

モンゴル国
国家非常事態庁 (NEMA)

モンゴル国
モンゴル地震防災能力向上プロジェクト
プロジェクト事業完了報告書
付属資料 I

令和2年1月
(2020年)

独立行政法人
国際協力機構 (JICA)

株式会社 オリエンタルコンサルタンツグローバル
国際航業株式会社
OYO インターナショナル株式会社
一般財団法人 都市防災研究所

環境
JR
19-076

モンゴル国
国家非常事態庁 (NEMA)

モンゴル国
モンゴル地震防災能力向上プロジェクト
プロジェクト事業完了報告書
付属資料 I

令和2年1月
(2020年)

独立行政法人
国際協力機構 (JICA)

株式会社 オリエンタルコンサルタンツグローバル
国際航業株式会社
OYO インターナショナル株式会社
一般財団法人 都市防災研究所

**モンゴル国地震防災能力向上プロジェクト
プロジェクト業務完了報告書
付属資料**

付属資料 I

1. 業務フローチャート	1-1
2. 活動実績	2-1
3. 専門家派遣実績	3-1
4. 研修員受け入れ実績	4-1
5. セミナー実施実績	5-1
6. 供与機材・携行機材実績	
6-1. 耐震診断機材供与実績	6-1-1
6-2. 地震体験機材供与実績	6-2-1
6-3. 携行機材供与実績	6-3-1

