Republic of Honduras
Alcaldía Municipal del Distrito Central,
Comité Permanente de Contingencias,
Universidad Nacional Autónoma de Honduras

Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras

Project Completion Report

Annex

February 2026

Japan International Cooperation Agency (JICA)

Kokusai Kogyo Co., Ltd.
OYO Corporation

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JR
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Annex 1

Minutes of Meeting for Joint Coordination Committee

MINUTES OF MEETING
ON FIRST JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS
AGREED BETWEEN
ALCALDÍA MUNICIPAL DEL DISTRITO CENTRAL (AMDC)
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

The Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the JICA Expert Team (hereinafter referred to as "JET") to the Republic of Honduras on the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project") in order to conduct with Alcaldía Municipal del Distrito Central (hereinafter referred to as "AMDC"), Comité Permanente de Contingencias (hereinafter referred to as "COPECO") and Universidad Nacional Autónoma de Honduras (hereinafter referred to as UNAH).

As a result of discussions on this joint coordination committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, March 20, 2019

Dr. Takeshi Kuwano
Team leader
The Expert Team
Japan International Cooperation Agency

Mr. Nasry Juan Asfura Zablah
Mayor
Alcaldía Municipal del Distrito Central

Mr. Lisandro Rosales
National Commissioner
Comité Permanente de Contingencias

Mr. Julio Raudales
Vice Rector in International Affairs
Universidad Nacional Autónoma de Honduras

Ms. Norma Allegra Cerrato
Sub Secretary of Cooperation and International Promotion
Secretary for Foreign Affairs and International Cooperation

THE ATTACHMED DOCUMENTS

I. Role of Joint Coordination Committee and Implementation Structure of the Project

(1) Role of the Joint Coordination Committee in the Project

The roles of the Joint Coordination Committee are;

- To approve the activity plan on each period,
- To confirm the progress of the planed activity on each period,
- To solve issues on the Project with the related organizations,
- To discuss other matters for smooth progress of the Project.

The Joint Coordination Committee will be held on every six (6) months and a total of eight (8) times on during the Project. The related organization, AMDC, COPECO, UNAH, MoFA, JICA, JET and other necessary parties, should attend the Joint Coordination Committee.

(2) Implementation structure and the Working Group members

Implementation structure on the Project consists of Mayor of AMDC as a Project Director, Head of Unidad Municipal de Gestión Integral de Riesgo as a Project Manager and four (4) Working Groups (Annex-2). The Working Group consists of officers in AMDC, COPECO and UNAH (Annex-3).

(3) Pilot Project

Four (4) structural measures as pilot sites on slope disaster are implement in the Project. Two (2) structural measures are constructed and financed by JICA and JET in 2020 to 2021, and other two (2) structural measures are constructed by AMDC supported JET and financed by AMDC in 2021 to 2022.

II. Work Plan

The members at the Joint Coordination Committee agreed the contents of the Project and accepted the Work Plan explained by JET as follows. Detailed methods will be adjusted in the course of the Project with mutual cooperation.

(1) Overall activity

The Project was started on February 2019 and last until December 2022. JET consists of nine (9) Japanese experts of risk analysis, investigation/analysis, design/supervision, hazard evaluation, GIS etc. and form four (4) group corresponding to each Working Group to

implement the activities in the Project. JET also submit the Action Plan for all activity and manuals for each Output by the end of the Project.

(2) Output 1

Output 1 consists of, 1) Selection of pilot sites, 2) Investigation on the pilot sites in small-medium scale slope disaster, 3) Analysis of result of the investigation, 4) Preparation for designing, 5) Manual and training on Output 1, and 6) Preparation of the Action Plan for risk reduction of slope disasters after the Project.

The following six (6) slope disaster sites were agreed as the pilot sites for the activity of the Output 1 and Output 2 in the Project. Structural measures are implemented for the four (4) sites in small-medium scale slope disaster. Project proposals are prepared for structural measures for the two (2) sites in large-scale slope disaster based on the existing investigation and monitoring data obtained by AMDC or other relevant organizations.

Scale of slope disaster	Landslide	Slope failure/rockfall	Financed by
Small-medium	Campo Cielo	Fuerzas Unidas	JICA in 2020
	Nueva Santa Rosa	Villa Nueva	AMDC in 2021
Large	El Bambu and Jose Angel Ulloa		Other donors

(3) Output 2

Output 2 consists of, 1) Design and implementation of structural measures on the pilot sites, 2) Assignment of the budget by AMDC, 3) Monitoring and maintaining the structural measures, 4) Manual and training on Output 2, and 5) Preparation of the Action Plan for structural measures after the Project.

(4) Output 3

Output 3 consists of, 1) Review of the related information and maps, 2) Selection of a pilot area, 3) Update of the current hazard maps, 4) Manual and training on Output 3, and 5) Preparation of the Action Plan for hazard and risk mapping after the Project.

A pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map on the Output 3 in the Project were determined as follows;

- Area of the "Mapa de Tegucigalpa, 12,000 E952 EDITION 2-NIMA, Hoja 2" including Col. Nueva Santa Rosa and Col. El Edén

(5) Output 4

Output 4 consists of, 1) Review of the current approach and information on the land use regulation 2) Selection of pilot special regime zones, 3) Preparation of drafts of Land Use Regulation and Land Use Regulation Map, 4) Submission of the Land Use Regulation and the

Land Use Regulation Map to the Municipal Corporation of AMDC, 5) Manual and training on Output 4, and 6) Preparation of the Action Plan for the Land Use Regulation of slope disasters after the Project.

III. Monitoring of the Project

The agreed contents on the monitoring of the Project are; 1) JET, AMDC, COPECO and UNAH will conduct cooperatively monitoring of the Project, 2) The purpose is to check progress and outcomes given by the activities of the Project, 3) the method is to use Project Monitoring Sheet which consists of three (3) forms such as Monitoring Sheet Summary, Monitoring Sheet I and Monitoring Sheet II, 4) the Project Monitoring Sheet cover matters such as Project progress, achievement of the outputs based on indicators, problems and issues under consideration, and external factors affecting the progress and output of the Project. The Project Monitoring Sheet Ver.1 (Annex 4) was approved for this purpose by the members at the Joint Coordination Committee. Updated version will be prepared at six-month intervals.

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Implementation structure on the Project

Annex-3: List of the Working Group members

Annex-4: Monitoring sheet ver.1

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Alcaldia Municipal del Distrito Central (AMDC)
Nasry Juan Asfura Zablah (Mayor, AMDC)
Cinthia Borjas Valenzuela (Director, UMGIR)
Fanny Mejia (DGCDG, AMDC)
Julio César Aviles (Director of Land-use planning, DOT)
Rigoberto Rivera (Manager, CODEM)
Karen Cubas Triminio (Manager, GER)
Ibraham Francisco Molina (Director, Infrastructure)
Jorge Godoy(Manager, Legal)
Oscar Edgardo Romero (Manager, GCC)
German Gerardo Flores (Coordinator, UMPEG)
Tobías Artica (Asisstent, LEGAL)
Rüben Hernández (Specialist, UMGIR)

Other Ministries/Organizations
Julio Quiñonez (Sub commissioner of Central District, COPECO)
Mercedes Pineda (Coodinator, SRECI)

Universidad Nacional Autónoma de Honduras (UNAH)
Julio Cesar Raudales (Vice-chancellor of international relations UNAH)
Nabil Kawas (Dean, Facultad de Ciencia)
Lidia Torres Bernhard (Director of IHCIT, UNAH)

<JAPANESE SIDE>

Embassy of Japan in Honduras
Mio Oizumi (Chief of cooperation)

JICA
Suguru Nakane (Chief Representative, JICA Honduras Office)
Hisashi Suzuki (Director of technical and financial cooperation)
Kaname Sugimoto (JICA Expert)

Viviana Suazo (Program officer)

JICA Expert Team

Takeshi Kuwano (Team leader /Slope disaster risk analysis)

Takashi Hara (Geological investigation and analysis (Landslide))

Satoru Tsukamoto (Geological investigation and analysis (Slope failure and rockfall))

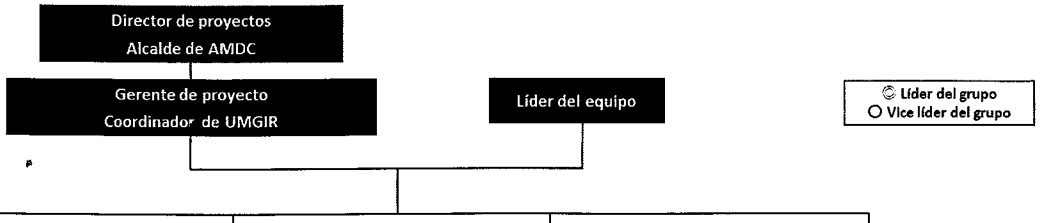
Kiyoharu Hirota (Slope disaster hazard evaluation)

Chaki Nishi (Land use regulation)

Kosuke Uzawa (Project coordinator/ Training plan)

Annex-2

Implementation structure on the Project



Grupo de trabajo de la Resultado 1		Grupo de trabajo de la Resultado 2		Grupo de trabajo de la Resultado 3		Grupo de trabajo de la Resultado 4	
◎ UMGIR		◎ Infraestructura		◎ UMGIR		◎ Control de la construcción	
○ GER		○ Infraestructura		◎ GER		○ Legal	
C/P	**Equipo de expertos de JICA**	**C/P**	**Equipo de expertos de JICA**	**C/P**	**Equipo de expertos de JICA**	**C/P**	**Equipo de expertos de JICA**
• COPECO • CODEM • UNAH • UMPEG • DGCDH	• Investigación y Análisis Geológico (Deslizamiento) • Investigación y Análisis Geológico (Derrumbe de ladera y caída de rocas) • Estudio Topográfico • Medidas estructurales (Deslizamiento) /Medidas estructurales (Derrumbe de ladera y caída de rocas)	• UMGIR • Finance • Control and monitoring • COPECO • UNAH	• Medidas estructurales (Deslizamiento) / Medidas estructurales (derrumbe de ladera y caída de rocas) • Investigación y Análisis Geológico (Derrumbe de ladera y caída de rocas) • Investigación y Análisis Geológico (Deslizamiento)	• COPECO • CODEM • UNAH • UGA	• Evaluación de amenaza de desastre en laderas • Mapeo SIG • Investigación y Análisis Geológico (Deslizamiento) • Investigación y Análisis Geológico (derrumbe de ladera y caída de rocas) • Estudio Topográfico	• CODEM • DGCDH • UGA • COPECO • UMPEG • UNAH	• Regulación ordenamiento territorial • Medidas estructurales (Deslizamiento) / Medidas estructurales (Derrumbe de ladera y caída de rocas) • Mapeo SIG • Investigación y Análisis Geológico (Deslizamiento)

Annex-3

List of the Working Group members

Nombre		Nombre de la Organización/Departamento/Unidad
Grupo 1 / Producto 1 (Investigación y Análisis Detallado)		
Coordinador	Rubén Hernández	UMGIR – AMDC
Sub-Coordinador	Karen Cubas	GER– AMDC
	Roberto Granados	UMGIR
	Suyapa Zelaya	UMGIR
	Rubén Álvarez	CODEM
	Ferid Gabrie	CODEM
	Zaida Paola Flores Martinez	UMPEG
	Alejandra Alemán	DCGDH
	Marcio Lopez	GER– AMDC
	Ana Gabriela Núñez	INGENIERIA – UNAH
	Maryury García	INGENIERIA – UNAH
	Laura Salgado	INGENIERIA – UNAH
	Elías Urquia	INGENIERIA – UNAH
	Junior Reyes	INGENIERIA – UNAH
	Elisabeth Espinoza	IHCIT-UNAH
	Maynor Ruiz	IHCIT-UNAH
	Alex Cardona	IHCIT-UNAH
	Oscar Elvir	IHCIT-UNAH
	Nelson Sevilla	IHCIT-UNAH
	Félix Rodríguez	IHCIT-UNAH
	Lidia Torres	IHCIT-UNAH
	Javier García	IHCIT-UNAH
	Miguel Alejandro López Rivera	COPECO
	Jorge Miguel Aguilar Medina	COPECO
	Heymy Elyana Barahona	COPECO
Grupo 2 / Producto 2 (Construcción de Contramedidas))		
Coordinador	Ibraham Molina	INFRASTRUCTURA
Sub-Coordinador	Francisco Maldonado	INFRASTRUCTURA
	Roberto Granados	UMGIR
	María Fernanda Flores	UMGIR
	Joel Pereira	UMGIR - Obras Civiles
	Marcos Funes	CODEM
	Marjorie Alvarado	Finanzas
	Claudia Ardon	Licitaciones y servicios Internos
	Carlos Borjas	DCS
	Elvin Yuri Rubi	DFA
	Ana Gabriela Núñez	INGENIERIA – UNAH
	Maryury García	INGENIERIA – UNAH
	Laura Salgado	INGENIERIA – UNAH
	Elías Urquia	INGENIERIA – UNAH
	Junior Reyes	INGENIERIA – UNAH
	Maynor Ruiz	IHCIT-UNAH
	Lidia Torres	IHCIT-UNAH
	Gonzalo Funez	COPECO
	Heymy Barahona	COPECO
	Miguel Alejandro López Rivera	COPECO
	Jorge Miguel Aguilar Medina	COPECO

Grupo 3 / Producto 3 (Mapas de Amenazas y Riesgos)		
Coordinador	Cincy Rosa	UMGIR – AMDC
Sub-Coordinador	Karen Cubas	GERENCIA DE EVALUACIÓN DE RIESGO– AMDC
	Hugo Medina	GERENCIA DE EVALUACIÓN DE RIESGO– AMDC
	Silvia Becerra	UGA
	Ruben Alvarez	CODEM
	Ferid Gabrie	CODEM
	Joel Manueles	UMGIR
	Ana Gabriela Núñez	INGENIERIA – UNAH
	Maryury García	INGENIERIA – UNAH
	Laura Salgado	INGENIERIA – UNAH
	Elías Urquia	INGENIERIA – UNAH
	Elisabeth Espinoza	IHCIT-UNAH
	Javier Garcia	IHCIT-UNAH
	Maynor Ruiz	IHCIT-UNAH
	Alex Cardona	IHCIT-UNAH
	Oscar Elvir	IHCIT-UNAH
	Nelson Sevilla	IHCIT-UNAH
	Felix Rodriguez	IHCIT-UNAH
	Lidia Torres	IHCIT-UNAH
	Lenin Díaz	COPECO
	Heymy Barahona	COPECO
	Miguel Alejandro López Rivera	COPECO
	Jorge Miguel Aguilar Medina	COPECO
Grupo 4 / Producto 4 (Regulación de Ordenamiento Territorial)		
Coordinador	Julio Avilés	DOT
Sub-Coordinador	Jorge Godoy	Gerencia de Servicios Legales
	José Ramón Anariba	CODEM
	Silvia Becerra	UGA
	María Fernanda Flores	UMGIR
	Gerardo Flores	UMPEG
	Paola Flores	UMPEG
	Candy Hernández	DOT
	Alejandra Alemán	DCGDH
	Oscar Romero	Control de la Construcción
	Ana Gabriela Núñez	INGENIERIA – UNAH
	Maryury García	INGENIERIA – UNAH
	Laura Salgado	INGENIERIA – UNAH
	Gladys Rojas	INGENIERIA – UNAH
	Lidia Torres	IHCIT-UNAH
	Maynor Ruiz	IHCIT-UNAH
	Lenin Diaz	COPECO
	Heymy Barahona	COPECO
	Miguel Alejandro López Rivera	COPECO
	Jorge Miguel Aguilar Medina	COPECO

Annex-4

PM Form 3-1 Monitoring Sheet Summary

TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Version of the Sheet: Ver.01 (Term: February, 2019 - March, 2019)

Name: Takeshi Kuwano

Title: Team leader

Submission Date: March 20, 2019

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of March 2019
Japanese Side Experts	Total MM: 54.80 MM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	5.03 MM (9.29 % of Total MM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	0	0	(future activity)
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	0	0	(future activity)
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	0	0	(future activity)
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	0	0	(future activity)
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	0	0	(future activity)
A manual for hazard and risk mapping is prepared.	0	0	(future activity)
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	0	0	(future activity)
Land use regulation maps for slope disasters for pilot special regime zones are created.	0	0	(future activity)

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation
Project purpose: Capacity to manage slope disasters in the Central District is improved.		

