of NEMA.

(2) Output2

The following two indicators are applied to evaluate the achievement of the Output 2 based on the PDM.

2.1 Guideline for seismic assessment: The number of the participants in the training program on seismic assessment

The achievement in this term: The WG2 has just started to develop the guideline. For the purpose of technical transfer of seismic diagnosis in Japan, the first seminar was held on April 20th, 2017. There are 25 attendees at this seminar.

2.2 Guideline for seismic strengthening: The number of the training program on seismic strengthening

The achievement in this term: The WG2 has just started to develop the guideline. For the purpose of technical transfer of seismic strengthening in Japan, the first seminar was held on May 3rd, 2017. There are 22 attendees at this seminar.

(3) Output3

The following two indicators are applied to evaluate the achievement of the Output 3 based on the PDM.

3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project

Achievement in this term: The WG3 has just started to prepare the guidelines and teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

3.2 The number of visitors in Training Center

Achievement in this term: The WG3 has just started to prepare the guidelines and teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

1-4 Achievement of the Project Purpose

The following two indicators are applied to evaluate the achievement of the Project based on the PDM.

1. The number of the approved guidelines and agreement

2. The number of the data on disaster risk reduction which newly established and improved

The achievement in this term: After grasping the issues and challenges of the current status of legal frameworks of DRR in Mongolia for each Output, development of guidelines, agreements, standards of seismic diagnosis and strengthening, teaching materials have been just started at each WG. In order to ensure sustainability after the Project, each activity is planned and implemented so that guidelines and other related outputs which will be developed in the Project are approved by NEMA, MCUD or MECSS through their standard procedures.

1-5 Changes of Risks and Actions for Mitigation

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction

At the start of the Project, it was considered the formulation of the guideline for preparation system and the guideline for disaster prevention as one of activities in Activity 1.1.2 based on the contents of the PDM which was developed and approved when the amended law of disaster protection was still a draft one. However, as explained in Section 1-2, the articles and the contents of rules and regulations directed to be formulated in a draft of amended law which became occasions to prepare the both guidelines were modified in the official amended law of disaster protection, and the policy of preparation of both guidelines in the Project needs to be changed. In the case of changing the policy of preparation of both guidelines, the description of "Note 1-1) Amended Law of Disaster Protection "8.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc.." in the PDM might need to be changed. It should be confirmed whether the change of the description of Note 1-1) in PDM is necessary.

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

In the WG1 activity, two pilot aimags are assumed for revision of the local disaster management plan, but these targeted places have not been selected yet. After selection of two aimags in the WG2, it will be discussed in the Steering Committee and the JCC in order to receive approval.

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

In Mongolia there are few examples of seismic strengthening of buildings,, it is effective to identify specific target structures for creating examples in the preparation of guidelines on seismic strengthening of buildings and reconstruction. For this reason “Activity 2.2.2 (To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot) will be started earlier than the initial work plan.

Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

In the WG3 activity, three different places selected from urban area, Ger area (unplanned area), and rural area are assumed as the pilot areas for the training on DRR education and raising awareness but these pilot places have not been identified yet. After selection of three places in the WG3, it will be discussed in the Steering Committee and the JCC in order to receive approval.

1-6 Progress of Actions undertaken by JICA

N/A

1-7 Progress of Actions undertaken by Gov. of Mongolia

(1) Output1

The necessity of compilation of the guideline for preparation system and the guideline for disaster prevention in this Project will be discussed in Mongolia side and in JCC.

The pilot areas for Activity 1.3.1 have been proposed by NEMA, namely UB City, Darkhan-Uul and Khentii. These candidates will be approved by JCC.

(2) Output2

Under consultation of NEMA and MCUD, CDC made efforts to examine TOR and to select appropriate CST such as MACE (Mongolian Association of Civil Engineers) to promote the establishment of standards, so that the Activity 2.2.2 will start earlier than planned.

N/A

1-8 Progress of Environmental and Social Considerations (if applicable)

N/A

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

N/A

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

Output 2: the project on seismic diagnosis and strengthening of school buildings targeted in Ulaanbaatar city are being implemented by World Bank. Since this project is related to the activity of the Output 2 in the Project, information gathering for this project is carried out continuously. It is assumed that the output in the World Bank project is mentioned as one of referential documents in the guidelines for seismic diagnosis and strengthening of buildings in the Project.

Output 3: MECSS is working with World Vision Mongolia to establish a platform for information sharing among school DRR personnel. For the purpose of information sharing, the JET of WG3 participates in events of their activity as an observer.

Outcome 3: It turned out that World Vision Mongolia is carrying out similar activities in development of teaching materials for DRR education and raising awareness. The JET of WG3 continues to discuss this matter with NEMA with a view to the division of the activities for development of materials by disaster type.

2. Delay of Work Schedule and/or Problems (if any)

2-1 Detail

The delay of each WG activity is concerned due to the busy schedule of WG members. The WG meetings were sometimes postponed.

2-2 Cause

Concentration of works and events which Mongolian side C/P has to deal with for each organization. Participation of overseas trainings implemented by other donors, etc.

2-3 Action to be taken

The JET explains the significance of the activities in the Project and effects of the output at each organization to supervisors of each Mongolian side C/P continuously in order to get their understanding of the Project. And also the JET requests the sharing of event schedule adequately. National staff in the Project confirms the working progress by Mongolian side C/P continuously.

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Mongolia,etc.)

N/A

3. Modification of the Project Implementation Plan

3-1 PO

N/A

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

N/A

4. Preparation of Gov. of Mongolia toward after completion of the Project

In this term, the specific policy and actions are not discussed yet.

II. Project Monitoring Sheet I & II *as Attached*

Project Monitoring Sheet I (Version.2 as of May 31, 2017)

Version 2
Dated June 29, 2017

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia

Implementing Agency: National Emergency Management Agency (NEMA)

Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City

Period of Project: December 2016 to November 2019

Project Site: Mongolia

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal Seismic risk will be reduced.</p>	<ol style="list-style-type: none"> Number of the approved guideline, rules, provisions Number of white paper open to public Number of the executed seismic assessment Number of the seismic strengthened building Number of implemented activities on disaster risk reduction education 	<p>Study by NEMA</p>	<p>The policy on disaster risk reduction will not be changed in Mongolia.</p>		
<p>Project Purpose The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.</p>	<ol style="list-style-type: none"> The number of the approved guidelines and agreement The number of the data on disaster risk reduction which newly established and improved 	<p>Project report</p>	<p>NEMA expands the pilot activities in other aimags and sums.</p>	<p>After grasping the issues and challenges of the current status of legal frameworks of DRR in Mongolia for each Output, development of guidelines, agreements, standards of seismic diagnosis and strengthening, teaching materials has been just started at each WG.</p>	<p>In order to ensure sustainability after the Project, each WG makes it a goal to get an approval of guidelines and other related outputs which will be developed in the Project from NEMA, MUCD or MECSS through their standard procedures.</p>
<p>Outputs 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced. 2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced.</p>	<ol style="list-style-type: none"> The number of guidelines, operational rules, provisions which are developed. <ol style="list-style-type: none"> The number of the draft of agreement, developed and participants who participated in the training programs on agreements White paper on disaster risk reduction Guideline for seismic assessment The number of the participants in the training program on seismic assessment Guideline for seismic strengthening The number of the training program on seismic strengthening 	<p>Project report</p>	<ol style="list-style-type: none"> The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. Participants in training programs continue to work in the same position. The relation among related organizations is maintained. Exchange information is maintained among the related organizations. 	<p>The WG1 has just created the basic frameworks of the guideline of risk assessment and the guideline of disaster management plan. The WG1 has created the draft manual of agreement preparation procedure and started to create an agreement on the field of information and communication. The WG1 has gotten an approval of the work plan to prepare the white paper from Head of NEMA. The WG2 has just started to develop the guideline for seismic assessment. For the purpose of technical transfer of seismic diagnosis in Japan, the first seminar was held on April 20th, 2017. There are 25 attendees at this seminar. The WG2 has just started to develop the guideline for seismic strengthening. For the purpose of technical transfer of seismic strengthening in Japan, the first seminar was held on May 3rd, 2017. There are 22 attendees at this seminar.</p>	
<p>3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.</p>	<ol style="list-style-type: none"> The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project The number of visits in Training Center 	<p>Ordinance of Ministry of Education, Culture and Science Ordinance of NEMA</p>		<p>The WG3 has just started to prepare the guidelines and teaching materials for DRR education and raising awareness.</p>	

Activities	Inputs	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1)) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2)) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p> <p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-5))</p>	<p>The Mongolian Side</p> <ul style="list-style-type: none"> - Assignment of counterparts - Project Director - Project Managers - Project Coordinator - Project Members <p>For Output 1</p> <ul style="list-style-type: none"> - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC) <p>Provision of Equipment</p> <ul style="list-style-type: none"> - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table <p>Training in Japan and/or the third countries</p>	<p>The Japanese Side</p> <ul style="list-style-type: none"> - Dispatch of Experts - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction Education - Disaster Risk Reduction at Community Level - Educational Material Development
<p>2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p>	<p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency 	<p>Pre-Conditions</p>



<p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergaten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergaten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training Institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	<p><Issues and countermeasures></p> <p>The delay of each WG activity is concerned due to the busy schedule of WG members. The WG meetings were sometimes postponed by concentration of works and events which Mongolian side C/P has to deal with for each organization.</p> <p>The JET explains the significance of the activities in the Project and effects of the output at each organization to supervisors of each Mongolian side C/P continuously in order to get their understanding of the Project. And also the JET requests the sharing of event schedule adequately.</p>
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Notes

- 1-1) Amended Law of Disaster Protection "8.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc..
- 1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM
- 1-3) National level, UB city and two provinces are the target areas
- 1-4) Improvement of existing "Disaster Information Sharing System"
- 1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)
- 2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities
- 2-2) Guidelines are regarded as operational guidelines by Resolution of Minister
- 2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.
- 3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certificated teacher's instructors
- 3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring of nationwide implementation of education and training program to all the necessary target stakeholders
- 3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency Management Departments of Cities, Provinces, and Districts, (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels, (3) Heads of governor's offices of Provinces, Soms, and Districts (4) Heads of Bags and Khoroos, (5) Coordinators of civil activities in Provinces, Districts, and Khoroos and (6*) Volunteers (*only in pilot areas)
- 3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.

Project Title: The Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia												
Inputs	Year				Year				Remarks	Monitoring		
	2016		2017		2018		2019				2020	
Expert	Pln	Act	Pln	Act	Pln	Act	Pln	Act	Pln	Act	Issue	Solution
Kiyosaka OWADA												
Ashiro FURUTA												
Osumi NISHII												
Kensuke CHIKAWA												
Shouji MARITA												
Yoshiaki YAMAZAKI												
Tadashi ISE												
Seisho FUJISHIMA												
Jun MATSUJO												
Masaaki AOKI												
Shigeki KITA												
Hideo OMINE												
Miki KODAMA												
Norio OGAWA												
Toshitaka HIWARI												
Yoshiaki OTA												
Amidorigai NAYANBATOR												
Equipment for seismic assessment												
Earthquake simulation experience equipment for Training in Japan												
Comprehensive disaster risk reduction (tentative)												
In-country/Third country Training												
Activities	Achievements										Issue & Countermeasures	
Sub-Activities	Responsible Organization										Japan	GOM
Output 1: To identify problems and challenges on implementation of legal frameworks of disaster risk reduction												
1.1.1 To review the current legal frameworks of disaster risk reduction												
1.1.2 To summarize the problems and challenges												
1.1.2 To develop guidelines on improvement of disaster risk and database on disaster risk reduction												
1.1.2.1 To develop the guideline of risk assessment												
1.1.2.2 To develop the guideline of disaster management plan												
1.1.2.3 To develop the guideline of the disaster preparedness plan												
1.1.2.4 To develop the guideline of earthquake risk management												
1.1.2.5 To develop the Guideline of Database												

TO Chief Representative of JICA Mongolia OFFICE

PROJECT MONITORING SHEET

Project Title : Project for Strengthening the National Capacity of Earthquake**Disaster Protection and Prevention in Mongolia****Version of the Sheet: Ver. 3.0 (Term: June, 2017 - November, 2017)****Name: D.Batsaikhan****Title: Director of Disaster Prevention****Department, NEMA****Name: Kiyotaka Owada****Title: Team leader / Integrated disaster management I****Submission Date: January 17, 2018****I. Summary****1. Progress****1-1 Progress of Inputs****(1)Dispatch of Experts**

The following Experts from Japanese side were assigned in this monitoring period.

	Area of responsibility	Experts name	Period of assignment
Project Management Group	Team Leader / Integrated Disaster Risk Management I	Kiyotaka OWADA	Jun.14 – Jul. 9, 2017 Sep.4 – Oct.3, 2017 Nov. 22 – Nov 30, 2017
	Deputy Team Leader / Integrated Disaster Risk Management II	Akihiro FURUTA	Jun. 1 – Jun. 17, 2017 Oct. 30 – Nov. 25, 2017
OUTPUT1: Disaster Management Plan	Disaster Management Plan I	Osamu NISHII	Jun. 12 – Jul. 1, 2017 Oct. 30 – Nov. 11, 2017
	Disaster Management Plan II	Kensuke ICHIKAWA	Sep. 10 – Oct. 10, 2017
	Disaster Management system I	Yoshitaka YAMAZAKI	Aug. 31 – Sep. 19, 2017
	Disaster management system II	Shiro MAKITA	Jun. 8 – Jun. 23, 2017
	Disaster management information I	Tadashi ISE	Jun. 5 – Jun. 14, 2017
	Disaster management information II	Akihiro FURUTA	—
Output 2: Seismic Resistance	Seismic-Resistance	Seiichiro FUKUSHIMA	Jun. 13 – Jul. 1, 2017 Nov. 29 – Nov 30, 2017
	Seismic Diagnosis of Infrastructures and Lifelines	Jun MATSUO	Jun. 1 – Jun. 22, 2017 Oct. 23 – Nov. 11, 2017
	Seismic Diagnosis of Buildings / Seismic Strengthening I (RC, PC)	Masahide AOKI	Aug. 24 – Sep. 12, 2017
	Seismic Diagnosis of Buildings / Seismic Strengthening II (Masonry)	Shigeki KITA	Oct. 30 – Nov. 8, 2017

	Area of responsibility	Experts name	Period of assignment
	Seismic-Resistant Design	Hideto OMINE	Aug. 13 – Aug. 30, 2017
Output 3: DRR Education	DRR Education I	Miki KODAMA	Sep. 10 – Sep. 23, 2017 Nov. 16 – Nov 29, 2017
	DRR Education II	Yujiro OGAWA	Jun. 11 – Jun. 23, 2017 Nov. 27 – Nov 30, 2017
	Community-Based Disaster Management / Project Coordination I	Toshikazu HIWAKI	Jun. 13 – Jul. 2, 2017 Nov. 22 – Nov 30, 2017
	Development of Disaster Management Teaching Materials I	Yoko OTA	Aug. 7 – Aug. 18, 2017
	Development of Disaster Management Teaching Materials II / Project coordination II	Amarjargal NAYANBAATAR	Jun. 13 – Jun. 29, 2017 Aug. 8 – Aug. 16, 2017 Sep. 14 – Sep. 28, 2017 Nov. 17 – Nov. 28, 2017 *Intermittent assignment during above periods

(2) Assignment of counterparts

The current administration of authorities concerned of Mongolia for the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia (hereinafter referred to as “the Project”) is as following,

(a) Project Director:

D.Batsaikhan, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinators

Z.Battulga, Disaster Operation Department, NEMA

Enkhbat, Policy Coordination and Cooperation Department, NEMA

The Project Director and one of Project Coordinators were changed according to transfers of personal within the NEMA. D.Batsaikhan who was promoted the Director of Disaster Prevention Department was assigned to the Project Director as the successor of B. Uuganbayar who was promoted to the Deputy Chief of NEMA. Enkhbat who is an officer of Policy Coordination and Cooperation Department was assigned to the Project Coordinator as the successor of D.Bazarragchaa who was transferred to Disaster Risk Management Department.

According to the Record of Discussions (hereinafter referred to as “R/D”), the project organization of Mongolia side includes the counterpart (hereinafter referred to as “C/P”) of working groups (hereinafter referred to as “WG”) in order to implement project activities at

output level of the Project.

The member list of the C/P for each WG had been amended accordingly at the third Joint Coordinating Committee (hereinafter referred to as “JCC”) on June 29th, 2017 and at the fourth Steering Committee (hereinafter referred to as “SC”) on September 28th, 2017 based on the member list approved in the second JCC on April 14th, 2017. And at the fifth SC on November 27th, 2017, further amendment of C/P member was confirmed as shown below.

(a) Member of Sub-Group of WG1 (As of November, 2017)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			3rd JCC Jun.2017	4th SC Sep.2017	5th SC Nov.2017
Coordinator for WG1	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
Disaster Risk Assessment	D.Serjmyadag	Law Enforcement University of Mongolia	○	○	○
	P.Amarzaya	Disaster Research Institute, NEMA	○	○	○
	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
	B.Batbayar	Disaster Risk Management Dep., NEMA	○	○	○
	B.Khishigbaatar	Disaster Operation Dep., NEMA			○
	S.Bazarragchaa	Disaster Research Institute, NEMA			○
Disaster Protection Planning	B.Bayanmunkh	Policy Coordination and Cooperation Dep., NEMA	○	○	○
	B.Myagmardorj	Disaster Operation Dep., NEMA	○	○	○
	T. Turbileg	Disaster Operation Dep., NEMA		○	○
	Ch.Otgontugs	Fire Dep., NEMA	○	○	○
	E.Batbayar	Emergency Management Department of Capital City (EMDC)	○	○	○
	A.Dashnyam	EMDC	○	○	○
Disaster Reduction Agreement	B.Duvshin	Disaster Risk Management Dep., NEMA	○	○	○
White Paper	E.Altankhishig	Policy Coordination and Cooperation Dep., NEMA	○		
	O.Tsend-Ayush	Disaster Prevention Dep., NEMA		○	○
Disaster DB	B.Purevnyam	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D.Badamsuren	Disaster Research Institute, NEMA	○	○	
	D. Sodnomragchaa	Disaster Research Institute, NEMA	○	○	○
	B.Boldkhuu	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D. Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA			○

(b) Member of Sub-Group of WG2 (As of November, 2017)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			3rd JCC Jun.2017	4th SC Sep.2017	5th SC Nov.2017
Coordinator for WG2	D.Zanabazar	Ministry of Construction and Urban Development (MCUD)	○		
	B.Soyomboo	MCUD			○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
Seismic Diagnosis of Buildings	D.Zanabazar	MCUD	○		
	B.Soyomboo	MCUD			○
	G.Erkhembayar	MCUD	○	○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○
	Sh.Uranchimeg	General Agency for. Specialized Inspection (GASI)	○	○	○
	N.Ganchimeg	GASI	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○	○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
T.Galbadrakh	Finance and Logistics Dep., NEMA		○	○	
Seismic Diagnosis of Infrastructures and Lifelines	D.Zanabazar	MCUD	○		
	B.Soyomboo	MCUD			○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○
	Sh.Uranchimeg	GASI	○		
	N.Ganchimeg	GASI	○	○	○
	B.Munkhsaikhan	GASI	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
	T.Galbadrakh	Finance and Logistics Dep., NEMA	○	○	○
Design for Seismic Strengthening	D.Zanabazar	MCUD	○		
	B.Soyomboo	MCUD			○
	G.Erkhembayar	MCUD	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○	○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○

(c) Member of Sub-Group of WG3 (As of November, 2017)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			3rd JCC Jun.2017	4th SC Sep.2017	5th SC Nov.2017
Coordinator for WG3	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
School DRR Education (WG3-1)	J.Myagmar	Ministry of Education, Culture, Science and Sports (MECSS)	○	○	○
	Ch.Gantsetseg	MECSS	○	○	○
	P.Baljinnyam	MECSS	○	○	○
	A.Enkhtogtokh	Education Research Institute (ERI), MECSS	○	○	○
	B.Erdenechimeg	ERI, MECSS	○	○	○
	G.Mongolkhatan	ERI, MECSS	○	○	○
	G.Khaliun	ERI, MECSS	○	○	○
	Munkhbayar	Institute of Teacher Professional Development	○	○	○
	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	O.Tsend-Ayush	Disaster Prevention Dep., NEMA	○		
L.Munkhchimeg	Disaster Prevention Dep., NEMA			○	
Community DRR Education (WG3-2)	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	D.Bat-Erdene	Disaster Prevention Dep., NEMA	○	○	○
	D.Dulamsuren	Public Information Center, Disaster Prevention Dep., NEMA	○	○	○
	S.Amgalan	Administrative Management Dep., NEMA	○	○	○
	S.Doljinsuren	EMDC			○
	B.Chinbat	EMDC	○	○	○
	B.Uuriingegee	DRR Training Center, EMDC	○	○	○
	B.Ariunchimeg	National Center for Long life Education		○	○
	M.Amartungalag	MECSS	○		

1-2 Progress of Activities

(1) Overall of Project

1) Implementation of Steering Committee (SC) and Joint Coordination Committee (JCC)

The third JCC and three (3) times of SCs have been held in this monitoring period.

No.	Date	Participants	Contents of discussion
Third SC	June 20, 2017	NEMA, WG member for each OUTPUT	<ul style="list-style-type: none"> - Documentary of public awareness activity for seismic risk reduction in Mongolia - Monitoring Sheet, version2 - Procuring equipment - Target Aimags for revision of the regional disaster management plan - Pilot places for the training on DRR education and raising awareness - Proposed training contents and candidates Next training in Japan
Third JCC	June 29, 2017	NEMA, MCUD, MECSS, GASI, Construction Quality and Safety Department; City Planning and Master Planning Agency of Capital City, etc. Total: 42 participants	<ul style="list-style-type: none"> - Project Monitoring Sheet I & II "Ver. 2" - Progress of Activities for each Working Group - 2nd Training in Japan - Procuring equipment
Fourth SC	Sep. 28, 2017	NEMA, WG member for each OUTPUT	<ul style="list-style-type: none"> - Working Group Member - Procuring equipment - Target Aimags for revision of the regional disaster management plan - Pilot places for the training on DRR education and raising awareness
Fifth SC	Nov. 24, 2017	NEMA, WG member for each OUTPUT	<ul style="list-style-type: none"> - Amendment of Working Group Member - Procuring Equipment - Target Aimags for revision of the regional disaster management plan

2) Provision of Equipment

As identified in the work plan of the Project which was approved by the first JCC, the equipment for seismic diagnosis and the earthquake simulation experience equipment for the Disaster Risk Reduction (hereinafter referred to as "DRR") Training Center (temporary name) are supposed to be procured and donated by JICA.

Regarding the equipment for seismic diagnosis, the Mongolian side formulated an equipment training program at WG of Output 2, and then they incorporated the training program into the Operation and Maintenance (hereinafter referred to as "O&M") plan, and submitted the plan to the JICA Mongolian Office. As a result of the above process, the

process of procurement of the equipment for seismic diagnosis in Mongolia was started by the JICA Mongolia office.

Regarding the earthquake simulation experience equipment, the Mongolian side formulated a training program using equipment in the DRR Training Centre at WG of Output 3. After some modifying, they attached the program to the O&M plan with consideration for the contents of the training program. The plan was submitted to the JICA Mongolian Office. As a result of the above process, the process of procurement of the earthquake simulation experience equipment for the DRR Training Centre was started by JICA Headquarters.

3) Training in Japan

The Mongolian side requested the second training in Japan in order to learn specific knowledge and technical approach which will be directly utilized to prepare guidelines and training programs in the activities of each WG. For this request from Mongolian side, the Japanese side requested that obtained knowledge and experiences through the first training in Japan should be reflected in the WG activities firstly, and detailed training items would be identified in each WG activity by the third JCC held on June, 2017.

At the third JCC meeting, the representatives for each WG member made their presentations about the status of WG activities based on the lessons learned from the first training in Japan and proposed subjects of that they need to promote better understanding by the further training in Japan.

As the result of the discussion about the further training in Japan based on the presentation by the representatives for each WG member, both the Japanese side and the Mongolian side agreed with the implementation of the second training program in Japan by dividing into three times (3) for each output.

The training for OUTPUT3 with ten (10) trainees named as “Capacity Improvement for the promotion of DRR” was implemented from October 29th to November 11th, 2017. After that, training for OUTPUT2 with nine (9) trainees named as “Capacity Improvement for Seismic Diagnosis and Strengthening Buildings” was also implemented from November 12 to 22, 2017.

The training for OUTPUT1 with thirteen (13) trainees named as “Capacity Improvement for Disaster Management Planning” are going to be implemented from December 6th to 16th, 2017.

(2) Output1

Activity 1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction

At the beginning of the Project, the needs to develop new rules and regulations or to revise existing rules and regulations had been discussed in the WG1 based on the draft contents of the amended Law of Disaster Protection, and it had been considered that five (5) guidelines (hereinafter referred to as “GL”) would be formulated in the activities for Output 1, namely “Risk Assessment GL”, “Disaster Protection Planning GL”, “Disaster Preparedness GL”, “Disaster Management GL” and “Disaster Database GL”.

It had been assumed that the Disaster Preparedness GL would deal with setting the levels of disaster preparation and preliminary measures according to the level of preparation, and the Disaster Management GL would be mainly supposed to deal with management concerning investment for mitigation at the time of an earthquake. However, in the Formal Amended Law of Disaster Protection, the provisions that had been the basis of the assumption for formulating the Disaster Preparedness GL and the Disaster Management GL were revised or deleted.

In particular, the provisions of Articles 10.2, 10.8 and 11.1 had been initially considered to correspond to the Disaster Preparedness GL. However, these provisions were revised and the roles of the police, public security, and military chiefs’ headquarters were described mainly in those Articles. Since some of their roles and resource data are confidential, it was decided that the Disaster Preparedness GL would not be prepared independently but the part of activities in preparedness phase would be included in the Disaster Protection Planning GL.

And also the provisions of Article 12.2 had been initially considered to correspond to the Disaster Management GL. However, the part of investment for mitigation was deleted from the Article and it was newly described that “Disaster Management” is an audit of disaster prevention activities of relevant agencies by the National Audit Committee. The National Audit Committee is planned to be established within NEMA and the National Auditor shall independently conduct the audit work. Therefore, Mongolian side mentioned that an audit work is including confidential data and it is no necessary for the support from the JICA Expert Team (hereinafter referred to as “JET”) to prepare the GL for the national auditing.

From the above viewpoint, three (3) GLs shall be developed in Output 1 of the Project, namely, the "Risk Assessment GL", "Disaster Protection Plan GL", and "Disaster

Database GL".

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction

1) Disaster Risk Assessment Guideline

The framework and the configuration of the Risk Assessment GL were confirmed in the WG1. Due to the enforcement of the amended Law of Disaster Protection, NEMA is undertaking to revise the Regulation for Implementation of Disaster Vulnerability and Risk Assessment (Annex of the Cabinet Decision of 176, 2006). The revised regulation mainly states the administrative framework of general disaster risk assessment. There are six (6) annexes for the revised regulation, and Annex 4 named as "Technical Guideline (GL) for Earthquake Risk Assessment" is considered to be the guideline which will be formulated in the Project.

The Technical GL for Earthquake Risk Assessment created by JICA in the Turkish project was modified by WG1 to be suitable for Mongolia. Using this GL as a basic material, WG decided to develop two (2) guidelines namely, 1) Comprehensive earthquake disaster risk assessment GL for the central and local governments and 2) Detailed earthquake disaster risk assessment GL for experts and researchers of related organizations. The WG1 member created the first draft of the comprehensive earthquake disaster risk assessment GL.

2) Disaster Protection Planning Guideline

The WG1 member prepared three (3) draft GLs namely, national earthquake disaster management operation planning GL, Aimag / Soum level earthquake disaster protection planning GL and Ulan Bator (hereinafter referred to as "UB") City / District earthquake disaster protection planning GL. Draft national earthquake disaster protection planning GL is under preparation. These draft GLs are prepared based on the input from the JET with reference to the Basic Disaster Management Plan in Japan, disaster management operation plan of several ministries in Japan and Regional Disaster Prevention Plan in Sapporo City, Japan.

These GLs do not replace the existing "Instruction Manual for Utilization of Disaster Management Plan Form" (Order of Chief of the NEMA, 2013). Because these GLs are for formulating disaster protection plan specialized for earthquake. On the other hand, the Internal WG in NEMA has been established to update the existing Instruction Manual, and this WG is trying to update the Instruction Manual by reference to the GLs created in the Project. It will be new Instruction Manual in order to formulate disaster protection plans for

other disasters.

3) Disaster Database Guideline

Regarding the disaster database guideline, the intent was confirmed to compile the operational framework of the disaster related information management system, database specifications and procedure of data sharing with related organizations which are supposed to be developed through Activity 1.3.3 as a GL.

Activity 1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection

The WG1 member verified the articles of the Amended Law of Disaster Protection mainly from the viewpoint of risk assessment and disaster protection, and disaster prevention, and investigated the necessity to establish new rules and regulations and/or revise existing rules and regulations. As a result, it was confirmed that the necessity for establishment and revision of one (1) regulation which was corresponded to the Risk Assessment GL and six (6) regulations which were corresponded to the Disaster Protection Planning GL.

As described in Activity 1.1.2, for the Regulation for Implementation of a Disaster Vulnerability and Risk Assessment (Annex of the Cabinet Decision of 176, 2006), the revision work has already been started by the NEMA, and the main text of the regulation has already been completed. Annexes of this regulation include earthquake risk assessment guideline which will be prepared in the Project. Annexes are currently under development.

Activity 1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations

Draft manual of preparation procedure of the agreement has been developed based on the comparison and analysis of the existing agreements in Mongolia and Japan. The contents of the manual are mainly, (i) grasping the current situation, (ii) examining the scope of the agreement, (iii) examining the contents of the agreement, (iv) negotiating the framework of the agreement, and (v) preparing an agreement draft. The manual has been updated while preparing the actual draft agreement in WG1, and it is at present, version 0.8.

After discussion in WG1, three (3) fields, namely, “information / communication”, “fuel” and “medicine” were selected as fields for establishing the agreement during the Project period. In addition, the item “(i) grasping the current situation” in the manual was

conducted by brainstorming style using a large piece of paper and post-it notes.

<Information / communication>

WG1 exchanged views with the Prime Minister's Information and Communication Coordination Committee and four (4) mobile phone companies to discuss the possibility of cooperation agreement to secure information communication at the time of a disaster. As a result of the discussion, the members agreed to work on the agreement for securing mobile phone communications during disasters. The draft agreement is prepared by the WG1 and these organizations plan to sign the agreement next February, 2018.

<Fuel>

Since it turned out that the national stockpile is a state secret, WG1 decided to explore the possibility of signing an agreement with only private stockpiles and supplies.

WG1 studied on the agreement for priority supply of fuel to emergency response activities by NEMA, the Petroleum Authority, and private companies. Finally, the agreement on fuel supply for emergency activity was prepared. These parties are considering the possibility of concluding an agreement in 2018.

<Medicine>

The stockpiling and distribution of medicine in the country were investigated through the Ministry of Health (hereinafter referred to as "MOH"). WG1 and MOH discussed about NEMA's support to prepare cooperation agreements between MOH and relevant organization on the emergency distribution of medicine at the time of disaster which should be included as an appendix in the Disaster Management Operation Plan of MOH. In addition, to implement the demonstration experiment of this cooperation agreement was discussed and it was planned that this experiment would be conducted in the training on the national disaster management operation plan of the MOH held in March 2018.

<Other fields>

WG investigated the possibility of agreement in the field of "food", "evacuation place / temporary housing" and "water supply and sewerage". Draft agreements were prepared and presently under discussion between Ministry of Agriculture and Food, Ministry of Construction and Urban Development, and UB City Water and Sewerage Bureau respectively.

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

The current National Disaster Protection Plan in Mongolia mainly describe the emergency response activities for each disaster and there are a few descriptions about disaster prevention and preparedness. Therefore, the JET shared the document of “countermeasures common to all disaster types” in the Basic Disaster Management Plan in Japan with the WG1 member as a reference.

The current regional disaster protection plans of UB city, Aimag and Soum levels were basically prepared based on the Instruction Manual for Utilization of Disaster Management Plan Form (Order of Head of the NEMA, 2013). The new draft earthquake disaster protection planning guidelines were prepared in the WG1 as described in Activity 1.1.2, and the policy to revise the regional disaster protection plans based on this guideline was confirmed.

Activity 1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan

In the activity 1.1.2., WG1 member prepared draft national earthquake disaster protection operation guideline, draft aimag / soum level earthquake disaster protection planning guideline and draft UB City / District earthquake disaster protection planning guideline. Also draft national earthquake disaster protection plan is under preparation.

In the 4th SC held on 24th November 2017, Darkhan-Uul Aimag and Umnugovi Aimag were selected as pilot areas to revise the exiting earthquake disaster protection plan and Chingeltei District and Bayangol District of UB City were proposed as pilot districts.

Based on these developed guidelines, the WG1 will shortly start the revision work.

Activity 1.3.3 To improve the present system which collect and analyze information on disaster risk reduction

NEMA is responsible for improving the database for disaster related data under the Article 14 "Creating a Disaster Database" of the Amended Law of Disaster Protection. From the point of views of carrying out the NEMA's duty in the Law and contributing to the priority actions in "Sendai Framework for Disaster Risk Reduction 2015-2030" in Mongolia, the improvement policy of the present system had been discussed in the WG1. As cerise of discussions, the over-all framework of upgrading database for disaster related data and installing new information sharing system in NEMA was clarified in consideration of expected relationships among NEMA headquarters, regional offices and related organizations in Mongolia. And the WG member confirmed their intent to develop a new spatial database of disaster events and disaster related information based on a

Geographic Information System (hereinafter referred to as “GIS”) for supporting DRR activities by NEMA as mission-critical system.

As of the first of June, 2017, the installation work for the e-comi map system which is free open-source software developed by the National Research Institute for Earth Science and Disaster Resilience in Japan (hereinafter referred to as “NIED”) in the server of the Mongolian National Data Center (hereinafter referred to as “NDC”) has been completed.

The works of developing a conversion tool between daily-basis incident report system managed by the Early Warning Center (hereinafter referred to as “EWC”) in NEMA to new spatial database of disaster events and designing of new database such as identification of data types, contents and formats in database are on-going by the WG1 member under technical support by the JET.

For effective utilization of the new spatial database, a new rule and regulation for system operation in NEMA is needed and also the enhancement of human capacity for spatial database management is important in order to get the system entrenched in NEMA and to ensure sustainable spatial database management. As of the first of August, 2017, the WG1 member reported the status of database improvement activity in the Project at the board meeting of NEMA and also explained necessity to enhance human capacity for operation and management of spatial database and to upgrade hardware such as a server. The policies of increasing specialized staff of database management in the EWC and securing a budget to install new server in NEMA was indicated by the chief of NEMA.

The most suitable procedures for operation and management of spatial database for NEMA are being discussed with the WG1 member through the development of the Database Guideline and Operation Manual. As of the middle of November, 2017, the Database Guideline was drafted by the 1-day workshop in the WG1 activity.

Activity 1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2

The WG1 explained the overall plan of editing the white paper to the person in charge of the ten (10) departments of NEMA and instructed the contents of necessary materials and the collection destination. The explanatory material serves as a draft of the preparation manual.

The person in charge changed and a new person was appointed. The status of data collection as of the end of October is as follows;

Table 1.1 Data Collection Status for White Paper

Department in NEMA	Number of items to be collected	To be collected by the end of October	Result
Policy Coordination and Cooperation	7	4	3
Disaster Prevention	4	1	1
Disaster Risk Management	2	1	0
Disaster Operation	10	6	1
Fire	3	2	0
National Stockpiling and Humanitarian Support	3	2	0
Administrative Management	1	0	0
Finance and Procurement	1	0	0
Disaster Research Institute	3	0	2
EMDC	1	0	0
TOTAL	39	16	7

(3) Output2

Activity 2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version

The WG2 member investigated the current standards and regulations regarding the evaluation of buildings to identify the issues and to examine the countermeasures. It was noted that current documents were regarding evaluation of deterioration and/or aging. Therefore, WG2 decided that the issues and countermeasures that are identified will be reflected in the guidelines that will be newly established in the project.

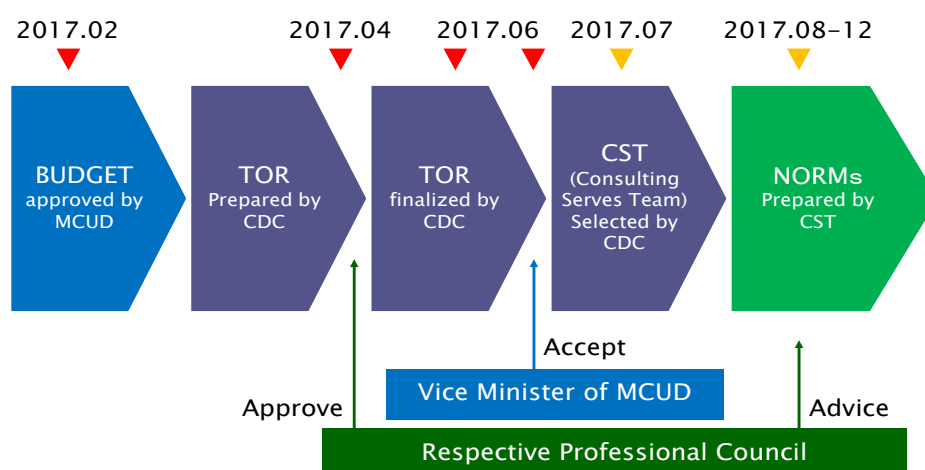
The WG2 member also discussed the seismic evaluation of infrastructure and lifeline structures with personnel of relevant organizations. In the discussions it was pointed out that regular replacement of structures is urgently needed and effective since many of the structures are aged and deteriorated. So the WG2 concluded that seismic capacity of the structures will be examined based on the existing check sheet with some modifications.

Activity 2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment

Since the newly established guidelines must be used practically, the WG2 decided to follow the Mongolian procedure shown in Figure 2.1 to make standards and regulations. In

the figure, a tentative schedule is also given.

In this project, it was decided to prepare four guidelines, three for buildings and one for Infrastructures and lifeline structures. To transfer the Japanese technology and knowhow to Mongolian counterparts, the formation shown in Table 2.1 was established. Each member of WG2 is expected to share the information in the WG2.



TOR: Terms of Reference, CDC: Construction Development Center, CST: Consulting Serves Team
 NORM: Mongolian Standard

Figure 2.1 Procedure to prepare guidelines

Table 2.1 Formation for establishment of guidelines

		RC ^{*1} Building	PC ^{*2} Building	Masonry Building	Infrastructures and Lifelines
CST	Organization	MACE			"Sart-Sharaid" LLC ^{*3} (Private Company in Mongolia)
	Leader	Ganzorig			Member of "Sart-Sharaid" LLC
	Secretary	Ganbayar			
	Members	Tulga Tulbat Bazarsad	Duinkherjav Baasanjav Odbayar	Munkhbayar Sharaa Javkhlan	
JET	Leader	Fukushima			
	Members	Aoki	Aoki	Kita	Matsuo
WG2	Representative Persons	Gantulga Erkhenbayar Ganchimeg	Saruultuya Galbadrakh	Tsend-Ayush Khlan	Battulga Munkhsaikhan

*1) RC: Reinforced Concrete, *2)PC: Precast Concrete, *3)LLC: limited liability company

1) Establishment of seismic evaluation guidelines for buildings

WG2 discussed the construction of seismic evaluation of buildings and decided on the two-level evaluations. The level of evaluation will be determined by the importance of the buildings and/or limitations of time and budget. Another advantage of employing the two-level evaluations is that it is possible to select the method by the skill of engineers. Level-1 evaluation is simple and can be used by those who are not familiar with engineering matters. Level-2 evaluation is more precise way that requires some knowledge on seismic design or evaluation. Level 3 evaluation that is not included in the scope may be the one equivalent to the current seismic design.

Based on the Japanese standard for seismic evaluation and seismic strengthening, The WG2 determined the contents and prepared the prototypes of guidelines for RC, PC and Masonry buildings. Some issues derived from converting from prototypes to draft guidelines were discussed with the Consulting Serves Team (hereinafter referred to as “CST”), followed by submitting draft guidelines to the Construction Development Center (hereinafter referred to as “CDC”) from the CST. Draft guidelines are under examination by the CDC.

2) Establishment of seismic evaluation guideline of Infrastructures and lifeline structures

The WG2 discussed the seismic evaluation method for Infrastructures and lifeline structures, and reached the conclusion that a method using a damage function is suitable to such structures. The WG2 established the concrete damage function reflecting the result of the Phase-1 Project and shared it with the other members in WG2. Draft guideline was submitted to the CDC for their examination and approved by the technical committee.

Also, the prototype of a checklist was established based on the request from the General Agency for. Specialized Inspection (hereinafter referred to as “GASI”). It is noted that this checklist has been converted to an excel spread sheet so that necessary scoring and judgment based on that score can be done automatically.

Activity 2.1.3: Implementation of the Training to Improve Knowledge and Ability for Those Who Carry Out Seismic Estimation on Structures and Lifelines

Some excel spread sheets for level-1 evaluation of buildings and for check of Infrastructures and lifeline structures were prepared in advance. These spread sheets were originally made to help CST members understand current Japanese standards, and they need to be improved after establishment of the draft guideline for seismic evaluation.

Also, the WG2 conducted the prototype of training using the spread sheet for seismic diagnosis of infra and lifeline structures, in order to identify the issues to be solved for the training course planned in the Project.