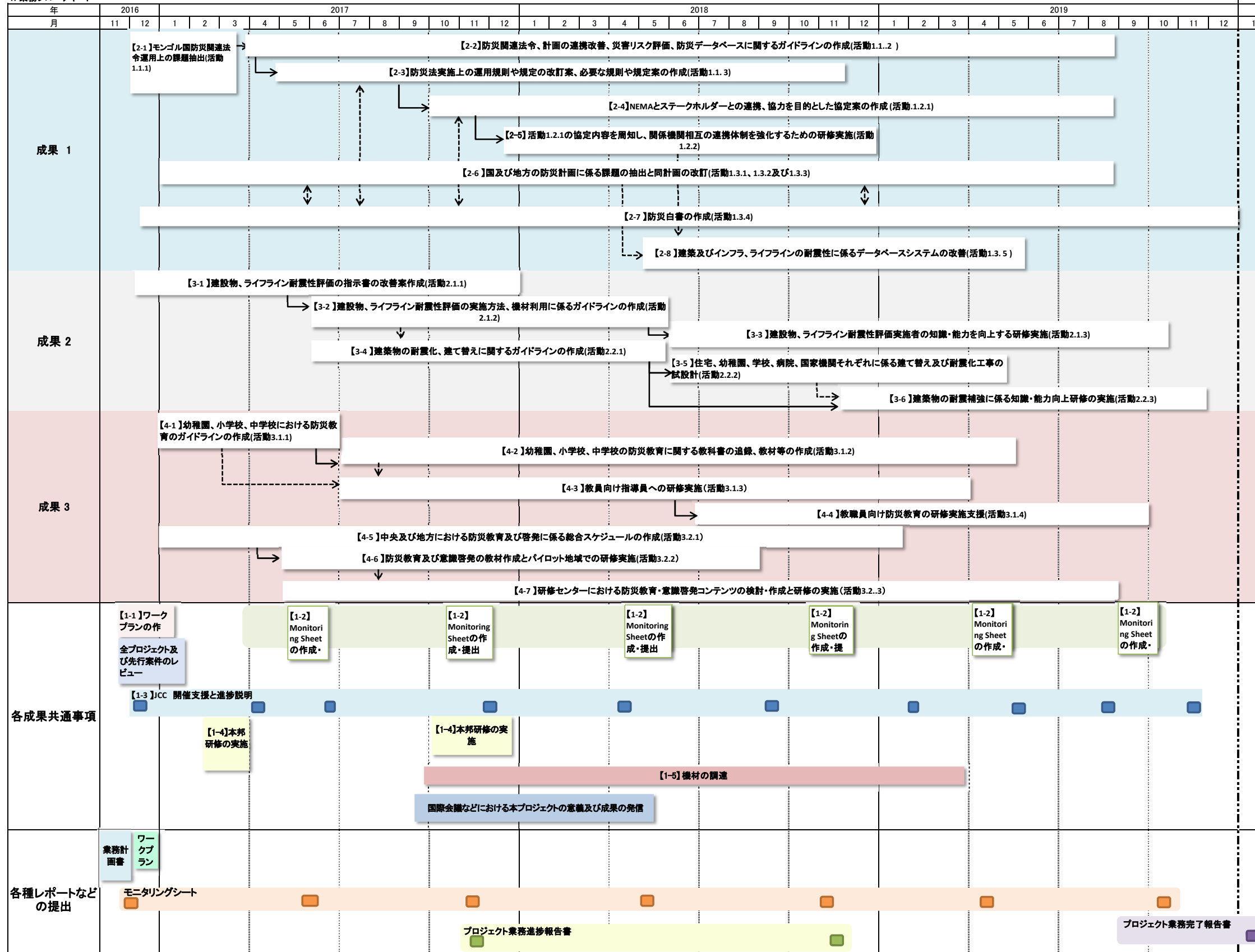
付属資料 II

7. PDM	7-1
8. JCC 議事録	8-1

付属資料 I

1 業務フローチャート

1. 業務フローチャート



2 活動計画／実績

2. 活動計画/実績

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

Activities		2017																2018				2019				2020				Responsible Organization		Monitoring																														
		W U R S H I T A				A R S H I T A				C H I T A				A M Z A K A				S E K H O I M A				F A K I T A				K O S O M I N E				O G A W A & S U W A				H A W A K I				O T A N A N B A A T A R				Japan	GOM	Achievements	Issue & Countermeasures																	
Sub-Activities		IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	IV	I	II	III	IV																																			
Output 1:																																																														
1.1.1 To 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																																		Plan																							✓	✓	<Completed> The WG1 member gathered information about exiting rules and regulations for disaster risk reduction in order to reveal a plan to develop guidelines in the Project.	<no further activities>		
1.1.1.2 To summarize the problems and challenges																																		Plan																							✓	✓	<Completed> Due to the enforcement of the amended law of disaster protection, WG1 decided to develop new rules and regulations or to revise previous them for whole DRR planning and activities.	<no further activities>		
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																																		Plan																									✓	✓	<Completed> The WG1 members developed "Integrated Earthquake Disaster Risk Assessment GL" and an application software for earthquake risk assessment for central and local government staff have been developed. "Technical GL for earthquake risk assessment" for experts and researcheres has also been developed.	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).
1.1.2.2 To develop the guideline of earthquake disaster protection plan																																		Plan																									✓	✓	<Completed> The WG1 member prepared 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. These GLs were submitted to the Excuteve Committee of NEMA, and Aimag / Soum Level Earthquake Disaster Protection Planning GL and Capital City / District Level Earthquake Disaster Protection Planning GL were approved.	National Earthquake Disaster Protection Planning GL and State Earthquake Disaster Protection Service Planning GL need to be approved by the Cabinet and are expected to take time.
1.1.2.3 To develop the guideline of the earthquake disaster preparedness																																		Plan																									✓	✓	Based on the result of discussion in Activity 1.1.1, the WG1 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.	<no further activities>
1.1.2.4 To develop the guideline of earthquake disaster management																																		Plan																									✓	✓	Based on the result of discussion in Activity 1.1.1, the WG1 decided the GL for earthquake disaster management will not be prepared in the Project.	<no further activities>
1.1.2.5 To develop the Guideline of Database																																		Plan																									✓	✓	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".	<no further activities>
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 extract regulations to be newly established and/or to be revised																																		Plan																									✓	✓	It was confirmed that the necessity for establishment and revision of one (1) regulation which is corresponded to the Risk Assessment GL and six (6) regulations which are corresponded to the Disaster Protection Planning GL.	<no further activities>
1.1.3.2 To develop new regulations and revised regulations																																		Plan																									✓	✓	<Completed> Regarding the seven (7) regulations confirmed in Activity 1.1.3.1, earthquake disaster part of the regulations is considered to be developed as five (5) GLs namely, Earthquake Disaster Risk Assessment GL, 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 in the Project.	The seven regulations for disaster species other than the earthquake are not created in the Project. The prospects for completion are not established. Therefore, the regulations shall be specialized for earthquake disasters.
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																																		Plan																									✓	✓	<Completed> Finally, nine (9) fields were selected for establishing the agreement during the Project period as described in Activity 1.2.1.2.	<no further activities>
1.2.1.2 To organize the items to be described in the agreement on the extracted activity items, coordinate with related organizations, prepare draft agreement																																		Plan																									✓	✓	The WG1 members prepared the draft agreement for following field and discussed the contents with ministries and agencies subject to the agreement. "Stable supply of foods and water to evacuation places and temporary housings" with the Ministry of Food and Agriculture "Stable supply of medicines during disaster" with the Ministry of Health "Supply of construction materials and temporary housings" with the Ministry of Construction and Urban Development "Stable transport and securing road transport during disaster" with the Ministry of Road and Transportation Development "Stable fuel supply during disaster" with the Mineral Resources and Petroleum Agency "Set up priority telephone lines on disaster" with a mobile phone company "Emergency water supply on disaster" with the Water Management Authority "Usage of public buildings, especially schools as evacuation places" between EMDC and the Mayor's Office of UB City "Wastewater treatment at the evacuation place" between EMDC and the Facility Service Office of UB City	<no further activities>
1.2.1.3 To conclude agreement																																		Plan																									✓	✓	Among the nine (9) agreements, eight (8) agreements have been concluded except "Set up priority telephone lines on disaster"	Agreement on "Set up priority telephone lines on disaster" has not been concluded due to several technical issues to establish the priority lines and at present, there is no prospect of solving the problem. Stakeholder's effort is desired.