1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	0	(future activity)
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	0	(future activity)

1-5 Changes of Risks and Actions for Mitigation

None.

1-6 Progress of Actions undertaken by JICA

None.

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

None.

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

None.

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

None.

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.)

None.

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

2-1 Detail

None.

2-2 Cause

None.

2-3 Action to be taken

None.

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

None.

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.)

None.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1] Version: 1.0
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH) Dated: March 20, 2019
Project Period: 2018 to 2021 (about 3 years and 9 months)
Project Site: The Central District

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high.	(future activity)	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		(future activity)	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

			• AMDC has access to the equipment and tools owned by UNAH.		
Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. • A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	· Report on detailed investigation and analysis to identify slope disaster risks of pilot sites · JICA project monitoring report · Manual for investigation and analyzing small/medium size slope disaster risk sites	· The key counterparts are assigned during the project period · AMDC has access to the equipment and tools owned by UNAH.	(future activity) (future activity)	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed. • A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	· Project designs of 4 structural measures for small/medium size slopes · JICA project monitoring report · 4 structural measures at pilot sites · Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		(future activity) (future activity)	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. • A manual for hazard and risk mapping is prepared.	· The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map · Manual for hazard and risk mapping		(future activity) (future activity)	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created. • Land use regulation maps for slope disasters for pilot special regime zones are created.	· A draft land use regulation for slope disasters for pilot special regime zones · Land use regulation map for slope disasters for pilot special regime zones		(future activity) (future activity)	

Activities	**Input**	**Pre-condition**
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 1 large-size landslide and 1 large-size slope failure/rock fall) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Input: Japanese Side 1. Experts 1) Team leader	Working members are assigned.

1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method. 3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.		**<u>Issues and Countermeasures</u>**

3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMRET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

Project Monitoring Sheet II (Revision of Plan of Operation)

Version 1
Dated: March 20, 2019

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Inputs	Year	2019												2020												2021												2022												Remarks	Monitoring: Issue	Monitoring: Solution
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Expert																																																		
Team leader / Slope disaster risk analysis	Plan																																																	
	Actual																																																	
Geological investigation and analysis (Landslide)	Plan																																																	
	Actual																																																	
Structural measures (Landslide)	Plan																																																
	Actual																																																
Structural measures (Slope failure and Rockfall)	Plan																																																
	Actual																																																
Geological investigation and analysis (Slope failure and rockfall)	Plan																																																
	Actual																																																
Topographic survey	Plan																																																
	Actual																																																
Slope disaster hazard evaluation	Plan																																																
	Actual																																																
GIS Mapping	Plan																																																
	Actual																																																
Land use regulation	Plan																																																
	Actual																																																
Project coordinator/ Training plan	Plan																																																
	Actual																																																
Equipment																																																	
Equipement	Plan																																																
	Actual																																																
Training in Japan																																																	
Traning in japan	Plan																																																
	Actual																																																
In-country/Third country Training																																																	
	Plan																																																
	Actual																																																

Activities		Year	2019												2020												2021												2022												Responsible Organization		Achievements	Issue & Countermeasures
Sub-Activities		#	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Japan	GoH		
Output 1:																																																				
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 1 large-size landslide and 1 large-size slope failure/rock fall) to implement structural measures on slope disasters.	Plan																																																			
	Actual																																																				
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model).	Plan																																																			
	Actual																																																			
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Plan																																																			
	Actual																																																			
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.	Plan																																																			
	Actual																																																			
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.	Plan																																																			
	Actual																																																			
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.	Plan																																																			
	Actual																																																			
1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project.	Plan																																																			
	Actual																																																			
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan																																																			
	Actual																																																			
Output 2:																																																				
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.	Plan																																																			
	Actual																																																			
2.2.Organize applicability of structural measure methods for different slope disasters.	Plan																																																			
	Actual																																																			
2.3.Conduct the environmental impact/social assessment.	Plan																																																			
	Actual																																																			
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC	Plan																																																			
	Actual																																																			
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget).	Plan																																																			
	Actual																																																			
2.6. Conduct bidding and award process	Plan																																																			
	Actual																																																			
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works.	Plan																																																			
	Actual																																																			
2.8. Implement and supervise structural measure works.	Plan																																																			
	Actual																																																			
2.9. Prepare a monitoring and maintenance plan.	Plan																																																			
	Actual																																																			
2.10. Conduct monitoring and maintenance of the structural measure works.	Plan																																																			
	Actual																																																			
2.11.Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 - 2.10.	Plan																																																			
	Actual																																																			
2.12.Provide training course, seminar, or/and conference to share the manual and experience produced by the Project	Plan																																																			
	Actual																																																			
2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan																																																			
	Actual																																																			

Output 3:			
3.1. Review slope disaster risk related maps and related information	Plan / Actual	The review of maps and information was started.	
3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map	Plan / Actual	(future activity)	
3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.	Plan / Actual	(future activity)	
3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area.	Plan / Actual	(future activity)	
3.5. Collect the existing geo-spatial data in the pilot area.	Plan / Actual	(future activity)	
3.6. Analyze the geo-spatial data in the pilot area.	Plan / Actual	(future activity)	
3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.	Plan / Actual	(future activity)	
3.8. Define the level of slope disaster hazard and risks in the pilot area.	Plan / Actual	(future activity)	
3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMRET based on the prioritization in activity 3.8	Plan / Actual	(future activity)	
3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 - 3.9.	Plan / Actual	(future activity)	
3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project.	Plan / Actual	(future activity)	
3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.	Plan / Actual	(future activity)	
Output 4:			
4.1. Review the current approach and information on the land use regulation	Plan / Actual	The review of the current approach and information was started.	
4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks.	Plan / Actual	(future activity)	
4.3. Select pilot special regime zones to develop a proposal of land use regulation	Plan / Actual	(future activity)	
4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones.	Plan / Actual	(future activity)	
4.5. Elaborate draft regulations for land use on the pilot special regime zones.	Plan / Actual	(future activity)	
4.6.Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones.	Plan / Actual	(future activity)	
4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District	Plan / Actual	(future activity)	
4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 - 4.6.	Plan / Actual	(future activity)	
4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project.	Plan / Actual	(future activity)	
4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan / Actual	(future activity)	
Duration / Phasing	Plan / Actual		

Monitoring Plan	Year	2019												2020												2021												2022												Remarks	Issue	Solution
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Monitoring																																																			
Joint Coordinating Committee	Plan																																																		
	Actual																																																		
Submission of Monitoring Sheet	Plan																																																		
	Actual																																																		
Reports/Documents																																																		
Work Plan	Plan																																																	
	Actual																																																		
Progress Report	Plan																																																	
	Actual																																																		
Final Report	Plan																																																		
	Actual																																																		
Public Relations																																																		
	Plan																																																		
	Actual																																																		
	Plan																																																		
	Actual																																																		

MINUTES OF MEETING
ON SECOND JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS
AGREED BETWEEN
ALCALDÍA MUNICIPAL DEL DISTRITO CENTRAL (AMDC)
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

The Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the JICA Expert Team (hereinafter referred to as "JET") to the Republic of Honduras on the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project") in order to conduct with Alcaldía Municipal del Distrito Central (hereinafter referred to as "AMDC"), Comité Permanente de Contingencias (hereinafter referred to as "COPECO") and Universidad Nacional Autónoma de Honduras (hereinafter referred to as UNAH).

As a result of discussions on this joint coordination committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, September 9, 2019

Dr. Kuwano Takeshi
Team leader
The Expert Team
Japan International Cooperation Agency

Mr. Nasry Juan Asfura Zablah
Mayor
Alcaldía Municipal del Distrito Central

Mr. Gabriel Rubí
National Commissioner
Comité Permanente de Contingencias

Mr. Julio Raudales
Vice Rector in International Affairs
Universidad Nacional Autónoma de Honduras

Ms. Norma Allegra Cerrato
Sub Secretary of Cooperation and International Promotion
Secretary for Foreign Affairs and International Cooperation

THE ATTACHMED DOCUMENTS

I. Report of activity and plan of the Project

The members at the Joint Coordination Committee agreed the activity reporting for the past six (6) months and the plan for the next six (6) months of the Project as follows.

(1) Output 1

The plan of the topographical survey and the geological investigation was made, and the survey and investigation have been started at the designated two (2) pilot sites, namely Campo Cielo and Fuerzas Unidas according to the plan. The plan of the survey and investigation on the other two (2) pilot sites, namely Nueva Santa Rosa and Villa Nueva is being finalized through the discussion of JET and AMDC.

The survey/investigation work and analysis/interpretation of the result of the works at the four (4) pilot sites will be conducted in the next six months of the Project.

(2) Output 3

The related information and maps including GIS have been reviewed, and a pilot area was selected. The check sheets for simple hazard/risk evaluation have been created, and field training for them has been held.

The hazard/risk evaluation by using the check sheets will be compared with the result of the previous data at Nueva Santa Rosa and El Edén. The seminars about basic learning/training for the hazard map and GIS will be held.

(3) Output 4

National and local regulations for land use in Tegucigalpa area have been collected and reviewed with the related department of AMDC, COPECO and UNAH. Currently the method of the application for permission for land use / acquisition is being confirmed in normal and hazard-risk zones.

Based on the results of reviewing the regulations and the method, scope of work in preparation for implementation of land use regulation will be defined, and pilot special regime zones will be selected.

II. Modification of Project Design Matrix and Monitoring of the Project

(1) Modification of Project Design Matrix

- Activity 1.1: "1 large-size landslide and 1 large-size slope failure/rock fall" for the pilot projects is modified to "2 large-size landslides," based on the request from AMDC that landslides are higher risk than slope failures/rock falls in the Central District.
- Activity 3.9: "SIMRET" is modified to "SIMET," based on the modification that "Riesgos" had been removed from "SIMRET: Sistema de Información Municipal sobre Riesgos y Estudios Territoriales del Distrito Central."

(2) Monitoring of the Project

As of September 2019, input of JET has reached 8.85 Man and Month (hereinafter referred to as "MM") (16.14 % of Total MM in the Project). For Output 1, the detailed investigation was started, and the analysis is being conducted in the two (2) pilot sites. The issue is that the schedule is behind for four (4) months due to the change in contract system in Honduras. For Output 3, the information for the Slope Disaster Hazard Inventory Map and the Multi-hazard Map has been gathered, which is as scheduled. For Output 4, information for the land use regulation is being gathered, which is as scheduled.

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Project Design Matrix ver.2

Annex-3: Monitoring sheet ver.2

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Alcaldía Municipal del Distrito Central (AMDC)
Nasry Juan Asfura Zablah (Mayor, AMDC)
Cinthia Borjas Valenzuela (Director, UMGIR)
Fanny Mejía (DGCDH, AMDC)
Julio A. Colindres (Manager, Civil Works)
Rigoberto Rivera (Manager, CODEM)
Karen Cubas Triminio (Manager, GER)
Ibraham Francisco Molina (Sub-Director, DOT and Civil Works)
Jorge Godoy (Manager, Legal)
Oscar Edgardo Romero (Manager, GCC)
German Gerardo Flores (Coordinator, UMPEG)
Candy Hernández (Assistant, DOT and Civil Works)
Cincy Rosa (Analyst, UMGIR)
María Flores (Analyst, UMGIR)

Other Ministries/Organizations
Carlos Cordero (National Sub commissioner, COPECO)
Daliver Flores (Director Bilateral Coop., SRECI)
Ana Ríos (Specialist, BID)

Universidad Nacional Autónoma de Honduras (UNAH)
Julio Cesar Raudales (Vice-chancellor of international relations UNAH)
Nabil Kawas (Dean, Science Faculty)
Elías García (Link of Civil Engineering, UNAH)

<JAPANESE SIDE>

Embassy of Japan in Honduras
Oizumi Mio (Chief of cooperation)

JICA
Ito Takuma (Representative, JICA Honduras Office)
Viviana Suazo (Program officer)

JICA Expert Team

Kuwano Takeshi (Team leader /Slope disaster risk analysis)

Hara Takashi (Geological investigation and analysis (Landslide))

Uzawa Kosuke (Project coordinator/ Training plan)

Alejandro Flores (Technical Assistant Project)

Vilma Mejía (Assistant Project)

Project Design Matrix（PDM）

Annex 2

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Project Period: From 2019 to 2022 (about 3 years and 9 months)
Zone Identified for the Project (Project Target Area): The Central District
Counterpart The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Definition of slope disasters in the Project: landslide, slope failure, and rock fall

Date: September 9, 2019
Version: 2.0

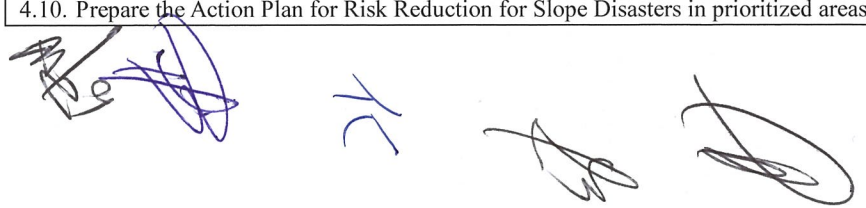
Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption
Overall Goal			
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan) [2]	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC	
Project Purpose			
Capacity to manage slope disasters in the Central District is improved	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC. 2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	• Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts • Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high. • AMDC has access to the equipment and tools owned by UNAH.
Outputs			
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened	1-1 Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. 1-2 A manual for investigating and analyzing small/medium	・Report on detailed investigation and analysis to identify slope disaster risks of pilot sites ・JICA project monitoring report	• The key counterparts are assigned during the project period • AMDC has access to the equipment and

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

	size slope disaster risk sites is prepared.	• Manual for investigation and analyzing small/medium size slope disaster risk sites	tools owned by UNAH.
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced	2-1. 4 structural measures for small/medium size slope disaster risks are constructed. 2-2 A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	• Project designs of 4 structural measures for small/medium size slopes • JICA project monitoring report • 4 structural measures at pilot sites • Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk	
3. Capacity to develop hazard and risk maps is enhanced	3-1. The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. 3-2 A manual for hazard and risk mapping is prepared.	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map • Manual for hazard and risk mapping	
4. Capacity to regulate land use for slope disasters is enhanced.	4-1. A draft land use regulation for slope disaster risk area for pilot special regime zones is created. 4-2. Land use regulation maps for slope disasters for pilot special regime zones are created.	• A draft land use regulation for slope disasters for pilot special regime zones • Land use regulation map for slope disasters for pilot special regime zones	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, ~~2~~ large-size landslides ~~and 1 large-size slope failure/rock fall~~) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Japanese Side</u> 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model <u>Input: Honduras Side</u>	Working members are assigned.