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

The WG2 decided that seismic evaluation and seismic strengthening should be combined in one guideline for each structure except for Infrastructures and lifelines, since seismic evaluation and seismic strengthening are strongly related to each other.

The WG2 and the CST examined the seismic strengthening methods for buildings based on the Japanese standard for seismic strengthening. The strengthening method were examined and selected by the WG2 and experts in Mongolia, so that they are practical and achievable with Mongolian materials and skills. Especially this is the case of PC large panel structure, which is unique structure by former Soviet Union.

Judgement of strengthening will be incorporated in the guideline after sufficient discussion among the WG2, the CST and other relevant organization.

Activity 2.2.2: Trial Design of Rebuilding and Strengthening Construction for Housing, Kindergartens, Schools, Hospitals and Government Buildings

The WG2 discussed the selection of model buildings that will be used in the trial design based on some features such as structural type, usage, and collapse characteristics. WG2 reached to the consensus that the typical or standard buildings should be selected for each usage denoted in the Work Plan.

The final decision on the selection was not made because of absence of the chief of bureau of the Ministry of Construction and Urban Development (hereinafter referred to as "MCUD"). The WG2 will grasp the situation of inauguration of new chief and will explain him/her about the selection to obtain the official decision.

(4) Output3

Activity 3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection

1) Implementation Policy for the Activities for the Development of School DRR Education Guidelines

After the detailed discussions with the counterparts, it was decided not to establish a committee for the development of the guideline which was originally planned and to conduct main development activities by the WG3-1 members in periodical consultation with the external experts for their technical advice and comments.

Also, it was decided that the guideline is to be developed covering not only earthquake, but also all the disasters which occur in Mongolia as target disasters, with the consideration for developing comprehensive school DRR guidelines.

The work plan for the development activities was designed as shown in the Table 3.1.

Table 3.1 Working Plan of the Guideline Development

	Mar.				Apr.				May				Jun.				Jul.				Aug.				Sep.				Oct.				Nov.				Dec.											
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV								
Working Group Meetings	★					★				★				★																																		
1 Understanding of Basic Implementation Policy																																																
2 Working Plan Development																																																
3 Collection, Translation, and Studying of Reference Documents																																																
4 Analysis of Current DRR Education in Schools																																																
5 Participation in the Training in Japan/ Training by Japanese Experts																																																
6 Development of Draft Contents of the Guideline																																																
7 Getting Comments from Relevant Organizations and Professional Experts																																																
8 Final Improvement and Completion of the Guideline																																																
9 Getting Approval of the Guideline																																																

2) Introduction of the guideline and reference documents in Japan

Prior to the development activities, basic ideas and systems for the school DRR education in Japan were introduced using the guideline “Reference Book for School DRR: Implementation of DRR Education for Nurturing a Zest for Living” developed by the Ministry of Education, Culture, Sports, Science, and Technology (hereinafter referred to as “MEXT”) in Japan. Also, the detailed DRR education plans and guidebooks developed based on the guideline by the prefectural and municipality education boards were introduced. Further, the table which shows the relationship of the educational contents described in the guideline and sample lecture plans was provided showing the respective

pages of the school textbooks. In addition, more reference documents for the guideline were translated into Mongolian and provided for the WG3-1 activities.

In cooperation with the field visit to Mongolia of Prof. Fujioka, the Education Department of Shiga University under the action research of the MEXT Scientific Research conducted a trial DRR lesson in No. 131 School. Targeting the grade 4 students of the primary school, lessons on the blessings and disasters that are laid upon us by nature and disaster preparedness were provided. The target students and the WG3-1 members that attended as observers of the lesson were impressed by one of the sample practical lessons that utilized an experiment for understanding disaster mechanisms. After the trial lesson, a meeting was held for opinion exchange with the WG3-1 members and the teachers of the No. 131 School. In the meeting, the mission and objectives of the School DRR Education Guidelines in Japan, the educational revolution and DRR education, and some video programs of the sample DRR lessons in the schools were introduced by Prof. Fujioka. The WG3-1 members commented that the utilization of the video program for teacher's reference is useful and effective.

3) Research on Current Situation of School DRR Education in Mongolia

In order to identify the current situation of school DRR education in Mongolia, DRR education contents in each educational level are examined in the Course of Study for Pre-School, Primary School, and Secondary School in Mongolia. The major findings by the research were as follows.

- The contents of hazard phenomenon and disasters are sufficiently included in the higher education, and higher and lower secondary education. In the pre-school education and primary education, contents of hazard phenomenon and disasters are reasonably well included.
- The content on disasters derived from ecology is 48%. Most of them are reflected mainly in the subjects of geography and chemistry of basic education, higher education and secondary education
- Contents of natural disasters are included in the geography education programs.
- Contents of technology disasters are included in the chemistry educational program in connection with confirming the handling of chemical substances and the influence of toxic substances.
- The contents of social disasters are not much included in education programs, and biological disasters are not included in educational programs.

- In general, purposes and objectives of the DRR education in the current education programs are not clear. Although DRR-related educational contents are individually included in some subjects such as geography and social studies, they are not systematically treated as DRR learning.
- Contents of personal safety education are included more in pre-school and primary education programs and education contents related to hazard phenomenon, accidents, disaster, and social safety are included more in lower and higher secondary education.

4) Development of the Draft Guideline for School DRR Education

Based on the studies of the reference documents and result of the research on the current school DRR education situation, title, composition, and purpose of the DRR education of each educational level was discussed and decided as follows.

- Title of the Guideline: “The Program for Life Safety Education”
- Type of the document: Course of Study which will be approved by the Minister of Education and Vice Prime Minister.
- Contents: The education guideline for life safety as a whole, not merely covering natural disasters
- Composition of the Program: 1) Background, 2) Purpose, 3) Contents, and 4) Teaching Method

Based on the above outline, the draft Program was developed. After the initial technical comments in the Ministry of Education, Culture, Science and Sports (hereinafter referred to as “MECSS”) were collected in September, a hearing meeting for taking technical comments and advice for the draft Program was organized on 4 October by inviting professionals and experts in the relevant organizations for finalization of the document. Currently it is in the process for the final improvement by the working group members based on the knowledge learned in the counterpart training in Japan and comments sent by the relevant organizations.

5) Collaboration with Comprehensive School Safety (CSS) Program

Since 2016, MECSS and World Vision Mongolia in cooperation with NEMA, UNICEF, and UNDP has conducted “Comprehensive School Safety (hereinafter referred to as “CSS”) Programs. The CSS program is aiming at promoting three areas of activities; (1) School Building Safety, (2) School Disaster Management, and (3) Education for Capacity

Enhancement to Reduce Disaster Risk and improve Disaster Resilience by coordinating and sharing relevant information among stakeholders.

On 28-29 November 2016, the first “Comprehensive School and Pre-school Safety Policy Forum” was held with the participation of the officers of the Emergency Management Department and Education Departments of the Prefectures and Municipalities, and DRR education stakeholders in government and non-governmental organizations, which was concluded with the practical recommendations for promoting school safety. Based on their recommendations, a 4-year Plan for School Safety Promotion was formulated to pursue the implementation of each of the recommended activities in a coordinated and balanced manner through the discussions among stakeholders. Also, a platform to monitor and promote the implementation of the activities was launched and the stakeholders concluded a MoU on the operation for the platform.

Since the output 3 activities of the Project are included in the activity area (3) of the CSS Program, the MECSS requested the Project team to collaborate with the Program. To avoid the duplication of the activities, the Project team decided to be involved in the CSS Program initiatives as an observer and continued to participate in the relevant events including of the workshops in May and August 2017.

Activity 3.1.2: To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools

Prior to the development of the educational materials, the existing materials for DRR education were collected.

Among them, the textbooks for the school DRR education were developed with the support of UNDP but still need improvement before they can be used in the school education nationwide. They were composed for teaching the DRR education contents as one subject and the contents and images of the textbook do not consider copyrights and were sometimes just copied from the Russian textbooks.

In addition to the above UNDP textbooks, there are some good materials which can be used in school DRR education, such as the children’s educational materials for each disaster developed by World Vision Mongolia. However, no materials have been systematically organized for school education based on each school grade and each subject. It is required to provide the materials and lesson guidebooks in a manner easily utilized by teachers according to their education plans.

Considering the above situation, it was decided to develop a “Guidebook” for teachers’

lessons as an annex of the “The Program of Life Safety Education”. Referring to the sample school DRR education lessons in the “Implementation of DRR Education for Nurturing a Zest for Living”, the “Guidebook” will be formulated as a format to provide DRR education in line with the contents in the Program of Life Safety Education.

Besides, there are not any school DRR education materials for disabled people. Inclusion of the sample lessons for the disabled people in the “Guidebook” will be considered.

After discussion in the several WG3-1 meetings, the composition of the “Guidebook” was decided as follows.

Foreword
 Abbreviations
 Chapter 1 Understanding of “Life Safety Education”
 1. Background and Needs
 2. What is “Life Safety Education”
 Chapter 2 “Life Safety Education” in Preschool and Compulsory Education
 1. Consistency between subjects (study items) and "life safety education" program
 2. Consistency between extra-curricular activity and "life safety education" program
 3. Consistency between life skill improvement activity and "life safety education" program
 Chapter 3 "Life Safety Education" Program Implementation Method (Overseas Case)
 1. Development of school education and action plans for introducing “Life Safety Education” program
 2. Curriculum of each subject (a. Pre-school education, b. Primary education, c. Lower secondary education, and d. Higher secondary education)

On 28 November 2017, a study workshop for the development of the educational materials was organized for the WG3-1 and WG3-2 members based on the request by the counterpart members to learn more examples of Japanese educational materials. Further a workshop for intensively discussing the contents of the “Guidebook” will be conducted on 10-12 January 2018.

Activity 3.1.3: To implement training programs for the instructors of Teacher Training Institutes and experts of educational departments in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively.

For including the training schedule in the MECSS annual training plans, discussion on the implementation schedule for the training in the Project was discussed with the director of the Institute of the Teacher’s Professional Development (hereinafter referred to as “ITPD”) and in the WG3-1 meeting held in September 2017.

Considering the other training schedule for the teachers and instructors, it was decided to

conduct the instructor training for all levels in around the dates in October 2018.

Implementation plan including of the participants to be invited and location of the training will be discussed and finalized by around April 2018.

Activity 3.2.1 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels

1) Framework for the Comprehensive Work Plan

At the beginning of the Activity 3.2.1, the current situation and issues for planning the DRR education and raising awareness were reviewed and summarized in the WG 3-2 activities. Major issues are as follows.

- DRR education and training annual plans of the NEMA and the Emergency Management Department of Capital City (hereinafter referred to as “EMDC”) are individually developed. The plans are not updated in the course of implementation in a year.
- Donors’ activities which provide a lot of assistance to the DRR education and training are not considered when making the plans in NEMA and EMDC.
- There is no coordination mechanism among donors regarding DRR education and awareness raising activities and material development, and some of the donors’ activities overlap.
- Information of the DRR education and awareness activities are not published well.

The following activities were proposed for solving the above issues.

- Development of institutional framework among stakeholders of the DRR education and awareness raising activities to regularly update the training schedule.
- Development of a website which can be accessed by government organizations and donor agencies and manage the DRR education and training activities plans. The simple system and design of the website is to be developed in consideration of easy to update at any time of the year and ensuring sustainability.
- Integration of the donor’s activities in the annual plan.
- Development and operation of a mailing list with which government organizations and donor agencies can share the latest information

Prior to the major activities, cases in Myanmar and Nepal for the development of platforms

for information sharing were introduced and studied as references.

2) Development and Activities of Comprehensive Training Schedule

<Operational System>

The first draft of the operational system for sustainable activities of the Comprehensive Work Plan was developed through WG3-2 activities, and discussed in the meeting that the stakeholders relevant to the DRR education and awareness activities had been invited to.

As a result of the discussions in the meeting, a “DRR Training and Raising Awareness Team” was established as a system led by the Disaster Prevention Department of NEMA and supported by the Policy Coordination and Cooperation Department of NEMA, with external support by World Vision Mongolia for the Comprehensive Training Schedule. The operational rules including purpose, composition and roles of the members of the Team were designated and approved as a regulation by the NEMA Administrator.

Information to be shared for the Comprehensive Training Schedule was discussed in detail with the references to the cases in Myanmar and Nepal. As a result, a platform which can display the major necessary information regarding the activities, such as “When (date)”, “Who (organizers)”, “Where (place)” and “What kind of activities” at a glance was designed. Also, the data entry system was developed in consideration of easy input of data by each stakeholder.

The following existing two websites were examined to choose the location to install the system for the Comprehensive Work Plan.

- A website was developed through the support of the World Vision for publishing the information on implementation of the DRR awareness and education activities conducted by NEMA and the Emergency Management Department of the Districts and Cities (<http://ontsgoisur.gov.mn/>)
- A website was developed with the support of the Asian Disaster Preparedness Center (hereinafter referred to as “ADPC”) for mapping of the projects of the donors which conduct DRR activities in Mongolia (<http://www.ontsgoi.gov.mn/>)

The latter website has a search function for the projects by target areas and implementation period, which is required for the search function of the Comprehensive Work Plan. Therefore, it was decided to utilize the website (www.ontsgoi.gov.mn) and operate the developed website in the site after the transfer of the management authority from ADPC to NEMA.

In September 2017, the working group members noticed that the website developed by ADPC was not in a stand-alone server for the NEMA and needed to be installed in the NEMA server, which is currently no available space for new web pages. Consequently, the system for the Comprehensive Work Plan cannot be installed together with the ADPC website and need to be reconsidered for the way to provide the service.

< Mailing List for the Team >

A mailing list (mdptteam@googlegroups.com) for the DRR Training and Raising Awareness Team was created by utilizing a Google group. Through the trial use, operation rules of the mailing list will be finalized.

< Regular Meetings of the DRR Training and Raising Awareness Team >

The meetings for the DRR Training and Raising Awareness Team were conducted on 23 May 2017 and 28 June 2017. The members from NEMA, EMDC, MECSS, the Institute of Astronomy and Geophysics (hereinafter referred to as "IAG"), World Vision Mongolia, Save the Children, and UNDP attended the meetings as possible steering committee members of the Team and discussed the framework of the Team including operational rules. The team decided to conduct regular meetings once every three months.

As the first regular meeting, a Team meeting for the coordination of the relevant events for the "International DRR Day" was conducted on 29 September 2017. In the meeting, also improvement of the mailing list and website utilization was discussed.

Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

1) Development of the DRR Training Materials for the Community

Prior to starting development work for the new educational materials, the existing DRR education materials for the community were collected and listed. (Refer to the Activity 3.1.2).

Among the collected materials, a series of the textbooks and curriculum developed by UNDP for the DRR education to "Residents", "Volunteers", and "Employees of Companies and Organizations" were approved by the NEMA Administrator Regulation. The Project team reviewed the textbooks and curriculum for "Residents" in detail, since DRR education and awareness activities by NEMA and relevant organizations are conducted based on the Regulation. As a result, it was identified that the textbooks have very detailed explanations for the DRR education and training contents, however, more easy-to-understand educational materials are required for the community training

program.

The activities of the component 3 (called “Be Ready!”) of the “Disaster Resilient Ulaanbaatar Project” conducted by the World Vision Mongolia with NEMA help includes development of a set of DRR training materials and implementation of DRR awareness activities for the community. The Project team learned that the development of the educational material for the “Be Ready!” segment is also planned for the preparing of easy-to-understand additional educational materials for conducting the DRR educational activities under the UNDP curriculum approved by the NEMA Administrator Regulation, which is similar to the Project. After the identification of the similarity, the Disaster Prevention Department of NEMA requested the collaboration of the two Project activities so as to develop one package of educational materials as a standard for DRR training and education.

In view of the circumstances, the Project team studied and sorted out the proposed outputs of the “Be Ready!”, so as to avoid duplication of the activities to be conducted in the Project. NEMA, the JET and World Vision held a coordination meeting in August 2017 and decided to work on the material development under the leadership of NEMA. Also, the JET joined some of the meetings of the “Be Ready!” and gave technical comments for the draft educational materials developed by them.

In the meanwhile, JET introduced some Japanese sample training materials for community DRR activities. The development of the educational materials in the Project has been pursued through the learning of the samples and in coordination with the activities of “Be Ready!” by February 2018.

2) Selection of the Pilot Areas for Community DRR Training and Education

The selection of the pilot areas for the community DRR training and education in the Project was discussed in the WG3-2 meeting. As selection criteria, risks of deteriorated buildings for urban areas, and disaster risks other than earthquake, such as flood, for the Ger area, and earthquake risks for rural areas were proposed. As a result, the three pilot areas were proposed in the JCC held in June 2017. The final decision of the pilot areas was made in the Steering Committee held in the end of September after the detailed discussions and studies with the relevant persons. Bayngol District and Bayanzurkh District in UB City, and Zavkhn Aimag were selected.

The proposed two pilot areas in UB city was observed by the WG3-2 members in August and the relevant information of Zavkhn Aimag was collected in October for analyzing the current situation of the disasters, disaster risk management and community DRR activities.

Further coordination with the selected areas will be made toward the implementation of the training program in March 2018.

Activity 3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center

As a first activity, the current situation of the operation of the education program and equipment installed in the Center was reviewed. The Center officially launched the training activities in October 2016 and had conducted many training programs, with the training equipment provided from China and Korea, such as an earthquake simulation shaking table and a vehicle with DRR experience devices.

Through the WG3-2 activities including the observation of the current training program in the Center, the current situation and issues of the Center were discussed. The major issues raised in the discussion were as follows.

- Only a part of the Program officially prepared for the Center in October 2016 is implemented due to the lack of educational materials, etc.
- Mainly school student groups are the current target of the training, although the schools without school buses have difficulty to visit the Center.
- More exhibits which school children can directly experience are required.
- The movie used in the earthquake simulation shaking table, which starts with an earthquake early warning alert should be improved. There is no early warning service for earthquake at this moment and usually most of earthquakes occur without any previous warning.
- Consideration of the use of volunteers for the operation of the Center so as to provide more training programs, is a proposal from the practice learned in the training in Japan.

Based on the above identified issues, discussions on the improvement of the Program were held in May and June 2017. After the introduction of the training programs and basic plans of some DRR training centers in Japan, the Program was revised with the view to incorporate the importance of experiences into the purpose of the Program as a whole. Also, the other Japanese ideas for the educational contents, such as the catch phrase “Don’t push, don’t run, don’t speak, and don’t return (O-Ha-Shi-Mo) for the experience program for evacuation from smoke, were taken as good examples for learning which children can easily remember.

Several workshops were conducted for supporting the improvement of the Program. A workshop was conducted for introducing the movies and educational program introduced in the Training Center in Japan on 15 August, and a mini-workshop for DRR leaning in practice was conducted on 21 September using some educational tools including of “Paper Bururu” developed by Prof. Fukuwa, Nagoya University. Further, after the second counterpart training in Japan, a meeting to introduce what the training participants learned in Japan was conducted for the officers of the Training Center on 17 November 2017, especially focused on the training and educational tools and facilities for the DRR training centers.

1-3 Achievement of Output

(1) Output1

The following three indicators are applied to evaluate the achievement of the Output 1 based on the PDM.

1.1 The number of guidelines, operational rules, provisions which are developed.

Achievement in this term:

The WG1 has developed draft of national earthquake disaster operation planning guideline, aimag / soum level earthquake disaster protection planning guideline and draft UB City / District level earthquake disaster protection planning guideline. National disaster protection planning guideline (earthquake edition) is under development.

The WG1 member decided to develop two (2) risk assessment guidelines, namely general risk assessment guideline and detailed risk assessment guideline. A draft detailed technical earthquake risk assessment guideline have been compiled and shared by the WG1 members.

The WG1 member was discussed the most suitable procedures for operation and management of spatial database in NEMA and they started development of the draft Database Guideline and Operation Manual of spatial database.

1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements

Achievement in this term:

In the three (3) pilot fields, texts of agreement on "information and communication" and "fuel" are completed. Draft agreement on "medicine" between the MOH is prepared and under discussion. Additionally, the fields of "food", "evacuation place / temporary housing", "water supply and sewerage" were selected. The Draft agreement were prepared and presently under discussion between Ministry of Agriculture and Food, Ministry of Construction and Urban Development, UB City Water and Sewerage Bureau respectively.

1.3 White paper on disaster risk reduction

The achievement in this term:

As described in the Activity 1.3.4, 39 items scheduled to be included in the white paper. 7 items were collected at the end of October 2017.

(2) Output2

The following two indicators are applied to evaluate the achievement of the Output 2 based on the PDM.

2.1 Guideline for seismic assessment: The number of the participants in the training program on seismic assessment

The achievement in this term:

The WG2 is developing the guidelines. For technical transfer of seismic diagnosis for buildings in Japan, the seminar on the basic concept of Seismic Demand Index Iso was held on June 27th, 2017. There were 25 attendees at this seminar.

After establishing draft guideline of seismic diagnosis for infra and lifeline structures, model training seminars to explain the guideline were held on October 26th at NEMA, on October 27th at GASI, and on November 8th at CDC. There were 42, 17 and 40 attendees, respectively.

2.2 Guideline for seismic strengthening: The number of the training program on seismic strengthening

The achievement in this term:

No activity on the dissemination of techniques of seismic strengthening was held in this period.

(3) Output3

The following two indicators are applied to evaluate the achievement of the Output 3 based on the PDM.

3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project

Achievement in this term:

The WG3 is developing the guidelines and teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

3.2 The number of visitors in Training Center

Achievement in this term:

The WG3 is preparing the improved training program and teaching materials for DRR education and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators.

1-4 Achievement of the Project Purpose

The following two indicators are applied to evaluate the achievement of the Project based on the PDM.

1. The number of the approved guidelines and agreement

2. The number of the data on disaster risk reduction which newly established and improved

The achievement in this term:

Activities for developing guidelines, agreements, standards of seismic diagnosis and strengthening, teaching materials have been continued at each WG. In order to ensure sustainability after the Project, each activity is planned and implemented so that guidelines and other related outputs which will be developed in the Project are approved by NEMA, MCUD or MECSS through their standard procedures.

1-5 Changes of Risks and Actions for Mitigation

(1) Output1

1) How to Utilize Japanese Materials for Preparation of Each Guideline in Mongolia

The Mongolian side has great interest in Japanese disaster risk assessment, disaster prevention plans, guidelines for disaster prevention plans, disaster prevention agreements etc., and exceedingly and positively wants to obtain this knowledge. They, therefore, strongly hope to fully translate their materials such as the basic disaster management plan in Japan, the regional disaster prevention plan, disaster prevention work plan of each ministry and disaster prevention agreements.

However, if they receive a complete translation, they may tend to use it unchanged. Then, there is a danger that they will develop plans and agreements that cannot be realized in Mongolia. Therefore, the JET showed only the items necessary for disaster prevention planning and agreement preparation, etc. It is necessary to discuss these concerns within

WG so as to create content that can be realized in Mongolia for these items.

2) Human Capacity Development for Database Management

One of the most important parts of the database utilization in NEMA is the human capacity development. NEMA recently reorganized and new departments and divisions have already been established. According to the new organizational structure, there are only a few capacities for IT technology response units in NEMA. Shortages of human resources for management of database and information system are major challenges in NEMA currently. After development of the spatial database as well as disaster information sharing system as one of the WG1 activities, if there are no specific persons who can manage the system by themselves in NEMA, it will be difficult to get the system entrenched in NEMA and to ensure sustainable spatial database management.

The WG1 proposed to establish a new management unit for Spatial database management under the NEMA in order to get the system entrenched in NEMA and to ensure sustainable spatial database management after the Project. The chief of NEMA agreed to this proposal and NEMA started establishing the management team in July, 2017.

(2) Output2

1) Establishment of Mongolian Standards

To make the guideline practical and effective, the WG2 decided to follow the Mongolian standards that were established under the direction of MCUD, since the previous guideline for mid- and high-rise buildings, which was established in the Phase-1 Project is not being used. On the other hand, implementing the official procedure was time consuming. For example, needed were the time for preparation of the TOR to obtain acceptance from the Respective Professional Council, time for finalizing the TOR and receiving acceptance from MCUD, time for application of the CST and other relevant times. These additional times and related efforts caused delay in proceeding the activities.

To forward the project on schedule, WG2 and JET collaborated to prepare the TOR and to give explanations to members of the CST and of the Respective Professional Council in advance.

WG2 also made prototype of each guideline to help the CST to establish draft guideline, followed by the frequent exchange of opinions to make prototype practical in Mongolia.

2) Utilization of tools for explanation of evaluation procedures

Many Mongolian standards and regulations do not contain enough figures, tables and sample calculations for readers' understanding.

So, the WG2 and the CST decided that some sample calculations for seismic diagnosis and some examples of seismic strengthening work are included on the guideline so that readers can understand the contents easily. Also, the WG2 asked the CST to provide illustrative figures and photos.

It may be difficult for some personnel relevant to seismic diagnosis to conduct a complicated procedure requiring computational effort. Also, it may not be necessary to conduct such a complicated procedure depending on the situation.

It is the first trial for Mongolian engineers to introduce Japanese technology on seismic evaluation. So, the WG2 made the members of the CST understand the Japanese way of evaluation by holding small training courses utilizing some excel spreadsheets for quick evaluation.

These are very effective for them to understand how an evaluation is done, and to know the pros and cons of the various methods, so that all the engineers of the CST accepted the introduction of the Japanese method into Mongolian guidelines. It is noted the tool can also be used in the training course not only in the project period, but also after completion of the Project.

(3) Output3

1) Better Understanding of the Project Activities as a Technical Assistance Project

Since this Project is the first project for NEMA as a Technical Assistance Project, the counterparts had some confusion regarding what should be done by the JET and what should be done by the Mongolian side. In most of the foreign assistance projects for the NEMA in the past, major activities and works were done by the project members and their involvement in the project activities was limited. Under those circumstances, the superiors of the departments and divisions which the counterparts belong to have also achieved no understanding of how much time the counterparts need to spend for the Project activities and the counterparts are always busy with their other commitments. They get caught in a dilemma between the project activities and the other commitments in their organization.

For a more comfortable working environment of the counterparts for the Project activities, regular explanations, reporting, and consultation with the superiors of the counterparts

from the Project team were conducted. Also, explanations to the counterparts about the procedures of the Project activities were repeated.

2) Need for Coordination with Other Projects

Along with the discussions for the revision of the Law on Disaster Protection, which focuses on the strengthening of disaster prevention and preparedness, some projects related to the DRR education and training were formulated and have been conducted by other donor agencies and NGOs. Similar or relevant activities with the Project are planned in some projects, which make coordination with the activities in other projects more important for avoiding duplication and effective utilization of the outputs of those other projects.

The Activity 3.2.1 was conducted for better coordination among the stakeholders for effective implementation of the DRR education and training activities. The activities are still in the initial stage, however, more information relevant to DRR education and training is expected to be shared among the stakeholders through the system introduced by the activities. Further, the NEMA is expected to coordinate stakeholders' activities for avoiding duplications.

Also, the platform launched by the Comprehensive School Safety (CSS) program by MECSS and World Vision Mongolia provides the opportunities for effective coordination among the actors of the school DRR activities. The Project team could also get information regarding the other stakeholder's activities for School DRR by the initiative.

The Project team will work together with the stakeholders of the above two initiatives for ensuring the sustainability of the coordination efforts.

3) Hand over and Operation of ADPC's Website

Handover of the ADPC's website, which the JET is supposed to integrate with the comprehensive training schedule, was made in September. The major hindrance of the operation is the insufficient capacity of the NEMA's server to transfer the data source from ADPC. This issue had not been fully discussed among NEMA and ADPC during the project implementation period. As of September 2017, NEMA has a plan to increase the capacity of the server by depending on the financial assistance from Asian Development Bank (hereinafter referred to as "ADB"), yet there is no guarantee of an immediate increase in the capacity of the server.

Therefore, it is necessary to rearrange the means of updating the comprehensive training schedule within the physical capacity of the existing server and the technical capacity of

NEMA's persons in charge of IT management. It is indispensable to communicate with NEMA to raise the awareness of the importance of opening the information to the public and accumulation of necessary information by securing the information in servers of appropriate capacity. The JET will continue to secure the data storage by supporting efforts to secure the budget to increase the capacity or utilize the available sources.

1-6 Progress of Actions undertaken by JICA

The process of procurement of the earthquake simulation experience equipment for the DRR Training Centre was started by JICA Headquarters. But the delivery date of the equipment to Mongolian side will be slipped to the latter half of the year in 2018 due to various reasons of Japanese side. The schedule of procurement of the equipment was already explained to NEMA, it is necessary to pay attention to the delay of shipping and to share the progress of procurement with Mongolian side timely.

The procurement of the equipment for seismic diagnosis that was started by the JICA Mongolia office will be completed by the end of May in 2018. The technology transfer relating to utilization of diagnostic equipment is scheduled to begin soon after the procurement.

1-7 Progress of Actions undertaken by Gov. of Mongolia

Output2: Under consultation of NEMA and MCUD, CDC examined TOR and selected the Mongolian Association of Civil Engineers (hereinafter referred to as "MACE") and Sart Sharaid LLC as SCTs. The former is for buildings and the latter is for infra and lifeline structures.

Putput3: MECSS will be in the process of the approval of the "Life Safety Education Program" in the Ministry in December 2017.

1-8 Progress of Environmental and Social Considerations (if applicable)

N/A

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if

applicable)

N/A

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

Output 3: MECSS is working with World Vision Mongolia to establish a platform for information sharing among school DRR personnel. For the purpose of information sharing, the JET of WG3 participates in events of their activity as an observer.

Output 3: It turned out that World Vision Mongolia is carrying out similar activities in development of teaching materials for DRR education and raising awareness. The JET of WG3 continues to discuss this matter with NEMA with a view to the division of the activities for development of materials by disaster type.

2. Delay of Work Schedule and/or Problems (if any)

2-1 Detail

N/A

2-2 Cause

N/A

2-3 Action to be taken

N/A

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Mongolia,etc.)

N/A

3. Modification of the Project Implementation Plan

3-1 PO

N/A

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

N/A

4. Preparation of Gov. of Mongolia toward after completion of the Project

In this term, the specific policy and actions are not discussed yet.

II. Project Monitoring Sheet I & II *as Attached*

Project Monitoring Sheet I Ver. 3.0 (Term: June, 2017 - November, 2017)

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia
 Implementing Agency: National Emergency Management Agency (NEMA)
 Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City
 Period of Project: December 2016 to November 2019
 Project Site: Mongolia

**Version 3
 Dated January 17, 2018**

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal Seismic risk will be reduced.	<ol style="list-style-type: none"> Number of the approved guideline, rules, provisions Number of white paper open to public Number of the executed seismic assessment Number of the seismic strengthened building Number of implemented activities on disaster risk reduction education 	Study by NEMA	The policy on disaster risk reduction will not be changed in Mongolia.			
Project Purpose The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.	<ol style="list-style-type: none"> The number of the approved guidelines and agreement The number of the data on disaster risk reduction which newly established and improved 	Project report	NEMA expands the pilot activities in other aimags and sums.	Activities for developing guidelines, agreements, standards of seismic diagnosis and strengthening, teaching materials have been continued at each WG.	In order to ensure sustainability after the Project, each WG makes it a goal to get an approval of guidelines and other related outputs which will be developed in the Project from NEMA, MCUD or MECSS through their standard procedures.	
Outputs 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced.	<ol style="list-style-type: none"> The number of guidelines, operational rules, provisions which are developed. The number of the draft of agreement developed and participants who participated in the training programs on agreements White paper on disaster risk reduction 	Project report	<ol style="list-style-type: none"> The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. Participants in training programs continue to work in the same position. The relation among related organizations is maintained. Exchange information is maintained among the related organizations. 	<ol style="list-style-type: none"> The WG1 has drafted three (3) guidelines for national earthquake disaster operation planning, aimag / soum level earthquake disaster protection planning and draft UB City / District level earthquake disaster protection planning. And also, The WG1 members decided to develop two (2) guidelines for earthquake risk assessment, namely general risk assessment guideline and detailed risk assessment guideline. Three (3) fields, namely, "information / communication", "fuel" and "medicine" were selected as fields for establishing the agreement during the Project period. Agreements on "information / communication" and "fuel" are completed. Draft agreement on "medicine" between Ministry of Health is prepared and under discussion. Thirty-ninth (39) items scheduled to be included in the white paper. 7 items were collected at the end of October 2017. 		
2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced.	<ol style="list-style-type: none"> Guideline for seismic assessment The number of the participants in the training program on seismic assessment Guideline for seismic strengthening The number of the training program on seismic strengthening 	Project report		<ol style="list-style-type: none"> The WG2 is developing the guidelines. For technical transfer of seismic diagnosis for buildings in Japan, the seminar on the basic concept of Seismic Demand Index Iso was held on June 27th, 2017. There were 25 attendees at this seminar. After establishing draft guideline of seismic diagnosis for infra and lifeline structures, model training seminars to explain the guideline were held on October 26th at NEMA, on October 27th at GASI, and on November 8th at CDC. There were 42, 17 and 40 attendees, respectively. No activity on the dissemination of techniques of seismic strengthening was held in this period. 		
3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.	<ol style="list-style-type: none"> The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project The number of visits in Training Center 	<p>Ordinance of Ministry of Education, Culture and Science</p> <p>Ordinance of NEMA</p>		<ol style="list-style-type: none"> The WG3 is developing the guidelines and teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators. The WG3 is preparing the improved training program and teaching materials for DRR education and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators. 		

Activities	The Mongolian Side	The Japanese Side	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction database on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1)) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2)) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p> <p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p> <p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergarten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergarten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>Assignment of counterparts</p> <ul style="list-style-type: none"> - Project Director - Project Managers - Project Coordinator - Project Members <p>For Output 1</p> <ul style="list-style-type: none"> - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC) <p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency <p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	<p>Dispatch of Experts</p> <ul style="list-style-type: none"> - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction Education - Disaster Risk Reduction at Community Level - Educational Material Development <p>Provision of Equipment</p> <ul style="list-style-type: none"> - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table <p>Training in Japan and/or the third countries</p>	<p>Pre-Conditions</p> <p style="text-align: center;">➔</p> <p><Issues and countermeasures></p> <p>Output1</p> <p>1) How to Utilize Japanese Materials for Preparation of Each Guideline in Mongolia</p> <p>The JET do not share fully translated materials in Japan, because It is important to discuss the items necessary for disaster prevention planning and agreement preparation in WG so as to create contents that can be realized in Mongolia.</p> <p>2) Human Capacity Development for Database Management</p> <p>The WG1 proposed to establish a new management unit for spatial database management under the NEMA in order to ensure sustainable spatial database management after the Project. The chief of NEMA agreed to this proposal and NEMA started establishing the management team.</p> <p>Output2</p> <p>1) Establishment of Mongolian standards</p> <p>To make the practical and effective guidelines, the WG2 decided to follow the Mongolian standards that were established under the direction of MCDU.</p> <p>2) Utilization of tools for explanation of evaluation procedures</p> <p>It is the first trial for Mongolian engineers to introduce Japanese technology on seismic evaluation. Therefore, the WG2 and the CST decided that some sample calculations for seismic diagnosis and some examples of seismic strengthening work are included on the guideline so that readers can understand the contents easily.</p> <p>Output3:</p> <p>1) Better Understanding of the Project Activities as a Technical Assistance Project</p> <p>Since this Project is the first project for NEMA as a Technical Assistance Project, the counterparts had some confusion regarding what should be done by the JET and what should be done by the Mongolian side. For a more comfortable working environment of the counterparts for the Project activities, regular explanations, reporting, and consultation with the superiors of the counterparts from the Project team were conducted. Also, explanations to the counterparts about the procedures of the Project activities were repeated.</p> <p>2) Need for Coordination with Other Projects</p> <p>Similar or relevant activities with the Project are planned in some projects conducted by other donor agencies and NGOs, which make coordination with the activities in other projects more important for avoiding duplication and effective utilization of the outputs of those other projects. Therefore, The Activity 3.2.1 is being conducted for better coordination among the stakeholders for effective implementation of the DRR education and training activities in Mongolia.</p>

Notes

1-1) Amended Law of Disaster Protection "6.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc..

1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM

1-3) National level, UB city and two provinces are the target areas

1-4) Improvement of existing "Disaster Information Sharing System"

1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)

2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities

2-2) Guidelines are regarded as operational guidelines by Resolution of Minister

2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.

3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certificated teacher's instructors

3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring of nationwide implementation of education and training program to all the necessary target stakeholders

3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency Management Departments of Cities, Provinces, and Districts. (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels. (3) Heads of governor's offices of Provinces, Sums, and Districts. (4) Heads of Bags and Khoroos. (5) Coordinators of civil activities in Provinces, Districts, and Khoroos and (6) Volunteers (only in pilot areas)

3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.

Activities	Sub-Activities	Year	2017				2018				2019				2020				Responsible Organization	Achievements	Issue & Countermeasures																		
			IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III				IV																	
																							2017				2018				2019				2020				
Output 3.1																																							
3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection																				Plan																			
3.1.1.1 To review current situation of DRR education in kindergarten and primary and secondary schools comparing with Japanese practices																				Actual																			
3.1.1.2 To develop the guideline through the activities of the School DRR Education Working Group (WG)																				Plan																			
3.1.2 To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools																				Actual																			
3.1.2.1 To collect and review existing educational materials through the WG activities																				Plan																			
3.1.2.2 To establish Task Forces for the development of the educational materials (one task force each for kindergarten, primary, and secondary schools)																				Actual																			
3.1.2.3 To organize workshops and discuss materials to be developed																				Plan																			
3.1.2.4 To develop and finalize the educational materials through the Task Force and the WG activities																				Actual																			
3.1.3 To implement training programs for the instructors of Teacher Training Institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.2																				Plan																			
3.1.3.1 To formulate the training programs through workshops and the WG activities																				Actual																			
3.1.3.2 To implement pilot training																				Plan																			
3.1.3.3 To review the training and formulate training manuals																				Actual																			
3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3																				Plan																			
3.1.4.1 To support the training for teachers																				Actual																			
3.1.4.2 To review the result of the training of 3.1.3 and 3.1.4 through workshops and the WG activities and compile lessons learnt																				Plan																			
3.2 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels																				Actual																			
3.2.1.1 To interview related organizations about coordination and cooperation																				Plan																			
3.2.1.2 To examine framework for NEMA to conduct integrated management																				Actual																			
3.2.1.3 To implement regular meetings																				Plan																			
3.2.1.4 To create a website for the coordination and share information among the relevant organizations																				Actual																			

3.2.7 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas	Plan	Actual	2017				2018				2019				2020				Remarks	Issue	Solution	
			I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV				
																						Plan
3.2.2.1 To review existing textbooks of DRR education for communities	△△○○	○○○○	■	■															✓	The policy of activities to develop teaching materials in the Project was discussed in the WG3-2, and teaching materials to promote the understanding of residents based on the UNGPs's requirements were developed by holding a demonstration of notes for development of teaching materials with World Vision Mongolia.		
3.2.2.2 To discuss and develop training materials	△△○○	○○○○	■	■															✓	Revisions of the Japanese materials for the training was introduced and initial discussion for the materials to be developed in the Project was conducted.		
3.2.2.3 To implement Training of Trainers workshop	△△○○	○○○○	■	■															✓	The schedule for the ToT was changed considering the period for the development of the training materials		
3.2.2.4 To implement workshops in the pilot area	△△○○	○○○○	■	■																		
3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																						
3.2.3.1 To examine and consider a study program for the training center	△△○○	○○○○	■	■															✓	The reference documents of Hongo Bosaikan and Kyoto DRR Training Center in Japan were examined and the program of the training center was revised.		
3.2.3.2 To examine materials and equipment for improvement of training center	△△○○	○○○○	■	■															✓	The WG3 member made an initial examination and studies of the current equipment and materials of the Training Center.		
3.2.3.3 To support procurement of equipment	△△○○	○○○○	■	■															✓	Due to the delay of the procurement procedure, the schedule will be extended.		
3.2.3.4 To develop educational materials such as movie, exhibition, etc.	△△○○	○○○○	■	■															✓	After the training in Japan, discussion of the development of the educational materials was started.		
3.2.3.5 To operate training program	△△○○	○○○○	■	■																		
3.2.3.6 To examine expansion to other regions	△△○○	○○○○	■	■																		
Duration / Phasing	Plan	Actual																				
Monitoring Plan	Year																					
Monitoring	Joint Coordinating Committee	Plan	Actual																			
Setup the Detailed Plan of Operation	Plan	Actual																				
Submission of Monitoring Sheet	Plan	Actual																				
Report/Documents																						
Work Plan / Project Item Report	Plan	Actual																				
Project Completion Report	Plan	Actual																				
Public Relations																						
	Plan	Actual																				
	Plan	Actual																				

TO Chief Representative of JICA Mongolia OFFICE

PROJECT MONITORING SHEET

Project Title : Project for Strengthening the National Capacity of Earthquake**Disaster Protection and Prevention in Mongolia****Version of the Sheet: Ver. 4.0 (Term: December, 2017 - May, 2017)****Name: D.Batsaikhan****Title: Director of Disaster Prevention****Department, NEMA****Name: Kiyotaka Owada****Title: Team leader / Integrated disaster management I****Submission Date: June 29, 2018****I. Summary****1. Progress****1-1 Progress of Inputs****(1)Dispatch of Experts**

The following Experts from Japanese side were assigned in this monitoring period.