Activities	Sub-Activities	O W A D A	F U R U H I T A I	N I C A H I K I T A W A	M Y A A Z A K I	Y A S E	F U K U S H I M A	M A K I	A O K I	K O M I N E	K O D A M A	O G I W A K I	H I T A R	N A Y A N B A A T A R	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	I	II	III			IV
Output 2:																																					
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																																					
2.1.1.1 To identify problems of present specifications of seismic resistance																																		✓	✓	<Completed> WG2 discussed the current situations and issues of each specifications, followed by the conclusion that the current specifications are not on the seismic resistance but on the deterioration. So no problems on the seismic resistance was identified.	<no further activities>
2.1.1.2 To revise the present specifications and to develop new code of seismic resistance																																		✓	✓	<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.	<no further activities>
2.1.2 To develop guidelines-methodologies which show the method for implementing seismic assessment for buildings and lifelines, and how to use equipment																																					
2.1.2.1 To consult the contents of Guideline regarding the seismic evaluations																																		✓	✓	<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.	<no further activities>
2.1.2.2 To develop the seismic evaluation of RC and PC building																																		✓	✓	<Completed> Guidelines were approved by the minister of MCUD on November 6, 2018.	<no further activities>
2.1.2.3 To develop the seismic evaluation of masonry building																																		✓	✓	<Completed> Guideline was approved by the minister of MCUD on November 6, 2018.	<no further activities>
2.1.2.4 To develop the seismic evaluation of infrastructure and lifeline																																		✓	✓	<Completed> Guideline was approved by ministers of MCUD and MRTD on December 28, 2018.	<no further activities>
2.1.3 To implemnt training programs for enhancing the knowledge and capacity of experts who assess the seismic strength of buildings and lifeline																																				↓ Equipment for seismic diagnosis	
2.1.3.1 To consult training program of the guidelines																																		✓	✓	<Completed> WG2 decidec to implement TOT for seismic evaluation to individual organization, since the contents to be transferred will be different according the objectives of counterparts.	<no further activities>
2.1.3.2 To implement training for the evaluation of seismic resistance																																		✓	✓	<Completed> Trainings of the seismic evaluation were conducted by WG2, followed by TOTs for relevant organizations to transfer the technologies. Materials needed for TOT were also arranged. NEME will monitor the implementation of TOT to make sure the continuous technology transfer. It is noted that the training course for seismic evaluation using the guideline established will	<no further activities>
2.2.1 To develop guidelines-methodologies on seismic strengthening and reconstruction of buildings																																					
2.2.1.1 To consult the contents of guidelines-methodologies																																		✓	✓	<Completed> WG2 discussed on the structure of guidelines so that it was decided that guideline will be established for each structures combining seismic evakuaton and strengthening.	<no further activities>
2.2.1.2 To develop the guidelines-methodologies																																		✓	✓	<Completed> Guidelines were approved by the minister of MCUD on November 6, 2018.	<no further activities>
2.2.2 To support the introduction and dissemination of seismic strengthening techniques for reconstructing collective housing, kindergarden, schools, hospital, national buildings and design the reconstruction and seismic strengthening of each type of building as a pilot																																					
2.2.2.1 To consult the target buildings for traial design																																		✓	✓	<Completed> WG2 selected 5 buildings for trial design of seismic strengthening. These buildings were explained and approved in 6th JCC.	<no further activities>
2.2.2.2 To design of rebuilding and strengthening on target buildings																																		✓	✓	<Completed> Necessary diagnosis and trial design were implemented followed by sample design drawings which will be used as trainig material and as sample drawing for Mongolian engineers.	<no further activities>
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																																					
2.2.3.1 To plan training progarm																																		✓	✓	<Completed> WG2 discussed on the trainig program, so that date, venue, and contents were finalized. It was also decided that WG2 members introduce their current activities to the participants.	<no further activities>
2.2.3.2 To implemnt training progarm																																		✓	✓	<Completed> Training of the seismic strengthening was conducted by WG2, followed by TOTs for relevant organizations to transfer the technologies. Materials needed for TOT were also arranged. NEME will monitor the implementation of TOT to make sure the continuous technology transfer. It is noted that the training course for seismic evaluation using the guideline established will be conducted as one of programs of MACE so that technical transfer to engineers in private companies can be done.	<no further activities>

3 専門家派遣実績

4 研修員受け入れ実績

4. 研修員受け入れ実績

1. 第一回本邦研修 2017年 3月 20～29日

1) 参加者

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) 研修プログラム

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
	17:30 - 18:00	Introduction of Japan Bosai Platform (JBP) activities
03/22(Wed)	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. 第2回本邦研修 成果3 2017年10月29日～11月11日

1) 参加者

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) 研修プログラム

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
10/31(Tue)	14:30 - 17:45	Disaster prevention training facility for citizens: Honjo Life safety Learning Center (Development of training programs)
	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. 第2回本邦研修 成果2 2017年11月12～22日