2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method. 3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMRET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		**Issues and Countermeasures**
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		



PM Form 3-1 Monitoring Sheet Summary

TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Version of the Sheet: Ver.02 (Term: February, 2019 – September, 2019)

Name: Takeshi Kuwano

Title: Team leader

Submission Date: September 9, 2019

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of September 2019
Japanese Side Experts	Total MM: 54.80 MM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	8.85 MM (16.14 % of Total MM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	15	10	Detailed investigation was started, and the analysis is being conducted. The start of work was delayed due to the change in contract system in Honduras.
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	0	0	(future activity)
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	0	0	(future activity)
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	0	0	(future activity)
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	10	10	Information for the Maps has been gathered.
A manual for hazard and risk mapping is prepared.	0	0	(future activity)
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	5	5	Information for the land use regulation is being gathered.
Land use regulation maps for slope disasters for pilot special regime zones are created.	0	0	(future activity)

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation
Project purpose:		

Capacity to manage slope disasters in the Central District is improved.		
1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	0	(future activity)
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	0	(future activity)

1-5 Changes of Risks and Actions for Mitigation

None.

1-6 Progress of Actions undertaken by JICA

None.

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

None.

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

None.

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

None.

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.)

None.

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

2-1 Detail

None.

2-2 Cause

None.

2-3 Action to be taken

None.

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

None.

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.)

None.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Version: 2.0
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Dated: September 9, 2019
Project Period: 2018 to 2021 (about 3 years and 9 months)
Project Site: The Central District

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high.	(future activity)	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		(future activity)	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

			• AMDC has access to the equipment and tools owned by UNAH.		
Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. • A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	· Report on detailed investigation and analysis to identify slope disaster risks of pilot sites · JICA project monitoring report · Manual for investigation and analyzing small/medium size slope disaster risk sites	· The key counterparts are assigned during the project period · AMDC has access to the equipment and tools owned by UNAH.	Detailed investigation was started, and the analysis is being conducted. (future activity)	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed. • A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	· Project designs of 4 structural measures for small/medium size slopes · JICA project monitoring report · 4 structural measures at pilot sites · Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		(future activity) (future activity)	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. • A manual for hazard and risk mapping is prepared.	· The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map · Manual for hazard and risk mapping		Information for the Maps has been gathered. (future activity)	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created. • Land use regulation maps for slope disasters for pilot special regime zones are created.	· A draft land use regulation for slope disasters for pilot special regime zones · Land use regulation map for slope disasters for pilot special regime zones		Information for the land use regulation is being gathered. (future activity)	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Input: Japanese Side 1. Experts 1) Team leader	Working members are assigned.

1K

1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method. 3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.		**<u>Issues and Countermeasures</u>**

3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

Project Monitoring Sheet II (Revision of Plan of Operation)

Version 2
Dated: September 9, 2019

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Inputs	Year	2019												2020												2021												2022												Remarks	Monitoring: Issue	Monitoring: Solution
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Expert																																																		
Team leader / Slope disaster risk analysis	Plan																																																	
	Actual																																																	
Geological investigation and analysis (Landslide)	Plan																																																	
	Actual																																																	
Structural measures (Landslide)	Plan																																																
	Actual																																																
Structural measures (Slope failure and Rockfall)	Plan																																																
	Actual																																																
Geological investigation and analysis (Slope failure and rockfall)	Plan																																																
	Actual																																																
Topographic survey	Plan																																																
	Actual																																																
Slope disaster hazard evaluation	Plan																																																
	Actual																																																
GIS Mapping	Plan																																																
	Actual																																																
Land use regulation	Plan																																																
	Actual																																																
Project coordinator/ Training plan	Plan																																																
	Actual																																																
Equipment																																																	
Equipement	Plan																																																
	Actual																																																
Training in Japan																																																	
Traning in japan	Plan																																																
	Actual																																																
In-country/Third country Training																																																
	Plan																																																
	Actual																																																

Activities / Sub-Activities	Year	2019												2020												2021												2022												Responsible Organization: Japan	Responsible Organization: GoH	Achievements	Issue & Countermeasures
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12				
Output 1:																																																			
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters.	Plan																																																		
	Actual																																																		
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model).	Plan																																																		
	Actual																																																		
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Plan																																																		
	Actual																																																		
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.	Plan																																																		
	Actual																																																		
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.	Plan																																																		
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1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.	Plan																																																		
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1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project.	Plan																																																		
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1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan																																																		
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Output 2:																																																			
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.	Plan																																																		
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2.2.Organize applicability of structural measure methods for different slope disasters.	Plan																																																		
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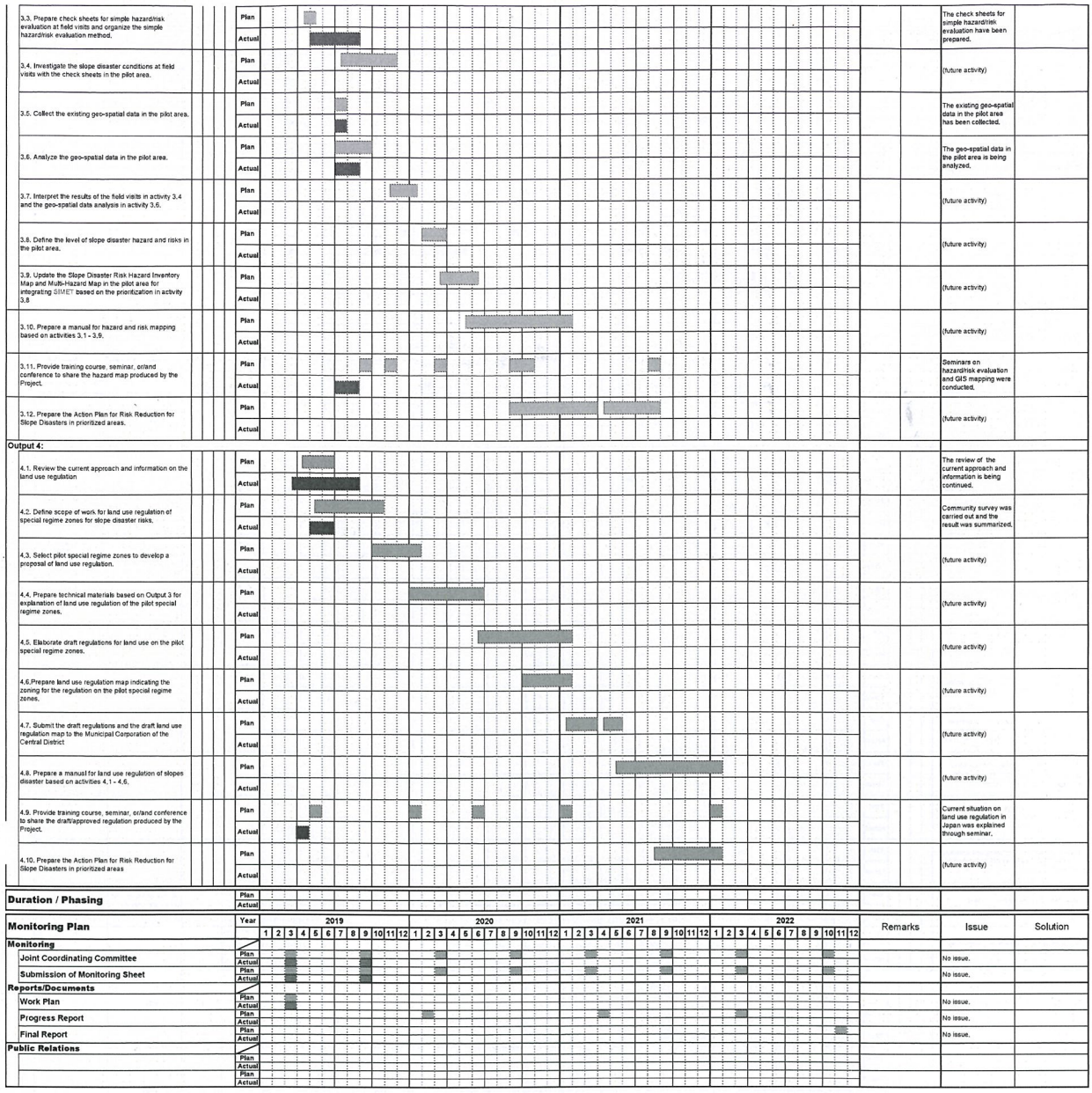
3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.
Plan
Actual
The check sheets for simple hazard/risk evaluation have been prepared.
3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area.
(future activity)
3.5. Collect the existing geo-spatial data in the pilot area.
The existing geo-spatial data in the pilot area has been collected.
3.6. Analyze the geo-spatial data in the pilot area.
The geo-spatial data in the pilot area is being analyzed.
3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.
3.8. Define the level of slope disaster hazard and risks in the pilot area.
3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8
3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 - 3.9.
3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project.
Seminars on hazard/risk evaluation and GIS mapping were conducted.
3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.
Output 4:
4.1. Review the current approach and information on the land use regulation
The review of the current approach and information is being continued.
4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks.
Community survey was carried out and the result was summarized.
4.3. Select pilot special regime zones to develop a proposal of land use regulation.
4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones.
4.5. Elaborate draft regulations for land use on the pilot special regime zones.
4.6.Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones.
4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District
4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 - 4.6.
4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project.
Current situation on land use regulation in Japan was explained through seminar.
4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas
Duration / Phasing
Monitoring Plan
Year
2019
2020
2021
2022
1 2 3 4 5 6 7 8 9 10 11 12
Remarks
Issue
Solution
Monitoring
Joint Coordinating Committee
No issue.
Submission of Monitoring Sheet
No issue.
Reports/Documents
Work Plan
No issue.
Progress Report
No issue.
Final Report
No issue.
Public Relations

MINUTES OF MEETING
ON THIRD JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS

The Third Joint Coordination Committee was held with the participation of the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA Expert Team (hereinafter referred to as "JET"), Alcaldía Municipal del Distrito Central (hereinafter referred to as "AMDC"), Comité Permanente de Contingencias (hereinafter referred to as "COPECO") and Universidad Nacional Autónoma de Honduras (hereinafter referred to as UNAH) for the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project")

As a result of discussions on this joint coordination committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, July 1st, 2021

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Team leader
The Expert Team
Japan International Cooperation Agency

Mr. Nasry ASFURA
Mayor
Alcaldía Municipal del Distrito Central

Mr. Max GONZALES
Minister
Secretariat of State in Risk Management and National Contingencies (COPECO)

Mr. Julio RAUDALES
Vice Rector in International Affairs
Universidad Nacional Autónoma de Honduras

Mr. SHINO Katsuhiko
Chief Representative
Japan International Cooperation Agency
Honduras Office

Ms. Karen NAJARRO
Sub Secretary of Cooperation and International Promotion
Secretary for Foreign Affairs and International Cooperation

THE ATTACHMED DOCUMENTS

I. Updated schedule and contents of the Project due to COVID19

(1) Updated schedule of the Project

The activities in the Project have been almost suspended since March 2020 to May 2021 because of the pandemic of COVID19. The Project period should be extended for one (1) year as follows to achieve the Project Purpose and each output. The modification of the period will take effect after the amendment of the Record of Discussion of the Project.

Original period: February 2019 to December 2022.

Modified period: February 2019 to December 2023.

The schedule and contents of the Project are modified as Annex-2. Progress Report 2, Progress Report 3 and Final Report in the Project are submitted in March 2022, March 2023 and December 2023 respectively.

(2) Budget of the construction of countermeasure works in the pilot sites

According to the modification of the schedule, the construction of countermeasure works is implemented in the four (4) pilot sites as follows;

Campo Cielo and Fuerzas Unidas: November 2021 to April 2022.

Nueva Santa Rosa and Villa Nueva: November 2022 to April 2023.

While the countermeasure works in Campo Cielo and Fuerzas Unidas are financed by the Project, those in Nueva Santa Rosa and Villa Nueva are financed by AMDC. The rough estimate of the total cost of the countermeasure works in Nueva Santa Rosa and Villa Nueva is 7,000,000 Lempira, which will be changed by close calculation after the design in August 2021. All parties confirmed that AMDC secures budget for the construction work in Nueva Santa Rosa and Villa Nueva, and for the maintenance cost of the countermeasure works after the Project. JET also explained that the Project period may be shortened and/or the activities may be changed if the construction costs for 2022-2023 cannot be secured by September 2021.

(3) Updated Working Group members

Several members of Working Group from AMDC, COPECO and UNAH in the Project are changed due to the influence of suspension by COVID19. Updated list of the Working Group member is indicated in Annex-3.

(4) Thorough countermeasures against infectious diseases in the Project activities

All parties agreed to conduct thorough countermeasures against the infectious diseases in the

Project for smooth and safe implementation of the activity, especially in field survey and construction works. All parties also agreed that the contractors of the pilot project will be requested to present specific infection control measures as part of their safety measures which will be one of the evaluation items for selection.

II. Report of activity and plan of the Project

The activity reporting during October 2019 to May 2021 and the plan for the next six (6) months of the Project are as follows;

(1) Output 1

Topographic and geological surveys of four (4) pilot sites were completed. The survey analysis and the disaster occurrence mechanism were also completed. For the sites in Campo Cielo and Fuerzas Unidas, the design policy was studied, and the constants required for the design were set. Basic design policy for Nueva Santa Rosa has been set, but it needs to be verified by additional monitoring results. For Villa Nueva, the hazardous places have been identified.

In the next period, all activities on the countermeasure works will be completed, and action planning of disaster risk reduction, preparation of the investigation manual, and project planning for the large-scale risk areas will be commenced.

(2) Output 2

The design of the countermeasure works in Campo Cielo has been completed, and the bidding procedure is prepared. The design of the countermeasure works in Fuerzas Unidas has been completing, and the bidding procedure is prepared. For the countermeasure works in Nueva Santa Rosa and Villa Nueva, the basic design is being prepared for the budget request in AMDC.

In the next period, the bidding and construction of countermeasure works will be started in Campo Cielo and Fuerzas Unidas. The basic design of countermeasure works will be completed in Nueva Santa Rosa and Villa Nueva, and the budget will be requested for next year.

(3) Output 3

The check sheets for simple hazard evaluation were created, and the field training for them was implemented in the pilot areas, Nueva Santa Rosa and El Edén. The results of the field survey were interpreted and analyzed with the geospatial data. The hazard evaluation by using the check sheets was compared with the previous data.

In the next period, the criteria of the evaluation factors will be selected on the risk assessment in Nueva Santa Rosa. The seminars on basic training for hazard mapping by using GIS and the risk assessment based on the hazard map will be held.

(4) Output 4

The members were divided into two (2) teams for developed zones and non-developed zones. Eden-Bambú-Cabaña, El Hatillo and Nueva Santa Rosa were selected as pilot special regime zones. The scope of work was defined for land use regulation as several steps including comparison of the Japanese and Honduran regulation, examination of the regulation target and contents, application flow by local residents, definition of the internal procedure in AMDC, and creation of regulation map.

In the next period, the draft of the land use regulation will be proposed referring the opinions from relevant parties and be revised the contents in order to make suitable regulation.

JET submitted the Progress Report 1 to AMDC, COPECO and UNAH. The Progress Report 1 consists of the results on Output 1 to 4 including the above mentioned activities from the beginning of the Project on February 2019 to February 2020 before the pandemic. AMDC, COPECO and UNAH received the Progress Report 1 and approved the progress on each output in the Project.