	Area of responsibility	Experts name	Period of assignment
Project Management Group	Team Leader / Integrated Disaster Risk Management I	Kiyotaka OWADA	Dec.1 – Dec. 6, 2018 Jan.18 – Feb.16, 2018 Apr.10 – May 7, 2018
	Deputy Team Leader / Integrated Disaster Risk Management II	Akihiro FURUTA	Feb. 27 – Mar. 22, 2018 Apr. 10 – Apr. 28, 2018
OUTPUT1: Disaster Management Plan	Disaster Management Plan I	Osamu NISHII	Feb. 26 – Mar.25, 2018 May. 2 – May. 31, 2018
	Disaster Management Plan II	Kensuke ICHIKAWA	—
	Disaster Management system I	Yoshitaka YAMAZAKI	Mar. 25 – Apr. 13, 2018
	Disaster management system II	Shiro MAKITA	—
	Disaster management information I	Tadashi ISE	Mar. 5 – Mar. 14, 2018
Output 2: Seismic Resistance	Disaster management information II	Akihiro FURUTA	—
	Seismic-Resistance	Seiichiro FUKUSHIMA	Dec.1 – Dec. 23, 2018 Apr. 16 – May 15, 2018 May. 30 – May 31, 2018
	Seismic Diagnosis of Infrastructures and Lifelines	Jun MATSUO	May. 24 – May 31, 2018
	Seismic Diagnosis of Buildings / Seismic Strengthening I (RC, PC)	Masahide AOKI	Mar. 18 – Apr. 6, 2018
	Seismic Diagnosis of Buildings /	Shigeki KITA	—

	Area of responsibility	Experts name	Period of assignment
	Seismic Strengthening II (Masonry)		
	Seismic-Resistant Design	Hideto OMINE	—
Output 3: DRR Education	DRR Education I	Miki KODAMA	Jan. 28 – Feb. 3, 2018 Mar. 28 – Apr. 5, 2018 Apr. 15 – Apr. 22, 2018 Apr. 29 – May 8, 2018
	DRR Education II	Yujiro OGAWA	Dec. 1 – Dec. 7, 2018
	DRR Education II	Seiji SUWA	Apr. 29 – May 8, 2018
	Community-Based Disaster Management / Project Coordination I	Toshikazu HIWAKI	Dec.1 – Dec. 2, 2018 May 29 – Jun. 15, 2018
	Development of Disaster Management Teaching Materials I	Yoko OTA	Dec. 11 – Dec. 24, 2018 Mar. 8 – Mar. 31, 2018 May 7 – May 27, 2018
	Development of Disaster Management Teaching Materials II / Project coordination II	Amarjargal NAYANBAATAR	*Intermittent assignment during above periods

(2) Assignment of counterparts

The current administration of authorities concerned of Mongolia for the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia (hereinafter referred to as “the Project”) is as following,

(a) Project Director:

D.Batsaikhan, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinators

Z.Battulga, Disaster Operation Department, NEMA

Enkhbat, Policy Coordination and Cooperation Department, NEMA

The member of current administration of authorities concerned of Mongolia has not been changed since last monitoring period.

According to the Record of Discussions (hereinafter referred to as “R/D”), the project organization of Mongolia side includes the counterpart (hereinafter referred to as “C/P”) of working groups (hereinafter referred to as “WG”) in order to implement project activities at output level of the Project.

The member list of the C/P for each WG had been amended accordingly at the fourth

Joint Coordinating Committee (hereinafter referred to as “JCC”) on December 1st, 2017 and at the sixth Steering Committee (hereinafter referred to as “SC”) on March 19th, 2018 based on the member list confirmed in the fifth SC on November 24th, 2017. And at the fifth JCC on April 18th, 2018, further amendment of C/P member was approved as shown below.

(a) Member of Sub-Group of WG1 (As of May, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			4th JCC Dec.2017	6th SC Mar.2018	5th JCC Apr.2018
Coordinator for WG1	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
Disaster Risk Assessment (WG1-1)	D.Serjmyadag	Disaster Research Institute, NEMA	○	○	○
	P.Amarzaya	Disaster Research Institute, NEMA	○	○	○
	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
	B.Batbayar	Disaster Risk Management Dep., NEMA	○	○	○
	B.Khishigbaatar	Disaster Operation Dep., NEMA	○	○	○
	S.Bazarragchaa	Disaster Research Institute, NEMA	○	○	○
Disaster Protection Planning (WG1-2)	B.Bayanmunkh	Policy Coordination and Cooperation Dep., NEMA	○	○	○
	B.Myagmardorj	Disaster Operation Dep., NEMA	○	○	○
	T. Turbileg	Disaster Operation Dep., NEMA	○	○	○
	Ch.Otgontugs	Fire Dep., NEMA	○	○	○
	E.Batbayar	Emergency Management Department of Capital City (EMDC)	○	○	○
	A.Dashnyam	EMDC	○	○	
Disaster Reduction Agreement (WG1-3)	B.Duvshin	Disaster Risk Management Dep., NEMA	○	○	○
White Paper (WG1-4)	O.Tsend-Ayush	Disaster Prevention Dep., NEMA	○	○	○
Disaster Database (WG1-5)	B.Purevnyam	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D. Sodnomragchaa	Disaster Research Institute, NEMA	○	○	○
	B.Boldkhuu	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D. Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA	○	○	○

After the fifth JCC, D. Amarzaya and S. Bazarragchaa retired from their work in the Disaster Research Institute in May 2018, and they left the sub-WG for Disaster Risk Assessment in WG1 accordingly. And also, as a replacement for A. Dashnyam in EMDC, B. Myagmardorgi transferred to EMDC, but he is assigned to the member of the sub-WG for Disaster Protection Planning in WG1 continuously. Furthermore, B. Dubshin left the

sub-WG for Disaster Reduction Agreement in WG1 and handed off the baton to T.Bilguun, Policy Coordination and Cooperation Department in NEMA.

(b) Member of Sub-Group of WG2 (As of May, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			4th JCC Dec.2017	6th SC Mar.2018	5th JCC Apr.2018
Coordinator for WG2	B.Soyomboo	Ministry of Construction and Urban Development (MCUD)	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
Seismic Diagnosis of Buildings (WG2-1)	B.Soyomboo	MCUD	○	○	○
	G.Erkhembayar	MCUD	○	○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○
	N.Ganchimeg	General Agency for. Specialized Inspection (GASI)	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
	T.Galbadrakh	Finance and Logistics Dep., NEMA	○	○	○
Seismic Diagnosis of Infrastructures and Lifelines (WG2-2)	B.Soyomboo	MCUD	○	○	○
	G.Erkhembayar	MCUD	○	○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○
	N.Ganchimeg	GASI	○	○	○
	B.Munkhsaikhan	GASI	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○
Design for Seismic Strengthening (WG2-3)	B.Soyomboo	MCUD	○	○	○
	G.Erkhembayar	MCUD	○	○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○
	N.Ganchimeg	GASI	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○	○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○	○	○

(c) Member of Sub-Group of WG3 (As of May, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			4th JCC Dec.2017	6th SC Mar.2018	5th JCC Apr.2018
Coordinator for WG3	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○

Monitoring Sheet Summary

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			4th JCC Dec.2017	6th SC Mar.2018	5th JCC Apr.2018
School DRR Education (WG3-1)	J.Myagmar	Ministry of Education, Culture, Science and Sports (MECSS)	○	○	○
	Ch.Gantsetseg	MECSS	○	○	○
	P.Baljinnyam	MECSS	○	○	○
	A.Enkhtogtokh	Education Research Institute (ERI), MECSS	○	○	○
	B.Erdenechimeg	ERI, MECSS	○	○	○
	G.Mongolkhatan	ERI, MECSS	○	○	○
	G.Khaliun	ERI, MECSS	○	○	○
	N.Munkhbayar	Institute of Teacher Professional Development	○	○	○
	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	L.Munkhchimeg	Disaster Prevention Dep., NEMA	○		
	G.Enkhtsolmon	Disaster Prevention Dep., NEMA		○	○
Community DRR Education (WG3-2)	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	D.Bat-Erdene	Disaster Prevention Dep., NEMA	○	○	○
	D.Dulamsuren	Public Information Center, Disaster Prevention Dep., NEMA	○	○	○
	S.Amgalan	Administrative Management Dep., NEMA			
	S.Doljinsuren	EMDC	○	○	○
	B.Chinbat	EMDC	○	○	○
	B.Uuriingegee	DRR Training Center, EMDC	○	○	○
	B.Ariunchimeg	National Center for Long life Education	○	○	○

1-2 Progress of Activities

(1) Overall of Project

1) Implementation of Steering Committee (SC) and Joint Coordination Committee (JCC)

The fourth and fifth JCCs, and the sixth SC have been held in this monitoring period.

No.	Date	Participants	Contents of discussion
Fourth JCC	Dec. 1, 2017	NEMA, MCUD, MECSS, GASI, Construction Quality and Safety Department; City Planning and Master Planning Agency of Capital City, etc. Total: 32 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Procuring Equipment - Target Aimags for revision of the regional disaster management plan
Sixth SC	June 29, 2017	NEMA, WG member for each OUTPUT Total: 31 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Schedule of Installing Equipment - Target Sum & Khoroo for Community

No.	Date	Participants	Contents of discussion
			DRR Education in Zavkhan Aimug and Ulan Bator (hereinafter referred to as "UB") city - Schedule of Next JCC
Fifth JCC	Sep. 28, 2017	NEMA, MCUD, MECSS, GASI, Construction Quality and Safety Department; City Planning and Master Planning Agency of Capital City, etc. Total: 35 participants	- Progress of WG Activities - Amendment of Working Group Member - Schedule of Installing Equipment - Pilot Areas for DRR Education and Awareness Activities - Schedule of Next JCC

2) Provision of Equipment

As identified in the work plan of the Project which was approved by the first JCC, the equipment for seismic diagnosis and the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center are supposed to be procured and donated by the Japan International Cooperation Agency (hereinafter referred to as "JICA"). The process of procurement of equipment has already been started by JICA Headquarters and JICA Mongolian office respectively.

For the schedule of installing equipment and its procedure, following things were confirmed between Japanese side and Mongolian side at the fifth JCC on April 18th, 2018.

Regarding the equipment for seismic diagnosis, Japanese side explained that the timing for installing equipment is going to be behind schedule and requested Mongolian side to discuss how to conduct the usage guidance of the equipment as a part of the training for seismic evaluation planned on June, 2018. Mongolian side accepted the delay of installing equipment for seismic diagnosis and mentioned that the implementation method of guidance of the equipment shall be discussed in the activity of WG2.

Regarding the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center, Japanese side requested that Mongolian side shall provide a proper response to advance preparation, equipment transport, supporting installation and control maintenance based on the Operation and Maintenance (hereinafter referred to as "O&M") Plan approved in the third JCC held on June 26, 2017. In addition, Japanese side also requested Mongolian side shall build a safety fence and steps in the appropriate place and prepare a portal crane and a hand lift jack used for installing equipment as advance preparation. Mongolian side accepted those requests and asked to provide documents and drawings necessary for dealing with them.

(2) Output1**Activity 1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction**

As mentioned in the monitoring sheet ver.3.0, as a result of careful examination of the amended Law on Disaster Protection, Disaster Preparedness Guideline (hereinafter referred to as "GL") and Disaster Management GL were decided not to be created in the Project. WG1 confirmed that three (3) GLs namely, "Earthquake Disaster Risk Assessment GL", "Earthquake Disaster Protection Planning GL", and "Disaster Database GL" shall be developed in Output 1 of the Project.

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction**1) Earthquake Disaster Risk Assessment Guideline**

Due to the enforcement of the amended Law on Disaster Protection, NEMA revised the Regulation for Implementation of Disaster Vulnerability and Risk Assessment (Annex of the Cabinet Decision of 176, 2006). The revision works were mainly conducted by the WG1 members. The revised regulation mainly states the administrative framework of general disaster risk assessment. There are six (6) annexes for the revised regulation, and Annex 4 named as "Technical Guideline for Earthquake Risk Assessment" is considered to be the guideline which will be formulated in the Project.

The member of WG1 decided to develop two (2) guidelines namely "Comprehensive Earthquake Disaster Risk Assessment GL" for the central and local governments and "Detailed Earthquake Disaster Risk Assessment GL" for experts and researchers of related organizations. As a first step, the Comprehensive GL has been developed to be applied to the pilot activities for regional earthquake disaster protection planning. In this GL, the risk assessment method prescribes a method suitable for Mongolia, so that governmental staff who do not have expert knowledge about earthquake risk can also evaluate by using the attached application software. Using this GL, risk assessment was conducted in pilot Aimags.

2) Earthquake Disaster Protection Planning Guideline

The member of WG1 has prepared three (3) GLs namely "National Earthquake Disaster Protection Planning GL", "Aimag / Soum Level Earthquake Disaster Protection Planning GL" and "Capital City / District Level Earthquake Disaster Protection Planning GL". One more GL is under preparation namely "State Earthquake Disaster Protection Service Planning GL". For this GL, risk assessment part is still under discussion.

The member of WG1 learned the composition and concept of the regional disaster protection plan in Japan at the training in Japan conducted in December 2017. The results of the learning at the training were reflected in the contents of new GLs. Especially, in order to use the results of risk assessment in the earthquake disaster protection plan effectively, the member of WG1 has adopted a new concept in Mongolia that sets earthquake disaster reduction goals. Furthermore, the necessity of establishment of the working group to formulate the disaster protection plan and the procedure of the plan formulation by the working group were also clearly stated in those GLs.

3) Disaster Database Guideline

Through the Activity 1.3.3, the need to establish a management team to operate and manage disaster database (hereinafter referred to as “DB”) using new information management system for disaster risk reduction (hereinafter referred to as “DRR”) was discussed in the sub-WG for disaster DB continuously. Finally the new division namely “Spatial Information and Technology Division” was established under Public Announcement and Emergency Administration Center in NEMA at the end of May 2018. The GL for operation and management of Disaster Spatial Database (hereinafter referred to as “DSDB”) were being developed on the assumption of new job descriptions of the new division. From here on, the first draft of GL is going to be updated in parallel with discussing the detailed work procedure and responsibility in the new division.

Activity 1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection

The member of WG1 verified the articles of the Amended Law on Disaster Protection mainly from the viewpoint of risk assessment and disaster protection, and investigated the necessity to establish new rules and regulations and/or revise existing rules and regulations. Table 1.1 shows the related rules and regulations with handling policy in the Project.

Table 1.1 Related Rules and Regulations with Handling Policy

Regulations Stipulated in the Amended Law on Disaster Protection	Handling Policy and Related GL
7.4 Regulation and procedure for disaster risk assessment	Regulation for Implementation of Disaster Vulnerability and Risk Assessment was revised. 1) Comprehensive Earthquake Disaster Risk Assessment GL and 2) Detailed Earthquake Disaster Risk Assessment GL shall be created in the Project as annexes of the revised regulation.
8.3 Instruction on development of disaster protection plan	Earthquake disaster protection planning GL in the Project is corresponded to the earthquake part of this instruction.
10.2 Procedure on check up and testing of disaster readiness assurance	These procedures and directive will not be prepared in the Project. The general part on "earthquake disaster

10.8 Procedure on special working regime	preparedness" shall be part of the earthquake disaster protection planning GL.
11.1 Directive on shifting to high level and all out readiness level	
12.2 Procedure on state control implementation of disaster protection	This procedure will not be prepared in the Project. NEMA shall prepare.
15.3 Common regulation on implementation of search and rescue operation	Earthquake part of these rules, regulations and procedures correspond to the National Earthquake Disaster Protection Planning G", the Sate Earthquake Disaster Protection Service Planning GL, the Aimag / Soum Level Earthquake Disaster Protection Planning GL and the Capital City / District Level Earthquake Disaster Protection Planning GL prepared in the Project.
16.5 Approve procedure for transmission of disaster announcement signals	
18.2 Rule and procedure of disaster operation groups	
19.2 Procedure on mobilization of manpower and evacuation	
20.3 Procedures and instructions for disaster damage and needs assessment	
20.4 Regulation on reimbursement for a regal body who performed official disaster response activities and assistance	This regulation will not be prepared in the Project.

Activity 1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations

Draft agreements are under discussion within each organization. It is expected to be signed between NEMA, organizations, and private sectors in the near future.

Status of agreement development in sectors is summarized as below.

<Stable supply of doctors and medicines during disaster>

Two draft agreement documents were prepared, between the Ministry of Health (hereinafter referred to as "MOH") and the Private Hospital Association, and between MOH and the Drug Association. The responsible person in MOH changed frequently. NEMA's responsible officer, Mr. Munkhbaatar in emergency relief and medical unit in disaster and emergency response department will explain the status of Agreement to Mr. Altanbagana, s Senior officer from medical relief department in MOH.

<Stable supply of foods and water to evacuation places and temporary housings>

The draft agreement was prepared between NEMA and the Ministry of Food and Agriculture (hereinafter referred to as "MOFA)". Mr. Naranchuluun, in Husbandry Policy Department Senior officer in MOFA had reviewed draft agreement and the document was given to Mr. Ulziibayar in NEMA. Mr. Ulziibayar will reflect the comment given by stock department and disaster and emergency response department.

<Supply of construction materials and temporary housings>

Two draft agreement documents were prepared between the Ministry of Construction and

Urban Development (hereinafter referred to as “MCUD”) and the Construction Material Association, and between MCUD and the Construction Association. Response from Legal advisor of MCUD, Ms. Amartuvshin is awaited. Inquiry by Mr. Ulziibayar in NEMA will be necessary.

<Stable transport and securing road transport during disaster>

The Ministry of Road and Transportation and NEMA have draft agreement.

<Stable fuel supply during disaster>

The Mineral Resource and Petroleum Agency and NEMA have draft agreement on stable fuel supply during disaster. The Ministry recommended that stakeholders other than NEMA will be added to be effective.

<Set up priority telephone lines on disaster>

NEMA and mobile phone company namely “Unitel” have draft agreement on communication during disaster.

<Waste water treatment and stable water supply during disaster>

NEMA and the Water Management Authority have draft agreement on waste water treatment and stable water supply during disaster.

Activity 1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction

In order to test the effectiveness of agreement for earthquake disaster response, and to demonstrate good practice of agreement to promote agreement in health sector to other sectors, a joint training was made on April 9th in Ulaanbaatar City (hereinafter referred to as “UB City”). A total of 38 participants from various sectors jointed the training.

Good practice of agreement for disaster response in Japan, progress of agreement in Mongolia, and draft agreement in health sector in Mongolia was presented by NEMA and the JICA Expert Team (hereinafter referred to as “JET”). Then, participants conducted table-top exercise based on an earthquake disaster scenario in UB City to fill the gaps in health workers and medicines using draft agreement and 1/50,000 scale map for the period from 6 to 72 hours after earthquake of intensity VIII.



Presentation at the Training



Table-top Exercise

Figure 1.1 Scenes of Training to Test the Effectiveness of Agreement for Earthquake Disaster Response

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

This activity is completed, and the results were described in the monitoring sheet summary version 3.0.

Activity 1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan

The member of WG1 planned to revise the existing national earthquake disaster protection plan by October 2018 using the developed National Earthquake Disaster Protection Planning GL. The same goes for UB City earthquake disaster protection plan. The State Earthquake Disaster Protection Service Planning GL will be distributed to related ministries and organizations after completion for their own revision / development.

Since there is no existing earthquake disaster protection plan at Aimag / Soum level nor District level in UB City, it will be newly created using GLs. In May 2018, the WG1 member conducted pilot activities using the Comprehensive Earthquake Disaster Risk Assessment GL and the Aimag / Soum Level Earthquake Disaster Protection Planning GL in pilot two Aimags of Darkhan-Uul and Umnugovi. In both Aimags, 2-day workshops were held and a dozen staff members gathered from related organizations, learned the contents of the risk assessment GL and planning GL, and actually conducted the earthquake risk assessment of the Aimag Center using the GL and application software. The earthquake disaster protection plan of these pilot Aimags will be developed by October 2018.

Pilot activities at Chingeltei District and Bayangol District of UB City will be conducted in September 2018.

Activity 1.3.3 To improve the present system which collect and analyze information on disaster risk reduction

NEMA is responsible for improving the database for disaster related data under the Article 14 "Creating a Disaster Database" of the amended Law on Disaster Protection. From the point of views of carrying out the NEMA's duty in the Law and contributing to the priority actions in "Sendai Framework for Disaster Risk Reduction 2015-2030" in Mongolia, the improvement policy of the present system had been discussed in the WG1 and now following actions are being implemented.

1) Development of New information Management System for Disaster Spatial Database (DSDB)

After discussing the over-all framework of upgrading database for disaster related data, the sub-WG for disaster DB decided to install the e-comi map which is a free open-source software for web-based Geographic Information System (hereinafter referred to as "GIS") produced by the National Research Institute for Earth Science and Disaster Resilience in Japan (hereinafter referred to as "NIED") as the new information management system for DSDB among NEMA headquarters, regional offices and related organizations in Mongolia.

As of the first of March 2018, almost all installation works including a setup of the server in the Mongolian National Data Center (hereinafter referred to as "NDC") had been completed. The system is on a test run in order to check accessibility from central and regional offices to the server and connectivity with the other spatial database managed by related organizations such as the National Agency of Land Administration, Geodesy and Cartography (hereinafter referred to as "ALAGaC"). The capacity of the existing server is still not enough to process multiple complex transactions concurrently, therefore NEMA has a plan to obtain higher spec server for enhancement of processing capacity.

The works of developing a new tool to convert a data format of disaster event records between text-based DB of daily-basis incident report system managed by the Public Announcement and Emergency Administration Center in NEMA and DSDB managed by the new management team is on-going by the sub-WG member under technical support by JET.

2) Development of Guideline for Operation and Management of Disaster Spatial Database (DSDB)

The most suitable rules and procedures for operation and management of DSDB by NEMA were discussed with the sub-WG member through the development of the GL in consideration of feedbacks from regional offices' staff. From November 2017, the sub-WG

member has spent their time to formulate the first draft of GL on the assumption of new job descriptions of the new management team which has been proposed by aiming to secure a human capacity to operate and manage DSDB using the new information management system called Internet-based Disaster Spatial Information System (hereinafter referred to as "I-DSIS"). At the end of May 2018, the new division was established under Public Announcement and Emergency Administration Center in NEMA, and the first draft of GL is going to be updated based on the result of discussing about detailed work procedure and responsibility in the new division.

3) Making Agreements for Spatial Database Sharing with Related Organizations

The sub-WG member has spent their time and effort making agreements for spatial database sharing between NEMA and related organizations which have original and unique spatial database regarding topographical maps, estimated seismic intensity zones, results for seismic diagnosis of building and others by aiming to develop better environment of data exchange for DRR related activities in Mongolia. At the first step of this action, the sub-WG member started discussion with ALAGaC and the Master Planning Agency of Capital City.

At the middle of April 2018, the official agreement on cooperation and spatial data sharing between ALAGaC and NEMA has been concluded as the result of a series of discussions about both technical matters and administrative affairs.

On the other hand, making agreement with the Master Planning Agency of Capital City is still under discussion. The Master Planning Agency has already understood the effects of data exchange for DRR activities in the UB City and both sides have been basically in agreement about this matter. For making agreement, NEMA side sent an official letter to the Master Planning Agency in order to request to move forward in this matter again.

4) Implementation of Training for Utilization of DSDB for DRR in NEMA

For formulating new organization structure for operation and management of DSDB, assessment and development of human capacity for NEMA Headquarters as well as EMDC and regional offices in 21 Aimags are one of the key actions, and as its first step, the training for Utilization of DSDB for DRR in NEMA was conducted.

50 staff from central NEMA and local emergency departments participated in 2-day training held on March, 12th and 13th 2018. Main purposes of training were to gain basic knowledge and skill of DSDB using I-DSIS and to discuss a better way to utilization of DSDB for DRR activities in NEMA.

Many positive comments for practical operation and management of I-DSIS were provided

and most of the trainees mentioned that the exercise on the second day was most effective. Furthermore, there were many opinions that they wanted more time for the exercise. It seems that they could obtain practical knowledge and experience by cooperating with the group member. It was not so difficult for them to gain system operation of I-DSIS as many of the trainees has already had basic skill of GIS operations.



Figure 1.2 Scenes of Exercises in the 2-Day Training for Utilization of DSDB

Activity 1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2

The white paper in 2017 described in Mongolian has been completed and editing of the present appearance is under way.

English translation is currently being conducted and it will be completed in early June 2018. The WG1 member will also prepare English summary versions and compile brochures for the Asian Ministerial Conference on Disaster Risk Reduction in 2018 (hereinafter referred to as “AMCDRR”). The white paper described in Mongolian and English, and the brochure in English will be completed by AMCDRR starting on July 2nd.

Table 1.2 Contents of White Paper

<p>Preface</p> <p>Chapter 1 Status of Mongolia Country Disaster Countermeasures Initiatives</p> <p>1.1. Disaster protection related laws of Mongolia</p> <p>1.2. Disaster-related policy documents</p> <p>1.3. Disaster protection system, organization, composition</p> <p>Chapter 2 Efforts on disaster protection</p> <p>2.1. Measures for disaster protection and disaster risk</p>	<p>Chapter 5 State Stockpiling</p> <p>5.1. Policy documents on state stockpiles and humanitarian assistance</p> <p>5.2. Efforts of national stockpiles and humanitarian assistance efforts, and its business</p> <p>Chapter 6 Earthquake disaster protection status and earthquake disaster countermeasures</p> <p>6.1. Activity of earthquake disaster protection standing committee</p>
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<p>reduction</p> <p>2.2. Disaster protection education, enlightenment</p> <p>2.3 Measures to secure disaster preparedness structure</p> <p>2.4. Early warning at the time of disaster, adjustment of emergency measures</p> <p>2.5. Measures to eliminate damage</p> <p>2.6. Personnel and equipment related to disaster protection</p> <p>2.7. Disaster drill</p> <p>Chapter 3 Disaster reduction cooperation</p> <p>3.1. International Disaster Protection Cooperation</p> <p>3.2. Mutual cooperation among institutions related to national disaster protection work</p> <p>3.3 Participation of public organizations, non-governmental organizations (NGOs), communities and residents in disaster protection</p> <p>Chapter 4 Fire-fighting Activities</p> <p>4.1. Policy document on fire countermeasures</p> <p>4.2. Firefighting efforts</p>	<p>6.2. Policy document on promotion of earthquake disaster protection measures</p> <p>6.3. Study on earthquake situation in Mongolia</p> <p>6.4. Study on active fault around Ulaanbaatar city</p> <p>6.5. Ulaanbaatar City earthquake disaster emergency operation plan</p> <p>6.6. Education and training related to earthquake disaster protection</p> <p>Chapter 7 Activities of the Disaster Research Institute</p> <p>7.1. Research investigation at disaster research laboratory</p> <p>7.2. Disaster database</p> <p>Chapter 8 Disaster protection finance</p> <p>8.1. Investment by state budget</p> <p>8.2. Foreign investment</p> <p>8.3. Projects and programs implemented in NEMA</p> <p>8.4. Compensation for victims payment</p> <p>8.5. Measures taken to eliminate damage</p> <p>Chapter 9 Disaster Protection Business Report for 2017</p>
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Activity 1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline

As described in the Activity 1.3.3, the sub-WG for disaster DB is developing DSDB for DRR. As one of the considerations of the DB development, the structure of spatial database including items of attributes is being designed to accumulate and manage the result of seismic diagnosis of buildings, infrastructure and lifeline which will be evaluate by appropriate organizations. And also, the sub-WG member is trying to make an agreement for data exchange with the Master Planning Agency of Capital City. The Master Planning Agency is implementing seismic diagnosis of buildings by own method and all of evaluation results for each building are managed using the formalized sheet named as "Passport". If the agreement will be concluded, NEMA and the Master Planning Agency can share the result of seismic diagnosis of not only buildings but infrastructures and lifelines, and they will be able to utilize those results for planning of disaster protection.

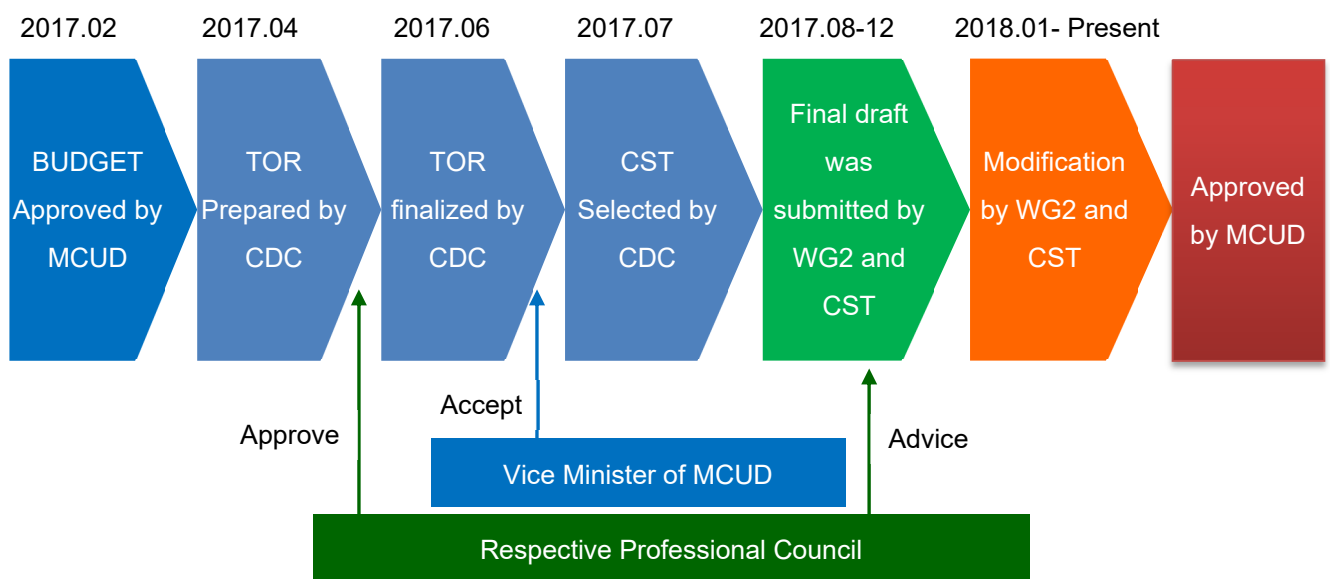
(3) Output2

Activity 2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version

As stated in the previous monitoring sheet, The WG2 member investigated the current standards and regulations regarding the evaluation of buildings, infrastructure and lifeline structures with personnel of relevant organizations, and followed by the conclusion, issues identified through the investigation will be reflected in the guidelines that will be newly established in the project.

Activity 2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment

The WG2 member decided to follow the Mongolian procedure shown in Figure 2.1 to make standards and regulations. In the figure, a tentative schedule is also given.



TOR: Terms of Reference, CDC: Construction Development Centre, CST: Consulting Serves Team
 NORM: Mongolian Standard

Figure 2.1 Procedure to prepare guidelines

1) Establishment of seismic evaluation guidelines for buildings

The WG2 determined the contents and prepared the prototypes of GLs for RC, PC and Masonry buildings. Some issues derived from converting from prototypes to draft GLs were discussed with the Consulting Serves Team (hereinafter referred to as “CST”),

followed by submitting draft GLs to the Construction Development Center (hereinafter referred to as “CDC”) from CST.

CDC examined the submitted GLs from the viewpoint of adequacy as Mongolian Standards, and requested CST to revise and update some items as below;

- To add field survey results in sample seismic evaluation
- To add more illustration of seismic evaluation
- To add sample calculation of I_s value for model buildings in each guideline to examine the I_s value’s adequacy

After discussing with WG2 on the concrete responses for the items above and solving them, CST resubmitted amended GLs to CDC, where the Respective Professional Council finally approved GLs. However, CDC is now requiring CST to conduct the field survey for their understanding the GLs. WG2 discussed with CST and concluded that supplementary survey is held for a RC building for which field survey was not conducted. For a PC building and a masonry one, the data from existing survey will be referred instead.

WG2 also conducted 2-day training meeting on May 4th and 5th using the draft GLs for buildings to have enough knowledge on them for future technology dissemination in Mongolia. A look of the meeting is shown in Figure 2.2.



Figure 2.2 Training meeting for draft guideline in WG2

2) Establishment of seismic evaluation guideline of Infrastructures and lifeline structures

The GL of seismic evaluation for infrastructures and lifeline structures was approved by the Science and Technology Council of MCUD in December 2017, and now in waiting for signing by the Minister. Because 6 months have passed since the council, JET will ask the

WG2 leader who is the chief of a bureau of MCUD to promote the process of signing.

Activity 2.1.3: Implementation of the Training to Improve Knowledge and Ability for Those Who Carry Out Seismic Estimation on Structures and Lifelines

WG2 discussed the contents and time table of 4-day training course for seismic evaluation for buildings, infrastructures, and lifeline structures, as shown in Figure 2.3.

	Day1	Day2	Day3	Day4
AM1	Opening Ceremony • Remarks • Introduction • On Guideline • Group Photo	RC bldg. (1) • Explanation of Guideline	Masonry bldg. • Explanation of Guideline • Exercise of Seismic Evaluation	Infra & Lifeline (1) • Past Damage in Japan • Brief Explanation of Phase-1 Project • Group Photo
AM2	General (1) • Current Guidelines in Mongolia • Seismic Evaluation by UB	RC bldg. (2) • Exercise of Seismic Evaluation	General (4) • Seismic Diagnosis System in Japan	Infra & Lifeline (2) • Current Situation on Mongolia • On Guideline
PM1	General (2) • Past Disaster and Response in Japan • Examples of Seismic Retrofitting	PC bldg. (1) • Explanation of Guideline	Equipment • Introduction of Equipment for Survey • Brief Explanation	Infra & Lifeline (3) • Exercise of Seismic Evaluation • Discussion on Future Activity
PM2	General (3) • Seismic Diagnosis Procedure • Conversion of Japanese Standard	PC bldg. (2) • Exercise of Seismic Evaluation	Closing Ceremony • Awarding • Closing Remarks	Closing Ceremony • Awarding • Closing Remarks

Figure 2.3 Time table of training course for seismic evaluation

Details discussed and determined by WG2 were as follows;

- The training course is held from June 4th to 6th,
- Venue is CDC's conference room, and,
- Numbers of trainees will be 90 from various organizations.

Before the training course, 2-day pilot training including “General (2) & (3)”, “RC bldg. (1) & (2)”, “PC bldg. (1) & (2)”, and “Masonry bldg. (1) & (2)” in Figure 2.3 was conducted for 20 trainees at the Mongolian Association of Civil Engineers (hereinafter referred to as “MACE”) office on May 10th and 11th to identify the issues in the training program. Result of questionnaire to trainees is summarized in Figure 2.4. The pilot training consisted of lectures and drills, whose look is shown in Figure 2.5.

Monitoring Sheet Summary

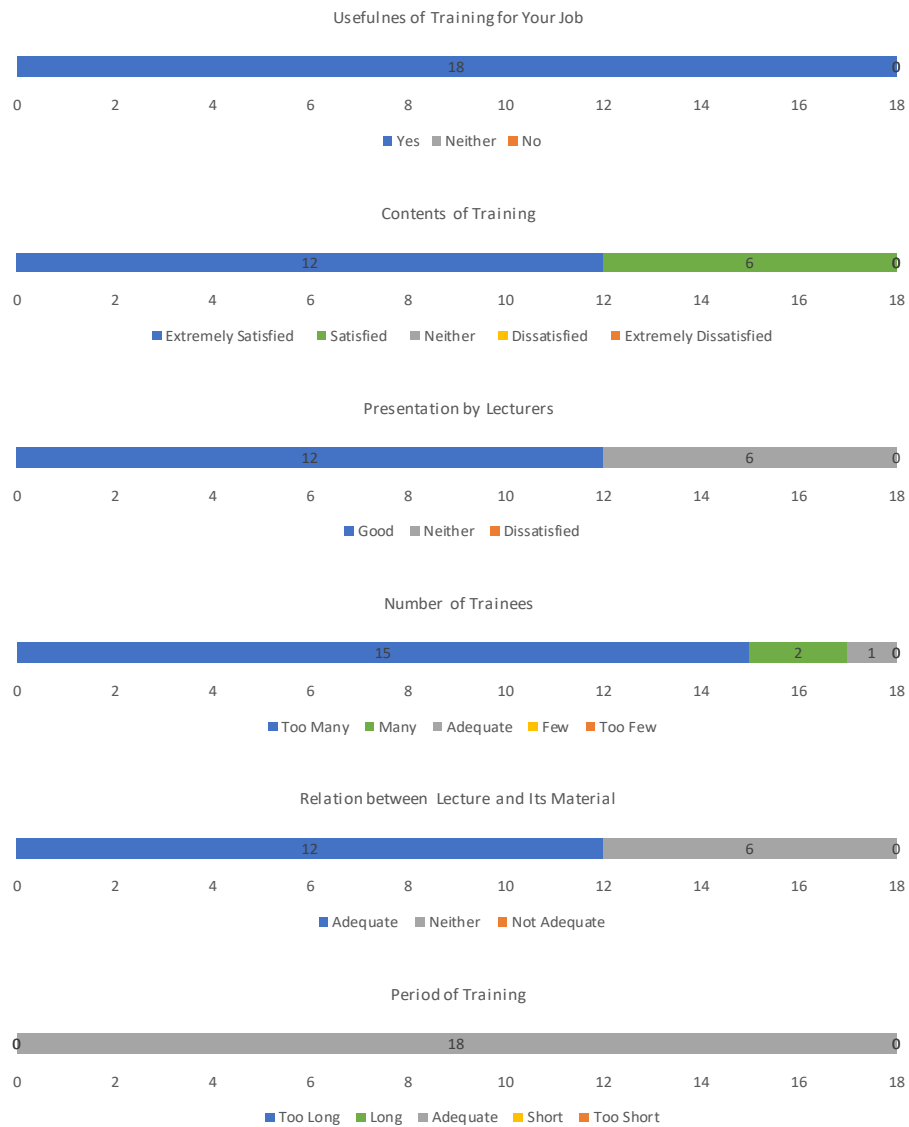
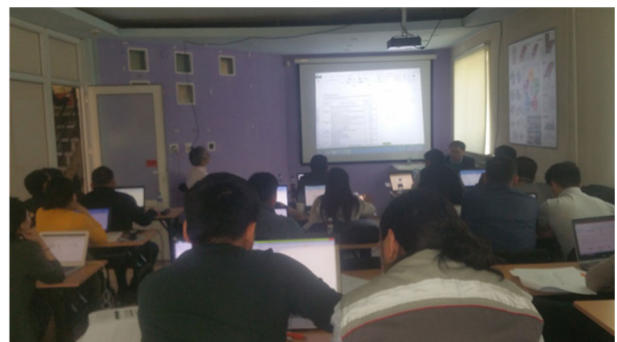


Figure 2.4 Summary of result of questionnaire



Lectures on Seismic Diagnosis



Drill using Excel Spread Sheet

Figure 2.5 Pilot training courses at MACE office

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

The WG2 decided that seismic evaluation and seismic strengthening should be combined in one GL for each structure except for Infrastructures and lifelines, since seismic evaluation and seismic strengthening are strongly related to each other.

As mentioned before, CDC examined the submitted GLs from the viewpoint of adequacy as Mongolian Standards, and requested CST to revise and update some items as below;

- To add more illustration of seismic retrofitting

After discussing with WG2 on the concrete measures and solving the item above, CST resubmitted GLs to CDC, where the Respective Professional Council finally approved the guidelines.

Activity 2.2.2: Trial Design of Rebuilding and Strengthening Construction for Housing, Kindergartens, Schools, Hospitals and Government Buildings

The final decision on the selection of model buildings was done by WG2 with new group leader who is the chief bureau of MCUD. The nominated buildings are summarized in Table 2.1.

The data necessary for strengthening design for these buildings, such as design drawings, calculation sheets, report of existing seismic evaluation and so on were collected and arranged by WG2.

Table 2.1 Model buildings for seismic strengthening

Structural Type	Usage	Name	Location	Note
Masonry	Kindergarten	No. 105 Kindergarten	Songino Khaikhan District	Constructed with standard design drawings
	School	No. 23 School	Chingeltei District	Large-scale school, based on standard design
	Public Office	NEMA	Sukhbaatar District	Public office necessary for emergency response
RC	Hospital	No.1 Gynecology Hospital	Sukhbaatar District	One of few RC hospital buildings
PC	Apartment House	9-Storey Apartment	Bayangol District	Apartment house based on standard design

(4) Output3

Activity 3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection

The draft GL for DRR education titled “The Program for Life Safety Education” was reviewed and finalized based on the knowledge learned in the counterpart training in Japan and comments sent by the relevant organizations in the WG3-1 activities in January and February 2018.

After submitting the final draft to the Ministry of Education, Culture, Science and Sports (hereinafter referred to as “MECSS”) in March 2018, the Program was modified based on the comments provided by the reviewers in the official approval process in MECSS.

The Program was approved by MECSS on April 6th 2018.

The Program is composed by 1) Background, 2) Purpose, 3) Contents, 4) Teaching Method, 5) Evaluation, and Matrix of DRR Education Contents in the School Education Curriculum in each educational level as addendum.

Activity 3.1.2: To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools

The writing and editing work of the “Guidebook” for teachers’ lessons as an annex of the “The Program of Life Safety Education” was proceeded through the workshops in February and April 2018 as well as the individual works by the working group members.

The draft composition of the Guidebook is as shown in the below table.