1) 参加者

	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) 研修スケジュール

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. 第2回本邦研修 成果1 2017年12月7~16日

1) 参加者

	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 Baljinnyam	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) 研修プログラム

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

5 セミナー実施実績

5. セミナー実施実績

モンゴル地震防災能力向上プロジェクト セミナー

1. 趣旨

本プロジェクトの成果を、防災関係省庁をはじめとする関係機関に広く周知、理解を深めることでモンゴル国の防災力向上に寄与する。

2. 開催

日時：2019年11月7日 09:30～17:10

場所：ツーシンホテル ソヨンボ会議場（5階）

3. 概要

100名を超えるご参加により各成果を得て防災計画、耐震診断、防災教育の各成果ごとに発表。展示コーナーでは本プロジェクトで導入・作成された耐震診断機器、耐震建築模型、防災紙芝居を展示、防災空間情報システムの体験コーナーも設置した。

4. 各成果発表内容

【成果1 防災計画】

リスク評価、国家防災、国家防災業務、地域地震防災計画の各ガイドラインの内容、災害空間情報システムに関する内容及び協定案の内容を説明した。特に地域防災計画ガイドラインについては、防災計画策定マニュアルの内容及び被害想定、減災目標の設定、施策の立案と、策定に至る手順に沿って説明し、内容の理解に努めた。

【成果2 耐震建築】

建物の構造別（鉄筋コンクリート造、プレキャストコンクリート造、組積造）耐震診断ガイドライン、インフラ・ライフラインの耐震診断ガイドラインの内容及び、計算手順を示しながら診断方法を解説した。耐震補強に関しては、ウランバートル市内の5つの建物に対する耐震診断の結果を受けて作成した耐震補強の試設計の結果を披露し、補強の具体手法を説明した。

【成果3 防災教育】

学校防災教育の実施内容のこれまでとこれからの展開に触れ、プロジェクトで実施した模擬授業の内容を披露した上で教員向けのガイドブックを紹介した。一般市民向け防災教育に関してはウランバートル市、ザブハン県で実施した啓発活動を紹介し、作成された教材、マニュアルの紹介を行った。市民防災研修センター向けの教材の紹介では、会場出席者の参加によるアクティビティを交えて紹介した。

5. 実施成果

本プロジェクトの成果を体系的に披露することにより、プロジェクトの全体像を明確に伝えることができた。セミナーの締めくくりでNEMA バトサイハン局長は本プロジェクト成果を今後の地震防災活動へ確実に生かしていくことを表明した。

また当日取材でテレビ局4社より取材を受け、当日夜の各局番組で本プロジェクトの成果内容が紹介された。後日新聞1紙にも掲載された。

なおセミナーの途中、サヤナー副首相顧問よりエンクトゥブシン副首相からの本プロジェクトに対する感謝状がJICA モンゴル事務所田村所長へ手渡された。



写真1 参加者集合写真



写真2 成果3での防災クイズ旗揚げ



写真3 展示コーナー



写真4 授与された副首相の感謝状



写真5 NEMA アリウンブヤン一等副長官の挨拶



写真6 JICA モンゴル事務所田村所長の挨拶



写真7 NEMA バトサイハン局長の挨拶



写真8 テレビ局の取材対応



写真9 会場の様子1



写真10 会場の様子2



写真11 耐震補強の効果を示す模型



写真12 各種教材・ガイドライン



写真13 耐震診断機材の紹介

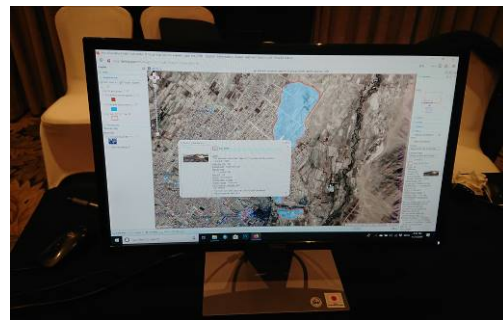


写真14 災害空間情報システムのデモンストレーション

セミナープログラム

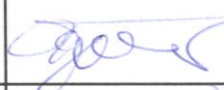


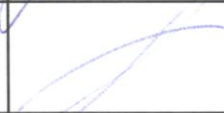
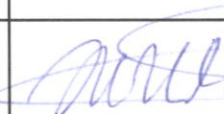
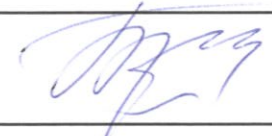
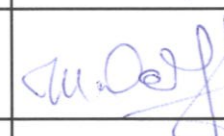