III. Modification of Project Design Matrix and Monitoring of the Project

(1) Modification of Project Design Matrix and Plan of Operation

The period of the Project is extended for one (1) year, and Project Design Matrix and Plan of Operation are modified as Annex-4 and 5.

(2) Monitoring of the Project (Annex-6)

As of the end of May 2021, input of JET has reached 30.81 Man and Month (hereinafter referred to as "MM") (47.70 % of Total MM in the Project). For Output 1, the detailed investigation and analysis by JET were almost completed. Those by AMDC are being conducted. For Output 2, the design of two (2) structural measures by JET was almost completed. For Output 3, the site investigation for making the hazard/risk maps was completed. Method to evaluate the hazard and risk is being discussed. For Output 4, the land use regulation and the targets are being discussed regularly in the Working Group.

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Updated schedule of the Project

Annex-3: Updated list of the Working Group member

Annex-4: Project Design Matrix ver.3

Annex-5: Plan of Operation ver.3

Annex-6: Monitoring sheet ver.3

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Alcaldía Municipal del Distrito Central (AMDC)
Juan Carlos García in representation of Sr. Major (Alderman)
Cinthia Borjas Valenzuela (Director, UMGIR)
Julio Avilés (Director, Land Management)
Karen Cubas Triminio (Manager, GER)
Ibraham Francisco Molina (Sub-Director, DOT and Civil Works)
Oscar Edgardo Romero (Manager, GCC)
Fredi Martínez (Manager, Civil Works)
Candy Hernandez (Technical Asisstant, DOT)
Diana Girón (Project Supervisor, DGCDH)
Alejandra Aleman (Administrative Assistant, DGCDH)
Raúl Laitano (Project Coordinator, DGCDH)
Cincy Rosa (Analyst, UMGIR)
María Flores (Analyst, UMGIR)
Sivia Becerra (Analyst, UMGIR)

Secretariat of State in the Office in Risk Management and National Contingencies (COPECO)
Roger Torres in representation of Mr. Minister (Sub Commissioner)
Arlette Montero (Director, Prevention Management)

Universidad Nacional Autónoma de Honduras (UNAH)
Julio Cesar Raudales (Vicerrector de Asuntos Internacionales)
Nabil Kawas (Dean, Science Faculty)

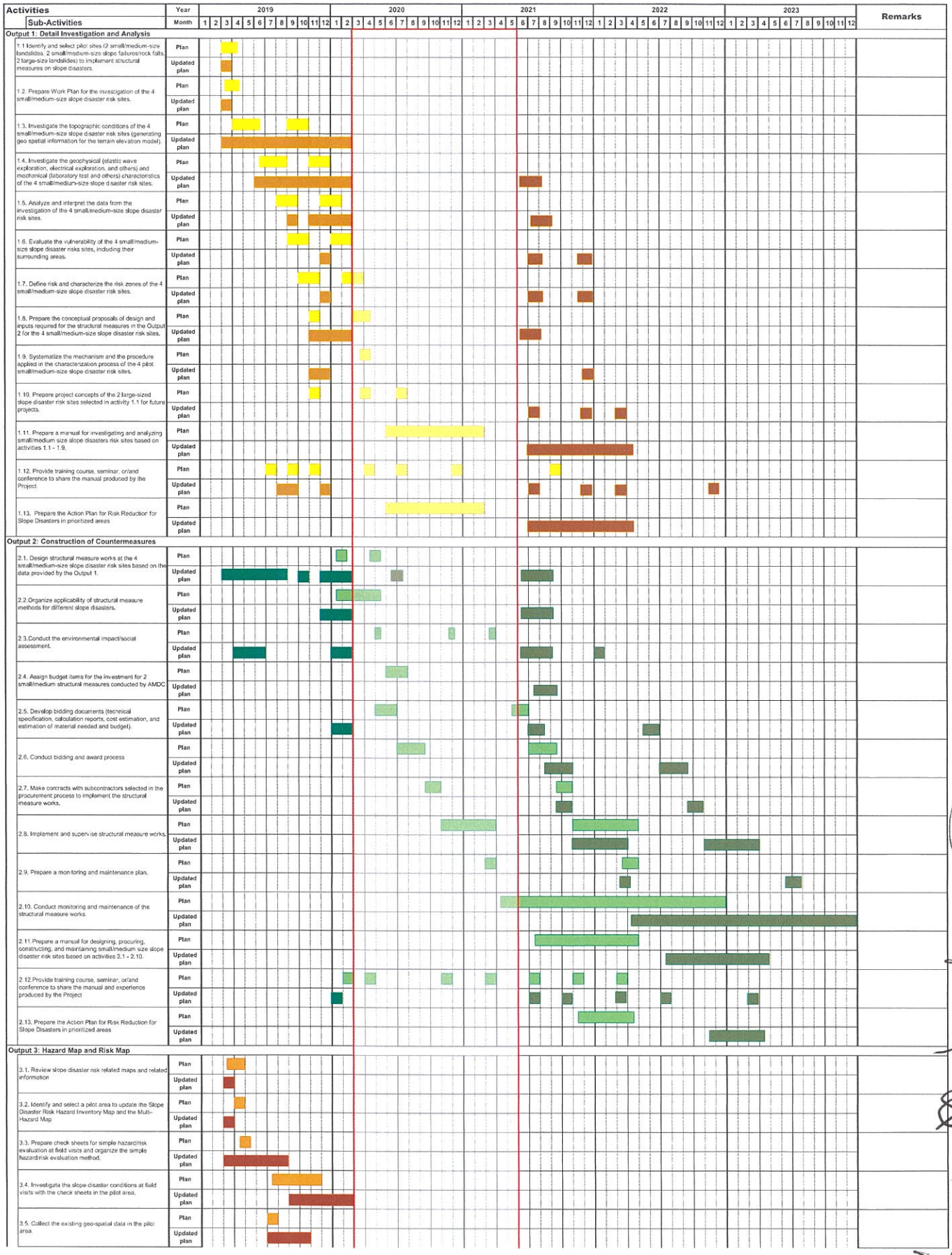
Other Ministries/Organizations
Mercedes Pineda (Analyst, SRECI)

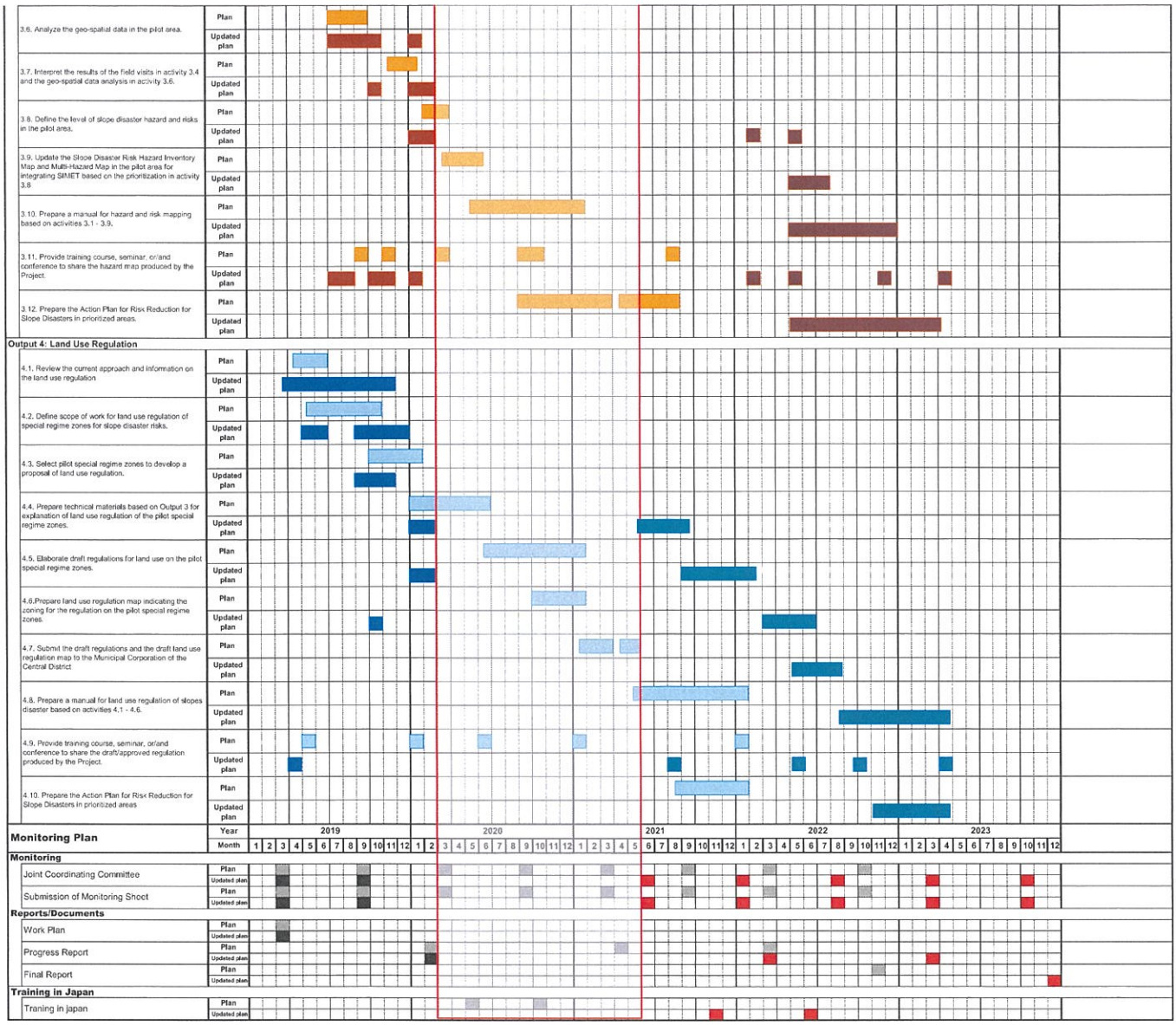
<JAPANESE SIDE>

Embassy of Japan in Honduras
TAKATORI Hikaru (Chief of cooperation)

JICA Honduras
SHINO Katsuhiko (Chief Representative)
Viviana Suazo (Program officer)

JICA Expert Team
KUWANO Takeshi (Team leader /Slope disaster risk analysis)
HARA Takashi (Geological investigation and analysis (Landslide))
Alejandro Flores (Technical Assistant Project)
Vilma Mejía (Assistant Project)


Activities
Sub-Activities
Year
Month
2019
2020
2021
2022
2023
1 2 3 4 5 6 7 8 9 10 11 12
Remarks
Output 1: Detail Investigation and Analysis
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters.
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model).
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.
1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project.
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas
Plan
Updated plan
Output 2: Construction of Countermeasures
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.
2.2.Organize applicability of structural measure methods for different slope disasters.
2.3.Conduct the environmental impact/social assessment.
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget).
2.6. Conduct bidding and award process
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works.
2.8. Implement and supervise structural measure works.
2.9. Prepare a monitoring and maintenance plan.
2.10. Conduct monitoring and maintenance of the structural measure works.
2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 - 2.10.
2.12.Provide training course, seminar, or/and conference to share the manual and experience produced by the Project
2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas
Output 3: Hazard Map and Risk Map
3.1. Review slope disaster risk related maps and related information
3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map
3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.
3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area.
3.5. Collect the existing geo-spatial data in the pilot area.


3.6. Analyze the geo-spatial data in the pilot area.
3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.
3.8. Define the level of slope disaster hazard and risks in the pilot area.
3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8
3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 - 3.9.
3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project.
3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.
Output 4: Land Use Regulation
4.1. Review the current approach and information on the land use regulation
4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks.
4.3. Select pilot special regime zones to develop a proposal of land use regulation.
4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones.
4.5. Elaborate draft regulations for land use on the pilot special regime zones.
4.6.Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones.
4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District
4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 - 4.6.
4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project.
4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas
Plan
Updated plan
Year
Month
2019
2020
2021
2022
2023
Monitoring Plan
Monitoring
Joint Coordinating Committee
Submission of Monitoring Sheet
Reports/Documents
Work Plan
Progress Report
Final Report
Training in Japan
Traning in japan

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Project Design Matrix（PDM）

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Project Period: From 2019 to 2023 (about 4 years and 9 months)
Zone Identified for the Project (Project Target Area): The Central District
Counterpart The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Definition of slope disasters in the Project: landslide, slope failure, and rock fall

Date: June 21, 2021
Version: 3.0

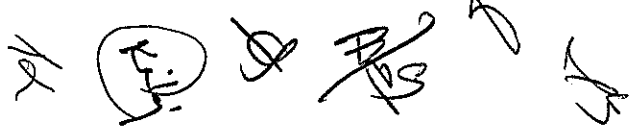
Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption
Overall Goal			
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan) [2]	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC	
Project Purpose			
Capacity to manage slope disasters in the Central District is improved	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC. 2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	• Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts • Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high. • AMDC has access to the equipment and tools owned by UNAH.
Outputs			
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened	1-1 Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. 1-2 A manual for investigating and analyzing small/medium	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites • JICA project monitoring report	• The key counterparts are assigned during the project period • AMDC has access to the equipment and