Table 3.1 Draft composition of the Guidebook

Foreword Abbreviations Chapter 1 General Outline of “Life Safety Education” 1. Background and Needs 2. What is “Life Safety Education” Chapter 2 “The Program for Life Safety Education” in Preschool and Compulsory Education 1. Outline of the Program for Life Safety Education 2. Consistency between subjects (study items) and “the Program for Life Safety Education” (educational levels, subjects, and extra-curricular activities) Chapter 3 Implementation Method of the “Program for Life Safety Education” 1. Development of school education and action plans for introducing “the Program for Life Safety Education” 2. Sample lesson plans for each subject (a. Pre-school education, b. Primary education, c.

Lower secondary education, and d. Higher secondary education)

Appendixes:

- 1) References for basic understanding of disasters
- 2) Terminology on DRR
- 3) List of references (books, audio, websites, etc.)

Besides, for the reference of the sample lesson plans, trial lessons for pre-school, 5th grade students, and 8th grade students were conducted by JET on May 1st and 2nd 2018 by inviting the staff members of the counterpart organizations including of working group members and teachers of the target schools.

The first draft Guidebook will be compiled by mid July 2018 by the individual works by the working group members.

Activity 3.1.3: To implement training programs for the instructors of Teacher Training Institutes and experts of educational departments in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively.

Implementation plan including of the participants to be invited and location of the training were discussed through the working group activities. Considering the other training schedule for the teachers and instructors in a year, it was decided to conduct the training programs for three educational levels as shown in the table below.

Table 3.2 Implementation plan of training programs

Location of the Training	Khovd	UB City (Batch 1)	UB City (Batch 2)
Date (3 days)	11-13 September 2018	18-20 September 2018	8-10 October 2018
Target Areas (tbc)	Bayan-Ölgii, Govi-Altai, Khovd, Uvs, Zavkhan (5 aimags)	Arkhangai, Dundgovi, Uvurkhantai, Umnugovi, Selenge, Bayankhongor, Dornogovi, Bulgan, Khuvsgul, Orkhon, Khentii, Dornod, Sukhbaatar (13 aimags)	9 districts of UB city Darkhan-Uul, Govisumber, Tuv (9 districts and 3 aimags)
Number of Trainees	3 persons from each aimag and district (Total 90 trainees)		

Initial discussion of the contents of the training was conducted in the WG3-1 meeting on May 7th 2018. The detailed contents and other logistics matters will be discussed and decided by mid-August 2018 and finalized by the preparation workshop in the beginning of September 2018.

Activity 3.2.1 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels

<Regular Meeting of the “DRR Training and Raising Awareness Team”>

The 4th regular meeting of the “DRR Training and Raising Awareness Team” was conducted on December 21st 2017, March 16th 2018 to report the update of activities of each member organization and to coordinate for the collaboration each other.

<Webpage for the Team to share the training schedule>

Due to unavailability of the server space of the NEMA for the webpage of the Team to share and coordinate the training schedule at the time of discussion in December 2017, the Team decided to check the items to be shared in the webpage using MS-Excel worksheet in the Google Drive at first and currently the Team members are in the process of the trial and review of them.

Some space in the NEMA’s training website (<http://ontsgoisur.gov.mn/>) was made available in April 2018 for the webpage of the Team. After checking and confirming the items (columns) for the schedule, the data entry system will be developed based on the result of the trial and review and put under the website.

< Mailing List for the Team >

A mailing list (mdptteam@googlegroups.com) for the DRR Training and Raising Awareness Team had been effectively used for the schedule sharing and coordination.

Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

1) Development of the DRR Training Materials for the Community

After extensive coordination with the World Vision Mongolia related to the activities of the component 3 (called “Be Ready!”) of the “Disaster Resilient Ulaanbaatar Project” throughout the period and the WG3-2 activities, including of 2-day workshop in February 2018, meetings in February and March 2018, and individual works, the draft

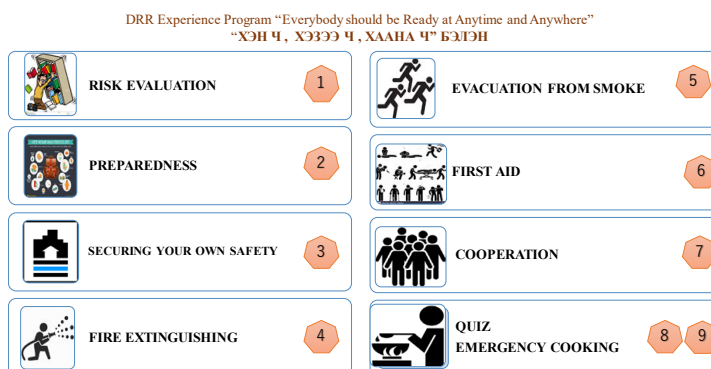


Figure 3.1 Contents of the Training Program

DRR training materials and tools in the Project were prepared in March 2018.

The training was named as “DRR Experience Program – Everybody be ready at anytime and anywhere-“

2) Selection of the Pilot Areas for Community DRR Training and Education

The selection of the pilot areas, i.e., Bayngol district and Bayanzurkh district in UB City, and Zavkhan Aimag, was confirmed in the SC held in March 2018 and the JCC in April 2018.

3) Implementation of the Training for Trainers

The workshops for the Training for Trainers (hereinafter referred to as “ToT”) were conducted on March 21st 2018 in UB City and on March 26th 2018 in Zavkhan Aimag combined with the “Be Ready” training program organized by the World Vision Mongolia and Mongolian Red Cross Society. The 50 participants of each workshop were the DRR Volunteer Team members, and staff members of the local governments and the lifelong learning centers in the target Aimags and Soums.

After the ToT workshops, the materials used in the training were compiled with detailed instruction points, information for preparation of “DRR Experience Program”, and reference data as a draft guidebook for instructors.

4) Implementation of the Workshop for DRR Awareness Raising

The workshops for DRR Awareness Raising in Zabkhan Aimagi were successfully conducted on May 12th 2018 in Otgon Soum and on May 14th 2018 in Uliastai Soum. Also the workshops in the pilot area in UB City were conducted on May 17th 2018 in Bayangol district and on May 20th 2018 in Bayanzurkh district with great success. Each workshop was mainly coordinated by the instructors trained in the ToT workshop in March 2018 using the draft guidebook for instructors.

Besides, on 20 March 2018, prior to the ToT, based on the request from the NEMA, the WG3-2 members provided support to conduct “DRR Experience Program” in the 87 school of the Bayanzurkh district utilizing the materials and tools prepared for the Project activities as one of the events for the Earthquake Awareness Day in Mongolia.

Based on the review of the ToT and the workshops as well as the event in the school, the WG3-2 members will revise and finalize the instructor’s guidebook for wide dissemination of the activities in Mongolia.

Activity 3.2.3 To develop and implement educational and training program for

implementing disaster prevention and simulation program in Training Center

After the training in Japan in November 2017, the WG3-2 members discussed improvement of the exhibits of the Center based on the learning in Japan through several meetings and 2-day workshop held in February 2018. Also, the members made coordination with the World Vision Mongolia which has a plan to support the Center's activities for avoiding duplication. As a result, the members decided to develop following items for the improvement of the exhibits of the Centers in the Project activities.

- Posters/Panels for the Earthquake Experience Room
- Miniature Building Models for learning Seismic Resistant Structure
- Educational material: DRR Quiz for Kids' Room

On May 3rd 2018, a mini workshop was conducted for the development of the miniature building model. Also, the team discussed improvement of the training program for the Earthquake Experience Room after the installment of the new Shaking Table in November 2018 in the meeting on May 24th 2018.

1-3 Achievement of Output

(1) Output1

The following three indicators are applied to evaluate the achievement of the Output 1 based on the PDM.

1.1 The number of guidelines, operational rules, provisions which are developed.

Achievement in this term:

The WG1 has a plan to prepare two (2) types of earthquake disaster risk assessment guidelines (GLs), four (4) types of disaster protection planning GLs and one (1) disaster database GL.

Regarding earthquake disaster risk assessment GLs, the comprehensive version has been developed, and the detailed technical version has been compiled and shared by the WG1 member. And for disaster protection planning GLs, National Level, Aimag / Soum Level and Capital City / District Level have been developed. On the other hand, Sate Services Level is under development. And also for disaster database GL, the first draft for operation and management of Disaster Spatial Database (DSDB) is being updated based

on the detailed work procedure and responsibility of the new division established on May 2018.

1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements

Achievement in this term:

Total eight (8) types of draft agreements are under discussion within sectors for “Medical and Pharmaceutical Supplies”, “Foods and Water Supplies”, “Construction Materials and Temporary Housings”, “Securing Road Transport”, “Telecommunication” and “Waste Water Treatment and Water Supply”.

1.3 White paper on disaster risk reduction

Achievement in this term:

The white paper in 2017 has been completed and editing of the present appearance is under way.

(2) Output2

The following two indicators are applied to evaluate the achievement of the Output 2 based on the PDM.

2.1 Guideline for seismic assessment: The number of the participants in the training program on seismic assessment

The achievement in this term:

The WG2 completed the four (4) types of GLs for seismic evaluation of buildings (RC, PC and Masonry) and infrastructures and lifelines. The WG2 is waiting for approval by the Science and Technology Council of MCUD, and for signing by Minister.

On March 29th, WG2 conducted seminar of seismic evaluation of RC structures for young engineers in Mongolia at MACE office, where 25 engineers attended.

After establishing draft GLs of seismic evaluation for RC, PC, and Masonry buildings, 2-day pilot training to explain the GL was held on May 10th and 11th, where 18 trainees from MACE and from Mongolian Association of Design Offices attended. This pilot training was authorized as official training course by MACE, so that all the attendants obtained points necessary for their licensing.

2.2 Guideline for seismic strengthening: The number of the training program on seismic

strengthening

The achievement in this term:

The WG2 decided that seismic evaluation and seismic strengthening should be combined in one GL for each building structure except for Infrastructures and lifelines. As mentioned above, the WG2 completed the three (3) types of GLs for seismic evaluation including seismic strengthening of buildings (RC, PC and Masonry) and they are waiting for approval by the Science and Technology Council of MCUD, and for signing by Minister.

(3) Output3

The following two indicators are applied to evaluate the achievement of the Output 3 based on the PDM.

3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project

Achievement in this term:

The WG3 has just developed the GL in April 2018 and is still in the process for preparing teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

3.2 The number of visitors in Training Center

Achievement in this term:

The WG3 is preparing the improved training program and educational materials for DRR education and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators.

1-4 Achievement of the Project Purpose

The following two indicators are applied to evaluate the achievement of the Project based on the PDM.

1. The number of the approved guidelines and agreement

2. The number of the data on disaster risk reduction which newly established and improved

The achievement in this term:

Activities for developing GLs, agreements, and necessary materials have been continued at each WG. In order to ensure sustainability after the Project, each activity is planned and implemented so that guidelines and other related outputs which will be developed in the Project are approved by NEMA, MCUD or MECSS through their standard procedures. The existing status of developing related documents are as below;

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
Output1	National Earthquake Disaster Protection Planning GL	NEMA	Draft GL was completed. After translation into Japanese, the JET is due to give some comments about the contents of the draft one.
	State Earthquake Disaster Protection Service Planning GL	NEMA	Now work in process. It is expected to complete draft GL by the middle of June 2018.
	Aimag / Soum Level Earthquake Disaster Protection Planning GL	NEMA	Draft GL was Completed. It will be updated or revised based on the feedbacks from pilot Aimags.
	Capital City / District Level Earthquake Disaster Protection Planning GL	EMDC	Draft GL was completed. After translation into Japanese, the JET is due to give some comments about the contents of the draft one.
	Earthquake Disaster Risk Assessment GL	NEMA	Draft GL for Comprehensive version was updated base on comments from the JET. Only the framework of draft GL for detailed version was confirmed.
	GL for Operation and Management of Disaster Spatial Database (DSDB)	NEMA	Now work in process. The first draft of GL is going to be updated in parallel with discussing the detailed work procedure and responsibility in the new division.
	Agreements	NEMA or other related organizations	As explained in Activity 1.2.1, eight (8) draft agreements were prepared.
	White Paper	NEMA	Mongolian version was completed. Translation tasks into English and Japanese are underway.
Output2	Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete Buildings	MCUD	Still under review by the Science and Technology Council of MCUD.
	Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete Buildings	MCUD	Still under review by the Science and Technology Council of MCUD.
	Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings	MCUD	Still under review by the Science and Technology Council of MCUD.

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
	Seismic Evaluation Method of Infrastructures and Pipelines	MCUD	Already approved by the Science and Technology Council of MCUD, now waiting for signing by the Minister.
Output3	Life Safety Education Program	MECSS	Approved on April 6th 2018
	Guidebook for Life Safety Education	MECSS	Now work in process.

1-5 Changes of Risks and Actions for Mitigation

(1) Output1

1) Impact of Preparation Work of AMCDRR

Many of WG1 members are assigned as members of AMCDRR preparation working group. Since AMCDRR is scheduled to be held in early July, this preparatory work takes time, and the progress of the Project has been affected. For example, Mr. Bayanmunkh, who is in charge of disaster protection planning in the Project, serves as the chairman of the preparation working group, so there are circumstances that he is not possible to participate in the pilot activity in the pilot Aimag. After AMCDRR is over, the WG1 members go into the summer vacation, so there is concern that the progress of the Project will be stopped until mid-August when the summer vacation ends.

(2) Output2

1) Technical transfer of seismic evaluation by precise method

Two-level seismic evaluation methods, simple method and precise one, were established for RC and PC buildings. Though the former method has been fully explained not only in WG2 but also to other engineers from various organizations, the latter method has not, since the precise method is complicated and requires calculation tools. However, the precise method gives more accurate evaluation and higher I_s values than simple method does, so that the precise method is preferable for personnel who is in charge of seismic retrofitting.

So that JET and WG2 will collaborate to prepare more detailed materials including some calculation tools to transfer the knowledge, technology and knowhow to the relevant personnel and engineers from private sectors.

Training course with the materials above must also be conducted to practically disseminate the precise method. So, WG2 will examine the training course with MACE or

other organization so that the training course can be authorized as official one to motivate engineers to attend.

2) Seismic evaluation for model buildings for retrofitting

After the training course held in June, WG2 will conduct seismic retrofitting design for five model buildings. Since seismic retrofitting is quite new technology in Mongolia and requires a lot of data including field survey to conduct the precise seismic evaluation for seismic diagnosis, enough communication is needed between WG2 and JET to proceed the project in schedule.

In accordance with the Work Plan, the strengthening design must start in July, so that necessary actions mentioned above shall be completed by the end of June. WG2 and JET must divide the work and make the start as soon as possible.

(3) Output3

1) Implementation of the Lessons based on the developed school DRR education guideline “Program for Life Safety Education”

The school DRR Education guideline “Program for Life Safety Education” was approved and issued on 6 April 2018 after completion by the efforts of the WG3-1 members. For the implementation of the Program in each school of Mongolia, more information and understanding of the contents and teaching methods of school teachers are needed. Since the DRR education is a new educational area out of a subject and is taught in some parts of existing subjects, integrated study, or extracurricular activities, there will be some difficulties for the teachers to conduct lessons without substantial information and understanding of teaching plans and methods of DRR education. Also, it is required to enhance awareness of local educational administration for the importance of DRR education. In these contexts, the MECSS requested to provide the training program targeting the instructors in all over Mongolia.

The WG3-1 will discuss with the counterparts and make necessary adjustments to change the original plan which was to provide the training to the instructors only in UB City.

2) Need for Coordination with Other Projects

Through the period of the activities, the WG3 members coordinated with other stakeholders of DRR education and awareness and established a good relationship with them. There are some plans for providing support for the DRR education and awareness activities in coming years, the WG3 will continue to strive to capitalize on the good

relationships for appropriately distributing limited resources.

1-6 Progress of Actions undertaken by JICA

The process of procurement of the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center was started by JICA Headquarters. The delivery date of the equipment in Mongolia is planned before November 2018.

The procurement of the equipment for seismic diagnosis that was started by the JICA Mongolia office is going to be behind schedule. Japanese side promised that the technology transfer relating to utilization of diagnostic equipment is going to be implemented soon after the procurement.

1-7 Progress of Actions undertaken by Gov. of Mongolia

The report of approval of guidelines of seismic evaluation for buildings will be prepared by CDC, followed by the final approval by the Science and Technology Council of MCUD for signing by the Minister. The guideline for infrastructures and lifeline structures is in the process of signing by the Minister.

1-8 Progress of Environmental and Social Considerations (if applicable)

N/A

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

N/A

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

It is necessary to revise the members in WG2 due to the following reason; Mr. Battuga of NEMA, sub-leader of WG2, is supposed to transfer to new position, and Mr. Gantilga of ALAGaC also left his organization. Since NEMA is the main C/P of the Project and ALACaC will conduct seismic evaluation for GASI, new members from the organizations are desired.

2. Delay of Work Schedule and/or Problems (if any)

2-1 Detail

N/A

2-2 Cause

N/A

2-3 Action to be taken

N/A

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Mongolia,etc.)

N/A

3. Modification of the Project Implementation Plan

3-1 PO

N/A

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

N/A

4. Preparation of Gov. of Mongolia toward after completion of the Project

In this term, the specific policy and actions are not discussed yet.

II. Project Monitoring Sheet I & II *as Attached*

Project Monitoring Sheet | Ver. 4.0 (Term: December, 2017 - May, 2018)

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia
Implementing Agency: National Emergency Management Agency (NEMA)
Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City
Period of Project: December, 2016 to November 2019
Project Site: Mongolia

Version 4
Dated June 29, 2018

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal Seismic risk will be reduced.	1. Number of the approved guideline, rules, provisions 2. Number of white paper open to public 3. Number of the executed seismic assessment 4. Number of the seismic strengthened building 5. Number of implemented activities on disaster risk reduction education	Study by NEMA	The policy on disaster risk reduction will not be changed in Mongolia.			
Project Purpose The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.	1. The number of the approved guidelines and agreement 2. The number of the data on disaster risk reduction which newly established and improved	Project report	NEMA expands the pilot activities in other aimags and sums.	Activities for developing Guidelines (GLs), agreements, and necessary materials have been continued at each WG.	In order to ensure sustainability after the Project, each WG makes it a goal to get an approval of guidelines and other related outputs which will be developed in the Project from NEMA, MCUD or MECSS through their standard procedures.	
Outputs 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced.	1.1 The number of guidelines, operational rules, provisions which are developed. 1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements 1.3 White paper on disaster risk reduction	Project report	1. The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. 2. Participants in training programs continue to work in the same position. 3. The relation among related organizations is maintained. 4. Exchange information is maintained among the related organizations.	1.1: Regarding risk assessment GLs, the comprehensive version has been developed, and the detailed technical version has been compiled and shared by the WG members. For planning GLs, National Level, Aimag / Soum Level and Capital City / District Level have been developed. But, Safe Services Level is under development. For disaster database GL, the first draft GL is being updated based on the work procedure and responsibility of the new division established on May 2018. 1.2: Total eight (8) types of Draft agreements are under discussion within sectors 1.3: The white paper in 2017 described in Mongolian has been completed and editing of the present appearance is under way.	1.1: The WG1 has a plan to prepare following GLs - Two (2) types of Earthquake Disaster Risk Assessment GLs 1) Comprehensive Earthquake Disaster Risk Assessment GL 2) Detailed Earthquake Disaster Risk Assessment GL - Four (4) types of disaster protection planning GLs 1) National Earthquake Disaster Protection Service Planning GL 2) State Earthquake Disaster Protection Service Planning GL 3) Aimag / Soum Level Earthquake Disaster Protection Planning GL 4) Capital City / District Level Earthquake Disaster Protection Planning GL - One (1) disaster database GL 1) GL for Operation and Management of Disaster Spatial Database (DSDB) 1.2: The sectors where draft agreements are under discussion are "Medical and Pharmaceutical Supplies", "Foods and Water Supplies", "Construction Materials and Temporary Housings", "Securing Road Transport", "Telecommunication" and "Waste Water Treatment and Water Supply".	
2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced.	2.1 Guideline for seismic assessment The number of the participants in the training program on seismic assessment 2.2 Guideline for seismic strengthening The number of the training program on seismic strengthening	Project report	2.1 & 2.2: The WG2 completed the four (4) types of guidelines (GLs) for seismic evaluation and seismic strengthening of buildings (RC, PC, Masonry) and for seismic evaluation of infrastructures & lifelines. They are waiting for approval by the Science and Technology Council of MCUD and/or for signing by the Minister. 2.1: On March, WG2 conducted seminar of seismic evaluation of RC structures for young engineers in Mongolia, where 25 engineers attended. And on May 2-day pilot training to explain the GL was held, where 18 trainees from MACE and Mongolian Association of Design Offices attended.	2.1 & 2.2: The WG2 has a plan to prepare following GLs, 1) Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete (RC) Buildings 2) Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete (PC) Buildings 3) Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings 4) Seismic Evaluation Method of Infrastructures and Pipelines	2.1 & 2.2: The WG2 has a plan to prepare following GLs, 1) Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete (RC) Buildings 2) Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete (PC) Buildings 3) Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings 4) Seismic Evaluation Method of Infrastructures and Pipelines	
3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.	3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project 3.2 The number of visits in Training Center	Ordinance of Ministry of Education, Culture and Science Ordinance of NEMA	3.1: The WG3 has just developed the GL in April 2018 and is still in the process for preparing teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators. 3.2: The WG3 is preparing the improved training program and educational materials for DRR education and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators.	3.1: The GL for DRR education titled "The Program for Life Safety Education" was approved by MECSS on April 6th 2018.		

Activities	The Mongolian Side	Inputs	The Japanese Side	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction database on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p> <p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-1-1)</p> <p>2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p> <p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergarten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergarten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>Assignment of counterparts</p> <ul style="list-style-type: none"> - Project Director - Project Managers - Project Coordinator - Project Members <p>For Output 1</p> <ul style="list-style-type: none"> - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC) <p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency <p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	<p>Dispatch of Experts</p> <ul style="list-style-type: none"> - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction Education - Disaster Risk Reduction at Community Level - Educational Material Development <p>Provision of Equipment</p> <ul style="list-style-type: none"> - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table <p>Training in Japan and/or the third countries</p>	<p style="text-align: center;">Pre-Conditions</p> <p style="text-align: center;">➔</p> <p style="text-align: center;"><Issues and countermeasures></p> <p>(1) Output: Impact of Preparation Work of AMCDDRR Many of WG1 members are assigned as members of AMCDDRR preparation working group. Since AMCDDRR is scheduled to be held in early July, this preparatory work takes time, and the progress of the Project has been affected.</p> <p>(2) Output2: Technical transfer of seismic evaluation by precise method Two-level seismic evaluation methods, simple method and precise one were established for RC and PC buildings. The precise method gives more accurate evaluation and higher /s values than simple method does, but the expertise for calculation process is required to understand the precise method. For this purpose, the WG2 decided to prepare more detailed materials including some calculation tools to transfer the knowledge, technology and knowhow to the relevant personnel and engineers from private sectors. And also, training course that may be authorized as official one in Mongolia with the materials above must also be conducted to practically disseminate the precise method.</p> <p>(3) Output2: Seismic evaluation for model buildings for retrofitting After the training course held in June, WG2 will conduct seismic retrofitting design for 5 model buildings. Since seismic retrofitting is quite new technology in Mongolia and requires a lot of data including field survey to conduct the precise seismic evaluation for seismic diagnosis, enough communication is needed between WG2 and JET to proceed the project in schedule. In accordance with Work Plan, the strengthening design must start in July, so that necessary actions mentioned above shall be completed by the end of June. WG2 and JET must divide the work and make the start as soon as possible.</p> <p>(4) Output3: Implementation of the Lessons based on the developed school DRR education guideline "Program for Life Safety Education" For the implementation of the Program for Life Safety Education in each school of Mongolia, more information and understanding of the contents and teaching methods of school teachers are needed. Since the DRR education is a new educational area out of a subject, there will be some difficulties for the teachers to conduct lessons without substantial information and understanding of teaching plans and methods of DRR education. In these contexts, the MECSS requested to provide the training program targeting the instructors in all over Mongolia. The WG3 is discussing how to make necessary adjustments to change the original plan which was to provide the training to the instructors only in UB city.</p> <p>(5) Output3: Need for Coordination with Other Projects Through the period of the activities, the WG3 members coordinated with other stakeholders of DRR education and awareness and established a good relationship with them. There are some plans for providing support for the DRR education and awareness activities in coming years, the WG3 will continue to strive to capitalize on the good relationships for appropriately distributing limited resources.</p>	<p>Notes</p> <p>1-1) Amended Law of Disaster Protection "6.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc..</p> <p>1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM</p> <p>1-3) National level, UB city and two provinces are the target areas</p> <p>1-4) Improvement of existing "Disaster Information Sharing System"</p> <p>1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)</p> <p>2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities</p> <p>2-2) Guidelines are regarded as operational guidelines by Resolution of Minister</p> <p>2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.</p> <p>3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certificated teacher's instructors</p> <p>3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring of nationwide implementation of education and training program to all the necessary target stakeholders</p> <p>3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency Management Departments of Cities, Provinces, and Districts. (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels. (3) Heads of governor's offices of Provinces, Sums, and Districts (4) Heads of Bags and Khoroos. (5) Coordinators of civil activities in Provinces, Districts, and Khoroos and (6) Volunteers ("only in pilot areas")</p> <p>3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.</p>

Project Monitoring Sheet II (Revision of Plan of Operation)

Project Title: The Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia																
Inputs Expert	2018				2019				2020				Remarks	Issue	Solution	
	W	I	II	III	IV	I	II	III	IV	I	II	III				IV
Kyozuka OWADA Akihiro FURUTA Osamu NISHII Kenzo ICHIKAWA Shiro MAKIYA Yoshihiko YAMAZAKI Tadashi ISE Seishiro FUKUSHIMA Jun MATSUO Masahide AOKI Shigeki KITA Hideo OMINE Miki KODAMA Yutaro OGAWA Seiji SUEA Toshikazu HIWAKI Yoko OTA Amargajal MAYANBAATAR	Plan															
	Actual															
	Plan															
	Actual															
	Plan															
	Actual															
	Plan															
	Actual															
	Plan															
	Actual															
	Plan															
	Actual															
	Plan															
	Actual															
	Equipment for seismic diagnosis															
Earthquake simulation experience equipment for DRR Training Centre																
Comprehensive disaster risk reduction																
Equipment for seismic diagnosis																
Earthquake simulation experience equipment for DRR Training Centre																
Comprehensive disaster risk reduction																
Activities																
Sub-Activities																
Output 1: Identify problems and challenges on implementation of legal frameworks of disaster risk reduction																
1.1.1.1 To review the current legal frameworks of earthquake disaster risk reduction																
1.1.1.2 To summarize the problems and challenges																
Responsible Organization																
Japan GOM																
Achievements																
Issue & Countermeasures																

Activity	Status	Start	End	Phase	Progress	Remarks	Output	Impact	Risk	Priority	Budget	Personnel	Equipment	Material	Other	Notes	
																	Plan
1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction	1.1.2.1 To develop the guideline of earthquake risk assessment																
	1.1.2.2 To develop the guideline of earthquake disaster protection plan																
	1.1.2.3 To develop the guideline of the earthquake disaster preparedness																
	1.1.2.4 To develop the guideline of earthquake disaster management																
	1.1.2.5 To develop the Guideline of Database																
	1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection	1.1.3.1 To examine the contents of the Law of Disaster Protection and to regulate to be newly established and/or to be revised															
1.1.3.2 To develop new regulations and revised regulations																	
1.1.3.3 To place the new and revised regulations in the process of approval and enforcement																	
1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations																	
1.2.1.1 To extract items that need to conclude agreement to build cooperative system between NEMA and related organizations																	
1.2.1.2 To organize the items to be described in the agreement which is related activity (see activities) with related organizations, prepare draft agreement																	
1.2.1.3 To conclude agreement																	
1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction	1.2.2.1 To prepare training program on agreement between related organizations																
	1.2.2.2 To implement the training program																

TO Chief Representative of JICA Mongolia OFFICE

PROJECT MONITORING SHEET

**Project Title : Project for Strengthening the National Capacity of Earthquake
Disaster Protection and Prevention in Mongolia**

Version of the Sheet: Ver. 5.0 (Term: June, 2018 - November, 2018)

Name: D.Batsaikhan

**Title: Director of Disaster Prevention
Department, NEMA**

Name: Kiyotaka Owada

**Title: Team leader / Integrated disaster
management I**

Submission Date: December 11, 2018

I. Summary

1. Progress

1-1 Progress of Inputs

(1)Dispatch of Experts

The following Experts from Japanese side were assigned in this monitoring period.

	Area of responsibility	Experts name	Period of assignment
Project Management Group	Team Leader / Integrated Disaster Risk Management I	Kiyotaka OWADA	Jun. 19 – Jul. 8, 2018 Aug. 29 – Sep. 27, 2018 Nov. 11 – Nov. 30, 2018
	Deputy Team Leader / Integrated Disaster Risk Management II	Akihiro FURUTA	Jun. 4 – Jun. 17, 2018 Sep. 2 – Sep. 18, 2018 Nov. 19 – Nov. 30, 2018
OUTPUT1: Disaster Management Plan	Disaster Management Plan I	Osamu NISHII	Sep. 2 – Oct. 2, 2013
	Disaster Management Plan II	Kensuke ICHIKAWA	Jun. 1 – Jun. 19, 2018 Aug. 10 – Sep. 7, 2018
	Disaster Management system I	Yoshitaka YAMAZAKI	—
	Disaster management system II	Shiro MAKITA	—
	Disaster management information I	Tadashi ISE	—
	Disaster management information II	Akihiro FURUTA	Jun. 18 – Jun. 22, 2018 Aug. 28 – Sep. 1, 2018
Output 2: Seismic Resistance	Seismic-Resistance	Seiichiro FUKUSHIMA	Jun. 1 – Jun. 9, 2018 Aug. 29 – Sep. 26, 2018 Nov. 4 – Nov. 17, 2018
	Seismic Diagnosis of Infrastructures and Lifelines	Jun MATSUO	Jun 1 – Jun. 12, 2018
	Seismic Diagnosis of Buildings /	Masahide AOKI	Jun 3 – Jun. 24, 2018

	Area of responsibility	Experts name	Period of assignment
	Seismic Strengthening I (RC, PC)		
	Seismic Diagnosis of Buildings / Seismic Strengthening II (Masonry)	Shigeki KITA	—
	Seismic-Resistant Design	Hideto OMINE	Jun 20 – Jul. 11, 2018 Oct. 31 – Nov. 17, 2018
Output 3: DRR Education	DRR Education I	Miki KODAMA	Sep. 6 – Sep. 22, 2018 Oct. 3 – Oct. 13, 2018
	DRR Education II	Yujiro OGAWA	—
	DRR Education II	Seiji SUWA	Sep. 6 – Sep. 22, 2018 Oct. 3 – Oct. 12, 2018
	Community-Based Disaster Management / Project Coordination I	Toshikazu HIWAKI	Jun. 1 – Jun. 15, 2018 Aug. 30 – Sep. 18, 2018 Nov.5 – Nov. 19, 2018
	Development of Disaster Management Teaching Materials I	Yoko OTA	—
	Development of Disaster Management Teaching Materials II / Project coordination II	Amarjargal NAYANBAATAR	*Intermittent assignment during above periods

(2) Assignment of counterparts

The current administration of authorities concerned of Mongolia for the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia (hereinafter referred to as “the Project”) is as following,

(a) Project Director:

D.Batsaikhan, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinators

B. Dorjderem, Policy Coordination and Cooperation Department, NEMA

There were some changes of project coordinators in charge in this monitoring period. Z. Battulga in Disaster Operation Department, who had been assigned to the coordinator since the beginning of the Project, transferred to the Emergency Management Department in Govi-Altai Aimag virtually around June 2018. Also, Enkhbat in Policy Coordination and Cooperation Department retired from his work in NEMA in September 2018. As a replacement for Enkhbat, B. Dorjderem was assigned to new project coordinator. The successor of Z. Battulga has not been assigned yet.

The other member of current administration of authorities concerned of Mongolia has not

been changed since last monitoring period.

According to the Record of Discussions (hereinafter referred to as “R/D”), the project organization of Mongolia side includes the counterpart (hereinafter referred to as “C/P”) of working groups (hereinafter referred to as “WG”) in order to implement project activities at output level of the Project.

The member list of the C/P for each WG had been amended at the seventh Steering Committee (hereinafter referred to as “SC”) on September 4th, 2018 based on the member list confirmed in the Joint Coordinating Committee (hereinafter referred to as “JCC”) on April 18th, 2018. And at the Sixth JCC on September 21st, 2018, further amendment of C/P member was approved as shown below.

(a) Member of Sub-Group of WG1 (As of November, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			5th JCC Apr.2018	7th SC Sep.2018	6th JCC Sep.2018
Coordinator for WG1	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
Disaster Risk Assessment (WG1-1)	D.Serjmyadag	Disaster Research Institute, NEMA	○	○	○
	P.Amarzaya	Disaster Research Institute, NEMA	○		
	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○
	B.Batbayar	Disaster Risk Management Dep., NEMA	○	○	○
	B.Khishigbaatar	Disaster Operation Dep., NEMA	○	○	○
	S.Bazarragchaa	Disaster Research Institute, NEMA	○		
Disaster Protection Planning (WG1-2)	B.Bayanmunkh	Policy Coordination and Cooperation Dep., NEMA	○	○	○
	B.Myagmardorj	Disaster Operation Dep., NEMA	○		
		Emergency Management Department of Capital City (EMDC)		○	○
	T. Turbileg	Disaster Operation Dep., NEMA	○	○	
	Ch.Otgontugs	Fire Dep., NEMA	○	○	○
	E.Batbayar	EMDC	○	○	
A.Dashnyam	EMDC				
Disaster Reduction Agreement (WG1-3)	B.Duvshin	Disaster Risk Management Dep., NEMA	○	○	○
	T.Bilguun	Policy Coordination and Cooperation Department, NEMA		○	○
White Paper (WG1-4)	O.Tsend-Ayush	Disaster Prevention Dep., NEMA	○	○	○
Disaster Database (WG1-5)	B.Purevnyam	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D. Sodnomragchaa	Disaster Research Institute, NEMA	○		
Spatial Information and Technology Division, NEMA				○	○

Monitoring Sheet Summary

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			5th JCC Apr.2018	7th SC Sep.2018	6th JCC Sep.2018
	B. Boldkhuu	Public Announcement and Emergency Administration Centre, NEMA	○	○	○
	D. Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA	○	○	○

(b) Member of Sub-Group of WG2 (As of November, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			5th JCC Apr.2018	7th SC Sep.2018	6th JCC Sep.2018
Coordinator for WG2	B.Soyomboo	Ministry of Construction and Urban Development (MCUD)	○		
	L.Bilegjargal	MCUD		○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○		
Seismic Diagnosis of Buildings (WG2-1)	B.Soyomboo	MCUD	○		
	L.Bilegjargal	MCUD		○	○
	G.Erkhembayar	MCUD	○		
	O.Bayarbaatar	MCUD		○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○		
	B.Bayardulam	Land Management, Geodesy and Cartography Agency, MCUD		○	○
	N.Ganchimeg	General Agency for. Specialized Inspection (GASI)	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○		
	N.Tamir	Master Planning Agency of Capital City		○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○		
	T.Galbadrakh	Finance and Logistics Dep., NEMA	○	○	○
Seismic Diagnosis of Infrastructures and Lifelines (WG2-2)	B.Soyomboo	MCUD	○		
	L.Bilegjargal	MCUD		○	○
	G.Erkhembayar	MCUD	○		
	O.Bayarbaatar	MCUD		○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○		
	B.Bayardulam	Land Management, Geodesy and Cartography Agency, MCUD		○	○
	N.Ganchimeg	GASI	○	○	○
	B.Munkhsaikhan	GASI	○	○	○
Z.Battulga	Disaster Operation Dep., NEMA	○			
Design for	B.Soyomboo	MCUD	○		

Monitoring Sheet Summary

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			5th JCC Apr.2018	7th SC Sep.2018	6th JCC Sep.2018
Seismic Strengthening (WG2-3)	L.Bilegjargal	MCUD		○	○
	G.Erkhembayar	MCUD	○		
	O.Bayarbaatar	MCUD		○	○
	B.Gantulga	Land Management, Geodesy and Cartography Agency, MCUD	○		
	N.Ganchimeg	GASI	○	○	○
	B.Tsend-Ayush	Master Planning Agency of Capital City	○		
	N.Tamir	Master Planning Agency of Capital City		○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○
	G.Saruultuya	Construction Development Center	○	○	○
	Z.Battulga	Disaster Operation Dep., NEMA	○		

(c) Member of Sub-Group of WG3 (As of November, 2018)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG		
			5th JCC Apr.2018	7th SC Sep.2018	6th JCC Sep.2018
Coordinator for WG3	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
School DRR Education (WG3-1)	J.Myagmar	Ministry of Education, Culture, Science and Sports (MECSS)	○	○	○
	Ch.Gantsetseg	MECSS	○	○	○
	P.Baljinnyam	MECSS	○	○	○
	A.Enkhtogtokh	Education Research Institute (ERI), MECSS	○	○	○
	B.Erdenechimeg	ERI, MECSS	○	○	○
	G.Mongolkhatan	ERI, MECSS	○	○	○
	G.Khaliun	ERI, MECSS	○	○	○
	N.Munkhbayar	Institute of Teacher Professional Development	○	○	○
	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	L.Munkhchimeg	Disaster Prevention Dep., NEMA	○		
	G.Enkhtsolmon	Disaster Prevention Dep., NEMA		○	○
Community DRR Education (WG3-2)	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○
	D.Bat-Erdene	Disaster Prevention Dep., NEMA	○	○	○
	D.Dulamsuren	Public Information Center, Disaster Prevention Dep., NEMA	○	○	○
	S.Doljinsuren	EMDC	○	○	○
	B.Chinbat	EMDC	○	○	○
	B.Uuriingegee	DRR Training Center, EMDC	○	○	○
	B.Ariunchimeg	National Center for Long life Education	○	○	○

1-2 Progress of Activities

(1) Overall of Project

1) Implementation of Steering Committee (SC) and Joint Coordination Committee (JCC)

The seventh SC and the sixth JCC have been held in this monitoring period.

No.	Date	Participants	Contents of discussion
Seventh SC	Sep. 4, 2017	NEMA, WG member for each OUTPUT Total: 30 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Progress of Installing Equipment - Schedule of Next JCC
Sixth JCC	Sep. 21, 2018	NEMA, MCUD, MECSS, GASI, Construction Quality and Safety Department; City Planning and Master Planning Agency of Capital City, etc. Total: 34 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Progress of Installing Equipment - Schedule of Next JCC

2) Provision of Equipment

As identified in the work plan of the Project which was approved by the first JCC, the equipment for seismic diagnosis and the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center are supposed to be procured and donated by the Japan International Cooperation Agency (hereinafter referred to as "JICA").

Regarding the equipment for seismic diagnosis, the procurement procedure has been carried forward by JICA Mongolia office and five (5) sets of diagnosis devices as shown below were officially handed over to NEMA on November 12, 2018.

Name of equipment	Number of devises
Surface strength measuring instruments	5
Ultrasonic-based measuring instruments	5
Corrosion measuring instruments	5
Concrete covering thickness measuring instruments	5
Surface strength measuring instruments for brick	5

Following handover of the equipment, the WG2 conducted 2-day training course regarding to the equipment utilization on November 12 to 13, 2018 with the participation of

governmental officers from related organizations and engineers from private companies. The detailed outline of the training shall be described in the part of Activity 2.1.3.

The process of procurement of the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Centre has already been started by JICA Headquarters. Regarding the schedule of installing equipment and its procedure, following things were discussed between Japanese side and Mongolian side at the sixth JCC on September 21, 2018.

Japanese side explained that the preparation for shipment of the equipment of earthquake simulation experience has been underway. Japanese side requested that Mongolian side should complete all advance preparations based on the Operation and Maintenance (hereinafter referred to as "O&M") Plan approved in the 3rd JCC held on June 26, 2017. Mongolian side promised construction works of floor enhancement by October 5, 2018.

In addition, Japanese side also requested that Mongolian side shall implement drainage water disposal and essential countermeasures against further inundation since the underground floor of the Centre was intruded by ground water after heavy rain in early September 2018. Mongolian side accepted and improved the slab of earthquake experience room with protection works for water intrusion on October 10, 2018.

In addition to this measure, Japanese side requested additional water protection countermeasures to prevent whole ground floor from the intrusion of ground water. Mongolian side is supposed to examine the followings; 1) prospect of budgetary allocation, 2) construction method, 3) construction schedule. The equipment is to be installed when Mongolian side addressed the result of the examination to Japanese side.

Mongolian side decided to keep the equipment properly up to the date of installation that arrived on October 20, 2018.

3) Introduction of the Project Activity at Asian Ministerial Conference for DRR 2018

Asian Ministerial Conference on Disaster Risk Reduction (hereinafter referred to as "AMCDRR") was held at the Ulaanbaatar (hereinafter referred to as "UB") from 3 to 6 of July, 2018. JICA Expert Team (hereinafter referred to as "JET") participated in this international event in order to introduce the Project activity to AMCDRR's participants who came from across Asian countries by exhibiting posters and a part of outcomes of the Project at the booth of the market place, attending an side event and delivering simple explanation for the latest status of the Project by Project member at the ignite stage respectively.

From 4 and 5 of July 2018, the booth exhibition was conducted at the market place in Sükhbaatar Square. The JET showed posters to explain the outline and latest status of activities for each output and project deliverables such as practical materials of community-based DRR education and awareness raising, and a model kit to show an effect of seismic strengthen of buildings. And then, the JET also gave a demonstration of how to use a water extinguisher and how to make an improved stretcher by involving visitor of Project's booth. The number of visitors was totally over two hundred (200) persons throughout the two days. At the next of Project's booth, NEMA's booth was set and the activity of Spatial Information and Technology Division which had been newly established last May 2018 to operate and manage Disaster Related Database for DRR using Internet-based Disaster Spatial Information System (hereinafter referred to as "I-DSIS") was introduced. The JET supported preparation and implementation of their exhibition.