		7 November 2019 Soyombo1, Tuushin Hotel, Ulaanbaatar	
Sessions		Contents	
09:00-09:30	Registration		
09:30-09:50	Opening	Overview	General T. Badral, Chief, NEMA
		Expectations	E.Tamura, Chief Representative, JICA
		Project Output	K. Owada, JET
09:50-12:00	Moderator: D. Bazarragchaa		
		リスク評価ガイドラインによるリスク評価	D.Serjmyadag
	Disaster Protection Planning	防災計画ガイドラインによる減災計画	ダルハン・ウムヌゴビ B.Bayanmunkh
		白書作成、協定締結による減災活動	
		災害空間情報データベース利用の勧め	
	Technical WS	リスク評価に基づく減災計画策定ショートプログラムワークショップ 内容: リスク評価から減災計画に至る過程を、耐震診断をテーマに短いプログラムで体験する。	
		災害情報の伝達における連携に関するワークショップ 内容: 災害発生時の情報のやり取りを体験し、連携の課題を (SISDRR体験: サブ会場)	
12:00-13:00	Lunch		
13:00-15:00	Moderator: Ts Khaliun		
	Diagnosis and Retrofitting of the Buildings	楽しく学ぶ耐震診断、補強 一次診断を実際に行い、補強方法を検討してみる。 内容:	
		耐震補強の実施方法 二次診断の内容と補強方法の決定に至る経緯を、手法の解説を含めて紹介する。 内容:	
15:00-17:00	Moderator: D.Bat-Erdene		
15:00-15:20		今後の学校防災教育の継続的实施に向けて	Ms. Myagmar J., Ministry of Education, Culture, Science and Sports (MECSS)
15:20-15:40	DRR Education	就学前安全教育の推進のための教師ガイドブックの	Ms. Mongolkhatan G., Education Research Institute
15:40-16:00		学校安全教育の実施プログラム	Ms. Munkhbayer N., Institute of Teachers' Professional
16:00-16:20		防災教育における防災WEGの設立	Mr. Bat-Erdene D., Disaster Prevention Department, NEMA
16:20-16:40		いつでもどこでも誰でもReadyについて	Mr. Chinbat B., Disaster Prevention Division, EMDC
16:40-17:00		研修センタートレーニングプログラム	Mr. Munkhbat D., UB City DRR Training Center, EMDC
17:00-17:10	Closing	D. Batsaikhan, PD, Director of Disaster Prevention, NEMA	

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
G.Ariunbuyan	First Deputy Chief, Brigadier general, NEMA	99296358	
L. Sayana	Advisor in charge of Emergency Management of Deputy Prime Minister		
S.Magnaisuren	State Secretary, Ministry of Construction and Urban Development		
D.Batsaikhan	Director, Disaster Prevention Department, NEMA	99113991	
L.Ulziibayar	Director, Policy Coordination and Cooperation Department, NEMA	99105574	
D.Jargal	Director, Infrastructure and State Inspection Department, General State Inspection Agency		
J.Myagmar	Director, Division of Preprimary and Primary Education, Ministry of Education, Culture, Science and Sports		
N.Ulambayar	Director, Emergency Management Department of the Capital City (EMDC)		
G.Enkhtuya	Director, Construction Quality and Safety Division, Master Planning Agency of Capital City		 99016977
Eriko Tamura	Chief Representative, JICA Mongolia office	94105931	田村 利子
Makiko Inamori	Project Formulation Advisor, JICA Mongolia Office	99096403	稲森
Ch.Munkhmanlai	Program Officer, JICA Mongolia office	95955515	
Hideaki Matsumoto	Director, Disaster Risk Reduction Team2, Disaster Risk Reduction Group, Global Environment Department, JICA		
Takafumi Sakurazawa	Disaster Risk Reduction Team2, Disaster Risk Reduction Group, Global Environment Department, JICA	Sakurazawa Takafumi Jica.g	
Keiichi Higashiya	Defense Attaché, Embassy of Japan	99112741	東谷 12

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project



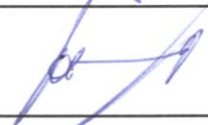




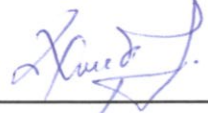



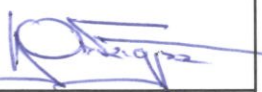

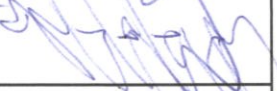
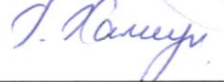
Name	Position, Organization	Tel	Signature
ЦЭНГҮҮН ЭНХЭ	МОНГОЛ HD	99959525	2-XVH
Д. Мөнх- баяр	"Мөнхонь гурв. Сэвэг"	8808-5586	
Д. Шинэ.	Эрх зөвхөн	99740735	
Б. Умар	"индорг" үйлчилгээ	99509037	
Х. Хулан	"Парламент" төлөв	80821345	Хулан.
П. Ганзориг	Үйлдвэр	99065876	
Д. Ойзуур	ХБХТ	9114245	
Б. Тэмцээ	МБХХ	99696909	Б. Тэмцээ
Б. Тэмцээ	БДБ	80065409	
Н. Мундана	168 7 үйлчилгээ	99786818	
Д. Мундана	JET	99070494	
K. Owada	JET		
S. Fukushima	JET		
Mik. Kodama	Expert Team		
Ya. Erdenebat	JET		