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

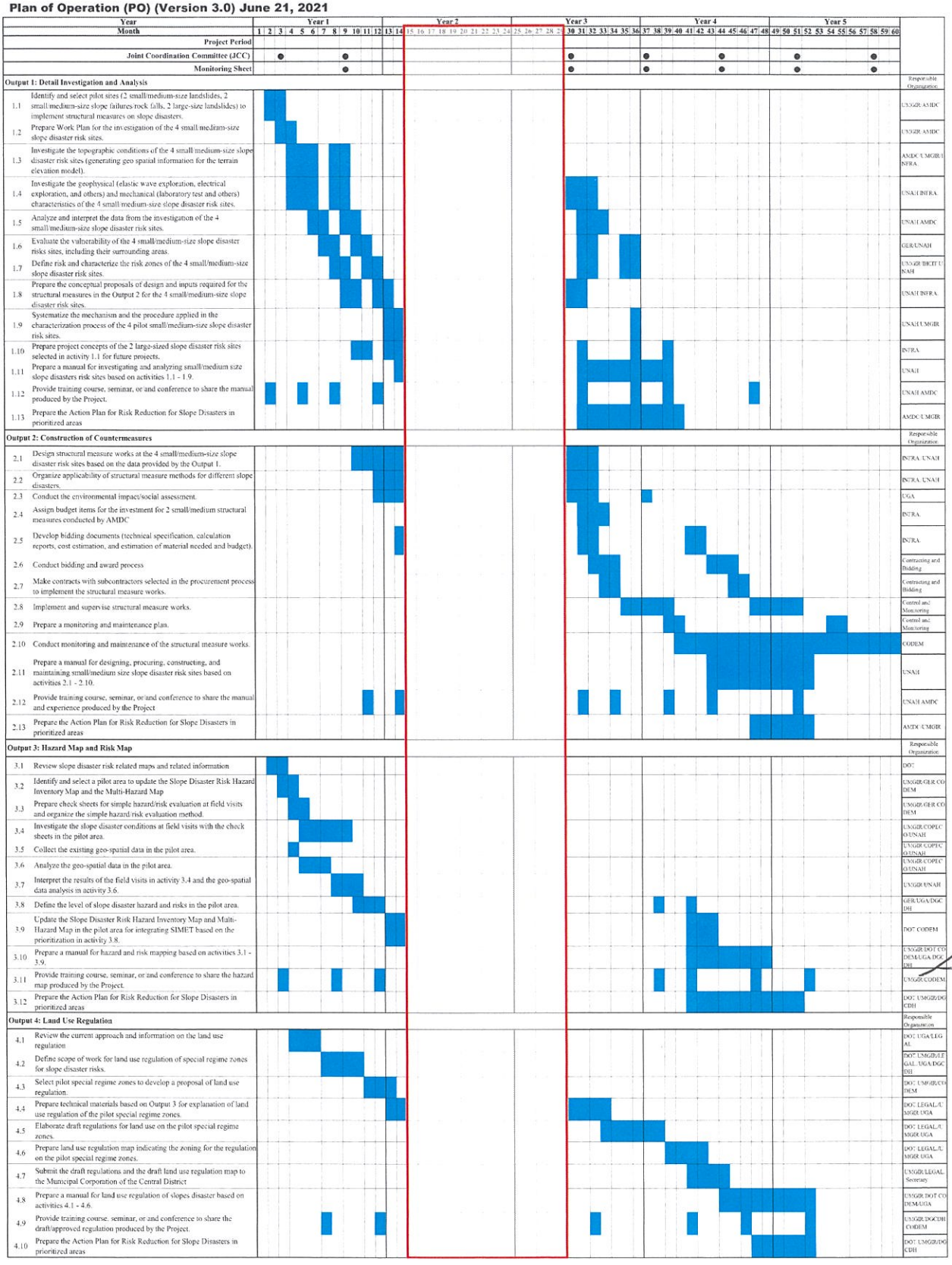
	size slope disaster risk sites is prepared.	・Manual for investigation and analyzing small/medium size slope disaster risk sites	tools owned by UNAH.
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced	2-1. 4 structural measures for small/medium size slope disaster risks are constructed. 2-2 A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	・Project designs of 4 structural measures for small/medium size slopes ・JICA project monitoring report ・4 structural measures at pilot sites ・Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk	
3. Capacity to develop hazard and risk maps is enhanced	3-1. The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. 3-2 A manual for hazard and risk mapping is prepared.	・The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map ・Manual for hazard and risk mapping	
4. Capacity to regulate land use for slope disasters is enhanced.	4-1. A draft land use regulation for slope disaster risk area for pilot special regime zones is created. 4-2. Land use regulation maps for slope disasters for pilot special regime zones are created.	・A draft land use regulation for slope disasters for pilot special regime zones ・Land use regulation map for slope disasters for pilot special regime zones	

Activities	**Input**	**Pre-condition**
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2~~1~~ large-size landslides~~ and 1 large-size slope failure/rock fall~~) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Japanese Side</u> 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model <u>Input: Honduras Side</u>	Working members are assigned.

2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method. 3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMRET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		**Issues and Countermeasures**
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		



Plan of Operation (PO) (Version 3.0) June 21, 2021



PM Form 3-1 Monitoring Sheet Summary

TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Version of the Sheet: Ver.03 (Term: September 2019 – June 2021)

Name: Takeshi Kuwano

Title: Team leader

Submission Date: June 21, 2020

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of May 2021
Japanese Side Experts	Total MM: 54.80 MM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	30.81 MM (47.70 % of Total MM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	85	85	Detailed investigation and analysis by JICA Project were completed, and summarized as Progress Report 1. Those by C/P are being conducted.
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	0	0	(future activity)
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	60	60	The design of 2 structural measures by JICA Project were almost completed. Those by C/P are started.
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	0	0	(future activity)
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	70	70	Site investigation for making the maps was completed. Method to evaluate the hazard and risk is being discussed.
A manual for hazard and risk mapping is prepared.	0	0	(future activity)
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	50	50	The land use regulation and the targets are being discussed regularly in the Working Group.
Land use regulation maps for slope disasters for pilot special regime zones are created.	0	0	(future activity)

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation
Project purpose:		

Capacity to manage slope disasters in the Central District is improved.		
1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	10	2 pilot structural measures are being planned for budget request in 2022 by AMDC.
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	0	(future activity)

1-5 Changes of Risks and Actions for Mitigation

None.

1-6 Progress of Actions undertaken by JICA

None.

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

None.

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

None.

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

None.

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.)

None.

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

2-1 Detail

The pandemic of COVID19 has almost suspended the activities in the Project from March 2020 to May 2021.

2-2 Cause

The pandemic of COVID19.

2-3 Action to be taken

The period of the Project was discussed by JICA and C/P to achieve the Project Purpose and Output. The Plan of Operation is modified as mentioned in "3-1 PO."

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

The period of the Project is extended for 1 year as follows;

Original period: February 2019 to December 2022.

Modified period: February 2019 to December 2023.

3-2 Other modifications on detailed implementation plan

According to the modification of the schedule, the construction of countermeasure works is implemented in the 4 pilot sites as follows;

Campo Cielo and Fuerzas Unidas: November 2021 to April 2022.

Nueva Santa Rosa and Villa Nueva: November 2022 to April 2023.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Project Period: 2019 to 2024 (about 4 years and 9 months)
Project Site: The Central District

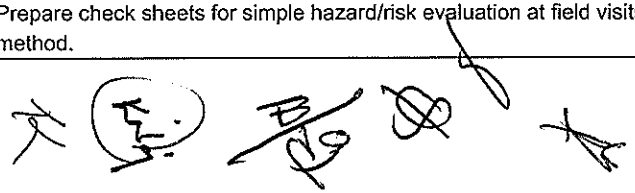
Version: 3.0
Dated: June 21, 2021

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high.	2 pilot structural measures are being planned for budget request in 2022 by AMDC.	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		(future activity)	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of areas selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

			• AMDC has access to the equipment and tools owned by UNAH.		
Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. • A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	· Report on detailed investigation and analysis to identify slope disaster risks of pilot sites · JICA project monitoring report · Manual for investigation and analyzing small/medium size slope disaster risk sites	· The key counterparts are assigned during the project period · AMDC has access to the equipment and tools owned by UNAH.	Detailed investigation and analysis by JICA Project were completed, and summarized as Progress Report 1. Those by C/P are being conducted. (future activity)	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed. • A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	· Project designs of 4 structural measures for small/medium size slopes · JICA project monitoring report · 4 structural measures at pilot sites · Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		The design of 2 structural measures by JICA Project are almost completed. Those by C/P are started. (future activity)	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. • A manual for hazard and risk mapping is prepared.	· The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map · Manual for hazard and risk mapping		Site investigation for making the maps was completed. Method to evaluate the hazard and risk is being discussed. (future activity)	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created. • Land use regulation maps for slope disasters for pilot special regime zones are created.	· A draft land use regulation for slope disasters for pilot special regime zones · Land use regulation map for slope disasters for pilot special regime zones		The land use regulation and the targets are being discussed regularly in the Working Group. (future activity)	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Japanese Side</u> 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	Working members are assigned.
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.		**<u>Issues and Countermeasures</u>**



3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

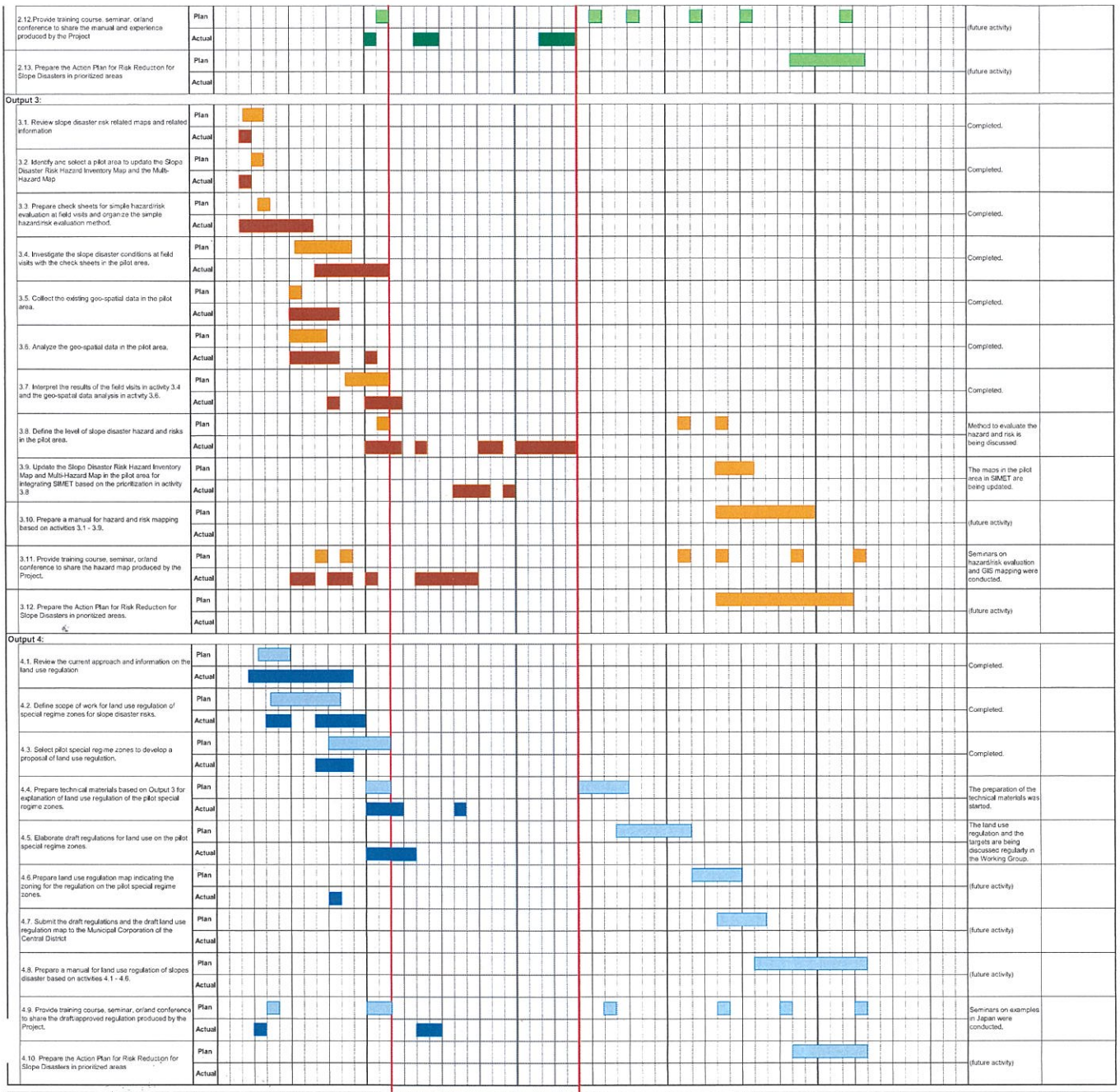
Project Monitoring Sheet II (Revision of Plan of Operation)

Version 3
Dated: June 21, 2021

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Inputs	Year	2019	2020	2021	2022	2023	Monitoring: Issue	Monitoring: Solution
Expert								
Team leader / Slope disaster risk analysis	Plan / Actual						The activities in the Project have been almost suspended since March 2020 to May 2021 because of the pandemic of COVID19.	The period of the Project should be extended for 1 year. The assignment schedule of the experts was adjusted with the revised schedule of the Project.
Geological investigation and analysis (Landslide)	Plan / Actual							
Structural measures (Landslide)	Plan / Actual							
Structural measures (Slope failure and Rockfall)	Plan / Actual							
Geological investigation and analysis 1 (Slope failure and rockfall)	Plan / Actual							
Geological investigation and analysis 2 (Slope failure and rockfall)	Plan / Actual							
Topographic survey	Plan / Actual							
Slope disaster hazard evaluation	Plan / Actual							
GIS Mapping	Plan / Actual							
Land use regulation	Plan / Actual							
Land use regulation 1	Plan / Actual							
Land use regulation 2	Plan / Actual							
Project coordinator/ Training plan	Plan / Actual							
Equipment								
Equipement	Plan / Actual						No issue.	
Training in Japan								
Traning in japan	Plan / Actual							The trainings in Japan in 2020 were shifted to 2021 and 2022.

Activities / Sub-Activities	Year	2019	2020	2021	2022	2023	Achievements	Issue & Countermeasures
Output 1:								
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters.	Plan / Actual						Completed.	
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model).	Plan / Actual						Completed.	
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed. The monitoring is being continued in the landslide sites.	
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.	Plan / Actual						(future activity)	
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.	Plan / Actual						(future activity)	
1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project.	Plan / Actual						Seminars on Geological survey and analysis were held.	
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan / Actual						(future activity)	
Output 2:								
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.	Plan / Actual						(future activity)	
2.2.Organize applicability of structural measure methods for different slope disasters.	Plan / Actual						(future activity)	
2.3.Conduct the environmental impact/social assessment.	Plan / Actual						(future activity)	
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC	Plan / Actual						(future activity)	
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget).	Plan / Actual						(future activity)	
2.6. Conduct bidding and award process	Plan / Actual						(future activity)	
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works.	Plan / Actual						(future activity)	
2.8. Implement and supervise structural measure works.	Plan / Actual						(future activity)	
2.9. Prepare a monitoring and maintenance plan.	Plan / Actual						(future activity)	
2.10. Conduct monitoring and maintenance of the structural measure works.	Plan / Actual						(future activity)	
2.11.Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 - 2.10.	Plan / Actual						(future activity)	



Monitoring Plan	Year	2019	2020	2021	2022	2023	Issue	Solution
		1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12		
Monitoring								
Joint Coordinating Committee	Plan						The schedule of JCC and Monitoring was revised.	
	Actual							
Submission of Monitoring Sheet	Plan							
	Actual							
Reports/Documents								
Work Plan	Plan						Completed.	
	Actual							
Progress Report	Plan						Progress Report 1 was submitted.	
	Actual							
Final Report	Plan						No issue.	
	Actual							

MINUTES OF MEETING
ON FOURTH JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS

The Fourth Joint Coordination Committee was held with the participation of the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA Expert Team (hereinafter referred to as "JET"), Alcaldía Municipal del Distrito Central (hereinafter referred to as "AMDC"), la Secretaría de Estado en los Despachos de Gestión de Riesgos y Contingencias Nacionales (hereinafter referred to as "COPECO") and Universidad Nacional Autónoma de Honduras (hereinafter referred to as UNAH) for the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project")

As a result of discussions on this joint coordination committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, February 7th, 2022

桑野 健

Mr. KUWANO Takeshi
Team leader
The Expert Team
Japan International Cooperation Agency

ALCALDIA MUNICIPAL DEL DISTRITO CENTRAL
ALCALDE MUNICIPAL 2022-2026

Mr. Jorge ALDANA
Mayor
Alcaldía Municipal del Distrito Central

COPECO HONDURAS
GOBIERNO DE LA REPÚBLICA DE HONDURAS
SECRETARIO DE ESTADO EN LOS DESPACHOS DE GESTIÓN DE RIESGOS Y CONTINGENCIAS NACIONALES

Mr. Sr. Ramón SOTO
Minister
Secretariat of State in Risk Management and
National Contingencies (COPECO)

Mr. Marco Tulio MEDINA
Vice Rector in International Affairs
Universidad Nacional Autónoma de Honduras

篠 克秀

Mr. SHINO Katsuhiko
Chief Representative
Japan International Cooperation Agency
Honduras Office

THE ATTACHMED DOCUMENTS

I. Special notes of the Project

(1) Budget of the construction of countermeasure works in the pilot sites

The construction of countermeasure works is implemented in the four (4) pilot sites as follows;

Campo Cielo and Fuerzas Unidas: February 2022 to August 2022.