On 4 of July 2018, Ms. J. Myagmar who is a coordinator of WG3 in the Project gave a presentation entitled "Ensuring and promotion of school DRR education as a standard education content in Mongolia" based on outcomes of WG3 activity for DRR education in the Project at one of side events of AMCDRR organized by World Vision Mongolia named as "Child-entered disaster risk reduction in Mongolia". The JET supported preparation and implementation of her presentation. The number of participants of this event was approximately forty (40) persons from educational institutions for each country and International Non-Governmental Organizations (hereinafter referred to as "INGO")

On 5 of July 2018, the JET joined the ignite stage held at the market place in Sükhbaatar Square and delivered their explanation about the latest status of the Project. Approximately twenty (20) participants heard a presentation given by the Project member.

(2) Output1

Activity 1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction

The activity was completed by the end of the previous reporting period.

The WG1 members confirmed that three (3) guidelines (hereinafter referred to as “GLs”) namely, "Earthquake Disaster Risk Assessment GL", "Earthquake Disaster Protection Planning GL", and "Disaster Database GL" shall be developed in Output 1 of the Project.

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction

1) Earthquake Disaster Risk Assessment Guideline

The WG1 members created the draft of Comprehensive Earthquake Disaster Risk Assessment GL with application software for simplified calculation of earthquake risk for the central and local government staff. Using this draft GL with application software, earthquake risk assessment was conducted in pilot aimags as a step of aimag level earthquake disaster protection planning.

On the other hand, the draft of Detailed Earthquake Risk Assessment GL is under preparation. It will be prepared by the end of 2018. Both GLs are considered to be a part of the annex of the revised Regulation for Implementation of Disaster Vulnerability and Risk Assessment (Annex of the Cabinet Decision of 176, 2006). However, the whole composition of the revised regulation has not been decided yet.

2) Earthquake Disaster Protection Planning Guideline

The WG1 members are preparing four (4) draft GLs namely, National Earthquake Disaster Protection Planning GL, State Earthquake Disaster Protection Service Planning GL, Aimag / Soum Level Earthquake Disaster Protection Planning GL and Capital City / District Level Earthquake Disaster Protection Planning GL.

Among these GLs, “National” and “State” GLs are the national level GLs and must be coordinated with the Standing Committee for Earthquake Disaster Protection and other ministries and related agencies. Before that, the GLs must be approved by the Executive Committee of NEMA. However, two members of WG1 in charge of “National” and “State” GLs were transferred and preparation works of these two GLs have been delayed. Therefore, the successors in charge of these two GLs must be decided and they should take over and restart the work quickly.

In the pilot aimags and districts, the Earthquake Disaster Protection Plans are being prepared or revised as a part of Activity 1.3.2. Through these pilot activities, feedbacks about the contents of the draft GLs will be gathered from officers who are member of planning in the pilot areas and these GLs will be improved. The revised GLs will be sent to the Executive Committee of NEMA for approval after improvement.

3) Disaster Database Guideline

Through the Activity 1.3.3, The GL for operation and management of Disaster Spatial Database (hereinafter referred to as “DSDB”) using Internet-based Disaster Spatial Information System (hereinafter referred to as “I-DSIS”) were being developed on the assumption of new job descriptions of the Spatial Information & Technology Division. As of end of October 2018, the drafting work of the GL with some supplemental documents has been finished and approval process by the head of NEMA as official regulation in NEMA is ongoing.

Activity 1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection

The activity was completed by the end of the previous reporting period.

The WG1 member verified the articles of the Amended Law on Disaster Protection mainly from the viewpoint of risk assessment and disaster protection, and identified the related rules and regulations in the Amended Law which are needed to establish new rules and regulations and/or revise existing ones with handling policy in the WG1 activity.

Activity 1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations

The progress of agreement development for each sector is summarized as below.

<Stable supply of foods and water to evacuation places and temporary housings>

The agreement was signed on October 16, 2018 between NEMA and the Ministry of Food and Agriculture (hereinafter referred to as “MOFA”). This agreement was announced through the website of NEMA and MONTSEME News Agency in Mongolia.

<Stable supply of medicines during disaster>

The agreements between the Ministry of Health (hereinafter referred to as “MOH”) and three major pharmaceutical sales companies were signed on November 7, 2018. This fact was announced through the website of NEMA.

<Supply of construction materials and temporary housings>

Two agreement documents were prepared between MCUD and the Construction Material Association, and between MCUD and the Construction Association. Agreement documents were already approved by the Minister of MCUD, and the agreements will be signed in December 2018.

<Stable transport and securing road transport during disaster>

The draft agreement has already been prepared. The progress is delayed due to personnel changes at the Ministry of Road and Transport Development (hereinafter referred to "MRTD"). The WG1 will discuss with the people in charge of the Ministry on the contents of the draft, and will negotiate for the Deputy Prime Minister's signature, which is the substitution the Minister.

<Stable fuel supply during disaster>

JET introduced several cases of fuel supply at disaster in Japan. The WG1 consulted with the Mineral Resource and Petroleum Agency about the contents of the agreement. NEMA side submitted the revised plan to the Agency in September 2018. Further discussions will be held to confirm the content.

<Set up priority telephone lines on disaster>

While consulting with the Communication and Information Technology Agency, the WG1 is negotiating to conclude the agreement between NEMA and a mobile phone company, UNITEL. The priority connection has technical and institutional issues, and the agreement can be concluded as soon as it resolves. It is expected to be possible by December 2018.

<Waste water treatment and stable water supply at the evacuation place>

The WG1 members are in discussion under the assumption that EMDC and the Water Management Authority / the Facility Service Office of Ulaanbaatar City (hereinafter referred to as "UB City") will make agreements about the water supply and sewerage supply to the evacuation places. The WG1 is also considering about an agreement to utilize school facilities as the evacuation place between EMDC and the Education Office of UB City. This agreement will include matters concerning the usage and management of disaster prevention facilities of schools constructed by Japan's Official Development Assistance Grants.

Activity 1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with

disaster risk reduction

The training programs for disseminating the effectiveness of agreement for earthquake disaster response was conducted during the previous reporting period. Based on the experience to conduct the training programs, the draft manual for implementing training programs will be prepared in the WG1 activity.

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

The activity was completed by the end of the previous reporting period.

Through the study of existing disaster protection plans in Mongolia, the WG1 members decided to prepare four (4) types of Earthquake Disaster Protection Planning GLs in the Project as described in the Activity 1.1.2.

Activity 1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan

The pilot activities to revise / newly develop the earthquake disaster protection plan were conducted in the pilot areas, Darkhan-Uul Aimag, Omnugobi Aimag, Bayangol District and Chingeltei District in UB City. The WG1 performed the workshops (hereinafter referred as WS) several times. In the WS, introduction and explanation of the draft GLs, formulation of task force including the members of infrastructure sectors, setting the schedule of developing the protection plan, earthquake risk assessment, making disaster scenario, decision of risk reduction objectives were implemented. Summary of activities is shown in the Table 1.1.

Result of WSs will be feed backed to the draft GLs.

Table 1.1 Pilot Activities for the Revision of Disaster Protection Plans

Pilot Area	WS Name	Date	Number of Participants	Activity
Darkhan-Uul Aimag	WS1	16, 17 May 2018	19	<ul style="list-style-type: none"> • Introduction of GL • Check on existing data • Simple earthquake risk assessment
	WS2	18, 19 Sep. 2018	12	<ul style="list-style-type: none"> • Introduction of GL • Check on existing data • Simple earthquake risk assessment
Omunugovi Aimag	WS1	24, 25 May 2018	17	<ul style="list-style-type: none"> • Establishment of task force group • Determination of planning schedule • Setting disaster scenario • Determination of risk reduction objective
	WS2	28 Sep.	13	<ul style="list-style-type: none"> • Establishment of task force group

Pilot Area	WS Name	Date	Number of Participants	Activity
		2018		<ul style="list-style-type: none"> • Determination of planning schedule • Setting disaster scenario • Determination of risk reduction objective
Bayangol District	Joint WS	28, 29 Aug. 2018	8	<ul style="list-style-type: none"> • Introduction of GL • Check on existing data • Setting disaster scenario • Extraction of priority items
Chingeltei District			8	

Activity 1.3.3 To improve the present system which collect and analyze information on disaster risk reduction

The NEMA is responsible for improving the database for disaster related data under the Article 14 "Creating a Disaster Database" of the amended Law on Disaster Protection. From the point of views of carrying out the NEMA's duty in the Law and contributing to the priority actions in "Sendai Framework for Disaster Risk Reduction 2015-2030" in Mongolia, the improvement policy of the present system had been discussed in the WG1 and now following actions are being implemented.

1) Development of Guideline for Operation and Management of Disaster Spatial Database (DSDB)

As described in Activity 1.1.2, the draft GL for Operation and Management of DSDB using I-DSIS is being developed in consideration of detailed work procedure and responsibility in the new division. From the first of September to the middle of October 2018, the sub-WG member and new division staffs discussed the articles and their descriptions of the draft GL, and contents of supplemental technical documents intensively through a series of weekly workshops supported by JET, finally the drafting work of the GL with some annexed documents has been finished at the end of October, 2018. Now the approval process by the head of NEMA as official regulation in NEMA is ongoing.

2) Modification of Existing Information System in the NEMA for Management of Disaster Incident Records

The disaster research institute in NEMA has been gathering and managing recorded data for past disaster events since 2005. Those recorded data are accumulated using MS Excel and almost all tasks to update recorded data which are reported from the local disaster management departments using different report formats are handled by only a few staff in the disaster research institute in NEMA due to shortage of staff.

After establishment of the new division, the rule to gather disaster incident records from

regional offices moved to the new division. And as one of utilization ways to operate DSDB using I-DSIS, the Sub-WG members discussed the better way to accumulate disaster incident records from regional offices in consideration of indicators for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for DRR (hereinafter referred to as “SFDRR”). Then, the Sub-WG members got on the improvement work of existing daily-basis incident report system managed by the Public Announcement and Emergency Administration Centre in NEMA. As of end of October 2018, work on the existing system improvement is ongoing.

3) Making Agreements for Spatial Database Sharing with Related Organizations

The Sub-WG members have spent their time and effort making agreements for spatial database sharing between NEMA and related organizations which have original and unique spatial database regarding topographical maps, estimated seismic intensity zones, results for seismic diagnosis of building and others by aiming to develop better environment of data exchange for DRR related activities in Mongolia.

The official agreement on cooperation and spatial data sharing between the Administration of Land Affairs, Geodesy, and Cartography of Mongolia (hereafter referred to as “ALAGaC”) and NEMA has been concluded as the result of a series of discussions about both technical matters and administrative affairs at the middle of April 2018.

For making agreement with the Master Planning Agency of Capital City is still under discussion. The Master Planning Agency has already understood the effects of data exchange for DRR activities in the UB City and both sides have been basically in agreement about this matter. NEMA side contacted to the Master Planning Agency in order to request to move forward in this matter, and both sides confirmed that they will restart discussions about spatial data exchange intensively.

4) Implementation of Training for Utilization of DSDB for DRR in NEMA

For formulating new organization structure for operation and management of DSDB using I-DSIS, assessment and development of human capacity for NEMA Headquarters as well as EMDC and local offices in 21 aimags are one of the key actions. As its first step, the 2-day training for gaining basic knowledge and skill of DSDB utilization using I-DSIS in NEMA was conducted on March 12 and 13, 2018.

On October 24 and 25, 2018, The Sub-WG members conducted 2nd training for operation and management of DSDB using I-DSIS to invite 30 staff from local emergency departments. The main purpose of the training was to gain advanced knowledge enough to operate the system by them. It seems that they could obtain practical knowledge and

experience, and it was not so difficult for them to gain system operation of I-DSIS as many of the trainees has already had basic skill of GIS operations.



Figure 1.1 Scenes of Exercises in the Advanced Training for I-DSIS held on October 24th and 25th 2018

Activity 1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2

The manuscript of “Mongolia Disaster Risk Reduction White Paper 2017” was completed in July 2018 and approval from the Director General of NEMA was obtained. At present, the Paper is under the final check of the appearance. It will be published in December 2018. The contents of the Paper are shown in Table 1.2.

Table 1.2 Contents of White Paper

<p>Chapter 1. Current State and Restructuring of the Legal Environment of Disaster Risk Reduction in Mongolia</p> <p>1.1. Mongolian Disaster Risk Reduction Legislation</p> <p>1.2. Disaster Risk Reduction Policy Documents</p> <p>1.3. Structure and Organization of Disaster Risk Reduction Activities.</p> <p>Chapter 2. Disaster Risk Reduction Activities</p> <p>2.1. Emergencies, Disasters and Accidents that have Occurred in Mongolia in 2017, Measures Taken</p> <p>2.2. Disaster Risk Reduction and Disaster Prevention Activities</p> <p>2.3. Disaster Risk Reduction Training and Awareness-Raising</p> <p>2.4. Measures to Ensure Disaster</p>	<p>Chapter 5. Strategic Reserves and Humanitarian Aid</p> <p>5.1. Documents Related to Strategic Reserves and Humanitarian Aid</p> <p>5.2. Activities Related to Strategic Reserves and Humanitarian Aid</p> <p>Chapter 6. Earthquake Disaster Prevention Activities</p> <p>6.1. Earthquake Disaster Prevention Standing Committee</p> <p>6.2. Documents Related to Enhancing Earthquake Disaster Prevention Measures</p> <p>6.3. Study of the Faults Near Ulaanbaatar City</p> <p>6.4. Earthquake Emergency Plan for Ulaanbaatar City</p>
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Preparedness 2.5. Disaster Alerts and Emergency Management 2.6. Disaster Risk Reduction Personnel and Equipment 2.7. Disaster Risk Reduction Training Chapter 3. Multilateral Cooperation in Disaster Risk Reduction 3.1. International Cooperation in Disaster Risk Reduction 3.2. Coordination of Disaster Risk Reduction Authorities 3.3. Participation of Non-Governmental Organizations, Community-Based Organizations and Citizens in Disaster Risk Reduction Activities Chapter 4. Fire Protection 4.1. Documents Related to Fire Protection 4.2. Activities to Combat Fires	Chapter 7. Disaster Research and Disaster Risk Reduction Research Activities 7.1. Research Conducted by the Disaster Research Institute 7.2. Disaster Risk Reduction Database Chapter 8. Disaster Risk Reduction Budget and Investment 8.1. Investments from the National Budget 8.2. Foreign Investments 8.3. Projects and Programs Being Implemented at the National Emergency Management Agency 8.4. Compensation for Disaster Victims Chapter 9. Disaster Risk Reduction Activity Report for 2017 Appendixes
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For the AMCDRR held in July 2018 at UB City, summary of the 2017 White Paper in English was edited by WG1. 1,000 copies of the summary were printed and distributed to the participants of the Conference.

The WG1 members are currently preparing a creation manual of the white paper. This manual explains about following items while reviewing the process of preparing the white paper in 2017:

- Establishment of a white paper preparation working group
- Discussion of composition and contents
- Determination of collection sources
- Collection of materials
- Arrangement of collected materials
- Preparation of manuscripts
- Editing of manuscripts
- Instruction and management of English translation
- Management of editing by a printing company, etc.,

The manual will be prepared by the end of 2018.

Activity 1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline

As described in the Activity 1.3.3, as one of the considerations of the DSDB development,

the structure of spatial database including items of attributes is being designed to accumulate and manage the result of seismic diagnosis of buildings, infrastructures and lifelines which will be evaluate by appropriate organizations. WG1 and WG2 will discuss a feasible way to gather those results from appropriate organizations.

The Sub-WG members are trying to make an agreement for data exchange including the result of seismic diagnosis of buildings with the Master Planning Agency of Capital City. And the WG1 members have a plan to upload the result of earthquake risk evaluation of buildings, infrastructures and lifelines in UB City estimated in the former JICA's project named as "The Project for Strengthening the Capacity of Seismic Disaster Risk Management in Ulaanbaatar City" to the DSDB. If those actions will be concluded, the DSDB will be improved and NEMA will be able to utilize those results for planning of disaster protection.

(3) Output2

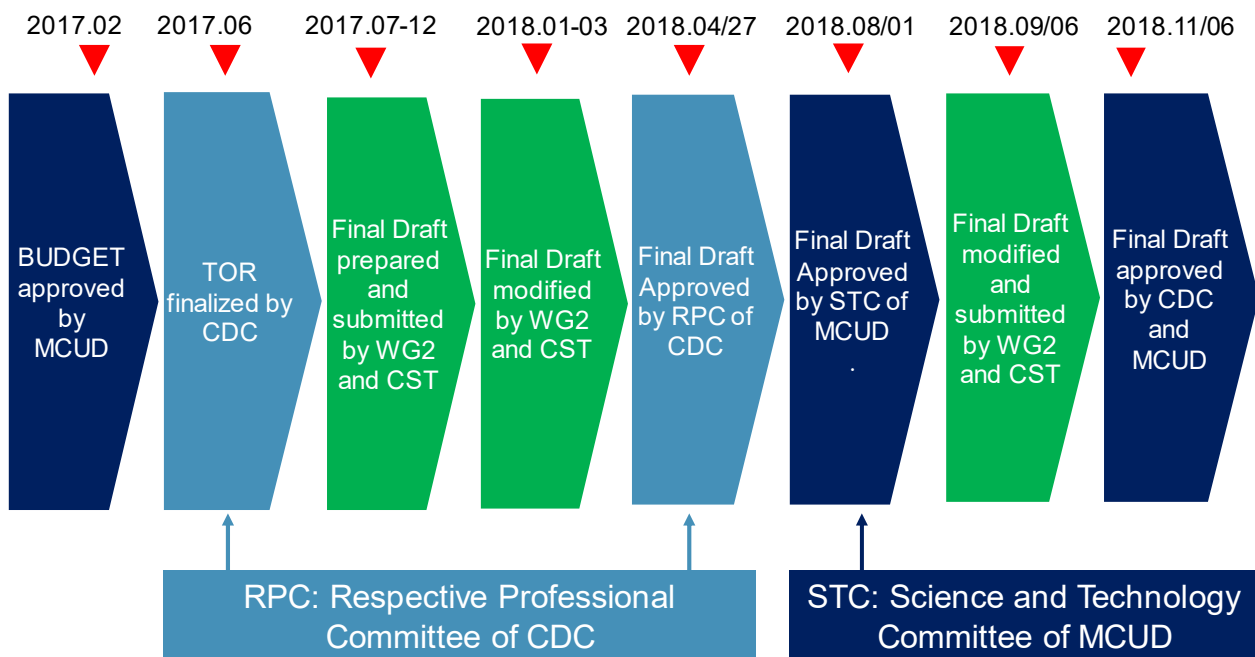
Activity 2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version

The activity was completed by the end of the previous reporting period.

The WG2 members investigated the current standards and regulations regarding the evaluation of buildings, infrastructure and lifeline structures with personnel of relevant organizations, and followed by the conclusion, issues identified through the investigation will be reflected in the guidelines that will be newly established in the Project.

Activity 2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment

The WG2 member decided to follow the Mongolian procedure shown in Figure 2.1 to make standards and regulations. In the figure, a tentative schedule is also given.



TOR: Terms of Reference, CDC: Construction Development Centre, CST: Consulting Serves Team
 NORM: Mongolian Standard

Figure 2.1 Procedure to prepare guidelines

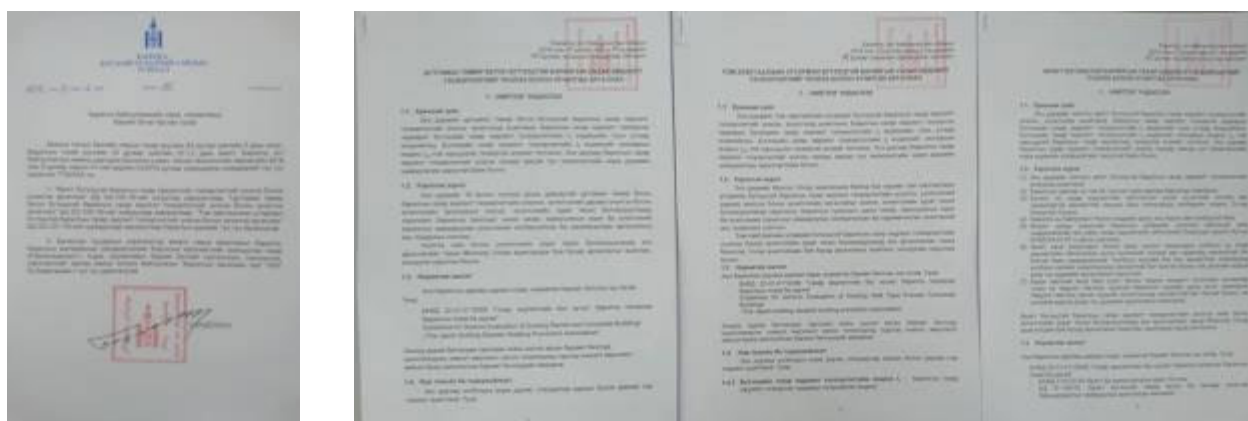
1) Establishment of seismic evaluation guidelines for buildings

In December, 2017, the Consulting Service Team (hereinafter referred as “CST”)

submitted the final drafts of GLs for RC, PC and masonry building to CDC followed by some technical comments from the Respective Professional Council (hereinafter referred as “RPC”) established by CDC. It is noted that the comments were regarding not only to seismic evaluation but to seismic strengthening, since the guidelines contain both items.

After modifying the draft GLs based on the response policy by WG2 and CST, the drafts were resubmitted to CDC in April, 2018, followed by the approval to submit to MCUD by RPC of CDC. The draft GLs were discussed by Science and Technology Committee (hereinafter referred as “STC”) of MCUD in August, 2018, and were finally approved to issue ministerial order.

On 6 November 2018, the GLs were approved by the minister of MCUD as ministerial order as shown in Fig.2.2.



Approval

Appendices corresponding to 3 types of buildings

Figure 2.2 Approval on GLs by the Minister of MCUD

The WG2 also conducted 2-day training meeting on September 22 and 23, 2018 using the draft GLs for buildings to transfer the relevant technology for new members in the WG2, since about a half of members were newly assigned in the JCC held in September. 2018.

2) Establishment of seismic evaluation guideline of Infrastructures and lifeline structures

The final draft GL of seismic evaluation for Infrastructures and lifeline structures was discussed by STC of MCUD in December, 2017. However, after MCUD submitted it to the MRTD for their review work since the GL includes not only the structures but also roads and bridges, MRTD requested MCUD to issue a joint ministerial order.

The GL was approved by the minister of MCUD in September, 2018 and was resent to MRTD for approval.

Activity 2.1.3: Implementation of the Training to Improve Knowledge and Ability for Those Who Carry Out Seismic Estimation on Structures and Lifelines

From June 4 to 6, the WG2 conducted the training course for seismic evaluation for RC, PC and masonry buildings at the conference room in CDC in collaboration with MCUD, NEMA, GASI, CDC and MACE. The number of participants including inspectors from GASI and prefectural officers was about 110 that was far beyond the estimation, and it was made clear that they are keenly interested in the new method on seismic evaluation.

The training course included not only lectures and also exercise of evaluation, and special lecture on non-destructive inspection by Prof. Ya.Duinkherjav of Mongolian University of Science and Technology (hereinafter referred as “MUST”).



Lecture



Explanation of Equipment

Figure 2.3 Training Course for Seismic Evaluation for Buildings

Following the training course mentioned above, the training course for seismic evaluation for Infrastructures and lifeline structures was held on June 7 also at the conference room in CDC in collaboration with MCUD, NEMA, GASI, and CDC. The number of participants including inspectors from GASI and prefectural officers was 70 that was also beyond the estimation.



Lecture

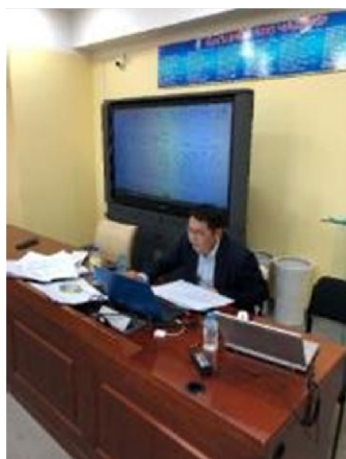


Awarding Ceremony

Figure 2.4 Training Course for Seismic Evaluation for Infrastructures and Lifeline Structures

One-day training course on seismic evaluation for buildings was also held in Erdenet, Orkhon Aimag on September 8, which was planned as one of the training programs of MACE by being requested by engineers in Erdenet. The training consisted of lectures and exercises, the same as previous ones. The number of the participants was 23 including engineers in a mining company as well as in other companies.

It is noted that all the participants keenly learned the method of seismic evaluation since the program gives them a strong motivation to participate by providing some points needed to obtain qualification. So collaboration with MACE in conducting training course can be one of solutions to disseminate the seismic evaluation technology in Mongolia.



Lecture



Exercise of Seismic Evaluation

Figure 2.5 Training Course for Seismic Evaluation for Buildings held in Erdenet

On November 12, 2018, JICA delivered 5 sets of non-destructive inspection equipment for seismic evaluation to NEMA. Following this, WG2 conducted 2-day training course regarding to the equipment on November 12 to 13, 2018 at the conference room of CDC.

The number of participants including not only governmental offices but also private companies was 64 that was beyond the estimation. Lecturers consisted of WG members, Japanese experts and some from Mongolian private sectors, so that the training course could include the topics on usage instruction of the equipment as well as the its application in seismic evaluation.

It is noted that this training course includes some exercise, such as concrete strength measurement and re-bar's location and diameter measurement. Questionnaire survey on the training course said that many of participants were satisfied with the exercise. Materials and sample specimens prepared for this training course will be used in the future courses.



Group Photo



Lecture using Handy Camera



Exercise of Strength Measurement



Exercise of Re-bar Measurement

Figure 2.6 Training Course for Equipment for Seismic Evaluation

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

The WG2 members decided that seismic evaluation and seismic strengthening should be

combined in one GL for each structure except for Infrastructures and lifelines, since seismic evaluation and seismic strengthening are strongly related to each other.

As mentioned before, GLs were approved by minister of MCUD on November 6, 2018.

Activity 2.2.2: Trial Design of Rebuilding and Strengthening Construction for Housing, Kindergartens, Schools, Hospitals and Government Buildings

The WG2 members discussed the selection of model buildings that will be used in the trial design. Based on the work plan five buildings with various usage and structural type were selected as shown in Table 2.1. The location and external appearance of the buildings are summarized in Fig.2.7.

Table 2.1 Model buildings for seismic strengthening

Structural Type	Usage	Name	Location	Note
Masonry	Kindergarten	No. 105 Kindergarten	Songino Khaikhan District	Constructed with standard design drawings
	School	No. 97 School	Bayanzurkh District	Constructed with standard design drawings
	Public Office	NEMA	Sukhbaatar District	Public office necessary for emergency response
RC	Hospital	No.1 Gynecology Hospital	Sukhbaatar District	One of few RC hospital buildings
PC	Apartment House	9-Storey Apartment	Bayangol District	Apartment house based on standard design

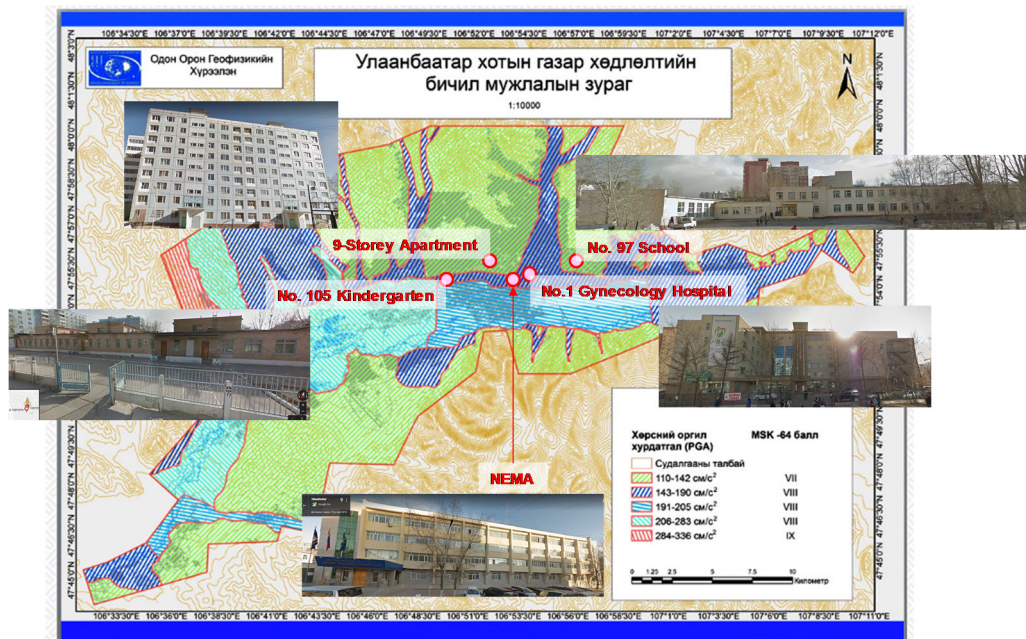


Figure 2.7 Location and External Appearance of Model Buildings for Trial Design

The data necessary for strengthening design for these buildings, such as design drawings, calculation sheets, report of existing seismic evaluation and so on were collected and arranged by WG2, followed by the precise seismic evaluation by which trial strengthening design will be conducted.

Figure 2.8 shows the example of strengthening design for RC hospital building. The upgrading of capacity of building is summarized in Fig.2.9, by which it can be seen that the building is properly strengthened.

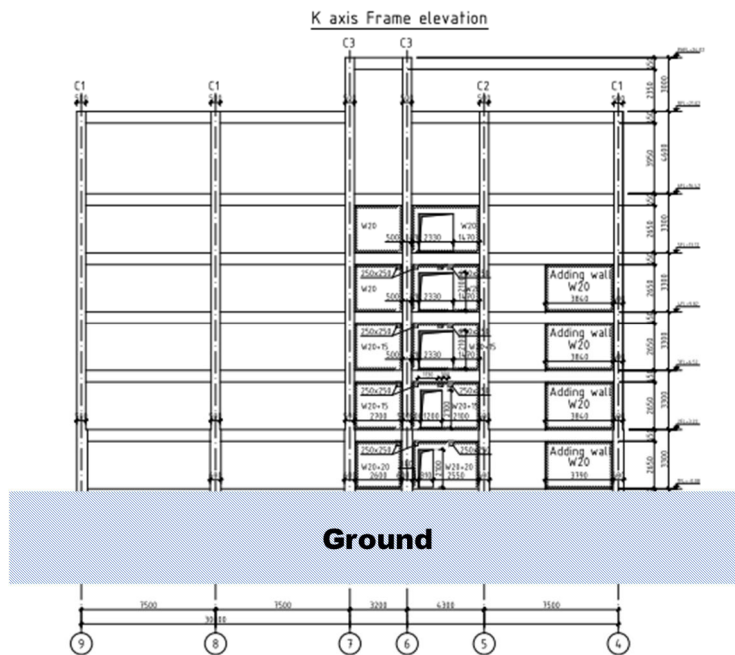


Figure 2.8 Example of Strengthening the RC building by Additional Walls

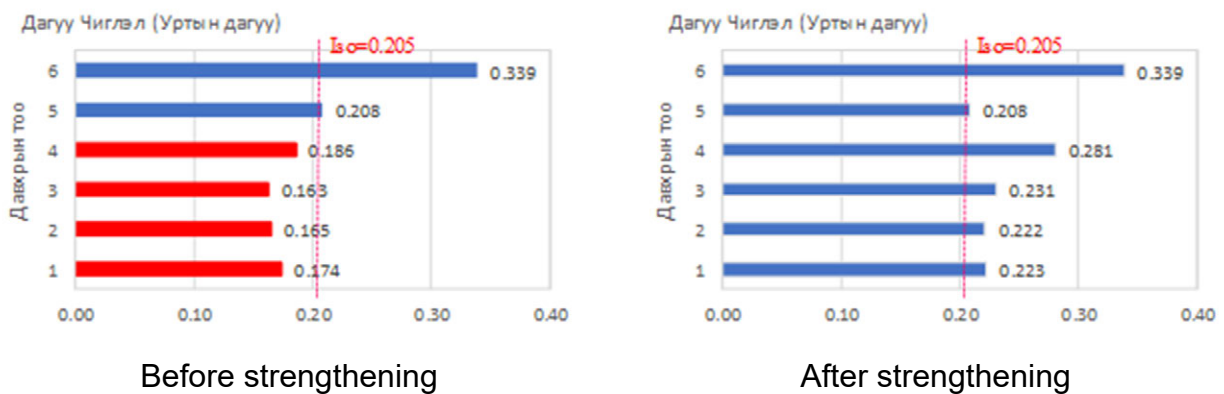


Figure 2.9 Increment of Building Capacity by Additional Walls

(4) Output3

Activity 3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection

The activity was completed on April 6, 2018 (within the previous reporting period) with the approval of the guideline titled “The Program for Life Safety Education”.

Activity 3.1.2: To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools

The writing and editing work of the “Guidebook” for teachers’ lessons as an annex of the “The Program of Life Safety Education” was continuously proceeded through the workshop in September 2018 and the individual works by the working group members.

Further, the contents of the draft Guidebook was introduced in the training programs for the instructors (Activity 3.1.3). Based on the lessons and good practices learned in the programs, the draft Guidebook has been reviewed in October and November 2018. The final Guidebook will be compiled by the end of January 2019 by the individual works of the working group members and working group meetings.

Activity 3.1.3: To implement training programs for the instructors of Teacher Training Institutes and experts of educational departments in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively.

Through the discussion of the operation and logistic matters of the training in June and July 2018, implementation plan of the training was slightly changed. The working group members decided to have a pre-workshop for trial implementation of the training for the officers of the Education Research Institute and Institute of the Teacher’s Professional Development to confirm the program and methods of the training in advance of the training. As a result, the pre-workshop and the training programs for three educational levels were conducted as shown in the table below.

Table 3.2 Final implementation plan of training programs

	Pre-Workshop	Training (Batch 1)	Training (Batch 2)
Location	UB City	UB City	UB City
Date	11-13 September 2018	18-21 September 2018	8-11 October 2018
Target Participants	Officers of Education Research Institute and Institute of Teacher’s Professional Development	Teacher’s Instructors/ Educational Supervisors of Primary and Lower-Secondary Education	Teacher’s Instructors/ Educational Supervisors of Pre-School Education
Number of	Total 50 persons	2 persons from Education	1 persons from Education

Trainees		Department of each provinces and districts (Total 60 persons)	Department of each provinces and districts (Total 30 persons)
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The contents of the training were mainly as shown in the below table and slightly changed in each program considering the target participants.

Table 3.3 Main Contents of the Training Programs

Day 1	Day 2	Day 3	Day 4
<p>Keynote Talk: 1) Global Framework of DRR and DRR Education 2) Life Safety Ability and Education Policy in Mongolia 3) Legal System of Disaster Management and DRR Education in Mongolia Experience Program: Experience of the Education Program of Citizens DRR Training Center Lecture 1: Basic Understanding of Disasters and DRR Lecture 2: Basic Understanding of DRR Education and Example of DRR Education in Japan Lecture 3: Introduction of the “DRR Experience Program - Everybody be ready at anytime and anywhere-“ Workshop 1: “DRR Experience Program - Everybody be ready at anytime and anywhere-“</p>	<p>Workshop 2: Disaster Response Educational Game: Cross Road Lecture 4: Training Program for School Safety and DRR Education for Various Targets in Japan Workshop 3: DRR Education Lessons based on the Education Plans Lecture 5: DRR Education Material “Be Ready!” Workshop 4-6: DRR Education Lessons using “Be Ready!” materials: > Fire Prevention and Response > Earthquake Preparedness and Response > Appropriate Use of Chemical Material at Home</p>	<p>Lecture 6: Outline of Life Safety Education Program Workshop 7: Introduction of Outline of the Guidebook and Integration of DRR Education into Other Subjects Workshop 8: Trial Lesson</p>	<p>Lecture 7: Abilities of 21st Century Learner and Educational Assessment Lecture 8: Disaster Management and Education during Disasters in Pre-School and School Workshop 8: Risks in Your Home Workshop 9: Planning of Life Safety Education in Pre-school and School Workshop 10: Planning of Training Program for Teachers on “Life Safety Education”</p>



Figure 3.1 Pre-Workshop (Left), Training for Primary and Secondary Education (Middle) and Training for Pre-School Education (right)

After the training programs, the WG3-1 members had review meeting and some follow-up activities were proposed. Among them were to incorporate the life safety education training into the regular training program for teachers provided by Institute of Teacher's Professional Development, and to conduct model activities in some selected kindergarten and schools as good reference for activities in aimag and district. Besides, the result of the questionnaire to the participants on the trainings was compiled as shown in the below figure. Further discussion for future training will be done in March 2019.

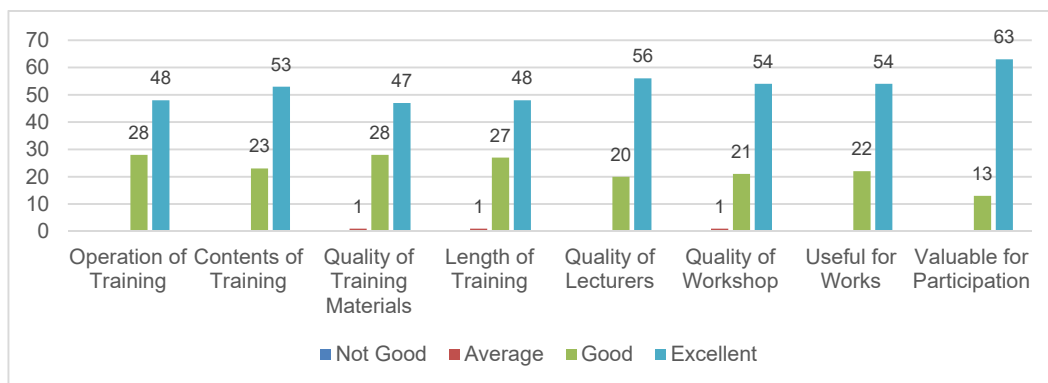


Figure 3.2 Result of the Questionnaire of the Training

Activity 3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3

WG3-1 members decided to conduct model activities in some selected kindergarten and schools in March 2019 and started coordination.

Activity 3.2.1 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels

<Webpage for sharing the DRR training schedule>

During WG3-2 Meeting on 25 June 2018, members discussed the items (columns) for the schedule and the data entry system. In October and November 2018, JET and NEMA examined the specification of the website layout, authority for editing and inputting and operational rules. The development of website will be completed by end of January 2019.

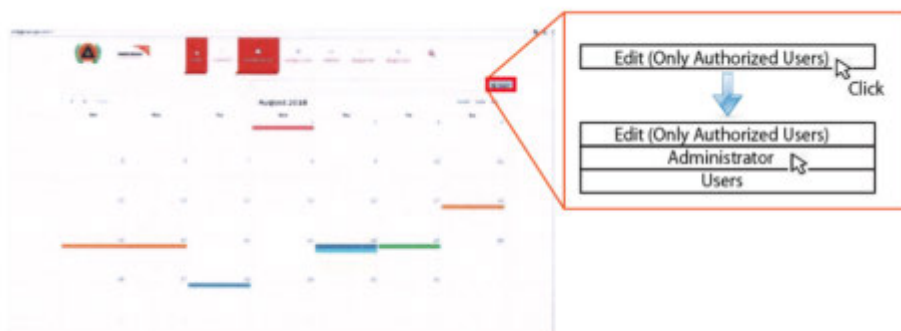


Figure 3.3 Draft Image of the Website for Training Schedule

Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

Based on the review of the ToT and the workshops as well as the event in the school, the WG3-2 members revised and finalized the Instructor’s Manual of “DRR Experience Program – Everybody be ready at anytime and anywhere-“ for wide dissemination of the activities in Mongolia. Contents of the Instructor’s Manual includes step-by-step process and items to prepare for each training.

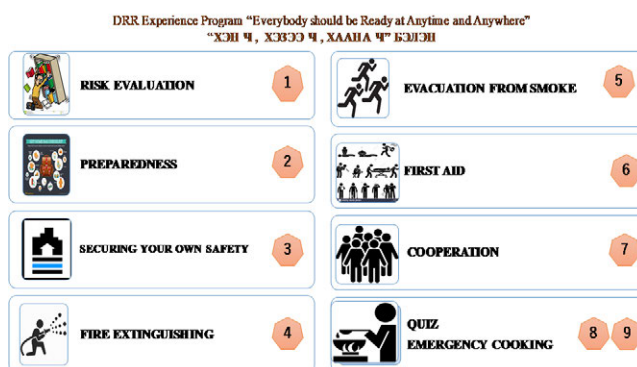


Figure 3.4 Contents of the Training Program

The JET printed out the Instructor’s Manual and distributed to nine districts in UB city and all aimags to promote implementing the program. In addition, NEMA obtained funding from MRCS to print out additional 1,000 copies for MRCS volunteers to implement the training. The soft copy of the manual are also available on the NEMA website so that everyone can download the contents.

The training equipment used in the TOT and community workshops is stored in EMDC office and rent for those who are interested in conducting the training program.