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
Amarzaya	NRCS DM officer.	99182853	
а/х Д. БЭТЗОРИЙ	Баянгол сумуудын Оюуны байгуулалт хийгч	86895780	
Х/ч Р. Баянцогт	БЗД-ийн Ойгоны байгуулалт ХЭТЭ	88028975	
А/х Т. Ганзориг	СБД - ОБХ	78860602	
а/х М. Хандсүх	ОБЕГ	80056668	
Т. Урианза	Иномин дүүргийн Увсан тэнгэр	99057655	
а/х Г. Н. Хандсүх	НОБТ ахлах инженер ажилтан	88127777	
а/х Б. Амгаланбаатар	ОБЕГ.	89005050	
Б. Аюулаансүрэн	ОБЕГ.	99007969	
С. Дорнодсүрэн	БЗД - ОБХ.	97041919	
Г. БААТАР СҮРЭН	ОУГА - ЭШАА.	99006255	
Ц. Оюунсүрэн	С ХҮД - ОБХ	88052220	
Мандахгэрэл	ОБЕГ	09150977	
Баянцүрэн	ОБЕГ	091515955	
Т. Дамсүх	Төмөр замын Нуралж	99530090	

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
С. Дамбаев	УГА Огноо, төлөөлөгч Хүрээлэн	Захиура	
С. Чондор	БХТ, УГДХ төлөөлөгч	89243246	
Я. Мөнхтүвшин	БХ, ББМВХ-ийн Зорил	98983939	
Р. Ганзориг	БХ. Гэгээн	99339944	
Т. Мөнхсайхан	БХ эма.	99034481	
Л. Халтбаяр	Ка/С.А.	99197350	
Б. Чинзориг	ОБЕГ.	99084557	
Б. Бузигинов	ИҮБ-а холбоо Төмөр	99102593	
Д. Сэрмиегов	ОБЕГ, ИХ	99105587	
Т. Уеел	Монгол Зургууль	99153662	
Б. Зүгжирал	БХ, эма.	99187692	
А. Энхтөгов	МЕР	99726419	
М. Мунхтүвшин	ITPD	90179900	
У. Дэлгэр	UBS	93161009	
Ц. Дорнод	UBS	93161009	

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
Д. Агуйзаяа	УД-и ОБХ-и СУСАХИ о/г Д. Агуйзаяа	93341414	
М. Дунрап	ХУБ ОБХ- СУСАХИ о/г М. Дунрап	8244380	
Б. Аюунгуяа	УД-и ОБХ-и СУСАХИ о/г Б. Аюунгуяа	99048532	
Г. Дамзори	meruy corps	99074770	
Д. Лайлаар	ОБЕГ-ГУСГ ахлах зөвлөх	99772628	
Б. Ингэсүх	ОБЕГ-ГУСГ ахлах зөвлөх	91006131	
Т. Энхтүвшин	ХБХ Газар	99016877	
О. Монх-Аюун	ХБХ Газар	99016877	
У. Бандаржав	ОБЕГ-ОЗТТ	88081218	
Т. Сүхбаатар	БХТоб	86118415	
Д. Анхтүвшин	СХД - ОБХ - СУСАХИ	91028187	
У. Яамц	ОБЕГ - УУЗМГ - ОСМТТ	88001641	
ММС ТБ (а/г) Монгол улсын МОНГОЛЫН АЖ АХУЙН МОНГОЛЫН АЖ АХУЙН		80708009	
Д. Далайгэрэл	СБД ОБХ	93054659	
Д. Дорноддоржиев	ИУТМС БАС	99177516	

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project





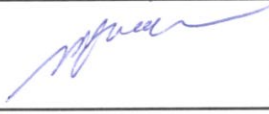


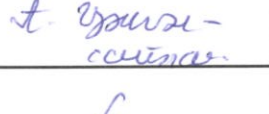
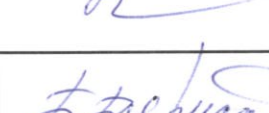
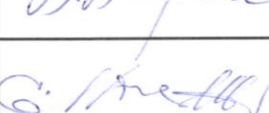
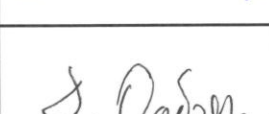
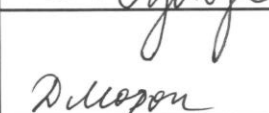
Name	Position, Organization	Tel	Signature
С. Бадрмаа	БЗД и ОБХ. Сурвалж суртал- нигаа үгс-х асуудал хэрэгжсэн ахлах дэргэдүүлэгч	99009567	С. Бадрмаа
Н. Дамсүрэн	ХЗХ. ОБХ. ГТГА-14 д олийн захирал	99002679	Н. Дамсүрэн
Ч. Хуучин	БТД - 13р сурвалж Сурвалжын менежер.	99257499	Ч. Хуучин
З. Аюул-Оюу	ГХСГТӨБ. Сурвалжын менежер	80287009	З. Аюул-Оюу
Д. Бат-Эрдэнэ	ОБЕГ	99029462	Д. Бат-Эрдэнэ
Д. Цыг	ОБЕГ	86150069	Д. Цыг
М. Хуучин	ОБЕГ	86156115	М. Хуучин
М. Наранцацрал	ОБЕГ	86811148	М. Наранцацрал
М. Амгун	ОБЕГ	99249813	М. Амгун
Д. Сүхбаатар	ОБЕГ	98 888 148	Д. Сүхбаатар
Т. Дэл	СХД	93054343	Т. Дэл
Б. Доржсүх	БЗД 32р эрх зүйч.	95011318	Б. Доржсүх
Embassy of Japan	embassy of Japan	99859613	Embassy of Japan
А. Наранцацрал	Eagle TV 2хүн	9509 1009	А. Наранцацрал
С. Бадраа	МТМ-ийн ОУХИХС.	9901-9977	С. Бадраа