Nueva Santa Rosa and Villa Nueva: November 2022 to April 2023.

While the countermeasure works in Campo Cielo and Fuerzas Unidas are financed by JICA, those in Nueva Santa Rosa and Villa Nueva are financed by AMDC. The rough estimate of the total cost of the countermeasure works in Nueva Santa Rosa and Villa Nueva is L10,000,000 (Ten million lempiras), which will be finalized through the Detailed Design. All parties confirmed that AMDC will secure budget for the construction work in Nueva Santa Rosa and Villa Nueva, and for the maintenance cost of the countermeasure works after the Project. JET also explained that the Project period may be shortened and/or the activities may be changed if the AMDC fails to secure the above mentioned budget for construction costs for 2022-2023.

(2) Assignment of counterpart members in the Project

The director and the project manager were newly assigned in the Project as follows, and new working group member list is attached in Annex-2.

Director: Jorge ALDANA, Alcaldía Municipal del Distrito Central.

Project Manager: Luis MAIER, Director of Unidad Municipal de Gestión Integral de Riesgo, AMDC.

II. Report of activity and plan of the Project

The Projects activities during June 2021 to January 2022 and the plan for the next six (6) months of the Project are as follows;

(1) Output 1

a. A re-analysis on the countermeasure works in Nueva Santa Rosa is ongoing, based on monitoring results.
b. Evaluation of the vulnerability and risk of disasters at four (4) pilot sites was commenced, and it has been completed in Campo Cielo and Fuerzas Unidas.

c. The elaboration of project concepts for two large-scale slope disaster risk sites, the manuals and the action plan of disaster risk reduction were commenced.

In the next period, vulnerability and risk evaluation for the remaining two (2) sites (Nueva Santa Rosa and Villa Nueva), the project concepts for the two large-scale slope disaster risk sites, and the manual will be considered.

(2) Output 2

a. The bidding and contract in Campo Cielo and Fuerzas Unidas have been completed. The preparation of construction in the two sites was started.

b. The basic design of the countermeasure works in Nueva Santa Rosa and Villa Nueva has been completed. Base on the basic design, budget request has been made within AMDC.

In the next period, construction of countermeasure works in Campo Cielo and Fuerzas Unidas will be implemented, to be completed on August and May, 2022 respectively. The detail design of countermeasure works will be completed in Nueva Santa Rosa and Villa Nueva.

(3) Output 3

Although the activities were suspended in the pilot areas due to COVID 19, the Working Group Members shared through web meetings; a. knowledge about how to create risk maps from hazard maps and b. knowledge on the relationship between rainfall and slope disasters.

In the next period, for defining the risk level of slope disasters in the pilot area, the assets will be evaluated in the area by investigating the asset value at each landslide polygon and its affected area. The risk maps for community-based areas will be discussed and created with GIS.

(4) Output 4

a. The draft regulation has been discussed.
b. Based on the reference laws for the regulation, the regulated zones and the risk zones were classified into 5 zones according to risk evaluation.
c. Type of land-use in the regulated zones and the application flow for the risk zones were defined with reference to other existing regulations in AMDC.

In the next period, drafting regulation will be continued. The activities related to regulation maps will be implemented.

JET summarized the Progress Report 2 consisting of the results on Output 1 to 4 including the above-mentioned activities from the beginning of the Project on February 2019 to February 2022 and submitted the report on March 2022 to AMDC, COPECO and UNAH. The report has been approved by AMDC, COPECO and UNAH.

III. Monitoring of the Project (Annex-3)

As of the end of January 2022, input of JET has reached 42.07 Person Months (hereinafter referred to as "PM") (65.13 % of Total PM of the Project). For Output 1, the detailed investigation and analysis by JICA Project were completed, those by the C/P are being conducted. For Output 2, the two (2) structural measures by JICA Project are being constructed. Those by the C/P are prepared. For Output 3, method to evaluate the risk is being discussed. For Output 4, the land use regulation is being drafted.

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Working group member list

Annex-3: Monitoring sheet ver.4

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Alcaldía Municipal del Distrito Central (AMDC)
Jorge Aldana (Mayor)
Russel Garay (Director, Municipal Main Office)
Marlon Urtecho (Manager, General management)
Mario Matamoros (Director, Territorial Planning Directorate)
Fredi Martinez (Manager, Civil works)
Hugo Medina (Prevention Officer, Risk Assessment Management)

Secretariat of State in the Office in Risk Management and National Contingencies (COPECO)
Ramón Soto (Minister)
Armando Suarez Brito (National Director, Preparedness and Response)
Lenin Díaz (Director, International Cooperation)
Arlette Magaly Montero (Director, Management for Prevention)
Miguel Alejandro Aguilar (Prevention Officer, Management for Prevention)

Universidad Nacional Autónoma de Honduras (UNAH)
Marco Tulio Medina (Vice rector)
Marcio Madrid (Advisor, Vice rector's office)
Carlos Alberto Murcia (Advisor, Vice rector's office)
Amy Chahín (Assistant, International Affaire Management)
Jessi Arita (Assistant, Communications)
Eduardo Gross (Dean, Engineering Faculty)
Laura Salgado (Technical Link for Project, Engineering Faculty)
Alejandro Galo (Dean, Science Faculty)
Lidia Torres (Technical Link for Project, Science Faculty)

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<JAPANESE SIDE>

Embassy of Japan in Honduras
KIBE Hidemi (Cooperation Assistant)
Ana Córdova (Cooperation Assistant)

JICA Honduras
SHINO Katsuhiko (Chief Representative)
CHITANI Minori (Head of Technical and Financial Cooperation)
Viviana Suazo (Program officer)

JICA Expert Team
KUWANO Takeshi (Team leader /Slope disaster risk analysis)
UZAWA Kosuke (Project Coordinator)
Alejandro Flores (Technical Assistant Project)
Vilma Mejía (Assistant Project)

	No	NAME	C/P	Mobile number	Email
Resultado 1	1	Roberto Granados Chahín	AMDC-UMGIR	8931-5621	roberto.granados@amdc.hn
	2	Marcio Lopez	AMDC-GER	9923-2925	marcio.lopez@amdc.hn
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TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District
Version of the Sheet: Ver.04 (Term: July 2021 – January 2022)

Name: Kuwano Takeshi
Title: Team leader
Submission Date: January 31, 2022

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of January 2022
Japanese Side Experts	Total PM: 54.80 PM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	42.07 PM (65.13 % of Total PM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Construction Planning/Bid Supervision 6) Construction Supervision 7) Slope disaster hazard evaluation 8) GIS mapping 9) Land use regulation 10) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	90	90	Detailed investigation and analysis by JICA Project were completed, and summarized as Progress Report 1 and 2. Those by C/P are being conducted.
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	5	5	Contents is being discussed.
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	65	65	2 structural measures by JICA Project are being constructed. Those by C/P are investigated.
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	0	0	(future activity)
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	70	70	Site investigation for making the maps was completed. Method to evaluate the hazard and risk is being discussed.
A manual for hazard and risk mapping is prepared.	0	0	(future activity)
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	60	60	The land use regulation and the targets are being discussed regularly in the Working Group.
Land use regulation maps for slope disasters for pilot special regime zones are created.	0	0	(future activity)

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation
Project purpose:		

Capacity to manage slope disasters in the Central District is improved.		
1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	15	The budget in 2022 for 2 pilot structural measures was requested by AMDC.
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	0	(future activity)

1-5 Changes of Risks and Actions for Mitigation

None.

1-6 Progress of Actions undertaken by JICA

None.

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

None.

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

None.

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

None.

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.)

None.

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

2-1 Detail

None.

2-2 Cause

None.

2-3 Action to be taken

None.

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

None.

3-2 Other modifications on detailed implementation plan

None.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Project Period: 2019 to 2023 (about 4 years and 9 months)
Project Site: The Central District

Version: 4.0
Dated: January 31, 2022

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high.	The budget in 2022 for 2 pilot structural measures was requested by AMDC.	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		(future activity)	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

			• AMDC has access to the equipment and tools owned by UNAH.		
Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	· Report on detailed investigation and analysis to identify slope disaster risks of pilot sites · JICA project monitoring report · Manual for investigation and analyzing small/medium size slope disaster risk sites	· The key counterparts are assigned during the project period · AMDC has access to the equipment and tools owned by UNAH.	Detailed investigation and analysis by JICA Project were completed, and summarized as Progress Report 1 and 2. Those by C/P are being conducted.	
	• A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.			Contents is being discussed.	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed.	· Project designs of 4 structural measures for small/medium size slopes · JICA project monitoring report · 4 structural measures at pilot sites · Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		2 structural measures by JICA Project are being constructed. Those by C/P are investigated.	
	• A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.			(future activity)	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	· The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map · Manual for hazard and risk mapping		Site investigation for making the maps was completed. Method to evaluate the hazard and risk is being discussed.	
	• A manual for hazard and risk mapping is prepared.			(future activity)	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	· A draft land use regulation for slope disasters for pilot special regime zones · Land use regulation map for slope disasters for pilot special regime zones		The land use regulation and the targets are being discussed regularly in the Working Group.	
	• Land use regulation maps for slope disasters for pilot special regime zones are created.			(future activity)	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Japanese Side</u> 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	Working members are assigned.
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.		**<u>Issues and Countermeasures</u>**

3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

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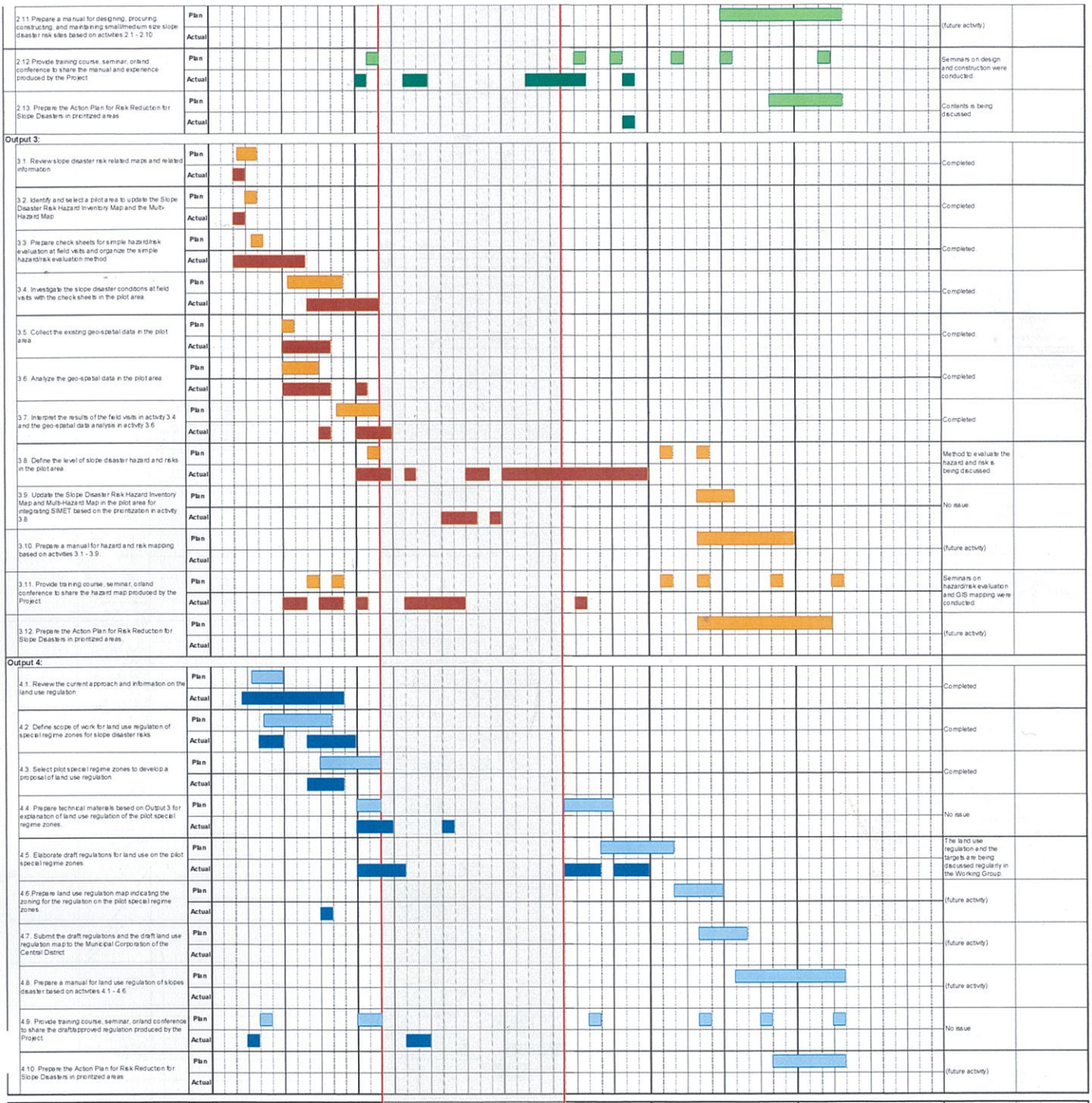
Project Monitoring Sheet II (Revision of Plan of Operation)

Version 4
Dated: January 31, 2022

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Inputs	Year	2019	2020	2021	2022	2023	Monitoring: Issue	Monitoring: Solution
Expert								
Team leader / Slope disaster risk analysis	Plan / Actual							
Geological investigation and analysis (Landslide)	Plan / Actual							
Structural measures (Landslide)	Plan / Actual							
Structural measures (Slope failure and Rockfall)	Plan / Actual							
Geological investigation and analysis 1 (Slope failure and rockfall)	Plan / Actual							
Geological investigation and analysis 2 (Slope failure and rockfall)	Plan / Actual							
Topographic survey	Plan / Actual							
Construction Planning/Bid Supervision	Plan / Actual						No issue.	
Construction Supervision	Plan / Actual							
Slope disaster hazard evaluation	Plan / Actual							
GIS Mapping	Plan / Actual							
Land use regulation	Plan / Actual							
Land use regulation 1	Plan / Actual							
Land use regulation 2	Plan / Actual							
Project coordinator/ Training plan	Plan / Actual							
Equipment								
Equipement	Plan / Actual						Additional equipment was delivered.	
Training in Japan								
Traning in japan	Plan / Actual							The trainings in Japan in 2020 were shifted to 2022.