Activity 3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center

<Panels for the Earthquake Experience Room>

WG3-2 members appointed one of the instructors of the Disaster Protection Training and Methodology Centre as a person in charge of the panel development. After the discussion in the several meetings in September 2018, the panels to be developed were decided as shown in the below table.

Table 3.4 Contents of the Panels (draft)

1) Basic Precautions for the Experience of Shaking Table	7) Basic Information of Earthquake in Mongolia (Active Faults, Observation Data, etc.)
2) Basic Mechanism of Earthquake	8) Basic Information of the Past Earthquake in Mongolia
3) World Earthquake Map	9) Earthquake Risks in Mongolia (simulation data, pictures of 1988 Spitak Earthquake, etc.)
4) Basic Information of the Great Hanshin-Awaji Earthquake	10) Earthquake Preparedness: Prevention of Furniture Toppling
5) Basic Information of the Kumamoto Earthquake	*4)-6) for as information of shakes of the Shaking Table
6) Basic Information of the Niigata Chuetsu Earthquake	

The JET provided technical advices, information, materials and data for the panel development through some meetings in September, October, and November 2018. Also, the coordination for the data to be used in the panels was made with IAG (Institute of Astronomy and Geophysics) and other relevant activities in October and November 2018.

<Miniature Building Models for learning Seismic Resistant Structure>

WG3-2 members appointed one of the instructors of the Disaster Protection Training and Methodology Centre as a person in charge of the development of miniature building models. To support the development work of the appointed person, some meetings were conducted for providing technical advices to develop the models throughout the period from June to November 2018.



Figure 3.5 Trial Models for the Miniature Building

<Educational material: DRR Quiz for Kids' Room>

Also, one of the instructors of the Disaster Protection Training and Methodology Centre was appointed as a person in charge of the development of the Kids' Room Educational materials. She attended the training program for instructor targeted the Pre-school

Education and enhanced understanding of education materials for kids. Through further discussion in the WG3-2 meeting, the materials to be developed will be decided.

1-3 Achievement of Output

(1) Output1

The following three indicators are applied to evaluate the achievement of the Output 1 based on the PDM.

1.1 The number of guidelines, operational rules, provisions which are developed.

Achievement in this term:

The WG1 has a plan to develop two (2) types of Earthquake Disaster Risk Assessment GLs, four (4) types of Earthquake Disaster Protection Planning GLs and one (1) Disaster Database GL.

Regarding Earthquake Disaster Risk Assessment GLs, the draft of comprehensive GL with application software for simplified calculation of earthquake risk was developed and is tried out in the pilot activity of earthquake disaster protection planning. On the other hand, drafting the detailed GL is still ongoing by the WG1 member.

Regarding Earthquake Disaster Protection Planning GLs, Aimag / Soum Level and Capital City / District Level have been developed. On the other hand, National Level and State Services Level is under development.

Regarding disaster database GL, the drafting work of the GL with some annexed documents has been finished at the end of October, 2018. Now the approval process by the head of NEMA as official regulation in NEMA is ongoing..

1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements

Achievement in this term:

Following two (2) fields of agreement were signed in the period from June 2018 to November 2018.

- Stable supply of foods and water to evacuation places and temporary housings: The agreement was signed on 16 October 2018 between NEMA and the MOFA.
- Stable supply of medicines during disaster: The agreements between MOH and three major pharmaceutical sales companies were signed on 7 November 2018.

Draft agreements are under discussion with following sectors.

- Supply of construction materials and temporary housings
- Stable transport and securing road transport during disaster
- Stable fuel supply during disaster
- Set up priority telephone lines on disaster
- Waste water treatment and stable water supply at the evacuation place

In order to test the effectiveness of agreement for earthquake disaster response, and to demonstrate good practice of agreement to promote agreement in health sector to other sectors, a joint training was made on April 9, 2018 in UB City. A total of 38 participants from various sectors jointed the training.

1.3 White paper on disaster risk reduction

Achievement in this term:

The manuscript of “Mongolia Disaster Risk Reduction White Paper 2017” was completed in July 2018 and approval from the Director General of NEMA was obtained. At present, the Paper is under the final check of the appearance.

(2) Output2

The following two indicators are applied to evaluate the achievement of the Output 2 based on the PDM.

2.1 Guideline for seismic assessment: The number of the participants in the training program on seismic assessment

The achievement in this term:

The WG2 completed the four (4) types of GLs for seismic evaluation of buildings (RC, PC and Masonry) and infrastructures and lifelines. The GLs for buildings were approved by the minister of MCUD on November 6, 2018 and will be published. On the other hand, GL for infrastructures and lifeline structures was also approved by the minister of MCUD and is waiting for one by the minister of MRT for a joint ministerial order.

After obtaining the approval on the draft GLs by STC of MCUD, WG2 conducted training course of seismic evaluation for buildings on June 4 to 6, 2018, and one for infrastructures and lifeline structures on June 7, 2018, respectively. For the former, 110 trainees including inspectors from GASI participated. The number of participants was far beyond the estimate. For the latter, 70 trainees which were also beyond the estimate participated.

In addition to the planned training course above, training course on seismic evaluation was held in Erdenet on September 8, 2018 in response to MACE's request. 23 engineers in Erdenet attended it. It is noted that collaboration with MACE will be one of practical way to disseminate the technology on seismic evaluation and seismic strengthening, since the MACE's program can make attendees motivated to participate by giving them "points" needed to be a registered engineer.

On November 12 to 13, 2018, the training course on non-destructive inspection equipment for seismic evaluation was conducted, in which 64 trainees participated.

2.2 Guideline for seismic strengthening: The number of the training program on seismic strengthening

The achievement in this term:

The WG2 members decided that seismic evaluation and seismic strengthening should be combined in one GL for each building structure except for Infrastructures and lifelines. As mentioned above, the WG2 completed the three (3) types of GLs for seismic evaluation including seismic strengthening of buildings (RC, PC and Masonry) and they were approved by the minister of MCUD on November 6, 2018.

(3) Output3

The following two indicators are applied to evaluate the achievement of the Output 3 based on the PDM.

3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project

Achievement in this term:

The WG3 developed the GL in April 2018 and is still in the process for preparing teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

3.2 The number of visitors in Training Center

Achievement in this term:

The WG3 is preparing the improved training program and educational materials for DRR education and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators.

1-4 Achievement of the Project Purpose

The following two indicators are applied to evaluate the achievement of the Project based on the PDM.

1. The number of the approved guidelines and agreement

2. The number of the data on disaster risk reduction which newly established and improved

The achievement in this term:

Activities for developing GLs, agreements, and necessary materials have been continued at each WG. In order to ensure sustainability after the Project, each activity is planned and implemented so that GLs and other related outputs which will be developed in the Project are approved by NEMA, MCUD or MECSS through their standard procedures. The existing status of developing related documents are as below;

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
Output1	National Earthquake Disaster Protection Planning GL	NEMA	Now work in process.
	State Earthquake Disaster Protection Service Planning GL	NEMA	Now work in process.
	Aimag / Soum Level Earthquake Disaster Protection Planning GL	NEMA	Draft GL was completed. It will be updated or revised based on the feedbacks from pilot aimags.
	Capital City / District Level Earthquake Disaster Protection Planning GL	EMDC	Draft GL was completed. It will be updated or revised based on the feedbacks from pilot districts
	Earthquake Disaster Risk Assessment GL	NEMA	Draft GL for Comprehensive version was updated base on comments from the JET. Only the framework of draft GL for detailed version was confirmed.
	GL for Operation and Management of Disaster Spatial Database (DSDB)	NEMA	The drafting work of the GL with some supplemental documents has been finished and approval process by the head of NEMA as official regulation in NEMA is ongoing.
	Agreements	NEMA or other related organizations	Two (2) fields of agreement were signed in this reporting period. Five (5) draft agreements were prepared.
	White Paper	NEMA	“Mongolia Disaster Risk Reduction White Paper 2017” was completed
Output2	Seismic Evaluation and Retrofitting	MCUD	The GL was approved by the minister

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
	Method of Existing Reinforced Concrete Buildings		of MCUD on November 6, 2018.
	Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete Buildings	MCUD	The GL was approved by the minister of MCUD on November 6, 2018.
	Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings	MCUD	The GL was approved by the minister of MCUD on November 6, 2018.
	Seismic Evaluation Method of Infrastructures and Pipelines	MCUD	The GL was approved by the minister of MCUD, and is waiting for approval by the minister of MRT for joint ministerial approval.
Output3	Life Safety Education Program	MECSS	Approved on April 6th 2018
	Guidebook for Life Safety Education	MECSS	Now work in process.
	Instructor's Manual (with DVD) for Community DRR Training	NEMA	Completed and printed 150 copies in August 2018.

1-5 Changes of Risks and Actions for Mitigation

(1) Output1

1) Frequent Change of Person in Charge and Vacancy of Position

Regarding the Earthquake Disaster Protection GL, originally, two GLs namely, "Aimag / Soum Level GL" and "Capital City / District Level GL" were planned to be made, however, according to the request of Mongolian side, two more GLs namely "National Earthquake Disaster Protection Planning GL" and "State Earthquake Disaster Protection Service Planning GL" were added to be prepared. For this additional preparation work, two more WG members were selected in the middle of 2017.

However, these two members were transferred together in 2018 and the successors have not been decided. The two GLs are for the national level disaster protection planning and must be coordinated with the Standing Committee for Earthquake Disaster Protection and other ministries and related agencies. It seems that this work will take a considerable time, therefore, the successors must be decided as soon as possible.

2) Preparation Work of the White Paper 2018

Although the white paper 2017 has been completed, the preparation work for 2018 version has not started yet. In order to issue the 2018 version at an appropriate time, the preparation work must start soon. WG1 have to urge the preparation of the manuals and

inform it to each department in NEMA for the formulation of the Working Group for the 2018 Paper. Since the 2018 version is issued during the Project period, JET must work on NEMA side so that better white paper can be created.

3) Upgrading the existing disaster incident reporting system in consideration of SFDRR Indicators

There were some challenges regarding the way to gather detailed metadata for disaster incident in consideration of SFDRR indicators. The WG1 members discussed the effective and efficiency way to deal with this matter, and they decided to upgrade the exiting disaster incident reporting system managed by Disaster Operation and Early Warning Command Centre, NEMA. Now the Sub-WG members are upgrading the system interface and a part of the database corresponding to SFDRR indicators. The Sub-WG members should pay attention to finish the task of the system upgrading on schedule and conduct appropriate trainings for operation of upgraded system for staffs in charge of encoding data of disaster incidents at the local emergency management offices.

(2) Output2

1) Relocation of Persons in charge of Seismic Evaluation and Strengthening

About half of WG2 members including some key persons were relocated before 6th JCC. Since all the members are expected to disseminate the methods within their field of work rather than to establish guidelines themselves.

So, it is an urgent matter to give the new members the necessary information and technologies to catch up with the other members as soon as possible. For this, two-day workshop was held to transfer the technologies.

2) Delay in Approving the Guidelines Established

Though ten (10) months have passed since the GL for seismic evaluation for Infrastructures and lifeline structures was approval by science and technology committee of MCUD, the ministerial order is not issued. WG2 discussed this situation and concluded that the WG2 leader, L.Bilegjargal will watch the approval status and take the appropriate action in case of necessary.

(3) Output3

1) Coordination with Other Projects for Website Development

The development of comprehensive schedule website delayed due to frequent changes of

NEMA's information sharing platforms funded by other donors. Eventually, ADPC's website platform to share donor's information suspended due to technical difficulties and NEMA developed different platform funded by the World Vision Mongolia. This change was informed to JET after developed the platform, which made unifying the entry form difficult. Prior coordination among agencies that develop web platform for similar purpose was indispensable as well as understanding the overarching vision and goal for information sharing as DRR focal agency.

After recognizing the differences of the web platform system among the relevant agencies, NEMA and the JET has been always trying to invite the relevant persons of other organizations when the discussion is conducted for the development of website for comprehensive schedule. All the members now become understood the importance of sharing information for avoiding unnecessary redoing coordination.

1-6 Progress of Actions undertaken by JICA

The process of procurement of the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center was started by JICA Headquarters. The shipment of the equipment was arrived on October 20, 2018 in UB City.

Japanese side requested that Mongolian side should complete all advance preparations based on the Operation and Maintenance (hereinafter referred to as "O&M") Plan approved in the 3rd JCC held on June 26, 2017. In addition, Japanese side also requested that Mongolian side shall implement essential countermeasures against further inundation since the underground floor of the Centre was intruded by ground water after heavy rain in early September 2018.

1-7 Progress of Actions undertaken by Gov. of Mongolia

Before installing the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center, Mongolian side has a duty to improve the slab of earthquake experience room with protection works for water intrusion and make a commitment to prevent whole ground floor in the Center from the intrusion of ground water by securing a budget for water protection countermeasures.

1-8 Progress of Environmental and Social Considerations (if applicable)

N/A

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

N/A

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

N/A

2. Delay of Work Schedule and/or Problems (if any)

2-1 Detail

N/A

2-2 Cause

N/A

2-3 Action to be taken

N/A

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Mongolia,etc.)

N/A

3. Modification of the Project Implementation Plan

3-1 PO

N/A

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

N/A

4. Preparation of Gov. of Mongolia toward after completion of the

Project

In this term, the specific policy and actions are not discussed yet.

II. Project Monitoring Sheet I & II *as Attached*

Project Monitoring Sheet I Ver. 5.0 (Term: June, 2018 - November, 2018)

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia
 Implementing Agency: National Emergency Management Agency (NEMA)
 Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City
 Period of Project: December 2016 to November 2019
 Project Site: Mongolia

Version 5
Dated December 11, 2018

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal Seismic risk will be reduced.</p>	<p>1. Number of the approved guideline, rules, provisions 2. Number of white paper open to public assessment 3. Number of the executed seismic assessment 4. Number of the seismic strengthened building 5. Number of implemented activities on disaster risk reduction education</p>	<p>Study by NEMA</p>	<p>The policy on disaster risk reduction will not be changed in Mongolia.</p>			
<p>Project Purpose The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.</p>	<p>1. The number of the approved guidelines and agreement 2. The number of the data on disaster risk reduction which newly established and improved</p>	<p>Project report</p>	<p>NEMA expands the pilot activities in other aimags and sums.</p>	<p>Activities for developing Guidelines (GLs), agreements, and necessary materials have been continued at each WG.</p>	<p>In order to ensure sustainability after the Project, each WG makes it a goal to get an approval of guidelines and other related outputs which will be developed in the Project from NEMA, MCUD or MECSS through their standard procedures.</p>	
<p>Outputs 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced.</p>	<p>1.1 The number of guidelines, operational rules, provisions which are developed. 1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements 1.3 White paper on disaster risk reduction</p>	<p>Project report</p>	<p>1. The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. 2. Participants in training programs continue to work in the same position. 3. The relation among related organizations is maintained. 4. Exchange information is maintained among the related organizations.</p>	<p>1.1: Regarding Earthquake Disaster Risk Assessment GLs, the draft of comprehensive GL was developed. On the other hand, drafting the detailed GL is still ongoing. Regarding Earthquake Disaster Protection Planning GLs, Aimag / Soum Level and Capital City / District Level have been developed. On the other hand, National Level and State Services Level is under development. Regarding disaster database GL, the drafting work of the GL has been finished at the end of October, 2018. Now the approval process by the head of NEMA as official regulation in NEMA is ongoing. 1.2: Following two (2) fields of agreement were signed in this reporting period. • Stable supply of foods and water to evacuation places and temporary housings: The agreement was signed on 16 October 2018 between NEMA and the MOFA. • Stable supply of medicines during disaster: The agreements between MOH and three major pharmaceutical sales companies were signed on 7 November 2018.</p>	<p>1.1: The WG1 has a plan to prepare following GLs, - Two (2) types of Earthquake Disaster Risk Assessment GLs 1) Comprehensive Earthquake Disaster Risk Assessment GL 2) Detailed Earthquake Disaster Risk Assessment GL - Four (4) types of disaster protection planning GLs 1) National Earthquake Disaster Protection Planning GL 2) State Earthquake Disaster Protection Planning GL 3) Aimag / Soum Level Earthquake Disaster Protection Planning GL 4) Capital City / District Level Earthquake Disaster Protection Planning GL - One (1) disaster database GL 1) GL for Operation and Management of Disaster Spatial Database (DSDB) 1.2: Draft agreements are under discussion with following sectors. • Supply of construction materials and temporary housings • Stable transport and securing road transport during disaster • Stable fuel supply during disaster • Set up priority telephone lines on disaster • Waste water treatment and stable water supply at the evacuation place</p>	
<p>2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced.</p>	<p>2.1 Guideline for seismic assessment program on seismic assessment 2.2 Guideline for seismic strengthening The number of the training program on seismic strengthening</p>	<p>Project report</p>	<p>2.1 & 2.2: The GLs for buildings were approved by the minister of MCUD on November 6, 2018 and will be published. The GL for infrastructures and lifeline structures was also approved by the minister of MCUD and is waiting for one by the minister of MRT for a joint ministerial order. • Training course of seismic evaluation for buildings in UB city on June 4 to 6, 2018: 110 trainees. • Training course of seismic evaluation for infrastructures and lifeline structures in UB city on June 7, 2018: 70 trainees. • Training course on seismic evaluation for buildings in Eerdenet on September 8, 2018: 23 trainees. Training course on non-destructive inspection equipment for seismic evaluation in UB city on November 12 to 13, 2018: 64 trainees.</p>	<p>2.1 & 2.2: The WG2 has a plan to prepare following GLs 1) Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete (RC) Buildings 2) Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete (PC) Buildings 3) Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings 4) Seismic Evaluation Method of Infrastructures and Pipelines</p>		

<p>3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.</p>	<p>3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project 3.2 The number of visitors in Training Center</p>	<p>Ordinance of Ministry of Education, Culture and Science Ordinance of NEMA</p>	<p>3.1: The WG3 developed the GL in April 2018 and is still in the process for preparing teaching materials for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators. 3.2: The WG3 is preparing the improved training program and educational materials for DRR education, and raising awareness for the Training Center, and it has not reached the stage of evaluation with quantitative indicators.</p>	<p>3.1: The GL for DRR education titled "The Program for Life Safety Education" was approved by MECSS on April 6th 2018.</p>
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Activities	The Mongolian Side	Inputs	The Japanese Side	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction database on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p> <p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-1-2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p> <p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergarten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergarten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>Assignment of counterparts</p> <ul style="list-style-type: none"> - Project Director - Project Managers - Project Coordinator - Project Members <p>For Output 1</p> <ul style="list-style-type: none"> - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC) <p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency <p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	<p>Dispatch of Experts</p> <ul style="list-style-type: none"> - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction Education - Educational Material Development <p>Provision of Equipment</p> <ul style="list-style-type: none"> - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table <p>Training in Japan and/or the third countries</p>	<p style="text-align: center;">Pre-Conditions</p> <p style="text-align: center;">➔</p> <p style="text-align: center;"><Issues and countermeasures></p> <p>(1) Output: Frequent Change of Person in Charge and Vacancy of Position: Two members in charge of "National Earthquake Disaster Protection Planning GL" and "State Earthquake Disaster Protection Service Planning GL" were transferred together in 2018 and the successors have not been decided. The two GLs are for the national level and disaster protection planning and must be coordinated with the Standing Committee for Earthquake Disaster Protection and other ministries and related agencies. It seems that this work will take a considerable time, therefore, the successors must be decided as soon as possible.</p> <p>(2) Output: Preparation Work of the White Paper 2018: The preparation work for 2018 version has not started yet. In order to issue the 2018 version at an appropriate time, the preparation work must start soon. WG1 have to urge the preparation of the manuals and inform it to each department in NEMA for the formulation of the Working Group for the 2018 Paper. Since the 2018 version is issued during the Project period, JET must work on NEMA side so that better white paper can be created.</p> <p>(3) Output: Upgrading the existing disaster incident reporting system in consideration of SFDRR indicators: The WG1 members decided to upgrade the existing disaster incident reporting system managed by Disaster Operation and Early Warning Command Centre, NEMA in order to gather detailed metadata for disaster incident in consideration of SFDRR indicators. Now the WG1 members are upgrading the system interface and a part of the database corresponding to SFDRR indicators. The WG1 members should pay attention to finish the task of the system upgrading on schedule and conduct appropriate trainings for operation of upgraded system for staffs in charge of encoding data of disaster incidents at the local emergency management offices.</p> <p>(4) Output: Relocation of Persons in charge of Seismic Evaluation and Strengthening: About half of WG2 members including some key persons were relocated before 6th JCC. Since all the members are expected to disseminate the methods within their field of work rather than to establish guidelines themselves. So, it is an urgent matter to give the new members the necessary information and technologies to catch up with the other members as soon as possible. For this, two-day workshop was held to transfer the technologies.</p> <p>(5) Output: Delay in Approving the Guidelines Established: Though ten (10) months have passed since the GL for seismic evaluation for infrastructures and lifeline structures was approved by science and technology committee of MCDU, the ministerial order is not issued. WG2 discussed this situation and concluded that the WG2 leader, L. Bilegjalgal will watch the approval status and take the appropriate action in case of necessary.</p> <p>(6) Output: Coordination with Other Projects for Website Development: The development of comprehensive schedule website delayed due to frequent changes of NEMA's information sharing platforms funded by other donors. Eventually, ADPC's website platform to share donor's information suspended due to technical difficulties and NEMA developed different platform funded by the World Vision Mongolia. This change was informed to JET after developed the platform, which made unifying the entry form purpose was indispensable as well as understanding the overarching vision and goal for information sharing as DRR local agency. After recognizing the differences of the web platform system among the relevant</p>	

- Notes
- 1-1) Amended Law of Disaster Protection "9.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc.
 - 1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM
 - 1-3) National level, UB city and two provinces are the target areas
 - 1-4) Improvement of existing "Disaster Information Sharing System"
 - 1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)
 - 2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities
 - 2-2) Guidelines are regarded as operational guidelines by Resolution of Minister
 - 2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.
 - 3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certified teacher's instructors
 - 3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring nationwide implementation of education and training program to all the necessary target stakeholders
 - 3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency Management Departments of Cities, Provinces, and Districts. (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels. (3) Heads of governor's offices of Provinces, Sums, and Districts. (4) Heads of Bags and Khoroos. (5) Coordinators of civil activities in Provinces, Districts, and Khoroos and (6) Volunteers (only in pilot areas)
 - 3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.

Activities	Sub-Activities	Year	2017				2018				2019				2020				Responsible Organization	Achievements	Issue & Countermeasures	
			IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III				IV
2.1.1 To analyze the status of seismic assessment of buildings and lifelines based on the context of the Law of Disaster Protection and develop the draft of revised version	Plan																				The WG2 investigated existing norms and standards followed by the identification and arrangement of problems regarding to seismic resistance.	It must be further discussed how to reflect the problems into current norms and standards or into guidelines that will be newly established.
	Actual																					
2.1.1.2 To identify problems of present specifications of seismic resistance	Plan																				It was confirmed that the standards for seismic diagnosis of buildings and the standards for seismic damage evaluation of infrastructures and lifelines which become key elements in the guidelines is developed, evaluated and authorized by the standard procedure in MCUD.	The procedure will be carried out by consulting team. Prior to the selection of consulting team, it is necessary to prepare the reference (TOR) related to standards creation. Currently, it is the stage where the TOR was prepared in the WG2 and the approval of the chemical committee was obtained. Based on the TOR, the consulting team will be selected under the guidance of MCUD.
	Actual																					
2.1.2 To revise the present specifications and to develop new code of seismic resistance	Plan																				-Completed-	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guidelines.
	Actual																					
2.1.3 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment	Plan																				Guideline of seismic evaluation and strengthening for RC and PC buildings was provided by CST (Consulting Service Team) with assistance from WG2, followed by the approval by experts panel arranged by CDC.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guidelines.
	Actual																					
2.1.4 To consult the contents of Guideline regarding the seismic evaluations	Plan																				Guideline of seismic evaluation for infra- and lifeline structures was provided by CST (Consulting Service Team) with assistance from WG2, followed by the approval by science and technology committee of MCUD. Also additional check list for quick diagnosis was issued to GASI.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.1.5 To develop the seismic evaluation of RC and PC building	Plan																				Guideline of seismic evaluation and strengthening for Masonry building was provided by CST (Consulting Service Team) with assistance from WG2, followed by the approval by experts panel arranged by CDC.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.1.6 To develop the seismic evaluation of masonry building	Plan																				Guideline of seismic evaluation for infra- and lifeline structures was provided by CST (Consulting Service Team) with assistance from WG2, followed by the approval by science and technology committee of MCUD.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.1.7 To develop the seismic evaluation of infrastructure and lifeline	Plan																				WG2 discussed the training program with draft guidelines and have conducted some lectures and workshop to learn the seismic diagnosis method to propagate guidelines.	It is necessary to develop training material such as text as well as some training material for TOT for future spreading of technology.
	Actual																					
2.1.8 To implement training programs for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline	Plan																				-Completed-	WG2 discussed and selected five buildings for which final retrofit design will be conducted.
	Actual																					
2.1.9 To consult training program of the guidelines	Plan																				WG2 discussed the training program with draft guidelines and have conducted some lectures and workshop to learn the seismic diagnosis method to propagate guidelines.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.1.10 To implement training for the evaluation of seismic resistance	Plan																				-Completed-	WG2 discussed and selected five buildings for which final retrofit design will be conducted.
	Actual																					
2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.1.1 To consult the contents of guidelines-methodologies	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.1.2 To develop the guidelines-methodologies	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstruction and seismic strengthening of each type of building as a pilot	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.2.1 To consult the target buildings for trial design	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.2.2 To design of rebuilding and strengthening on target buildings	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.3.1 To plan training program	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					
2.2.3.2 To implement training program	Plan																				WG2 discussed and selected five buildings for which final retrofit design will be conducted.	It is necessary to obtain approval by science and technology committee by MCUD. So, it is necessary to prepare the presentation material on established guideline.
	Actual																					

Activities	Sub-Activities	Year	2017				2018				2019				2020				Responsible Organization	Achievements	Issue & Countermeasures	
			IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III				IV
3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection	3.1.1.1 To review current situation of DRR education in kindergarten and primary and secondary schools comparing with Japanese practices	Plan																		The WG3-1 member studied Japanese practices and reviewed & analyzed current contents of the DRR and safety related school education in the Course of Study (Standard) in Mongolia.	-	
	Actual																					
3.1.2 To develop the guidelines through the activities of the School DRR Education Working Group (WG)	3.1.2.1 To collect and review existing educational materials through the WG	Plan																		A draft DRR education guideline in school "Life Safety Education Program" was developed through the WG3-1 activities. A confirmation hearing inviting experts on DRR and education in Mongolia was organized in Oct. 2017. Modification based on the experts' comments and learning from the Training in Japan was conducted in Feb. 2018. The guideline was finalized by the members. The Program was finalized and approved by the Minister of Education on 6 April 2018.	-	
	Actual																					
3.1.2 To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools	3.1.2.1 To collect and review existing educational materials through the WG	Plan																		Based on the research results of the working group members from ERI and the translated reference materials of Japan, composition of the "Guidbook" for the "Life Safety Education Program" was discussed in the WG meetings.	-	
	Actual																					
3.1.2 To establish Task Forces for the development of the educational materials (one for kindergarten, primary, and secondary schools)	3.1.2.1 To establish Task Forces for the development of the educational materials (one for kindergarten, primary, and secondary schools)	Plan																		The WG3-1 member decided to do the work by the group members (led by the Task Forces) and got technical advices from outside experts after the development of the draft.	-	
	Actual																					
3.1.3 To organize workshops and discuss and decide the contents of educational materials to be developed	3.1.3.1 To organize workshops and discuss and decide the contents of educational materials to be developed	Plan																		Initial discussion for the development of the educational materials was conducted on 28 Nov. 2017. A 2-day workshop (Feb. 2018) and a 3-day workshop (Apr. 2018) were organized for the development of the "Guidbook" for the implementation of the "Program". Also, trial lessons for three educational levels were conducted in May 2018.	-	
	Actual																					
3.1.4 To develop and finalize the educational materials through the Task Force and the WG	3.1.4.1 To develop and finalize the educational materials through the Task Force and the WG	Plan																		Through the workshops and individual works of the WG3-1 members, the development of "Guidbook" was proceeded.	-	
	Actual																					
3.1.3 To implement training programs for the instructors of teacher training institutes and experts in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2, respectively	3.1.3.1 To formulate the training programs through workshops and the WG activities	Plan																		Initial discussion for the schedule and framework for the training was made in the 2-day Workshop in Feb. 2018. The schedule for the training was decided in the WG3-1 meeting in April 2018. Discussion for the program of the training was started in the WG3-1 meeting in May 2018.	-	
	Actual																					
3.1.3.2 To implement pilot training	3.1.3.2 To implement pilot training	Plan																			-	
	Actual																					
3.1.3.3 To review the training and formulate training manuals	3.1.3.3 To review the training and formulate training manuals	Plan																			-	
	Actual																					
3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3	3.1.4.1 To support the training for teachers	Plan																			-	
	Actual																					
3.1.4.2 To review the result of the training of 3.1.3 and 3.1.4 through workshops and the WG activities and compile lessons learnt	3.1.4.2 To review the result of the training of 3.1.3 and 3.1.4 through workshops and the WG activities and compile lessons learnt	Plan																			-	
	Actual																					
3.2 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels	3.2.1 To interview related organizations about coordination and cooperation	Plan																		The WG3 member visited the relevant organizations and got their initial opinions for the effective coordination among stakeholders.	-	
	Actual																					
3.2.1.2 To examine framework for NEMA to conduct integrated management	3.2.1.2 To examine framework for NEMA to conduct integrated management	Plan																		Through the WG meetings and discussion with stakeholders, "DRR Education Team" was established for the effective coordination for the implementation of the community DRR training and education. Also, the role for the Team was finalized and approved by the NEMA Administrator. Frequent communication among members is realized through the mailing list of the Team.	-	
	Actual																					
3.2.1.3 To implement regular meetings	3.2.1.3 To implement regular meetings	Plan																		The Team decided to organize regular meetings once three months. The first meeting was organized in June 2017, and the second meeting was convened on the occasion for discussing events for International Day for Disaster Risk Reduction 2017. In December 2017 and March 2018, the meetings were held for the Team.	-	
	Actual																					
3.2.1.4 To create a website for the coordination and share information among the relevant organizations	3.2.1.4 To create a website for the coordination and share information among the relevant organizations	Plan																		The WG members developed a draft website for the "DRR Education Team" to share the DRR education and training information through the discussion and workshop with the experts from NEMA and the relevant organizations. The website for NEMA was decided to be utilized for the website of the "Comprehensive Schedule". Currently verification of the data to be included in the final system is on going.	-	
	Actual																					

3.2.7 To develop materials for training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas	Gantt Chart												Remarks										
	2016	2017	2018	2019	2020																		
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	
3.2.2.1 To review existing textbooks of DRR education for communities																							
3.2.2.2 To discuss and develop training materials																							
3.2.2.3 To implement Training of Trainers workshop																							
3.2.2.4 To implement workshops in the pilot area																							
3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.3.1 To examine and consider a study program for the training center																							
3.2.3.2 To examine materials and equipment for improvement of training center																							
3.2.3.3 To support procurement of equipment																							
3.2.3.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.3.5 To operate training program																							
3.2.3.6 To examine expansion to other regions																							
3.2.4 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.4.1 To examine and consider a study program for the training center																							
3.2.4.2 To examine materials and equipment for improvement of training center																							
3.2.4.3 To support procurement of equipment																							
3.2.4.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.4.5 To operate training program																							
3.2.4.6 To examine expansion to other regions																							
3.2.5 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.5.1 To examine and consider a study program for the training center																							
3.2.5.2 To examine materials and equipment for improvement of training center																							
3.2.5.3 To support procurement of equipment																							
3.2.5.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.5.5 To operate training program																							
3.2.5.6 To examine expansion to other regions																							
3.2.6 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.6.1 To examine and consider a study program for the training center																							
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3.2.6.3 To support procurement of equipment																							
3.2.6.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.6.5 To operate training program																							
3.2.6.6 To examine expansion to other regions																							
3.2.7 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.7.1 To examine and consider a study program for the training center																							
3.2.7.2 To examine materials and equipment for improvement of training center																							
3.2.7.3 To support procurement of equipment																							
3.2.7.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.7.5 To operate training program																							
3.2.7.6 To examine expansion to other regions																							
3.2.8 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.8.1 To examine and consider a study program for the training center																							
3.2.8.2 To examine materials and equipment for improvement of training center																							
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3.2.8.4 To develop educational materials such as movie, exhibition, etc.																							
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3.2.9.6 To examine expansion to other regions																							
3.2.10 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center																							
3.2.10.1 To examine and consider a study program for the training center																							
3.2.10.2 To examine materials and equipment for improvement of training center																							
3.2.10.3 To support procurement of equipment																							
3.2.10.4 To develop educational materials such as movie, exhibition, etc.																							
3.2.10.5 To operate training program																							
3.2.10.6 To examine expansion to other regions																							

TO Chief Representative of JICA Mongolia OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia

Version of the Sheet: Ver. 6.0 (Term: December, 2018 - May, 2019)

Name: D.Batsaikhan

Title: Director of Disaster Prevention Department, NEMA

Name: Kiyotaka Owada

Title: Team leader / Integrated disaster management I

Submission Date: June 24, 2019

I. Summary

1. Progress

1-1 Progress of Inputs

(1)Dispatch of Experts

The following Experts from Japanese side were assigned in this monitoring period.

	Area of responsibility	Experts name	Period of assignment
Project Management Group	Team Leader / Integrated Disaster Risk Management I	Kiyotaka OWADA	Dec. 1 – Dec. 8, 2018 Jan. 28 – Feb. 23, 2019 Mar. 17 – Mar. 30, 2019 Apr. 14 – Apr. 27, 2019 May. 27– May. 30, 2019
	Deputy Team Leader / Integrated Disaster Risk Management II	Akihiro FURUTA	Jan. 14 – Jan. 21, 2019 May. 13 – May. 19, 2019
OUTPUT1: Disaster Management Plan	Disaster Management Plan I	Osamu NISHII	Jan. 9 – Feb. 2 , 2019 May. 20 – May. 30, 2019
	Disaster Management Plan II	Kensuke ICHIKAWA	—
	Disaster Management system I	Yoshitaka YAMAZAKI	—
	Disaster management system II	Shiro MAKITA	—
	Disaster management information I	Tadashi ISE	—
	Disaster management information II	Akihiro FURUTA	—
Output 2: Seismic Resistance	Seismic-Resistance	Seiichiro FUKUSHIMA	Jan. 20 – Feb. 15, 2019 Apr. 21 – May. 20, 2019
	Seismic Diagnosis of Infrastructures and Lifelines	Jun MATSUO	—
	Seismic Diagnosis of Buildings / Seismic Strengthening I (RC, PC)	Masahide AOKI	—

	Area of responsibility	Experts name	Period of assignment
	Seismic Diagnosis of Buildings / Seismic Strengthening II (Masonry)	Shigeki KITA	—
	Seismic-Resistant Design	Hideto OMINE	Apr. 17 – May. 6, 2019
Output 3: DRR Education	DRR Education I	Miki KODAMA	Jan. 13 – Jan. 26, 2019 Mar. 3 – Mar. 19, 2019
	DRR Education II	Yujiro OGAWA	—
	DRR Education II	Seiji SUWA	Mar. 3 – Mar. 23, 2019
	Community-Based Disaster Management / Project Coordination I	Toshikazu HIWAKI	Jan. 23 – Feb. 16, 2019 May. 26 – May. 30, 2019
	Development of Disaster Management Teaching Materials I	Yoko OTA	—
	Development of Disaster Management Teaching Materials II / Project coordination II	Amarjargal NAYANBAATAR	*Intermittent assignment during above periods

(2) Assignment of counterparts

The current administration of authorities concerned of Mongolia for the Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia (hereinafter referred to as “the Project”) is as following,

(a) Project Director:

D.Batsaikhan, Director of Disaster Prevention Department, the National Emergency Management Agency (hereinafter referred to as “NEMA”)

(b) Project Manager:

Luvsansharav Ulziibayar, Director of Policy Coordination and Cooperation Department, NEMA

(c) Project Coordinator

B. Vanchindorj, Policy Coordination and Cooperation Department, NEMA

There is a change of project coordinator in charge in this monitoring period. B. Dorjderem in Policy Coordination and Cooperation Department retired from his work in NEMA in April 2019. As a replacement for B. Dorjderem, B. Vanchindorj was assigned to new project coordinator.

The other member of current administration of authorities concerned of Mongolia has not been changed since last monitoring period.

According to the Record of Discussions (hereinafter referred to as “R/D”), the project organization of Mongolia side includes the counterpart (hereinafter referred to as “C/P”) of working groups (hereinafter referred to as “WG”) in order to implement project activities at output level of the Project.

The member list of the C/P for each WG had been amended at the Eighth Steering Committee (hereinafter referred to as “SC”) on January 21st, 2019 based on the member list confirmed in the Joint Coordinating Committee (hereinafter referred to as “JCC”) on September 21st, 2018. And at the Seventh JCC on February 1st, 2019 and the Ninth SC on May 28th 2019, further amendments of C/P member were approved as shown below.

(a) Member of Sub-Group of WG1 (As of May, 2019)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG			
			6th JCC Sep.2018	8th SC Jan.2019	7th JCC Feb.2019	9th SC May.2019
Coordinator for WG1	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○	○
Disaster Risk Assessment (WG1-1)	D.Serjmyadag	Disaster Research Institute, NEMA	○	○	○	○
	D.Bazarragchaa	Disaster Risk Management Dep., NEMA	○	○	○	○
	B.Batbayar	Disaster Risk Management Dep., NEMA	○	○	○	○
	B.Khishigbaatar	Disaster Operation Dep., NEMA	○	○	○	○
Disaster Protection Planning (WG1-2)	B.Bayanmunkh	Policy Coordination and Cooperation Dep., NEMA	○	○	○	○
	B.Myagmardorj	Emergency Management Department of Capital City (EMDC)	○	○	○	○
	T. Turbileg	Disaster Operation Dep., NEMA				
	Ch.Otgontugs	Fire Dep., NEMA	○	○	○	○
	E.Batbayar	EMDC				
	B.Khishigbaatar	Disaster Operation Department, NEMA		○	○	○
Disaster Reduction Agreement (WG1-3)	B.Duvshin	Disaster Risk Management Dep., NEMA	○	○	○	○
	T.Bilguun	Policy Coordination and Cooperation Department, NEMA	○	○	○	○
White Paper (WG1-4)	O.Tsend-Ayush	Disaster Prevention Dep., NEMA	○	○	○	○
Disaster Database (WG1-5)	B.Purevnyam	Public Announcement and Emergency Administration Centre, NEMA	○	○	○	○
	D. Sodnomragchaa	Spatial Information and Technology Division, NEMA	○	○	○	○
	B. Boldkhuu	Public Announcement and Emergency Administration Centre, NEMA	○	○	○	○
	D. Bayarbaatar	Public Announcement and Emergency Administration Centre, NEMA	○	○	○	○

(b) Member of Sub-Group of WG2 (As of May, 2019)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG			
			6th JCC Sep.2018	8th SC Jan.2019	7th JCC Feb.2019	9th SC May.2019
Coordinator for WG2	L.Bilegjargal	Ministry of Construction and Urban Development (MCUD)	○	○	○	○
Seismic Diagnosis of Buildings (WG2-1)	L.Bilegjargal	MCUD	○	○	○	○
	O.Bayarbaatar	MCUD	○	○	○	○
	B.Bayardulam	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○	○
	N.Ganchimeg	General Agency for. Specialized Inspection (GASI)	○	○	○	○
	N.Tamir	Master Planning Agency of Capital City	○	○	○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○	○
	G.Saruultuya	Construction Development Center	○			
	S.Munkhdul	Construction Development Center		○	○	○
Seismic Diagnosis of Infrastructures and Lifelines (WG2-2)	B.Bayardulam	Land Management, Geodesy and Cartography Agency, MCUD	○	○	○	○
	L.Bilegjargal	MCUD	○	○	○	○
	O.Bayarbaatar	MCUD	○	○	○	○
	N.Ganchimeg	GASI	○	○	○	○
	B.Munkhsaikhan	GASI	○	○	○	○
Design for Seismic Strengthening (WG2-3)	L.Bilegjargal	MCUD	○	○	○	○
	O.Bayarbaatar	MCUD	○	○	○	○
	N.Ganchimeg	GASI	○	○	○	○
	N.Tamir	Master Planning Agency of Capital City	○	○	○	○
	Ts.Khulan	Master Planning Agency of Capital City	○	○	○	○
	G.Saruultuya	Construction Development Center	○			
	S.Munkhdul	Construction Development Center		○	○	○

(c) Member of Sub-Group of WG3 (As of May, 2019)

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG			
			6th JCC Sep.2018	8th SC Jan.2019	7th JCC Feb.2019	9th SC May.2019
Coordinator for WG3	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○	
	D.Bat-Erdene	Disaster Prevention Dep., NEMA				○
School DRR Education (WG3-1)	J.Myagmar	Ministry of Education, Culture, Science and Sports (MECSS)	○	○	○	○
	Ch.Gantsetseg	MECSS	○	○	○	○
	P.Baljinyam	MECSS	○	○	○	○
	A.Enkhtogtokh	Education Research Institute (ERI), MECSS	○	○	○	○
	B.Erdenechimeg	ERI, MECSS	○	○	○	○

Monitoring Sheet Summary

Sub-WG	Name	Job Title	Timing Nominated as WG Member and Period of Activity in WG			
			6th JCC Sep.2018	8th SC Jan.2019	7th JCC Feb.2019	9th SC May.2019
	G.Mongolkhatan	ERI, MECSS	○	○	○	○
	G.Khaliun	ERI, MECSS	○	○	○	○
	N.Munkhbayar	Institute of Teacher Professional Development	○	○	○	○
	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○	
	D.Bat-Erdene	Disaster Prevention Dep., NEMA				○
	G.Enkhtsolmon	Disaster Prevention Dep., NEMA	○	○	○	○
Community DRR Education (WG3-2)	D.Munkhbat	Disaster Prevention Dep., NEMA	○	○	○	
	D.Bat-Erdene	Disaster Prevention Dep., NEMA	○	○	○	○
	D.Dulamsuren	Public Information Center, Disaster Prevention Dep., NEMA	○	○	○	○
	S.Doljinsuren	EMDC	○	○	○	○
	B.Chinbat	EMDC	○	○	○	○
	B.Uuringegee	DRR Training Center, EMDC	○	○	○	○
	B.Ariunchimeg	National Center for Long life Education	○	○	○	○

1-2 Progress of Activities

(1) Overall of Project

1) Implementation of Steering Committee (SC) and Joint Coordination Committee (JCC)

The Eighth and Ninth SCs and the Seventh JCC have been held in this monitoring period.