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
Батжаргал	Зохиромж Делбэр Коолтд	99067143	
Балжинням	Аргумент түүл төвөг оогтөрөгч	95260351	
П. Дундурмаа	Star TV	88075193	Б. Дундурмаа 2.
Н. Пунхалсайхан	МҮОНР	8884-2471	
Э. Баянзүр	УУТЦ	31513159	
Khulan Ts.	Хотын байгууллагын хөдөлмөрийн газар	90994929	
Б. Ойрозгараа	Чулуулгийн сургууль	85154889	
Б. Bayardulam	ТЗБТЗЗГазар	99170998	
А. Цэвэрсайхан	ОУЦДЦ	99729186	А. Цэвэрсайхан
Н. Ганзориг	МХЕТ	99240964	
Б. Залуураа	medeel, mn сэрвэл	90228801	
М.С. Мөнхсайхан	МЕСТЦ, БАС	89197888	
Д. Дэлбаяр	JET	88 477748	
Д. Могой	JET	99057365	Д. Могой
Osamu NISHII	JET		

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

Date: 2019/11/7

Place: Soyombo 1 (5th Floor), Tuushin Hotel, Ulaanbaatar

Title of Meeting: Seminar on the Project

Name	Position, Organization	Tel	Signature
Торсан	УИИ РЛ	0911 4867	[Signature]
Мунчин	Энрик мэргэжл	88688983	[Signature]
Ц.Танзориг	NEMA	88065557	[Signature]
С.Ариуннаргал	БХТоб	91003809	[Signature]
Амармерген	JET	99277766	[Signature]
АНХБИЛЕГ.Т	JET	9989-3017	[Signature]
Sodchimeg	JET		Sodoo

6 供与機材・携行機材実績

6. 供与機材・携行機材実績

6-1. 耐震診断機材供与実績



CERTIFICATE OF HANDOVER

PROJECT TITLE: STRENGTHENING THE NATIONAL CAPACITY EARTHQUAKE
DISASTER PROTECTION AND PREVENTION IN MONGOLIA

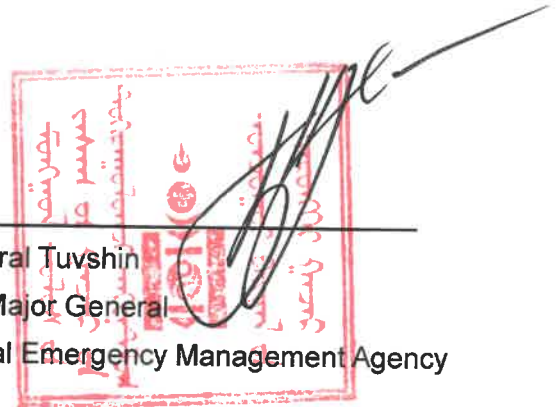
This is to certify that the equipment in the attached list for above-mentioned project have been handed over properly as of November 12, 2018 to National Emergency Management Agency.

田村 2113

for

Mr. Sato Mutsumi
Chief Representative
Mongolia Office
Japan International Cooperation Agency