Activities / Sub-Activities	Year	2019	2020	2021	2022	2023	Achievements	Issue & Countermeasures
Output 1:								
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters.	Plan / Actual						Completed.	
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model)	Plan / Actual						Completed.	
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed. The monitoring is being continued in the landslide sites.	
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.	Plan / Actual						The 2 pilot sites by JICA Project have been completed. Those by C/P are being conducted.	
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.	Plan / Actual						The sites were investigated. Draft proposal is being discussed.	
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.	Plan / Actual						Contents is being discussed.	
1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project.	Plan / Actual						No activity.	
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.	Plan / Actual						Contents is being discussed.	
Output 2:								
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.	Plan / Actual						2 structural measures by JICA Project have been designed. Those by C/P are investigated.	
2.2 Organize applicability of structural measure methods for different slope disasters.	Plan / Actual						No issue	
2.3 Conduct the environmental impact/social assessment.	Plan / Actual						The land acquisition in Campo Cielo at the Municipal Cooperation is suspended.	The procedure is needed to discuss at the Municipal Cooperation by the new government after February 2022.
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC.	Plan / Actual						The AMDC has requested a budget of Lps 10 million for Villa Nueva and Nueva Santa Rosa.	It should be approved at the Municipal Cooperation by the new government after February 2022.
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget).	Plan / Actual						The 2 pilot sites by JICA Project have been completed.	
2.6. Conduct bidding and award process.	Plan / Actual						The 2 pilot sites by JICA Project have been completed.	
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works.	Plan / Actual						The 2 pilot sites by JICA Project have been completed.	
2.8. Implement and supervise structural measure works.	Plan / Actual						Supervision plan is being discussed.	
2.9. Prepare a monitoring and maintenance plan.	Plan / Actual						(future activity)	
2.10. Conduct monitoring and maintenance of the structural measure works.	Plan / Actual						(future activity)	



Monitoring Plan	Year	2019	2020	2021	2022	2023	Issue	Solution
		1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12		
Monitoring								
Joint Coordinating Committee	Plan						No issue	
	Actual							
Submission of Monitoring Sheet	Plan							
	Actual							
Reports/Documents								
Work Plan	Plan						Completed	
	Actual							
Progress Report	Plan						Progress Report 2 is being prepared.	
	Actual							
Final Report	Plan						No issue	
	Actual							

MINUTES OF MEETING
ON FIFTH JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS

The Fifth Joint Coordination Committee was held with the participation of the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA Expert Team (hereinafter referred to as "JET"), the Municipal Government of the Central District (hereinafter referred to as "AMDC"), the Permanent Contingency Commission (hereinafter referred to as "COPECO") and the National Autonomous University of Honduras (hereinafter referred to as UNAH) for the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project")

As a result of discussions on this joint coordination committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, September 13th, 2022

桑野 健

Mr. KUWANO Takeshi
Team leader
The Expert Team
Japan International Cooperation Agency

Mr. Jorge ALDANA
Mayor
Municipal Government of the Central District

Mr. Ramón SOTO
Minister
Permanent Contingency Commission

Mr. Marco Tulio MEDINA
Vice Rector in International Affairs
National Autonomous University of Honduras

Mr. SHINO Katsuhiko
Chief Representative
Japan International Cooperation Agency
Honduras Office

THE ATTACHMED DOCUMENTS

I. Special notes of the Project

(1) Budget of the construction of countermeasure works in the pilot sites

The construction of countermeasure works in Nueva Santa Rosa and Villa Nueva is implemented and financed by AMDC. The total cost of the countermeasure works is L25,000,000 (Twenty five million lempiras). All parties confirmed that AMDC will secure budget for the construction work in Nueva Santa Rosa and Villa Nueva, and for the maintenance cost of the countermeasure works after the Project. JET also explained that the Project period may be shortened and/or the activities may be changed if the AMDC fails to secure the above mentioned budget for construction costs.

(2) Handover of the countermeasure works in Campo Cielo and Fuerzas Unidas

The countermeasure works in Campo Cielo and Fuerzas Unidas were handed over during a ceremony on August 23rd, 2022. AMDC confirmed that it would carry out any necessary activities according to the Memorandum of Understanding signed between AMDC, JICA and JET.

(3) Assignment of working group members in the Project

New working group members are assigned under the new administration, Director: Jorge ALDANA and Project Manager: Luis MAIER. The list of the working group members is attached in Annex-2.

II. Report of activity and plan of the Project

The Projects activities during February 2022 to August 2022 and the plan for the next six (6) months of the Project are as follows;

(1) Output 1

a. The vulnerability evaluation is being implemented with the Municipal Development Institute: IDEM, AMDC in Nueva Santa Rosa and Villa Nueva.
b. The risk definition has been completed at four (4) pilot sites.
c. The elaboration of project concepts for two large-scale slope disaster risk sites, the manuals and the action plan of disaster risk reduction is being implemented.

In the next period, the vulnerability evaluation, the project concepts for the two large-scale slope disaster risk sites, the manual, and the action plan will be implemented.

(2) Output 2

a. The construction of the countermeasure works in Campo Cielo and Fuerzas Unidas have been completed.
b. The detailed design and cost estimation of the countermeasure works in Nueva Santa Rosa and Villa Nueva are being implemented.

In the next period, the maintenance and monitoring for the countermeasures works are started in Campo Cielo and Fuerzas Unidas. The detail design of countermeasure works will be completed in Nueva Santa Rosa and Villa Nueva, and the bidding process will be implemented. The manual and the action plan will be prepared.

(3) Output 3

a. Five (5) sites damaged by Hurricanes ETA and IOTA in November 2021 were added as target sites.
b. The risk level of slope disasters in the pilot area has been discussed, and the methodology of creating a risk map was defined by investigating the asset value at each landslide polygon and its affected area.
c. The table of contents of the manual and the action plan were decided based on the discussion with the working group members.

In the next period, the risk level of slope disasters will be finalized in the pilot area. The risk maps will be created with GIS. The manual and the action plan will be prepared.

(4) Output 4

a. The draft regulation and the regulation maps are being continuously discussed on the collaboration with Output 3 and 4. The draft regulation was submitted to the legal department in AMDC.
b. The table of contents of the manual and the action plan were decided based on the discussion with the working group members.

In the next period, the draft regulation and the regulation maps will be finalized, and the submission of them to the Municipal Corporation will be prepared. The manual and the action plan will be prepared.

III. Monitoring of the Project (Annex-3)

As of the end of August 2022, input of JET has reached 51.94 Person Months (hereinafter referred to as "PM") (80.41 % of Total PM of the Project). For Output 1, activities except the vulnerability evaluation were completed. For Output 2, the two (2) structural measures by JICA Project were constructed. Those by the C/P are being designed. For Output 3, the methodology of creating a risk map was defined. For Output 4, the land use regulation and maps are being drafted.

Others

14 counterparts from AMDC, COPECO, and UNAH will participate in the project's Training Program "Slope Disaster Countermeasures: Investigation, Analysis, and Evaluation" from September 26th - October 7th, 2022 in Japan. A presentation on the results of the Training Program by the participants will take place within one month of their return to Honduras.

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Working group member list

Annex-3: Monitoring sheet ver.5

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Municipal Government of the Central District (AMDC)
Jorge Aldana (Mayor)
Julio Quiñonez (Advisor of the Major)
Russel Garay (Director, Municipal Main Office)
Luis Maier (Manager, Integrated Municipal Risk Unit)
Mario Matamoros (Director, Territorial Planning Directorate)
Nelson Méndez (Manager, Municipal Emergency Committee)
Osmin Arias (Officer, Control and Follow-up Directorate)
Renan Rivera (Officer, Control and Follow-up Directorate)
Dorian Fiallos (Officer, Control and Follow-up Directorate)
Silvia Becerra (Officer, Integrated Municipal Risk Unit)
María Flores (Officer, Integrated Municipal Risk Unit)
Roberto Granados (Officer, Integrated Municipal Risk Unit)

Permanent Contingency Commission (COPECO)
Benedicto Santos (Deputy Minister)
Jorge Aguilar (Head of Seismology, National Information Center of Seismology)

National Autonomous University of Honduras (UNAH)
Marco Tulio Medina (Vice rector of International Affair)
Keren Vallejo (Teacher, Faculty of Engineering)
Junior Reyes (Teacher, Faculty of Engineering)

<JAPANESE SIDE>

JICA Honduras

CHITANI Minori (Head of Technical and Financial Cooperation)

JICA Expert Team

KUWANO Takeshi (Team leader /Slope disaster risk analysis)

Alejandro Flores (Technical Project Assistant)

Armando Flores (Technical Project Assistant)

Vilma Mejía (Project Assistant)

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TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District
Version of the Sheet: Ver.05 (Term: February 2022 – August 2022)

Name: Kuwano Takeshi
Title: Team leader
Submission Date: September 13, 2022

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of August 2022
Japanese Side Experts	Total PM: 54.80 PM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	51.94 PM (80.41 % of Total PM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Construction Planning/Bid Supervision 6) Construction Supervision 7) Slope disaster hazard evaluation 8) GIS mapping 9) Land use regulation 10) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	95	95	All investigation and analysis except the vulnerability evaluation have been completed.
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	5	5	Table of contents was decided. It is being prepared.
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	75	75	2 structural measures by JICA Project were completed. Those by C/P are designed.
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	5	5	Table of contents was decided. It is being prepared.
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	80	80	The risk level has been discussed. The methodology of creating a risk map was defined.
A manual for hazard and risk mapping is prepared.	5	5	Table of contents was decided. It is being prepared.
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	70	70	The land use regulation and the maps are being drafted. The draft regulation was submitted to the legal department in AMDC.
Land use regulation maps for slope disasters for pilot special regime zones are created.	10	10	Table of contents was decided. It is being prepared.

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation
Project purpose:		

Capacity to manage slope disasters in the Central District is improved.		
1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	25	The budget, Lp18,000,000 for 2 pilot structural measures was secured by AMDC. 2 structural measures by C/P are designed.
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	5	Table of contents for each Output was decided. It is being prepared.

1-5 Changes of Risks and Actions for Mitigation

None.

1-6 Progress of Actions undertaken by JICA

None.

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

None.

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

None.

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

None.

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.)

None.

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

2-1 Detail

None.

2-2 Cause

None.

2-3 Action to be taken

None.

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

None.

3-2 Other modifications on detailed implementation plan

None.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Project Period: 2019 to 2023 (about 4 years and 9 months)
Project Site: The Central District

Version: 5.0
Dated: September 13, 2022

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high.	The budget for 2 pilot structural measures was secured by AMDC. 2 structural measures by C/P are designed.	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		Table of contents for each Output was decided. It is being prepared.	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

			• AMDC has access to the equipment and tools owned by UNAH.		
Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced. • A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	・Report on detailed investigation and analysis to identify slope disaster risks of pilot sites ・JICA project monitoring report ・Manual for investigation and analyzing small/medium size slope disaster risk sites	・The key counterparts are assigned during the project period ・AMDC has access to the equipment and tools owned by UNAH.	All investigation and analysis except the vulnerability evaluation have been completed. Table of contents was decided. It is being prepared.	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed. • A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	・Project designs of 4 structural measures for small/medium size slopes ・JICA project monitoring report ・4 structural measures at pilot sites ・Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		2 structural measures by JICA Project were completed. Those by C/P are designed. Table of contents was decided. It is being prepared.	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created. • A manual for hazard and risk mapping is prepared.	・The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map ・Manual for hazard and risk mapping		The risk level has been discussed. The methodology of creating a risk map was defined. Table of contents was decided. It is being prepared.	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created. • Land use regulation maps for slope disasters for pilot special regime zones are created.	・A draft land use regulation for slope disasters for pilot special regime zones ・Land use regulation map for slope disasters for pilot special regime zones		The land use regulation and the maps are being drafted. The draft regulation was submitted to the legal department in AMDC. Table of contents was decided. It is being prepared.	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas. 1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Japanese Side</u> 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	Working members are assigned.
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.		**<u>Issues and Countermeasures</u>**

3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		
4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

Project Monitoring Sheet II (Revision of Plan of Operation)

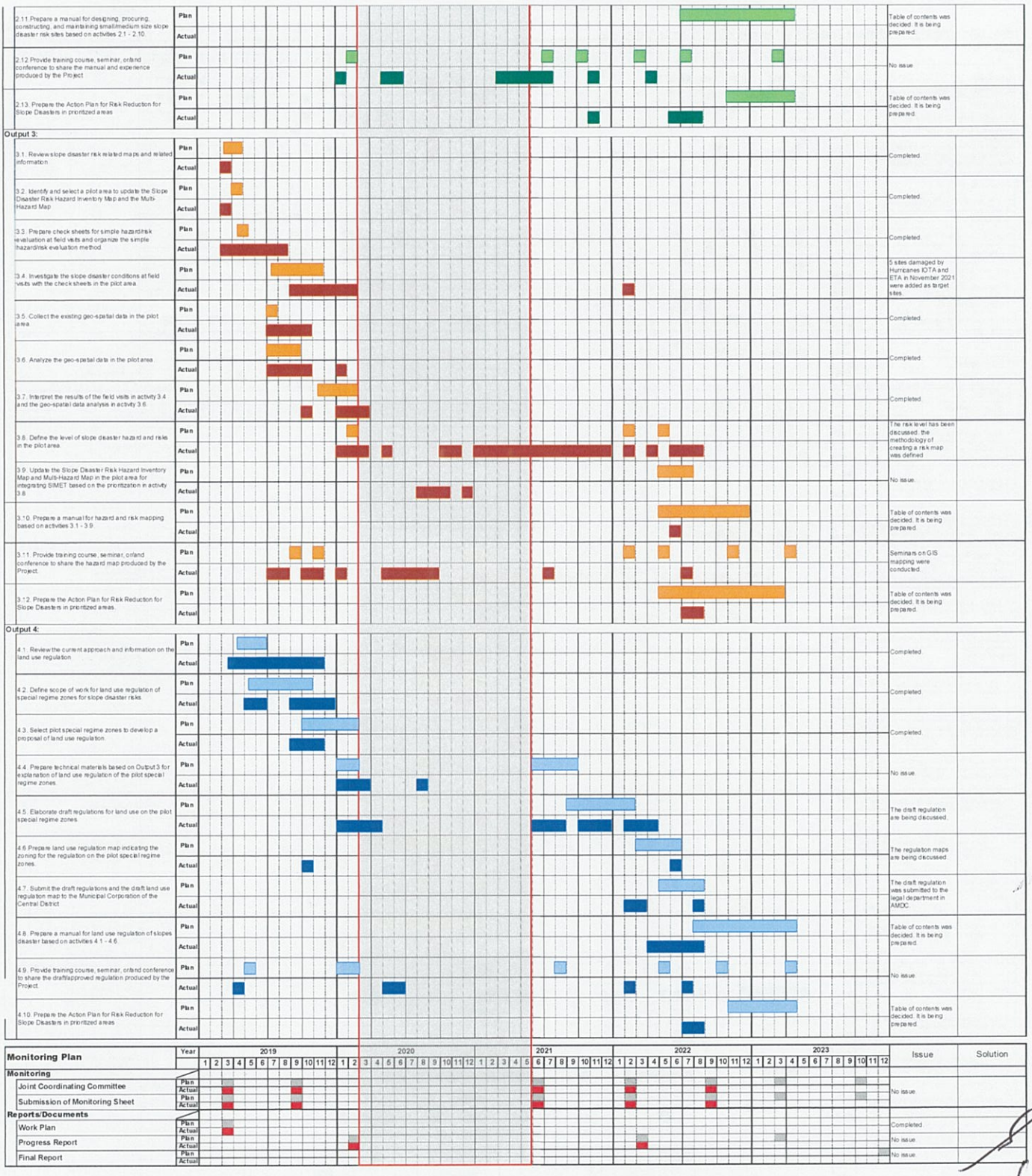
Version 5

Dated: September 13, 2022

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Inputs	Year	2019	2020	2021	2022	2023	Monitoring: Issue	Monitoring: Solution
Expert								
Team leader / Slope disaster risk analysis	Plan / Actual						No issue.	
Geological investigation and analysis (Landslide)	Plan / Actual							
Structural measures (Landslide)	Plan / Actual							
Structural measures (Slope failure and Rockfall)	Plan / Actual							
Geological investigation and analysis 1 (Slope failure and rockfall)	Plan / Actual							
Geological investigation and analysis 2 (Slope failure and rockfall)	Plan / Actual							
Topographic survey	Plan / Actual							
Construction Planning/Bid Supervision	Plan / Actual							
Construction Supervision	Plan / Actual							
Slope disaster hazard evaluation	Plan / Actual							
GIS Mapping	Plan / Actual							
Land use regulation	Plan / Actual							
Land use regulation 1	Plan / Actual							
Land use regulation 2	Plan / Actual							
Project coordinator/ Training plan	Plan / Actual							
Equipment								
Equipement	Plan / Actual						No issue.	
Training in Japan								
Traning in japan	Plan / Actual						It is being prepared.	