No.	Date	Participants	Contents of discussion
Eighth SC	Jan 21, 2019	NEMA, WG member for each OUTPUT Total: 25 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Progress of Installing Equipment - Schedule of Next JCC
Seventh JCC	Nov. 1, 2019	NEMA, MCUD, MECSS, GASI, Construction Quality and Safety Department; City Planning and Master Planning Agency of Capital City, etc. Total: 36 participants	<ul style="list-style-type: none"> - Progress of WG Activities - Amendment of Working Group Member - Progress of Procuring Equipment of Earthquake Simulation Experience for the Disaster Protection Training and Methodology Centre - Future Plan for Publishing White Paper - Schedule of Next JCC
Ninth SC	May 28, 2019	NEMA, WG member for each OUTPUT Total: 24 participants	<ul style="list-style-type: none"> - Amendment of Working Group Member - Confirmation of the Achievement of the Project Purpose based on

No.	Date	Participants	Contents of discussion
			Indicators - Discussion How to Evaluate the Achievement of the Overall Goal including items of Indicators - Schedule of Next JCC

2) Provision of Equipment

As identified in the work plan of the Project which was approved by the first JCC, the equipment for seismic diagnosis and the equipment of earthquake simulation experience for the Disaster Protection Training and Methodology Center (hereinafter referred to as "DPTMC") are supposed to be procured and donated by the Japan International Cooperation Agency (hereinafter referred to as "JICA").

Equipment for Seismic Diagnosis

The procurement procedure for five (5) sets of diagnosis devices had been carried out and all devices were finally handed over from JICA to NEMA on November 12, 2018. Then, the WG2 members and JICA Expert Team (hereinafter referred to as "JET") conducted a training to explain how to use the equipment on November 12 and 13, 2018.

Equipment of Earthquake Simulation Experience for DPTMC

The preparation for installing the equipment has already been carried by Mongolian side. Regarding the schedule of setting up of the equipment and its procedure, a few things were confirmed and discussed between Japanese side and Mongolian side at the seventh JCC on February 1, 2019 as below.

Mongolian side explained that following advance preparations necessary for installing the equipment of earthquake simulation experience at the DPTMC have already been completed and planned.

- Renovation of a slab foundation
- Construction works to prevent the room where the equipment will be installed from flooding
- Installation of switchboard by February 4, 2019 and the wiring on February 11, 2019
- Arrangement of a portal crane and two sets of hand lift jack by February 11, 2019
- Installation of a safety fence and steps in the appropriate place on February 18 and 19, 2019

Japanese side explained that JICA shall dispatch Japanese engineers from 10 to 23 of February 2019 to conduct installation works of the equipment and train DPTMC's staffs in charge to do regular maintenance. Then, Japanese side requested Mongolian side to deal with following matters,

- To install water stop boards at the edge of a slab foundation to prevent the equipment from flooding directly after installation works of the equipment.
- To take responsibility for continuing maintenance of the equipment and to secure the annual budget necessary to keep on the proper maintenance and management of the equipment.
- To undertake essential countermeasures against further inundation in the whole basement floor of DPTMC within 2019.

Mongolian side accepted above requests and promised to conduct waterproofing work of whole basement floor of DPTMC with adequate construction management from the end of March to May 2019. Furthermore, Mongolian side explained that the budget for this waterproofing work has already been secured by Emergency Management Department of the Capital City (hereinafter referred to as "EMDC") as a part of the budget for inspection and maintenance of DPTMC, and the detailed schedule and the constructor of this work will be decided by the end of March 2019.

After the installation work by Japanese engineers, the 2-day practical training toward staffs in charge of operation and management in DPTMC was conducted. In this training Japanese engineers taught them how to operate and maintain the equipment including the daily checking method.

Finally, the handing over ceremony was conducted on March 20, 2019 in the presence of Mr. U.Emkhtubshin, Deputy Prime Minister of Mongolia, Mr. M.Takaoka, Japanese Ambassador to Mongolia, Mr. T. Badral, Chief and Major General, NEMA, Ms. E. Tamura, Chief Representative of JICA Mongolia Office and all concerned at the DPTMC.

(2) Output1

Activity 1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction

The activity was completed within the previous reporting period.

The WG1 members confirmed that three (3) guidelines (hereinafter referred to as "GLs") namely, "Earthquake Disaster Risk Assessment GL", "Earthquake Disaster Protection Planning GL", and "Disaster Database GL" shall be developed in Output 1 of the Project.

Activity 1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction

1) Earthquake Disaster Risk Assessment Guideline

The WG1 members prepared "Comprehensive Earthquake Disaster Risk Assessment GL", "Technical GL for Earthquake Risk Assessment" and application software for a simple earthquake risk assessment for the central and local government staff. After the submission of last monitoring sheet (Version 5) on December 11, 2018, the WG1 members decided to integrate the "Comprehensive Earthquake Disaster Risk Assessment GL" and the proposed "Detailed Earthquake Risk Assessment GL". It is because there is not big difference between those two guidelines except the chapter on the method to analyze the risk assessment. The chapters on purpose, scope, terms, preparation of proposal, reflection of risk assessment results in disaster prevention plan, and preparation of earthquake disaster risk assessment report are common. The integrated guideline will be completed by the end of May 2019.

These two GLs and the application software are considered to be a part of the annex of the revised Regulation for Implementation of Disaster Vulnerability and Risk Assessment (Annex of the Cabinet Decision of 176, 2006). However, the whole composition of the Regulation has not been clearly identified.

The WG1 members introduced and used the application software to calculate the earthquake disaster damage in the pilot Aimags.

2) Earthquake Disaster Protection Planning Guideline

The WG1 members are preparing four (4) GLs namely, National Earthquake Disaster Protection Planning GL, State Earthquake Disaster Protection Service Planning GL, Aimag / Soum Level Earthquake Disaster Protection Planning GL and Capital City / District Level Earthquake Disaster Protection Planning GL.

Among these GLs, “National” and “State” GLs are the national level GLs and must be coordinated with the Standing Committee for Earthquake Disaster Protection and other ministries and related agencies. Before that, the GLs must be approved by the Executive Committee of NEMA. The new WG1 members in charge revised these two GLs and prepared for submission to the Executive Committee by the end of May 2019.

In the pilot Aimags and Districts, the Earthquake Disaster Protection Plans are being prepared or revised as a part of Activity 1.3.2. Through these pilot activities, feedbacks about the contents of the draft GLs were gathered from officers who are member of planning in the pilot areas and these GLs was improved. The revised GLs will be sent to the Executive Committee of NEMA for approval shortly.

3) Disaster Database Guideline

Through the Activity 1.3.3, the GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR) was approved as the order A/47 by the head of NEMA on 20 February 2019. There are two annexes of the GL about “Disaster Code” and “Spatial Database Design”. The GL consists of nine chapters shown in the below table.

Table 2-1 Contents of the GL with annexes

<p>GL on Operation and Management of Spatial Information System for Disaster Risk Reduction</p> <ul style="list-style-type: none"> • Chapter 1: Background • Chapter 2: Definition of the Terms • Chapter 3: Collection of Spatial Database for DRR and its Requirements • Chapter 4: Administration and Management of SISDRR • Chapter 5: Utilization of SISDRR • Chapter 6: Duties and Function of Users for SISDRR • Chapter 7: Security and Safety of SISDRR • Chapter 8: Prohibitions • Chapter 9: Legal Responses 	<p>Annex 1: Coding system of Spatial Database for DRR</p> <ul style="list-style-type: none"> • 1. Purpose to Establish Cording System • 2. Codes of thematic layers /disaster codes/ • 3. Codes of baseline layers /Location codes/ <p>Annex 2: Design of Spatial Database for DRR</p> <ul style="list-style-type: none"> • 1. Introduction of Spatial Database Design • 2. Requirements for Titling Layers and Maps • 3. Creating New Column in Baseline and Thematic Layers, and Editing Texts • 4. Common Terms for Spatial Database Design • 5. Design for Baseline Layers • 6. Design for Thematic Layers
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In the preparation stage of the draft GL, the GL’s name was referred to as the GL on Operation and Management of Disaster Spatial Database (DSDB) using Internet-based Disaster Spatial Information System (I-DSIS), but finally the GL’s name was defined as described above officially.

Activity 1.1.3 To develop new regulation and the drafts of revised version of regulation on implementation of the Law of Disaster Protection

The activity was completed within the previous reporting period.

The WG1 members verified the articles of the Amended Law on Disaster Protection mainly from the viewpoint of risk assessment and disaster protection, and identified the related rules and regulations in the Amended Law which are needed to establish new rules and regulations and/or revise existing ones with handling policy in the WG1 activity.

Activity 1.2.1 To develop the draft of the agreement which shows the coordination and cooperation among NEMA and related organizations

The progress of agreement development for each sector is summarized as below.

<Stable supply of foods and water to evacuation places and temporary housings>

This agreement has been concluded within previous reporting period between NEMA and the Ministry of Food and Agriculture (hereinafter referred to as “MOFA”) on October 16, 2018.

<Stable supply of medicines during disaster>

This agreement has been concluded within previous reporting period between the Ministry of Health (hereinafter referred to as “MOH”) and three major pharmaceutical sales companies were signed on November 7, 2018.

<Supply of construction materials and temporary housings>

Two agreement documents were prepared between MCUD and the Construction Material Association, and between MCUD and the Construction Association. Agreement documents were already approved by the Minister of MCUD, and the agreements will be signed shortly.

<Stable transport and securing road transport during disaster>

The draft agreement has already been prepared by the WG1. The Ministry of Road and Transport Development (hereinafter referred to “MRTD”).is examining the draft and it is in the process of revising.

<Stable fuel supply during disaster>

The WG1 consulted with the Mineral Resource and Petroleum Agency about the contents of the agreement. NEMA side submitted the revised contents to the Agency in September 2018. The draft agreement is under examination by the Agency.

<Set up priority telephone lines on disaster>

The priority connection has technical issues in mobile phone company UNITEL. The

agreement can be concluded as soon as it resolves. However at present, there is no prospect of solution.

<Emergency water supply on disaster>

The WG1 have prepared the draft agreement. The Water Management Authority and NEMA are under discussion about the details of the draft agreement.

<Usage of public buildings, especially schools as evacuation places>

The WG1 initially considered about an agreement to utilize school facilities as the evacuation place between EMDC and the Education Office of Ulaanbaatar City (hereinafter referred to as "UB City"). This agreement will include matters concerning the usage and management of disaster prevention facilities of schools constructed by Japan's Official Development Assistance Grants. However, after discussion, not only schools but also other public buildings were considered to be used as shelters, and it was decided to make an agreement between EMDC and the Mayor's Office of UB City. A draft of the agreement has been made by WG1.

<Wastewater treatment at the evacuation place>

The WG1 prepared a draft agreement between EMDC and the Facility Service Office of UB City. The draft is under examination by the Facility Service Office.

Activity 1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction

The activity was completed within the previous reporting period.

The training programs for disseminating the effectiveness of agreement for earthquake disaster response was conducted during the previous reporting period. Based on the experience to conduct the training programs, the draft manual for implementing training programs will be prepared in the WG1 activity.

Activity 1.3.1 To identify problems and challenge of monitoring, report, evaluation and disclosure of disaster protection plan at national and local levels

The activity was completed within the previous reporting period.

Through the study of existing disaster protection plans in Mongolia, the WG1 members decided to prepare four (4) types of Earthquake Disaster Protection Planning GLs in the Project as described in the Activity 1.1.2.

Activity 1.3.2 To revise the plans made in 1.3.1 and make a manual for the revision of disaster protection plan

The pilot activities to revise / newly develop the earthquake disaster protection plan continued in the pilot areas, Darkhan-Uul Aimag, Omnugobi Aimag, Bayangol District and Chingeltei District in UB City. The WG1 performed the workshops (hereinafter referred as WS) several times. In the WS, The task force was divided into four groups namely telecommunications, Urban development, Health care and environment, disaster prevention measures and education. Each group discussed about earthquake risk induction measures and their implementer, time, period and budget. These results are summarized in the "risk reduction planning sheets". From the sheets, earthquake risk reduction plan will be compiled. Summary of activities is shown in the Table 2-2.

Result of WSs were feed backed to the draft GLs.

Table 2-2 Pilot Activities for the Revision of Disaster Protection Plans

Pilot Area	WS Name	Date	Number of Participants	Activity
Darkhan-Ulu Aimag	WS3	15, 16 Nov. 2018	18	<ul style="list-style-type: none"> • Set the risk reduction targets (10 years) of the current disaster scenario • Extraction of problems facing the risk reduction target • Enumeration of measures to solve the problem
	WS4	28 Jan. 2019	19	<ul style="list-style-type: none"> • Enumeration of measures to resolve issues (continued) • Designation of major response agencies • Setting of implementation time, period of measure
	WS5	19 Apr. 2019	13	<ul style="list-style-type: none"> • Judgment of priority of measure • Calculation of estimated operating expenses
Omunugovi Aimag	WS3	28, 29 Nov. 2018	25	<ul style="list-style-type: none"> • Set the risk reduction targets (10 years) of the current disaster scenario • Extraction of problems facing the risk reduction target • Enumeration of measures to solve the problem
	WS4	18 Feb. 2019	23	<ul style="list-style-type: none"> • Enumeration of measures to resolve issues (continued) • Designation of major response agencies • Setting of implementation time, period of measure

Bayangol District	Joint WS2	31 Jan. 2019	8	<ul style="list-style-type: none"> • Set the risk reduction targets (10 years) of the current disaster scenario • Extraction of problems facing the risk reduction target • Enumeration of measures to solve the problem
Chingeltei District			8	
Bayangol District	Joint WS3	9 May 2019	1	<ul style="list-style-type: none"> • Enumeration of measures to resolve issues (continued) • Designation of major response agencies • Setting of implementation time, period of measure
Chingeltei District			7	

Activity 1.3.3 To improve the present system which collect and analyze information on disaster risk reduction

The NEMA is responsible for improving the database for disaster related data under the Article 14 "Creating a Disaster Database" of the amended Law on Disaster Protection. From the point of views of carrying out the NEMA's duty in the Law and contributing to the priority actions in "Sendai Framework for Disaster Risk Reduction 2015-2030" in Mongolia, the improvement policy of the present system had been discussed in the WG1 and now following actions are being implemented.

1) Development of Guideline for Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR)

After the drafting work by the sub-WG members and new division staffs, and some modifications of the draft GL based on the suggestions from directors in NEMA headquarters, finally the GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR) was approved as the order A/47 by the head of NEMA on 20 February 2019.

2) Upgrading installed SISDRR and Modifying Existing Information System in the NEMA for Management of Disaster Incident Records

As one of utilization ways of SISDRR, the Sub-WG members discussed the better way to accumulate disaster incident records from regional offices in consideration of indicators for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for DRR (SFDRR). Then, the Sub-WG members got on the improvement work of existing Daily-Basis Incident Report System (DBIRS) managed by the Public Announcement and Emergency Administration Centre in NEMA. And, the part of existing SISDRR installed in the Project is being upgraded in order to secure the good relation with DBIRS. As of end of May 2019, both works is still ongoing.

3) Making Agreements for Spatial Database Sharing with Related Organizations

The Sub-WG members have spent their time and effort making agreements for spatial database sharing between NEMA and DRR related organizations to develop better environment of data utilization for DRR related activities in Mongolia.

The agreement between the Administration of Land Affairs, Geodesy, and Cartography of Mongolia (hereafter referred to as “ALAGaC”) and NEMA was concluded in April 2018 (within the previous reporting period) as the first official agreement on cooperation and spatial data sharing.

In this reporting period, the official agreement between NEMA and the Master Planning Agency of Capital City was concluded on 5 March 2019 after a series of discussions about both technical matters and administrative affairs.

4) Implementation of Training for Utilization of SISDRR in NEMA

For formulating new organization structure for operation and management of SISDRR, assessment and development of human capacity for NEMA Headquarters as well as EMDC and local offices in 21 Aimags are one of the key actions. Therefore, The Sub-WG members and new division staffs are providing a series of training for gaining basic knowledge and skill of SISDRR utilization targeted to central and regional offices of NEMA from March 2018.

In this reporting period, on April 30, 2019, The Sub-WG members and new division staffs conducted 3rd training for operation and management of SISDRR to invite 42 staffs from EMDC, Emergency Management Department of 21 Aimags and the Public Announcement and Emergency Administration Centre in NEMA Headquarters. The main purpose of the training was to learn how to register data for all types of hazards and accidents in SISDRR. The training mainly consisted of hands-on practices using own computers.

Furthermore, it was planned to conduct a series of training targeted to each department of NEMA Headquarters to gain better understanding SISDRR O&M based on the new order A/47 by the head of NEMA. The Sub-WG members has already prepared draft schedule of the training, and they are going to get on this training after getting an approval of the schedule.

Activity 1.3.4 To elaborate white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 and 1.3.2

“Mongolia Disaster Risk Reduction White Paper 2017” was published in December 2018. The contents of the Paper are shown in Table 2-3.

Table 2-3 Contents of White Paper

<p>Chapter 1. Current State and Restructuring of the Legal Environment of Disaster Risk Reduction in Mongolia</p> <p>1.1. Mongolian Disaster Risk Reduction Legislation</p> <p>1.2. Disaster Risk Reduction Policy Documents</p> <p>1.3. Structure and Organization of Disaster Risk Reduction Activities.</p> <p>Chapter 2. Disaster Risk Reduction Activities</p> <p>2.1. Emergencies, Disasters and Accidents that have Occurred in Mongolia in 2017, Measures Taken</p> <p>2.2. Disaster Risk Reduction and Disaster Prevention Activities</p> <p>2.3. Disaster Risk Reduction Training and Awareness-Raising</p> <p>2.4. Measures to Ensure Disaster Preparedness</p> <p>2.5. Disaster Alerts and Emergency Management</p> <p>2.6. Disaster Risk Reduction Personnel and Equipment</p> <p>2.7. Disaster Risk Reduction Training</p> <p>Chapter 3. Multilateral Cooperation in Disaster Risk Reduction</p> <p>3.1. International Cooperation in Disaster Risk Reduction</p> <p>3.2. Coordination of Disaster Risk Reduction Authorities</p> <p>3.3. Participation of Non-Governmental Organizations, Community-Based Organizations and Citizens in Disaster Risk Reduction Activities</p> <p>Chapter 4. Fire Protection</p> <p>4.1. Documents Related to Fire Protection</p> <p>4.2. Activities to Combat Fires</p>	<p>Chapter 5. Strategic Reserves and Humanitarian Aid</p> <p>5.1. Documents Related to Strategic Reserves and Humanitarian Aid</p> <p>5.2. Activities Related to Strategic Reserves and Humanitarian Aid</p> <p>Chapter 6. Earthquake Disaster Prevention Activities</p> <p>6.1. Earthquake Disaster Prevention Standing Committee</p> <p>6.2. Documents Related to Enhancing Earthquake Disaster Prevention Measures</p> <p>6.3. Study of the Faults Near Ulaanbaatar City</p> <p>6.4. Earthquake Emergency Plan for Ulaanbaatar City</p> <p>Chapter 7. Disaster Research and Disaster Risk Reduction Research Activities</p> <p>7.1. Research Conducted by the Disaster Research Institute</p> <p>7.2. Disaster Risk Reduction Database</p> <p>Chapter 8. Disaster Risk Reduction Budget and Investment</p> <p>8.1. Investments from the National Budget</p> <p>8.2. Foreign Investments</p> <p>8.3. Projects and Programs Being Implemented at the National Emergency Management Agency</p> <p>8.4. Compensation for Disaster Victims</p> <p>Appendixes</p> <p>1 List of Legal Documents Related to Disaster Risk Reduction</p>
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The WG1 member also prepared the creation manual of the white paper. This manual explains about following items while reviewing the process of preparing the white paper in 2017:

- Establishment of a white paper preparation working group

- Discussion of composition and contents
- Determination of collection sources
- Collection of materials
- Arrangement of collected materials
- Preparation of manuscripts
- Editing of manuscripts
- Instruction and management of English translation
- Management of editing by a printing company, etc.,

Based on the manual, working group for the Disaster Reduction White Paper 2018 were established and the preparation work has started.

Activity 1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline

As described in the Activity 1.3.3, the SISDRR is upgrading to manage spatial database for DRR including the result of seismic diagnosis of buildings, infrastructures and lifelines which will be evaluate by appropriate organizations.

Based on the agreement for data exchange with the Master Planning Agency of Capital City, the environment to share the result of seismic diagnosis of buildings assessed by UB City with NEMA was developed.

Furthermore, the WG1 members is under preparation for uploading the result of earthquake risk evaluation of buildings, infrastructures and lifelines in UB City estimated in the former JICA's project named as "The Project for Strengthening the Capacity of Seismic Disaster Risk Management in Ulaanbaatar City" to the SISDRR. The contents of spatial database for DRR are gradually increasing as a supporting system for planning of disaster protection.

(3) Output2

Activity 2.1.1 To analyze the manual of seismic assessment of buildings and lifeline based on the context of the Law of Disaster Protection and develop the draft of revised version

The activity was completed within the previous reporting period.

The WG2 members investigated the current standards and regulations and concluded that issues identified through the investigation will be reflected in the guidelines newly established in the Project.

Activity 2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment

The activity was completed within the previous reporting period.

On 6 November 2018, the GLs for buildings were approved by No.185 Ministerial Order of MCUD.

And on 28 December 2018, the GL for infra structures and lifeline structures was approved by No. 174/303 Joint Ministerial Order of MCUD and MRTD as shown in Figure 2.1.



Figure 2.1 Joint Approvals on GL by the Ministers of MCUD & MTRD

Activity 2.1.3: Implementation of the Training to Improve Knowledge and Ability for Those Who Carry Out Seismic Estimation on Structures and Lifelines

After the approval of GLs, WG2 has conducted training for seismic evaluation on structures and lifelines not only to the officers in relevant organizations but also to the engineers in private companies, as summarized in Table 2.1.

Table 2.1 Result of training for seismic evaluation

Date	Name of Training	Participants	Venue	Note
2019.1.30	Seismic evaluation for buildings	30 from private companies	MACE	Conducted as MACE's program
2019.3.21	Seismic Evaluation for Buildings	28 from private companies	MACE	Conducted as MACE's program

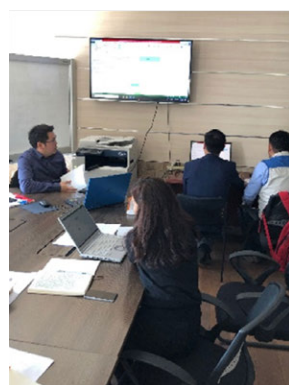
Date	Name of Training	Participants	Venue	Note
2019.3.28	Seismic evaluation and strengthening	31 in charge of seismic evaluation in each aimag office of MCUD and CDC	CDC	Conducted as part of TOT
2019.4.19	Seismic Evaluation for Buildings	10 from private companies	MACE	Conducted as MACE's program
2019.5.6 to present	TOT for NEMA	3 from risk management agency, NEMA	NEMA	The series of training
2019.5.10	TOT for GASI (building)	4 from relevant sections in GASI	MCUD	
2019.5.13	TOT for MCUD, CDC, ALAGaC	4 from relevant sections in MCUD and CDC	MCUD	
2019.5.14	TOT for UBMPA	5 from UBMPA	UBMPA	
2019.5.15	TOT for GASI (Infra, Lifeline)	6 from relevant sections in GASI	GASI	

It is noted that WG2 decided to conduct TOT for each target organization including private companies, since the objective of seismic evaluation and strengthening differ depending on the target organization. In the same way, technical backbone of each organization is also different.

It is also noticed that TOTs are conducted for small number of participants to make face-to-face meeting available, since detailed explanations and discussions are needed for enough technology transfer. Of course, technology transfer is time-consuming, so that the TOTs will be conducted repeatedly.



For NEMA



For MCUD & CDC



For GASI



For UBMPA

Figure 2.2 Training of Trainers for each Relevant Organizations

Activity 2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings

The activity was completed within the previous reporting period.

As mentioned above, GLs were approved by minister of MCUD on November 6, 2018.

Activity 2.2.2: Trial Design of Rebuilding and Strengthening Construction for Housing, Kindergartens, Schools, Hospitals and Government Buildings

The WG2 members discussed the selection of model buildings that will be used in the trial design. Based on the work plan five buildings with various usage and structural type were selected as shown in Table 2.2. The location and external appearance of the buildings are summarized in Fig.2.3.

Table 2.2 Model buildings for seismic strengthening

Structural Type	Usage	Name	Location	Note
Masonry	Kindergarten	No. 105 Kindergarten	Songino Khaikhan District	Constructed with standard design drawings
	School	No. 97 School	Bayanzurkh District	Constructed with standard design drawings
	Public Office	NEMA	Sukhbaatar District	Public office necessary for emergency response
RC	Hospital	No.1 Gynecology Hospital	Sukhbaatar District	One of few RC hospital buildings
PC	Apartment House	9-Storey Apartment	Bayangol District	Apartment house based on standard design

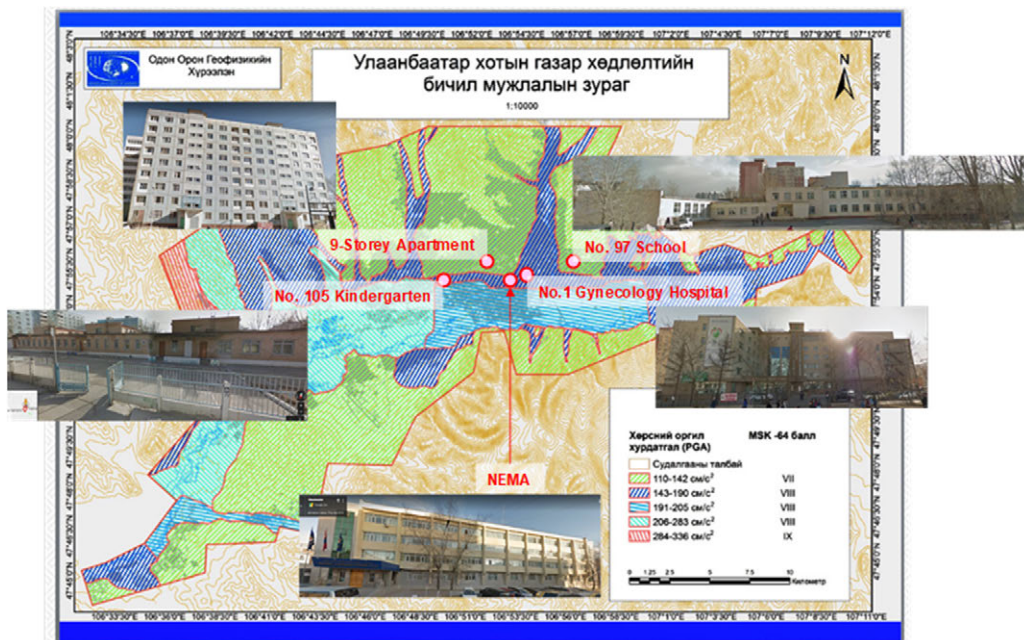


Figure 2.3 Location and External Appearance of Model Buildings for Trial Design

The data necessary for strengthening design for these buildings, such as design drawings,

calculation sheets, report of existing seismic evaluation and so on were collected and arranged by WG2, followed by the precise seismic evaluation by which trial strengthening design will be conducted.

Following data collection, the precise seismic evaluation was conducted for RC and PC buildings in accordance with GLs established, to obtain the necessary amount of strengthening as required in Japan. Then seismic strengthening design were conducted for the buildings. Figures 2.4 to 2.6 show the examples of design drawings.

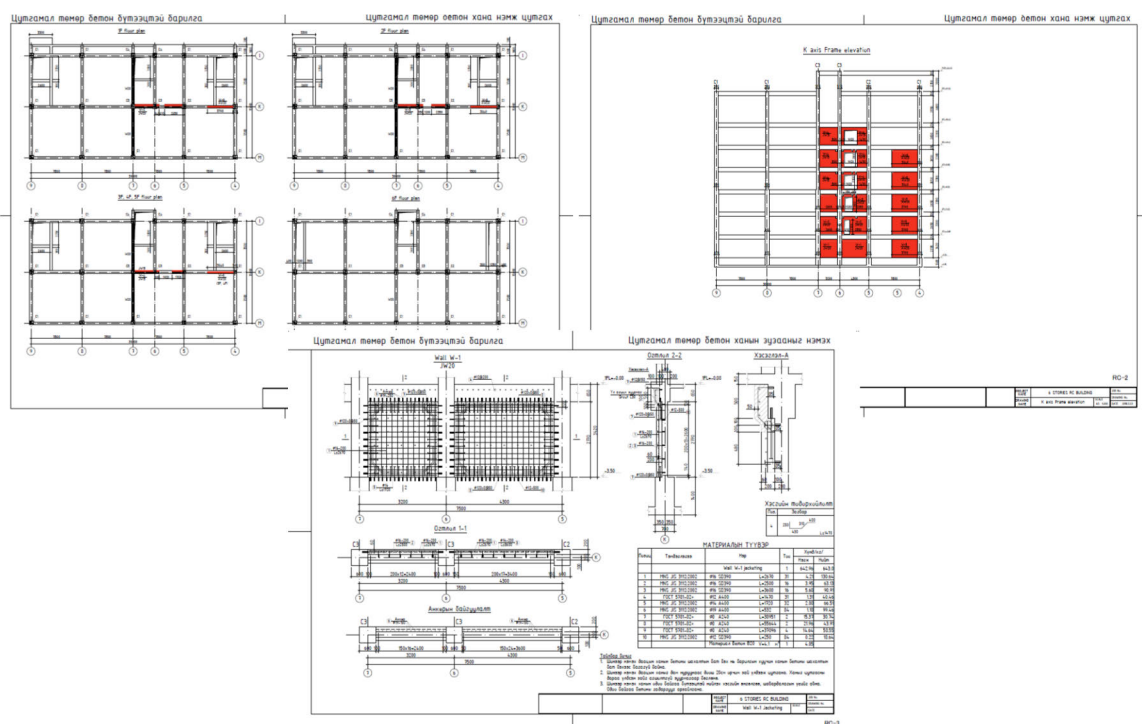


Figure 2.4 Example of Strengthening the RC building by Additional RC Walls

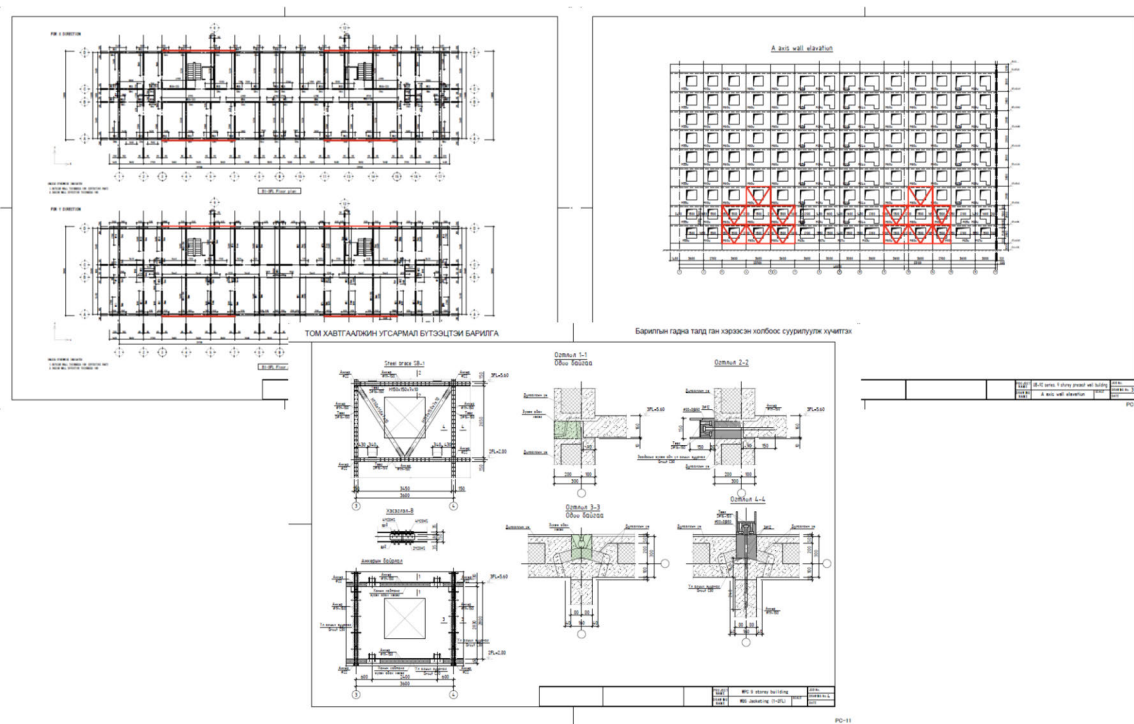


Figure 2.5 Example of Strengthening the PC building by Outer Frame

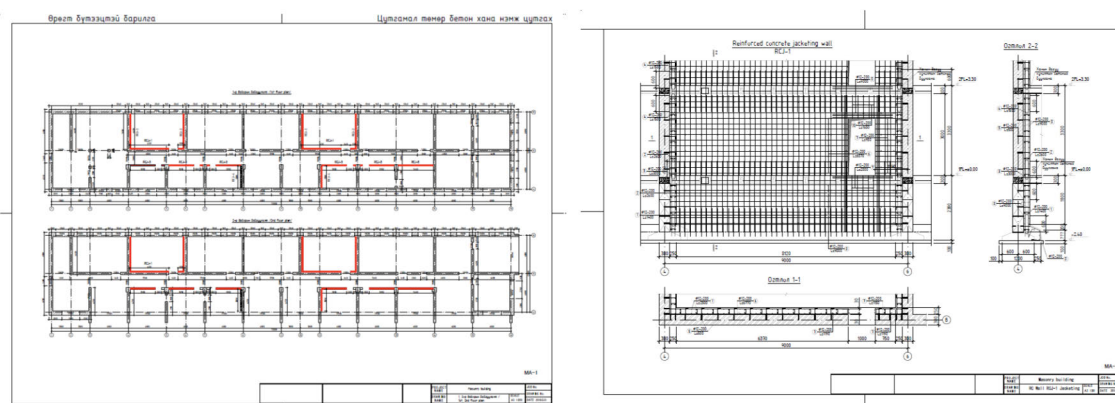


Figure 2.6 Example of Strengthening the masonry building by Additional RC Walls

It is noted some other types of strengthening method were examined and applied to make trial of strengthening design compatible to GLs.

Activity 2.2.3: To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings

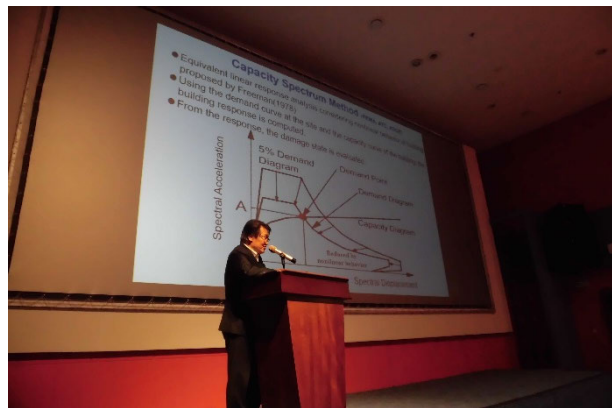
The WG2 members discussed about the training course for seismic strengthening and decided the date, venue, program as shown in Table.2.3.

Table 2.3 Outline of training for seismic strengthening

	5.1	5.2	5.3
	Disaster Protection Training and Methodology Centre	CDC	CDC
AM	<ul style="list-style-type: none"> Opening remark Plenary lecture 1 Introduction of Mongolian Activity 	<ul style="list-style-type: none"> Lecture & exercise of precise seismic evaluation 1 	<ul style="list-style-type: none"> Lecture & exercise of precise seismic strengthening 1
PM	<ul style="list-style-type: none"> Practice in Japan Plenary lecture 2 	<ul style="list-style-type: none"> Lecture & exercise of precise seismic evaluation 2 	<ul style="list-style-type: none"> Lecture & exercise of precise seismic strengthening 2 Closing remark Awarding



Group Photo at Training Center



Plenary Lecture by Prof. Ganzorig



Introduction of Activity in Mongol



Training of Seismic Strengthening

Figure 2.7 Training of Seismic Strengthening

65 participants from each organization including engineers from private companies learned the methodology and did the exercise. Result of questionnaire survey suggests that the training was useful and satisfactory for attendants, though some points commented shall be improved for the future trainings.

(4) Output3

Activity 3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction (DRR) education in kindergarten and primary and secondary schools based on Law of Disaster Protection

The activity was completed on April 6, 2018 (within the previous reporting period) with the approval of the guideline titled “The Program for Life Safety Education”.

Activity 3.1.2: To develop educational materials such as textbooks and supplementary readers for DRR education in kindergarten and primary and secondary schools

The writing and editing work of the “Guidebook” for teachers to implement lessons based on the “The Program of Life Safety Education” was continuously proceeded by each working group member. The final draft from each member was edited in consideration of the total structure and compiled as guidebooks for pre-school education and primary and secondary school education from March to the beginning of May 2019.

The table of contents of the final draft is as shown in the below table.

Table of Contents of Guidebook for Primary and Secondary Education	
<p>Foreword</p> <p>Life-Safety Education Program</p> <p>Introduction</p> <ul style="list-style-type: none"> ◇ Background of “Life-Safety Education” Program ◇ Outline of “Life-Safety Education” Program ◇ Contents and How to Utilize “Guidebook” <p>Chapt. 1: Understanding of Disasters</p> <ul style="list-style-type: none"> ◇ Disaster Situation ◇ Disaster, Hazard, Vulnerability ◇ Earthquake and DRR <p>Chapt. 2: Lesson Plans in the Subjects for Elementary School</p> <ul style="list-style-type: none"> ◇ Environmental Safety: Develop a sense of direction ◇ Environmental Safety: Climate Change ◇ Natural Disasters: Build Earthquake Resistant Buildings ◇ Earthquake DRR ◇ Fire Disaster Prevention <p>Chapt. 3: Lesson Plans in the Subjects for Lower Secondary School</p> <ul style="list-style-type: none"> ◇ Environmental Safety: Health Protection from Water Pollution ◇ Abnormal Weather Phenomenon: “Become Weather Forecaster” / Our Roles for Addressing Climate Change ◇ Natural Disasters: Protect Ourselves from Earthquake / Protection from Lightening Disaster 	<p>Chapt. 4: Lesson Plans in the Subjects for Upper Secondary School</p> <ul style="list-style-type: none"> ◇ Natural Disasters: Family Risk Management Planning ◇ Social Environmental Safety: Prevention from Cyber Crime <p>Chapt. 5: Education Activity and Teaching Method</p> <ul style="list-style-type: none"> ◇ Example of School Activity Planning ◇ Extracurricular Activity ◇ Elementary School: Contents of Life-Safety Education in the Extracurricular Activity ◇ Lower Secondary School: Contents of Life-Safety Education in the Extracurricular Activity ◇ Upper Secondary School: Contents of Life-Safety Education in the Extracurricular Activity <p>Glossary</p> <p>List of Reference Documents</p>

Table of Contents of Guidebook for Pre-school Education
Foreword
Life-Safety Education Program
Chapt. 1: Understanding of Disasters and Safety in Pre-schools
1.1 Basic Understanding of Disasters
1.2 Disaster, Hazard, Vulnerability, and Risk
Chapt. 2: Incorporating DRR Education Contents in the Pre-school Education Curriculum
2.1 Consistency of “Life-Safety Education Program” in the Pre-School Education “Core Program”
2.2 Implementation of “Life-Safety Education” Program in the Daily Education Activities
2.3 Examples of Lesson Plans
Glossary
List of Reference Documents

The final draft submitted to the Ministry of Education, Culture, Science and Sports (hereinafter referred to as “MECSS”) in May 2019 will be modified and finalized based on the comments provided by the reviewers in the official process of the MECSS.

The Guidebook will be printed and distributed to the schools and kindergartens across the country after the completion of review and modification process from June to September 2019.

Activity 3.1.3: To implement training programs for the instructors of Teacher Training Institutes and experts of educational departments in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively.

The activity was completed by November 2018 (within the previous reporting period) with the implementation of the pre-workshop on 11-13 September 2018, training programs on 18-21 September and 8-11 October 2018.