Mr. Badral Tuvshin
Chief, Major General
National Emergency Management Agency



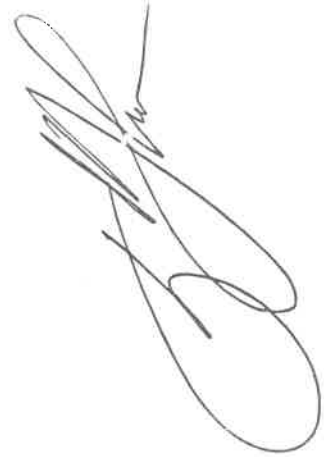
November 12, 2018

Ulaanbaatar, Mongolia

Handover Equipments

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

No.	Name of Item	Model	Quantity	Currency	Price	Condition	Date of Handover
1	Original Schmidt Test Hammer	Type N [310-01-001]	5	MNT	12,766,500	normal	12 Nov, 2018
2	Pundit Lab+	[326-20-001]	5	MNT	70,780,500	normal	12 Nov, 2018
3	Profometer Corrosion - Rod Electrode	[392-50-010]	5	MNT	9,538,100	normal	12 Nov, 2018
4	Profometer Corrosion - One Wheel Electrode	[330-01-001]	5	MNT	59,913,600	normal	12 Nov, 2018
5	Profometer Corrosion	[392-50-002]	5	MNT	99,856,000	normal	12 Nov, 2018
6	Profometer PM-630	[392-20-001]	5	MNT	19,378,800	normal	12 Nov, 2018
7	Original Schmidt Test Hammer	Type L [310-01-002]	5	MNT	12,766,500	normal	12 Nov, 2018





CERTIFICATE OF HANDOVER

**PROJECT TITLE: STRENGTHENING THE NATIONAL CAPACITY EARTHQUAKE
DISASTER PROTECTION AND PREVENTION IN MONGOLIA**

This is to certify that the equipment in the attached list for above-mentioned project has been handed over properly as of 20th March, 2019 to National Emergency Management Agency.

田村 利子

Ms. Eriko Tamura
Chief Representative
Mongolia Office
Japan International Cooperation Agency

A handwritten signature in black ink, appearing to be 'Badral Tuvshin', written over a horizontal line.

Mr. Badral Tuvshin
Chief, Brigadier General
National Emergency Management Agency

March 20, 2019

Ulaanbaatar, Mongolia

Handover Equipment

Earthquake experience machine

No.	Name	Description	Q'ty.	Currency	Unit Price	Site installed	Working condition	Date of Handover
1	Earthquake experience machine	Maker: Cosmate Model:GRANGRAN F350	1	JPY	52,000,000	Training and Methodology Center, Emergency Management Department of Capital City	Normal	March 20, 2019



CERTIFICATE OF HANDOVER

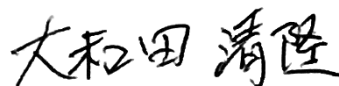
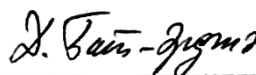
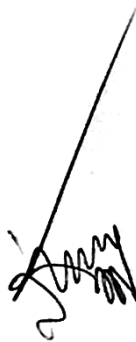
To: JICA Mongolia Office

Re: The Project for Strengthening The National Capacity for Earthquake Disaster Protection and Prevention in Mongolia

This certificate of handover is to certify that the equipment in the attached list, which had been utilized for the The Project for Strengthening The National Capacity for Earthquake Disaster Protection and Prevention in Mongolia, have been handed over properly to Mongolia National Emergency Management Agency (NEMA), as of November 15th, 2019.

Attached: List of Equipment

November 15th, 2019



Mr. Badral Tuvshin
Chief, Major General
National Emergency Management Agency
Mongolia

Kiyotaka Owada
Team Leader
The Project for Strengthening
The National Capacity for
Earthquake Disaster Protection and
Prevention in Mongolia

Attached: List of Equipment

SN	Description	Quantity	Specification
1	Desktop PC	1	hp CPU:15 6550, RAM:8GB, HDD1:120G, SSD HDD2:500GB
2	Desktop PC	1	CPU:I7 7700 RAM:32GB. HDD:500GB SSD Display Card:ETX 1050 Display:Dell 23inch
3	Laptop PC	1	Sony Vaio Z13AFJ, Intel core 17, 2.8GHz, 4 core, 8 thread, 8Gb RAM, DDR3, 13.1 Full HD LED Display, Antiglare, Blu-ray, 256GB SSD
4	Laptop PC	1	Dell 7559 CPU:Core I7-6700HQ, 2.6Ghz, RAM:8GB, HDD:256SSD, Display card:TX 9604gb, 15.6" display 1080FHD
5	Color Copier, Printer, Scanner	1	bizhub C281 Color mode: Full Color, Memory size:2GB, Max, original size:A3 or Ledger (11x17), Output size:Tray1:Width:5-1/2inches to 11-11/16inches(139.7mm to 297mm), Length:7-3/16 inches to 14-5/16 inch(182mm to 364mm), Tray2: Width:5-1/2 inches to 11-11/16inches(139.7mm to 297mm), Length:7-3/16 inches to 17 inches (182mm to 431.8mm) Manual Feed Tray: Width:3-9/16 inches to 12-5/8 inches(90mm to 320mm) Length:5-1/2 inches to 18 inches(139.7mm to 457.2mm) Power Supply AC110V, 15A, 60Hz, AC120V, 12A, 60Hz, AC 220V to 240V.8A 50/60Hz
6	ArcGIS	1	ArcGIS Desktop Basic and ArcGIS Spatial Analyst for Desktop
7	AutoCAD	1	Auto CAD, Including specialized tools AD Commercial New Single User ELD Annual Subscription (Expired)