Activity 3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3

On 27-28 December 2018, a training program on “Life-Safety Education” was conducted for the principals and teacher’s instructors of kindergartens in Bayanzurkh district with the support of EMDC, WG3-1 members, and Japanese Expert Team.

On 16 January 2019, the instructors who were trained in the Activity 3.1.3 conducted DRR training in the MECSS’s regular in-service training for 10-year experienced teachers with the support of the Japanese Expert Team.

Further, the model school activities were conducted to give good examples for promoting

DRR education in line with the “Life-Safety Education Program” in the No. 244 kindergarten, No.13 school, and No. 42 school as shown in the below table.

Purpose	✧ To give good examples for promoting DRR education in line with the “Life-Safety Education Program” in pre-school, primary and secondary education ✧ To develop video program of the lessons which are conducted as a final result of model school activities for the annex of “Guidebook”			
Participants	Students, teachers and staff of the selected model schools, Staff of Education Department and EMDC of the respective district which the selected model schools are located, and WG3-1 members			
Duration	5-19 March 2019			
Venue	Selected Model Schools			
Main Activities, Date and Time (no. of participants)		No. 244 Kindergarten	No. 13 School (primary)	No. 42 School (lower-secondary)
	1) Seminar for Teachers and Staff	3/5 10:00~13:00 (43 persons)	3/7 10:10~13:10 (53 persons)	3/6 9:30~12:30 (38 persons)
	2) Workshop 1 for model lessons	3/11 10:00~13:00 (14 persons)	3/12 10:15~13:10 (4 persons)	3/11 14:00~17:00 (5 persons)
	3) Workshop 2 for model lessons	3/13 14:00~17:00 (16 persons)	3/14 16:00~18:00 (4 persons)	3/13 10:00~13:00 (5 persons)
	4) Research Lessons of “Life-Safety Education”	3/15 9:30~10:30 (Evaluation meeting after the lesson) (13 persons)	3/19 10:15~11:40 (Evaluation meeting after the lesson) (4 persons)	3/18 12:20~14:00 (Evaluation meeting after the lesson) (8 persons)

	No. 244 Kindergarten	No. 13 School (primary)	No. 42 School (lower-secondary)
Seminars			
Workshops			
Lessons			

Additionally, in September 2019, the training program for “Life-Safety Education Program” will be conducted in the MECSS regular in-service training by Institute of Teacher’s Professional Development (ITPD) using the developed “Guidebook” for the Program.

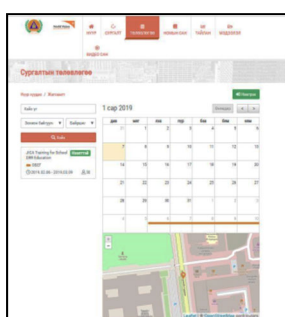
Activity 3.2.1 To develop comprehensive work plan for disaster risk reduction education and raising awareness at national and local levels

<Webpage for sharing the DRR training schedule>

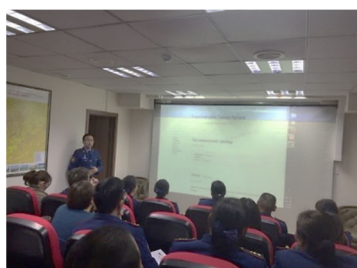
The website development was completed in January 2019 with the creation of manual*. On 31 January, a meeting to explain the system was conducted for the persons concerned in the NEMA meeting room. 21 persons from NEMA, EMDC, UNDP, Save the Children, World Vision, Mongolian Red Cross, and other donor organizations were attended the meeting. Further on-line briefing session was provided for the 57 persons in charge in 21 NEMA district offices.

(*refer to <http://ontsgoisur.gov.mn/pages/taylan-4w-programm-khangamzhiyn-taniltsuulga-garyn-avlaga>)

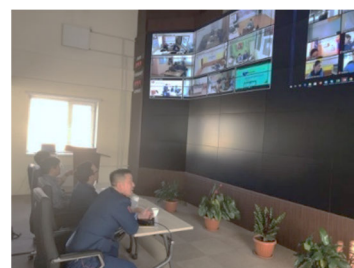
The website (<http://4w.ontsgoisur.gov.mn/>) started trial operation from 1 February 2019 and modified and improved based on the comments and opinions by the users by the end of April 2019. No major modifications were proposed.



Top Page of Website for sharing the DRR training schedule



Meeting to explain the website system



On-line briefing to district offices

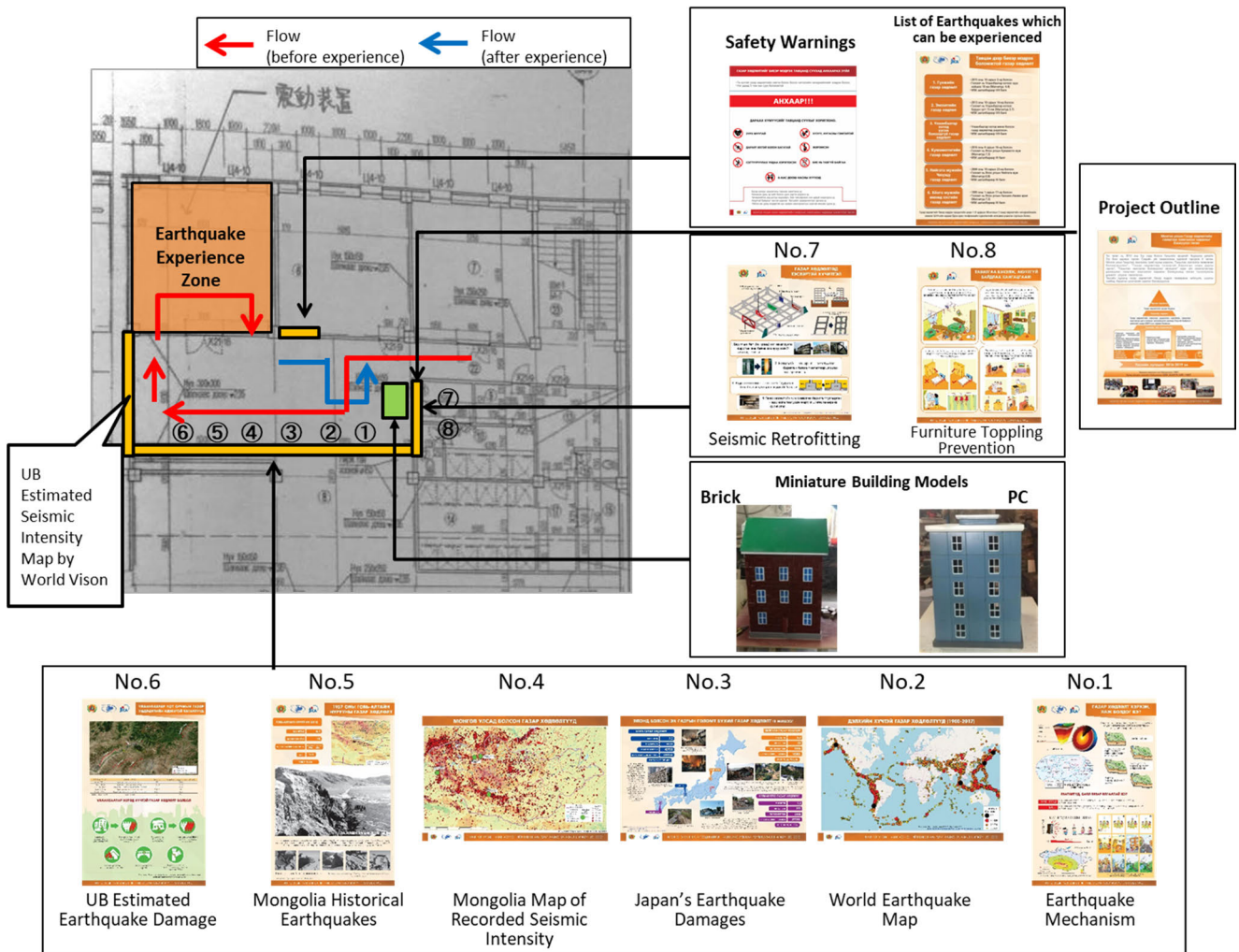
Activity 3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups in pilot areas

The activity was completed with the development of manual within the previous reporting period (<http://ontsgoisur.gov.mn/pages/khen-ch-khezee-ch-khaana-ch-belen>).

Activity 3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center

<Panels for the Earthquake Experience Room>

The panel development was completed in March 2019 and all the panels were exhibited together with the miniature building models for learning seismic retrofitting in the earthquake experience room of the Training Center as shown in the below image.



Further, the model to learn the relation of scale of Magnitude and its energy was developed and installed in the earthquake experience room.



Panels and Models Installed in the Earthquake Experience Room

<Educational material for Kids' Room>

As the Kids' Room educational material, a picture-story show (Kamishibai) for learning earthquake DRR was developed after discussion among working group members and

coordination with the World Vision's relevant activities. On 24 April 2019, using the developed picture-story show, a lesson for kindergarten pupils were conducted as a launching of the material. Beside the picture-story show with frame was installed in the Training Center, the printed materials were distributed to NEMA, EMDC, MECSS, Education Research Institute, ITPD, and the model schools of the WG3.1 activities.



Developed picture-story show for learning earthquake DRR



Lesson used the picture-story show

1-3 Achievement of Output

(1) Output1

The following three indicators are applied to evaluate the achievement of the Output 1 based on the PDM.

1.1 The number of guidelines, operational rules, provisions which are developed.

Achievement in this term:

The WG1 has a plan to develop two (2) types of Earthquake Disaster Risk Assessment GLs, four (4) types of Earthquake Disaster Protection Planning GLs and one (1) Disaster Database GL.

Regarding Earthquake Disaster Risk Assessment GL, the WG1 members integrated the Comprehensive Earthquake Risk Assessment GL and Detailed Earthquake Risk Assessment GL. Technical GL for Earthquake Risk Assessment has been prepared by the WG1 members. Application software for simplified earthquake risk assessment was developed in the previous reporting period. The risk assessment method prescribes a method suitable for Mongolia so that governmental staffs who do not have expert knowledge about earthquake risk can evaluate.

Regarding Earthquake Disaster Protection Planning GLs, Aimag / Soum Level and Capital City / District Level have been developed. On the other hand, National Level and State Services Level are under development.

Regarding disaster database GL, the GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR) was approved as the order A/47 by the head of NEMA on 20 February 2019.

1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements

Achievement in this term:

Following four (4) fields of agreement were signed by this reporting period.

- Stable supply of foods and water to evacuation places and temporary housings: The agreement was signed on 16 October 2018 between NEMA and the MOFA.
- Stable supply of medicines during disaster: The agreements between MOH and three major pharmaceutical sales companies were signed on 7 November 2018.

- Spatial Database Exchange: the official agreement between ALAGaC and NEMA was concluded in April 2018 as the first official agreement on cooperation and spatial data sharing.
- Spatial Database Exchange: the official agreement between NEMA and the Master Planning Agency of Capital City was concluded on 5 March 2019 after a series of discussions about both technical matters and administrative affairs.

Draft agreements are under discussion with following sectors.

- Supply of construction materials and temporary housings
- Stable transport and securing road transport during disaster
- Stable fuel supply during disaster
- Set up priority telephone lines on disaster
- Emergency water supply on disaster
- Usage of public buildings, especially schools as evacuation places
- Wastewater treatment at the evacuation place

In order to test the effectiveness of agreement for earthquake disaster response, and to demonstrate good practice of agreement to promote agreement in health sector to other sectors, a joint training was made on April 9, 2018 in UB City. A total of 38 participants from various sectors jointed the training.

1.3 White paper on disaster risk reduction

Achievement in this term:

The 2017 White Paper on Disaster Risk Reduction in Mongolia was published in both Mongolian and English version. The creation manual of the White Paper was prepared.

(2) Output2

The following two indicators are applied to evaluate the achievement of the Output 2 based on the PDM.

2.1 Guideline for seismic assessment: The number of the participants in the training program on seismic assessment

The achievement in this term:

<Guidelines>

The WG2 completed the four (4) types of GLs for seismic evaluation of buildings (RC, PC and Masonry) and infrastructures and lifelines. On 6 November 2018, the GLs for buildings were approved by No.185 Ministerial Order of MCUD. And on 28 December 2018, the GL for infra structures and lifeline structures was approved by No. 174/303 Joint Ministerial Order of MCUD and MRTD.

<Training Program>

After obtaining the approval on the draft GLs by STC of MCUD, WG2 conducted training course of seismic evaluation for buildings on June 4 to 6, 2018, and one for infrastructures and lifeline structures on June 7, 2018, respectively. For the former, 110 trainees including inspectors from GASI participated. The number of participants was far beyond the estimate. For the latter, 70 trainees which were also beyond the estimate participated.

In addition to the planned training course above, training course on seismic evaluation was held in Erdenet on September 8, 2018 in response to MACE's request. 23 engineers in Erdenet attended it. It is noted that collaboration with MACE will be one of practical way to disseminate the technology on seismic evaluation and seismic strengthening, since the MACE's program can make attendees motivated to participate by giving them "points" needed to be a registered engineer.

On November 12 to 13, 2018, the training course on non-destructive inspection equipment for seismic evaluation was conducted, in which 64 trainees participated.

After the publication of guidelines, TOTs started to disseminate the technology as mentioned before, in which 53 officers participated. Also 68 engineers from private companies participated in the training program for seismic evaluation supported by MACE, to which WG2 contributed.

2.2 Guideline for seismic strengthening: The number of the training program on seismic strengthening

The achievement in this term:

<Guidelines>

The WG2 members decided that seismic evaluation and seismic strengthening should be combined in one GL for each building structure except for Infrastructures and lifelines. As mentioned above, the WG2 completed the three (3) types of GLs for seismic evaluation including seismic strengthening of buildings (RC, PC and Masonry) and they were

approved by the minister of MCUD on November 6, 2018.

<Training Program>

On May 1 to 3m 2019, the planned training course on seismic strengthening was conducted, in which 65 trainees participated. It is noted that the number of participants was beyond the estimate.

(3) Output3

The following two indicators are applied to evaluate the achievement of the Output 3 based on the PDM.

3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project

Achievement in this term:

The WG3 developed the GL in April 2018 and the Guidebook to teach “Life-Safety Education” in May 2019 (currently in the approved process) for DRR education and raising awareness, and it has not reached the stage of evaluation with quantitative indicators.

3.2 The number of visitors in Training Center

Achievement in this term:

The WG3 developed educational materials in March 2019 and is now improving training program for the Training Center in line with the “Life-Safety Education” Program for DRR education and raising awareness.

After the handing over ceremony of the equipment of earthquake simulation experience conducted at the Earthquake Experience Room of the Disaster Protection Training and Methodology Center (DPTMC) on 20 March 2019, the equipment and all exhibitions including explanatory materials of earthquake mechanism and the miniature building models for learning seismic retrofitting have been made available for training program for implementing earthquake disaster prevention.

As of end of May 2019, the number of visitors to DPTMC who participated in the training program for implementing earthquake disaster prevention from opening at the Earthquake Experience Room was about 7,400 persons collectively. The breakdown of visitors' number is shown in below,

Group of Visitors	Number of Visitors		
	March, 2019	April, 2019	May, 2019
Public Service	1,166	1,259	541
Private Firm	58	558	611
Residents	0	445	450
School Students including Kindergarten, Primary, Lower-Secondary, higher-Secondary	1,920	925	800
University & College Students	160	685	930
Teachers	127	83	68
Total	3,431	3,955	3,400

1-4 Achievement of the Project Purpose

The following two indicators are applied to evaluate the achievement of the Project based on the PDM.

1. The number of the approved guidelines and agreement
2. The number of the data on disaster risk reduction which newly established and improved

The achievement in this term:

Activities for developing GLs, agreements, and necessary materials have been continued at each WG. In order to ensure sustainability after the Project, each activity is planned and implemented so that GLs and other related outputs which will be developed in the Project are approved by NEMA, MCUD or MECSS through their standard procedures. The existing status of developing related documents are as below;

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
Output1	National Earthquake Disaster Protection Planning GL	NEMA	Draft GL was completed. It will be finally compiled for the submission to the Executive Committee of NEMA
	State Earthquake Disaster Protection Service Planning GL	NEMA	Draft GL was completed. It will be finally compiled for the submission to the Executive Committee of NEMA
	Aimag / Soum Level Earthquake Disaster Protection Planning GL	NEMA	Draft GL was completed. It will be updated or revised based on the feedbacks from pilot Aimags.
	Capital City / District Level Earthquake Disaster Protection Planning GL	EMDC	Draft GL was completed. It will be updated or revised based on the feedbacks from pilot Districts
	Earthquake Disaster Risk Assessment GL	NEMA	Draft GL for Comprehensive version was updated base on comments from the JET. Only the framework of draft

Documents Prepared in each Activity		Administrative Jurisdiction	Existing Status of Development
			GL for detailed version was confirmed.
	GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR)	NEMA	The GL was approved as the order A/47 by the head of NEMA on 20 February 2019.
	Agreements	NEMA or other related organizations	Four (4) fields of agreements were signed officially and seven (7) fields of agreements were drafted by this reporting period.
	White Paper	NEMA	“Mongolia Disaster Risk Reduction White Paper 2017” was completed
Output2	Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete Buildings	MCUD	The GL was approved by the minister of MCUD on November 6, 2018.
	Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete Buildings	MCUD	The GL was approved by the minister of MCUD on November 6, 2018.
	Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings	MCUD	The GL was approved by the minister of MCUD on November 6, 2018.
	Seismic Evaluation Method of Infrastructures and Pipelines	MCUD, MTRD	The GL was jointly approved by the ministers of MCUD and MTRD on December 28, 2018.
Output3	Life Safety Education Program	MECSS	Approved on April 6, 2018
	Guidebook for Life Safety Education	MECSS	Developed in May 2019 and currently in the official review process.
	Instructor’s Manual (with DVD) for Community DRR Training	NEMA	Completed and printed 150 copies in August 2018.

1-5 Changes of Risks and Actions for Mitigation

(1) Output1

1) Delay of the compilation work of the GLs

The four (4) GLs are almost in the final compilation stage and are in preparation for submission to the Executive Committee of NEMA. However, the persons in charge in the WG1 were busy with preparation and implementation of the disaster protection training conducted in April 2019. They were hardly able to work for the Project during this period. Thus, the preparation work of GLs is delayed. It is ironic that our activities are delayed by disaster protection training that reflects our activities.

2) Recognize the need for effective investment

The WG members must recognize and understand the needs for the effective investment. In Mongolia, buildings, infrastructure and lifelines are the most vulnerable “residual risks”. The “residual risk” is the disaster risk that remains even if effective disaster protection measures are taken. It should be recognized that most residual risk can be mitigated by investment.

In order to make an effective investment, it is necessary to look for the best combination of structural and non-structural measures, and should be prioritized in areas where there is a high potential for economic losses and urgent action is needed.

And especially, it is necessary to make the plan by recognizing the implementation schedule of structural measures that take time to complete.

3) Preparation Work of the White Paper 2018

Although the working group for the White Paper 2018 has been established, the preparation work for 2018 version has not started yet. In order to issue the 2018 version at an appropriate time, the preparation work must start soon using the manual prepared by WG1. Since the 2018 version is issued during the Project period, JET must work on NEMA side so that better white paper can be created.

4) Make Redundancy of System Administration for SISDRR O&M

There are some challenges regarding a shortage of human resources for system administration for SISDRR O&M. The Spatial Information and Technology Division have a responsibility of operation and management of SISDRR, but there is only four staffs including division chief. And the focal system engineer is only one staff as of now. If the key person leaves for the division, it is difficult to keep a stable operation and management of SISDRR. It is serious risk and the JET requests to NEMA side to assign a few additional system engineers in the division to share the task of SISDRR O&M.

(2) Output2

1) Absence of Leader of Working Group

Due to the retirement of Mr. L. Bilegjargal, the previous leader of WG2, WG2 has to act without group leader. Since the activity of WG2 is now to conduct TOTs in some individual organizations including MACE, the strong leadership is still needed to promote disseminate the technology.

So, it is an urgent matter to have new leader assigned and to give him/her the knowledge and information up to present.

2) Amendment of Training Tools

Through training courses, it was seen that some items in training tools, such as calculation spread sheets, had better be amended, though the responsibility for results is not on the distributor but on the users.

So, WG2 will continue to find other reconcile items and amend them, so that the tools will be adequately used.

(3) Output3

1) Delay of Individual Editing Work

Due to the frequent mission travels to districts of WG members, some personal situation including their or family's health problems and others, the individual editing work for the Guidebook development by working group members had been delayed. MECSS included the work in the MECSS's official work plan of 2019 and finally the work was completed in May 2019.

1-6 Progress of Actions undertaken by JICA

Japanese side requested that Mongolian side shall implement essential countermeasures against further inundation at the DPTMC since the basement floor of the Center was intruded by ground water after heavy rain in early September 2018.

1-7 Progress of Actions undertaken by Gov. of Mongolia

Mongolian side has a duty to conduct waterproofing work of whole basement floor of DPTMC with adequate construction management from the end of March to May 2019. Furthermore, Mongolian side explained that the budget for this waterproofing work has already been secured by EMDC as a part of the budget for inspection and maintenance of DPTMC, and the detailed schedule and the constructor of this work will be decided by the end of March 2019.

1-8 Progress of Environmental and Social Considerations (if applicable)

N/A

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

N/A

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

N/A

2. Delay of Work Schedule and/or Problems (if any)

2-1 Detail

N/A

2-2 Cause

N/A

2-3 Action to be taken

N/A

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Mongolia, etc.)

N/A

3. Modification of the Project Implementation Plan

3-1 PO

N/A

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

N/A

4. Preparation of Gov. of Mongolia toward after completion of the

Project

In this term, the specific policy and actions are not discussed yet.

II. Project Monitoring Sheet I & II *as Attached*

Project Monitoring Sheet 1 Ver. 6.0 (Term: December, 2018 - May, 2019)

Project Title: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia
 Implementing Agency: National Emergency Management Agency (NEMA)
 Target Group: NEMA, Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, General State Inspection Agency, Emergency Management Department of the Capital City (EMDC), Construction Quality and Safety Department, Master Planning Agency of Capital City

Period of Project: December 2018 to November 2019

Project Site: Mongolia

Version 6
Dated June 24th, 2019

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal Seismic risk will be reduced.</p>	<p>1. Number of the approved guideline, rules, provisions 2. Number of white paper open to public 3. Number of the executed seismic assessment 4. Number of the seismic strengthened building 5. Number of implemented activities on disaster risk reduction education</p>	<p>Study by NEMA</p>	<p>The policy on disaster risk reduction will not be changed in Mongolia.</p>	<p>Activities for developing guidelines and related materials have been continued at each OUPUT activity. The latest status is as below: -Related to OUPUT1: 3 (approved) / 9 (planned to be developed) -Related to OUPUT2: 7 (approved) / 7 (planned to be developed) -Related to OUPUT3: 2 (approved) / 3 (planned to be developed)</p>	<p>In order to ensure sustainability after the Project, each WG makes it a goal to get an approval of guidelines and other related outputs which will be developed in the Project from NEMA, MUCUD or MECSS through their standard procedures.</p>
<p>Project Purpose The Capacity of National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.</p>	<p>1. The number of the approved guidelines and agreement. 2. The number of the data on disaster risk reduction which newly established and improved</p>	<p>Project report</p>	<p>NEMA expands the pilot activities in other aimags and sums.</p>	<p>1.1: Regarding Earthquake Disaster Risk Assessment (EDRA) GL, Detailed EDRA GLs were negotiated with Comprehensive EDRA GL, Technical GL for Earthquake Risk Assessment has been prepared. Regarding Earthquake Disaster Protection Planning GLs, Aimag / Soum Level and Capital City / District Level have been developed. On the other hand, National Level and State Services Level are under development. Regarding disaster database GL, the GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR) was approved as the order AM7 by the head of NEMA on 20 February 2019.</p>	<p>1.1: The WG1 has a plan to prepare following GLs. - Two (2) types of Earthquake Disaster Risk Assessment GLs 1) Comprehensive Earthquake Disaster Risk Assessment GL 2) Technical GL for Earthquake Risk Assessment - Four (4) types of disaster protection planning GLs 1) National Earthquake Disaster Protection Planning GL 2) State Earthquake Disaster Protection Service Planning GL 3) Aimag / Soum Level Earthquake Disaster Protection Planning GL 4) Capital City / District Level Earthquake Disaster Protection Planning GL - One (1) disaster database GL 1) GL on Operation and Management of Spatial Information System for Disaster Risk Reduction (SISDRR)</p>
<p>Outputs 1. Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced.</p>	<p>1.1 The number of guidelines, operational rules, provisions which are developed. 1.2 The number of the draft of agreement developed and participants who participated in the training programs on agreements 1.3 White paper on disaster risk reduction</p>	<p>Project report</p>	<p>1. The counterparts from NEMA, the Ministry of Construction and Urban Development and the Ministry of Education continue to work in the same position. 2. Participants in training programs continue to work in the same position. 3. The relation among related organizations is maintained. 4. Exchange information is maintained among the related organizations.</p>	<p>1.1: Following four (4) fields of agreement were signed by this reporting period. - Stable supply of foods and water to evacuation places and temporary housings. The agreement was signed on 16 October 2018 between NEMA and the MOFA. - Stable supply of medicines during disaster. The agreements between MOH and three major pharmaceutical sales companies were signed on 7 November 2018. - Spatial Database Exchange: the official agreement between ALA GaC and NEMA was concluded in April 2018. - Spatial Database Exchange: the official agreement between NEMA and the Master Planning Agency of Capital City was concluded on 5 March 2019.</p>	<p>1.2: Draft agreements are under discussion with following sectors. - Supply of construction materials and temporary housings - Stable transport and securing road transport during disaster - Stable fuel supply during disaster - Set up priority telephone lines on disaster - Emergency water supply on disaster - Usage of public buildings, especially schools as evacuation places - Wastewater treatment at the evacuation place</p>
<p>2. Capacity of public administration officer related with the seismic assessment and seismic strengthening for buildings will be enhanced.</p>	<p>2.1 Guideline for seismic assessment The number of the participants in the training program on seismic assessment 2.2 Guideline for seismic strengthening The number of the training program on seismic strengthening</p>	<p>Project report</p>	<p>2.1 & 2.2: The WG2 completed the three (3) types of GLs for seismic evaluation and retrofitting method of buildings (RC, PC and Masonry) and the GL for seismic evaluation method of infrastructures and lifelines. On 6 November 2018, the three GLs for buildings were approved by No.185 Ministerial Order of MUCUD. And on 28 December 2018, the GL for infrastructures and lifelines was approved by No. 174/303 Joint Ministerial Order of MUCUD and MRTD. Regarding the training program, following programs have already been conducted. - 180 trainees (Jun. 4-7, 2018) - 23 trainees (Sep. 6, 2018) - 64 trainees (Nov. 12-13, 2018) - 31 trainees (Mar. 28-2019) - 21 trainees (May. 6-31 2019) - 65 trainees (May. 1-3, 2019)</p>	<p>2.1 & 2.2: The WG2 has a plan to prepare following GLs. 1) Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete (RC) Buildings 2) Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete (PC) Buildings 3) Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings 4) Seismic Evaluation Method of Infrastructures and Pipelines</p>	<p>2.1 & 2.2: The WG2 has a plan to prepare following GLs. 1) Seismic Evaluation and Retrofitting Method of Existing Reinforced Concrete (RC) Buildings 2) Seismic Evaluation and Retrofitting Method of Existing Wall Type Precast Concrete (PC) Buildings 3) Seismic Evaluation and Retrofitting Method of Existing Masonry Buildings 4) Seismic Evaluation Method of Infrastructures and Pipelines</p>
<p>3. Implementing plan on disaster risk reduction education and awareness raising activities will be developed and realized.</p>	<p>3.1 The number of the cases of delivering classes on disaster risk reduction based on the activities of the Project 3.2 The number of visitors in Training Center</p>	<p>Ordinance of Ministry of Education, Culture and Science Ordinance of NEMA</p>	<p>3.1: The WG3 developed the GL in April 2018 and the Guidebook to teach "Life-Safety Education" in May 2019 (currently in the approved process) for DRR reduction and raising awareness, and it has not reached the stage of evaluation with quantitative indicators. 3.2: As of end of May 2019, the number of visitors to DPTMC who participated in the training program for implementing earthquake disaster prevention from opening at the Earthquake Experience Room was 5,800 persons collectively. The breakdown of visitors' number is shown in below.</p>	<p>3.1: The GL for DRR education titled "The Program for Life Safety Education" was approved by MECSS on April 6th 2018. 3.2: The handing over ceremony of the equipment of earthquake simulation experience was conducted at the Earthquake Experience Room of the Disaster Protection Training and Methodology Center (DPTMC) on 20 March 2019.</p>	<p>3.1: The GL for DRR education titled "The Program for Life Safety Education" was approved by MECSS on April 6th 2018. 3.2: The handing over ceremony of the equipment of earthquake simulation experience was conducted at the Earthquake Experience Room of the Disaster Protection Training and Methodology Center (DPTMC) on 20 March 2019.</p>

Activities	The Mongolian Side	Inputs	The Japanese Side	Important Assumption
<p>1.1.1 To identify problems and challenges on implementation of legal frameworks of disaster risk reduction</p> <p>1.1.2 To develop guidelines on improvement of legal frameworks and plans, assessment of disaster risk and database on disaster risk reduction</p> <p>1.1.3 To develop new regulation and the drafts(note 1-1)) of revised version of regulation on implementation of Law of disaster protection</p> <p>1.2.1 To develop the draft of the agreement (note 1-2)) which shows the coordination and cooperation among NEMA and related organizations</p> <p>1.2.2 To realize training programs for disseminating the agreement mentioned in 1.2.1 and strengthening the coordination structure among organizations related with disaster risk reduction</p> <p>1.3.1 To identify problems and challenge of monitoring, report, evaluation and discourse of disaster protection plan at national and local levels (note 1-3))</p> <p>1.3.2 To revise these plans and make a manual for the revision of disaster protection plan</p> <p>1.3.3 To improve the present system (note 1-4)) which collect and analyze information on disaster risk reduction</p> <p>1.3.4 To develop white paper on disaster risk reduction which let the Mongolian people know the progress on implementation, monitoring, evaluation of disaster risk reduction plan at national and local levels through the activities of 1.3.1 to 1.3.3</p> <p>1.3.5 To improve the system of database on seismic strength of buildings, infrastructure and lifeline (note 1-1)</p> <p>2.1.1 To analyze the manual of seismic assessment of buildings and lifeline (note 2-1)) based on the context of the Law of Disaster Protection and develop the draft of revised version</p> <p>2.1.2 To develop guidelines-methodologies (note 2-2)) which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment</p> <p>2.1.3 To implement training programs (note 2-3)) for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline</p> <p>2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings</p> <p>2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of buildings a pilot</p> <p>2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings</p> <p>3.1.1 To develop a guideline which shows contents, method and implementation way of disaster risk reduction education in kindergarten and schools based on Law of Disaster Protection</p> <p>3.1.2 To develop textbooks, supplementary readers and educational materials related with disaster risk reduction education in kindergarten and primary and secondary schools</p> <p>3.1.3 To implement training programs for the instructors (note 3-1)) of Teacher Training Institutes and experts of educational department in local governments, using the guideline and materials developed in 3.1.1 and 3.1.2 respectively</p> <p>3.1.4 To implement the training program for teachers by the instructors and experts who received the training programs mentioned in 3.1.3</p> <p>3.2.1 To develop comprehensive work plan (note 3-2)) for disaster risk reduction education and raising awareness at national and local levels</p> <p>3.2.2 To develop materials for the training on disaster risk reduction education and raising awareness, and implement the training for the target groups (note 3-3)) in pilot areas</p> <p>3.2.3 To develop and implement educational and training program for implementing disaster prevention and simulation program in Training Center</p>	<p>The Mongolian Side</p> <ul style="list-style-type: none"> - Assignment of counterparts - Project Director - Project Managers - Project Coordinator - Project Members <p>For Output 1</p> <ul style="list-style-type: none"> - Policy Coordination and Cooperation Department, NEMA - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Disaster Research Institute, NEMA - Emergency Management Department of Capital City (EMDC) <p>For Output 2</p> <ul style="list-style-type: none"> - Disaster Operational Department, NEMA - Disaster Prevention Department, NEMA - Ministry of Construction and Urban Development - Master Planning Agency of Capital City - General State Inspection Agency <p>For Output 3</p> <ul style="list-style-type: none"> - Disaster Prevention Department, NEMA - Ministry of Education, Culture and Science - Teacher Training Institute - Educational Research Institute - Emergency Management Department at aimag level 	<p>The Japanese Side</p> <ul style="list-style-type: none"> - Dispatch of Experts - Leader - Disaster Risk Management - Disaster Risk Reduction Framework - Disaster Risk Reduction Information - Seismic Strengthening Assessment - Seismic Strengthening Method - Seismic Strengthening Design - Disaster Risk Reduction at Community Level - Educational Material Development <p>Provision of Equipment</p> <ul style="list-style-type: none"> - Equipment for seismic assessment - Earthquake simulation experience equipment for Training Center such as shaking table <p>Training in Japan and/or for the third countries</p>	<p>Pre-Conditions</p> <p>➔</p> <p><Issues and countermeasures></p> <p>1) Output Delay of the completion work of the GLs: The four (4) GLs are almost in the final completion stage and are in preparation for submission to the Executive Committee of NEMA. However, the persons in charge in the WG1 were busy with preparation and implementation of the disaster protection training conducted in April 2019. They were hardly able to work for the Project during this period. Thus, the preparation work of GLs is delayed. It is ironic that our activities are delayed by disaster protection training that reflects our activities.</p> <p>2) Output Recognize the need for effective investment: The WG members must recognize and understand the needs for the effective investment. In Mongolia, buildings, infrastructure and lifelines are the most vulnerable "residual risks". The "residual risk" is the disaster risk that remains even if effective disaster protection measures are taken. It should be recognized that it is not realistic to expect that the disaster risk can be completely eliminated. It is necessary to look for the disaster risk reduction measures that are effective and efficient. The disaster risk reduction measures should be prioritized in a high potential for economic losses and urgent action is needed. And especially, it is necessary to make the plan by recognizing the implementation schedule of structural measures that take time to complete.</p> <p>3) Output Preparation Work of the White Paper 2018: Although the working group for the White Paper 2018 has been established, the preparation work for 2018 version has not started yet. In order to issue the 2018 version at an appropriate time, the preparation work must start soon using the manual prepared by WG1. Since the 2018 version is issued during the Project period, JET must work on NEMA side so that better white paper can be created.</p> <p>4) Output Make Redundancy of System Administration for SISDRR O&M: There are some challenges regarding a shortage of human resources for system administration for SISDRR O&M. The Spatial Information and Technology Division has a responsibility of operation and management of SISDRR, but there is only four staffs including division chief. And the local system engineer is only one staff as of now. If the key person leaves for the division, it is difficult to keep a stable operation and management of SISDRR. It is serious risk and the JET requests to NEMA side to assign a few additional system engineers in the division to share the task of SISDRR O&M.</p> <p>5) Output2 Absence of Leader of Working Group: Due to the retirement of Mr. L. Bilegjaral, the previous leader of WG2, WG2 has to act without group leader. Since the activity of WG2 is now to conduct TOTs in some individual organizations including MACE, the strong leadership is still needed to promote disseminate the technology.</p> <p>So, it is an urgent matter to have new leader assigned and to give him/her the knowledge and information up to present.</p> <p>6) Output2 Amendment of Training Tools: Through training courses, it was seen that some items in training tools, such as calculation spread sheets, had better be amended, though the responsibility for results is not on the distributor but on the users. So, WG2 will continue to find other reconcile items and amend them, so that the tools will adequately used.</p> <p>7) Output3 Delay of Individual Editing Work: Due to the frequent mission travels to districts of WG members, some personal situation including their or family's health problems and others, the individual editing work for the Guidebook development by working group members had been delayed. MECSS included the work in the MECSS's official work plan of 2019 and finally the work was completed in May 2019.</p>	
<p>Notes</p> <p>1-1) Amended Law of Disaster Protection "8.2 Rules of risk evaluation", "9.3 Guidelines and methodologies to develop disaster management plan", "12.1 Guidelines for preparation system", and "13.2 Rules and regulations of disaster management", and etc.</p> <p>1-2) Contracts, cooperation plan and MoU are equivalent to agreement mentioned in the PDM</p> <p>1-3) National level, UB city and two provinces are the target areas</p> <p>1-4) Improvement of existing "Disaster Information Sharing System"</p> <p>1-5) Improve existing database for sharing with related agencies (Components of the database system of UB city are under investigation)</p> <p>2-1) Buildings: Buildings, Road and Bridge Lifeline: Warm water pipeline, Water supply and sewerage, electric transmission and distribution facilities</p> <p>2-2) Guidelines are regarded as operational guidelines by Resolution of Minister</p> <p>2-3) Target: Ministry of Construction and Urban Development, Ministry of Education, Culture and Science, UB city, General State Inspection Agency, province level officers in charge of buildings, infrastructure and lifeline, association of architects, association of design engineers etc.</p> <p>3-1) Instructors of Institute of Teacher's Professional Development, experts of training departments of provinces and cities, and certificated teacher's instructors</p> <p>3-2) A document to clarify the targets, implementers and instructors of public education and training, and the contents of required education and training activities for the purpose of ensuring nationwide implementation of education and training program to all the necessary target stakeholders</p> <p>3-3) Target groups: (1) Staff of NEMA Disaster Prevention Department/ Emergency Operation Department, Training Center, and Emergency/Management Departments of Cities, Provinces, and Districts, (2) Members in charge of disaster prevention in Disaster Protection Services at National, Province and City levels, (3) Heads of governor's offices of Provinces, Sums, and Districts (4) Heads of Bags and Khoroos, (5) Coordinators of civil activities in Provinces, Districts, and Khoroos and (6) Volunteers (Only in pilot areas)</p> <p>3-4) The facility that the EMDC is constructing and preparing for providing DRR training and education to the citizens in Khan Uul district in UB city.</p>				

Activities	Year												Responsible Organization	Issue & Countermeasures				
	2017			2018			2019			2020								
	IV	I	II	III	IV	I	II	III	IV	I	II	III			IV			
Output 2: To analyze the status of seismic assessment of buildings and refine based on the context of the Law of Disaster Protection and develop the draft of revised version	2.1.1 To identify problems of present specifications of seismic resistance	Plan																<Completed> WG2 discussed the current situations and issues of each specifications, followed by the WG2 members to identify the current situation and the seismic resistance but on the occasion, no problems on the seismic resistance was identified.
	2.1.2 To revise the present specifications and to develop new code of seismic resistance	Actual																<Completed> WG2 discussed the current situations and issues of each specifications, followed by the conclusion that the issues will be stated and solved in the guidelines established in this project.
2.1.3 To develop guidelines/methodologies which show the method for implementing seismic assessment for buildings and facilities, and how to use equipment	2.1.2.1 To consult the contents of Guideline regarding the seismic evaluations	Plan																<Completed> WG2 discussed on the structure of guidelines so that it was decided that guideline will be established for each structures combining seismic evaluation and strengthening.
	2.1.2.2 To develop the seismic evaluation of RC and PC building	Actual																<Completed> Guidelines were approved by the minister of MCLUD on November 6, 2018.
	2.1.2.3 To develop the seismic evaluation of masonry building	Plan																<Completed> Guideline was approved by the minister of MCLUD on November 6, 2018.
	2.1.2.4 To develop the seismic evaluation of infrastructure and lifeline	Actual																<Completed> Guideline was approved by ministers of MCLUD and MRTD on December 26, 2018.
2.1.3 To implement training programs for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline	2.1.3.1 To consult training program of the guidelines	Plan																<Completed> WG2 decided to implement "TOT" for seismic evaluation to individual organization, since the seminars to be transferred will be different according the experience of counterpart.
	2.1.3.2 To implement training for the evaluation of seismic resistance	Actual																TOTs have been started for the WG2 members and for nominated TOT trainees. Training manuals will be arranged through TOT for future technology dissemination. Since some programs in which trainees will explain the guidelines to the third parties are also planned, detailed lecture was given to trainees.
	2.2.1 To develop guidelines/methodologies on seismic strengthening and reconstruction of buildings	Plan																<Completed> Guidelines were approved by the minister of MCLUD on November 6, 2018.
	2.2.1.1 To consult the contents of guidelines-methodologies	Actual																<Completed> Guidelines were approved by the minister of MCLUD on November 6, 2018.
2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarten, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of building as a pilot design	2.2.2.1 To consult the target buildings for trial design	Plan																<Completed> WG2 selected 5 buildings for trial design of seismic strengthening. These buildings were explained and approved in 6th JCC.
	2.2.2.2 To design of rebuilding and strengthening on target buildings	Actual																<Completed> Necessary diagnosis and trial design were implemented followed by sample design drawings which will be used as training material and as sample drawing for Mongolian engineers.
	2.2.3 To realize training programs with the participation of NEMA for enhancing knowledge and capacity of the experts who implement seismic strengthening of buildings	Plan																<Completed> WG2 discussed on the training program, so that date, venue, and contents were finalized. It was also decided that WG2 members introduce their current activities to the participants.
	2.2.3.1 To plan training program	Actual																Training for seismic strengthening of buildings was conducted on May 1-3, 2019 at Training Center and CQC meeting room, in which 100 offices and engineers participated.
2.2.3.2 To implement training program	Plan																	It is necessary to transfer the technology of seismic strengthening to the counterpart organizations, since seismic strengthening requires technical backbone of seismic design. So, TOT collaborated with MACE will be planned and conducted.
	Actual																	