Activities / Sub-Activities	Year	2019	2020	2021	2022	2023	Achievements	Issue & Countermeasures
Output 1:								
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters.	Plan / Actual						Completed.	
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model).	Plan / Actual						Completed.	
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed. The monitoring is being continued in the landslide sites.	
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Plan / Actual						The 2 pilot sites by JICA Project were completed. Those by C/P are being conducted.	
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites.	Plan / Actual						Completed.	
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects.	Plan / Actual						Draft concept is being discussed.	
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9.	Plan / Actual						Table of contents was decided. It is being prepared.	
1.12. Provide training course, seminar, orland conference to share the manual produced by the Project.	Plan / Actual						No issue.	
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan / Actual						Table of contents was decided. It is being prepared.	
Output 2:								
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1.	Plan / Actual						2 structural measures by JICA Project were completed. Those by C/P are designed.	
2.2 Organize applicability of structural measure methods for different slope disasters.	Plan / Actual						No issue.	
2.3 Conduct the environmental impact/social assessment.	Plan / Actual						2 structural measures by JICA Project were completed.	
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC.	Plan / Actual						No issue.	
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget).	Plan / Actual						No issue.	
2.6. Conduct bidding and award process.	Plan / Actual						No issue.	
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works.	Plan / Actual						No issue.	
2.8. Implement and supervise structural measure works.	Plan / Actual						2 structural measures by JICA Project were completed.	
2.9. Prepare a monitoring and maintenance plan.	Plan / Actual						(future activity)	
2.10. Conduct monitoring and maintenance of the structural measure works.	Plan / Actual						(future activity)	


2.11.Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 - 2.10.
Table of contents was decided. It is being prepared.
2.12.Provide training course, seminar, or/and conference to share the manual and experience produced by the Project.
No issue.
2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.
Table of contents was decided. It is being prepared.
Output 3:
3.1. Review slope disaster risk related maps and related information.
Completed.
3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map.
Completed.
3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method.
Completed.
3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area.
5 sites damaged by Hurricanes IOTA and ETA in November 2021 were added as target sites.
3.5. Collect the existing geo-spatial data in the pilot area.
Completed.
3.6. Analyze the geo-spatial data in the pilot area.
Completed.
3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6.
Completed.
3.8. Define the level of slope disaster hazard and risks in the pilot area.
The risk level has been discussed, the methodology of creating a risk map was defined.
3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8.
No issue.
3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 - 3.9.
Table of contents was decided. It is being prepared.
3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project.
Seminars on GIS mapping were conducted.
3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.
Table of contents was decided. It is being prepared.
Output 4:
4.1. Review the current approach and information on the land use regulation.
Completed.
4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks.
Completed.
4.3. Select pilot special regime zones to develop a proposal of land use regulation.
Completed.
4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones.
No issue.
4.5. Elaborate draft regulations for land use on the pilot special regime zones.
The draft regulation are being discussed.
4.6 Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones.
The regulation maps are being discussed.
4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District.
The draft regulation was submitted to the legal department in AMDC.
4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 - 4.6.
Table of contents was decided. It is being prepared.
4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project.
No issue.
4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas.
Table of contents was decided. It is being prepared.
Plan
Actual
Monitoring Plan
Year
2019
2020
2021
2022
2023
Issue
Solution
Monitoring
Joint Coordinating Committee
Submission of Monitoring Sheet
No issue.
Reports/Documents
Work Plan
Completed.
Progress Report
No issue.
Final Report
No issue.

MINUTES OF MEETING
ON SIXTH JOINT COORDINATION COMMITTEE FOR
PROJECT FOR CONTROL AND MITIGATION OF SLOPE DISASTERS
IN THE CENTRAL DISTRICT IN REPUBLIC OF HONDURAS

The Sixth Joint Coordination Committee was held on March 17th, 2023 with the participation of the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA Expert Team (hereinafter referred to as "JET"), the Municipal Government of the Central District (hereinafter referred to as "AMDC"), Secretary of State in the Offices of Risk Management and National Contingencies (hereinafter referred to as "COPECO") and the National Autonomous University of Honduras (hereinafter referred to as UNAH) for the Project for Control and Mitigation of Slope Disasters in the Central District in Republic of Honduras (hereinafter referred to as "the Project")

As a result of discussions on this Joint Coordination Committee, all parties agreed to the matters described on the attached sheets.

Tegucigalpa, 2023

Dr. KUWANO Takeshi
Team leader
The Expert Team
Japan International Cooperation Agency

Mr. Jorge ALDANA
Mayor
Municipal Government of the Central District

Mr. Dario GARCIA
Minister
Secretary of State in the Offices of Risk
Management and National Contingencies

Dr. Marco Tulio MEDINA
Vice Rector in International Affairs
National Autonomous University of Honduras

Mr. SHINO Katsuhiko
Chief Representative
Japan International Cooperation Agency
Honduras Office

THE ATTACHMED DOCUMENTS

I. Special notes of the Project

(1) La Guillen landslide

A huge landslide disaster happened in September 2022 in La Guillen next to Nueva Santa Rosa which is a pilot site for the Project. The disaster affected Nueva Santa Rosa as well as La Guillen. Since it was necessary to consider the impact of the landslide in La Guillen for the countermeasures in Nueva Santa Rosa, these countermeasure plans and designs were significantly changed. AMDC proposed a new schedule for 2023 to 2025 in Annex 2 to complete the countermeasure works by December 2025 in La Guillen. According to the new schedule, AMDC will implement investigation, emergency works and permanent countermeasure works.

JET will provide technical advice for the AMDC's following activity in La Guillen and Nueva Santa Rosa until December 2023, when the JICA Project is expected to close.

- ✓ Preliminary landslide analysis
- ✓ Proposal of emergency measures policy
- ✓ Clearing and debris removal
- ✓ Detailed design of emergency measures
- ✓ Construction of emergency measures
- ✓ Plan for investigation and analysis
- ✓ Follow up to research and analysis
- ✓ Landslide monitoring
- ✓ Landslide analysis
- ✓ Plan of permanent countermeasure works.

(2) Modification of Project Design Matrix in the Project

As "Important External Conditions" in the Project Design Matrix of the Project, the following was added:

"In the pilot site and its surroundings, significant disasters with large-scale topographical alterations does NOT happen during the period from the survey until the countermeasure construction."

II. Report of activity and plan of the Project

The Projects activities during September 2022 to February 2023 and the plan for the next six (6) months of the Project are as follows;

(1) Output 1 (Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened)

a. The vulnerability evaluation has been completed at four (4) pilot sites (Campo Cielo, Fuerzas Unidas, Villa Nueva, Nueva Santa Rosa).

b. The elaboration of project concepts for two large-scale slope disaster risk sites is being finalized (Jose Angel Ulloa, El Eden).

c. The manuals and the Action Plan have been completed.

In the next period, the project concepts for the two large-scale slope disaster risk sites will be finalized as future projects in AMDC. Working Group (hereinafter referred to as "WG") 1 mainly composing of Integrated Municipal Risk Unit, Risk Evaluation Management and Municipal Emergency Committee in AMDC will implement the investigation and analysis for Nueva Santa Rosa and La Guillen landslide.

(2) Output 2 (Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced)

a. The design of countermeasure works for Villa Nueva and the design of emergency countermeasure works for Nueva Santa Rosa and La Guillen are being carried out.

b. The Action plan has been completed.

c. The maintenance work in Fuerzas Unidas is being carried out.

d. The manual of countermeasure works in design version is being prepared.

In the next period, the bidding and the supervision of countermeasure works in Villa Nueva, the emergency countermeasure works in Nueva Santa Rosa and La Guillen will be implemented by WG 2 mainly composing of Control and Follow-up Directorate, Civil Works Department and Municipal Emergency Committee in AMDC. The manual will be completed.

(3) Output 3 (Capacity to develop hazard and risk maps is enhanced)

a. A joint seminar was held for Outputs 3 and 4 to share the methods for hazard and risk classification. Risk communication after creating the risk map was discussed.

b. Hazard classification was confirmed in La Guillen, Villa Delmi, and Suazo Córdoba, which were damaged in September 2022.

c. The Action plan has been completed.

In the next period, WG 3 such as mainly Risk Evaluation Management and Integrated Municipal Risk Unit in AMDC will finalize the slope disaster risk map in the pilot area using GIS. The manual will be completed.

(4) Output 4 (Capacity to regulate land use for slope disasters is enhanced)

a. The draft regulation was continuously updated. The Articles for entering to private lands for the evaluation and for the regulation category were updated.

b. The trial regulation map was created based on the result of hazard evaluation.

c. The manual for land use regulation is being finalized.

d. The Action plan has been completed.

In the next period, WG 4 mainly composing of Territorial Planning Directorate, Legal Department, Risk Evaluation Management and Integrated Municipal Risk Unit in AMDC will finalize the draft regulation and the regulation maps to submit them to the Municipal Corporation through the Legal Department in AMDC. The manual will be completed.

III. Monitoring of the Project (Annex-3)

As of the end of February 2023, input of JET has reached 55.34 Person Months (hereinafter referred to as "PM") (85.67 % of Total PM of the Project).

Annex-1: List of members who attended the Joint Coordination Committee

Annex-2: Schedule in La Guillen in 2023 to 2025

Annex-3: Monitoring sheet ver.6

ALCALDE MUNICIPAL 2022-2026

Annex-1

List of members who attended the Joint Coordination Committee

<HONDURAS SIDE>

Municipal Government of the Central District (AMDC)

Russel Garay (Director, Municipal Main Office)
Ingrid Flores (Director, Integrated Municipal Risk Unit)
Mario Matamoros (Director, Territorial Planning Directorate)
Nelson Méndez (Manager, Municipal Emergency Committee)
Renan Rivera (Officer, Control and Follow-up Directorate)
Silvia Becerra (Officer, Integrated Municipal Risk Unit)
Darwin Martinez (Manager, Risk Evaluation Management)
Ashly Villamil (Assistant, Risk Evaluation Management)

Permanent Contingency Commission (COPECO)

Ilich Aguiriano (Secretary, General Secretariat)
Crisbel Cardona (Assistant, General Secretariat)
Daniela Sarai Bardales (Director, International Cooperation)
Jorge Miguel Aguilar (Officer, Seismology Department)

National Autonomous University of Honduras (UNAH)

Carlos Murcia (Advisor of Vice Rector, International Affair)

<JAPANESE SIDE>

JICA Honduras Office

CHITANI Minori (Head of Technical and Financial Cooperation)

JICA Expert Team

KUWANO Takeshi (Team leader /Slope disaster risk analysis)
AOKI Hotaka (Structural measures)
Alejandro Flores (Technical Project Assistant)
Vilma Mejía (Project Assistant)

Actividad	Responsable / Departamento	2022		2023												2024												2025											
		11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Análisis Preliminar del Deslizamiento / Preliminary Landslide Analysis	JICA																																				
Propuesta de Politica de Medidas de Emergencia / Proposal of Emergency Measures Policy	JICA																																				
Limpieza y remoción de escombros / Cleaning and debris removal	DCyS																																				
Diseño Detallado de Medidas de Emergencia / Detailed Design of Emergency Measures	DCyS y GOC																																				
Construcción de Medidas de Emergencia / Construction of Emergency Measures	DCyS y GOC																																				
Plan para Investigación y Análisis / Plan for Investigation and Analysis	UMGIR Y GER																																				
Seguimiento a Trabajos de Investigación y Análisis / Follow Up to Research and Analysis Work	UMGIR, GER, COPECO																																				
Monitoreo del Deslizamiento / Landslide Monitoring	CODEM, COPECO																																				
Análisis del Deslizamiento / Landslide Analysis	IHCIT, DCyS, Facultad de ingeniería																																				
Diseño Básico de Obras de Mitigación Finales / Basic Design of Final Mitigation Works	IHCIT, DCyS, Facultad de ingeniería																																				
Diseño Detallado de Obras de Mitigación Finales / Detailed Design of Final Mitigation Works	DCyS y GOC																																				
Elaboración de Pliegos de Licitación / Preparation of Bidding Documents	Gerencia de Licitaciones																																				
Licitación / Bidding	Gerencia de Licitaciones																																				
Construcción y Supervisión / Construction and Supervision	DCyS y GOC																																				
Maintenance and Monitoring / Mantenimiento y Monitoreo	CODEM																																				

Finalización Proyecto de JICA - AMDC

TO CR of JICA HONDURAS OFFICE

PROJECT MONITORING SHEET

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District
Version of the Sheet: Ver.06 (Term: September 2022 – February 2023)

Name: Kuwano Takeshi
Title: Team leader
Submission Date: March 17, 2023

I. Summary

1 Progress

1-1 Progress of Inputs

Inputs	Plan as of February 2019	Actual as of February 2023
Japanese Side Experts	Total PM: 54.80 PM 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation 8) Coordinator	55.34 PM (85.67 % of Total PM) 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Construction Planning/Bid Supervision 6) Construction Supervision 7) Slope disaster hazard evaluation 8) GIS mapping 9) Land use regulation 10) Coordinator
Japanese Side Training (Japan, Third Countries)	· Training on Slope Disaster Risk Reduction	· Training on Slope Disaster Risk Reduction
Procurement of Equipment	· Digital Terrain Model	· Digital Terrain Model
Honduras Side	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects	(1) Counterpart Personnel: 1) Project Director (Mayor of AMDC) 2) Project Manager (Coordinator of UMGIR) 3) WG members for Output 1 4) WG members for Output 2 5) WG members for Output 3 6) WG members for Output 4 (2) Working Space and Facilities for JICA Experts at: · UMGIR · UNAH (3) Project Cost: · Local operation cost · Construction of 2 pilot projects

1-2 Progress of Activities

Progress of activities is indicated in Monitoring Sheet Form 3-2 (PDM) and Form 3-3 (PO).

1-3 Achievement of Output

Output/indicators	Achievement (%)		Major results
	Plan	Actual	
Output 1: Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.			
Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	95	95	The report is being finalized.
A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.	90	100	The manual was completed.
Output 2: Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.			
4 structural measures for small/medium size slope disaster risks are constructed.	75	75	The structural measure in Villa Nueva by C/P is being designed. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa.
A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.	40	50	The manual is being prepared.
Output 3: Capacity to develop hazard and risk maps is enhanced.			
The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	85	85	The maps are being drafted.
A manual for hazard and risk mapping is prepared.	80	90	The manual is being finalized.
Output 4: Capacity to regulate land use for slope disasters is enhanced.			
A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	90	90	The land use regulation is being finalized.
Land use regulation maps for slope disasters for pilot special regime zones are created.	80	80	The land use regulation maps are being finalized.

1-4 Achievement of the Project Purpose

Project purpose/indicators	Achievement (%)	Situation

Project purpose: Capacity to manage slope disasters in the Central District is improved.		
1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	35	The structural measure in Villa Nueva by C/P is being designed. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa.
2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	95	Action Plan for each Output has been completed. The Integrated Action Plan is being finalized.

1-5 Changes of Risks and Actions for Mitigation

A huge landslide disaster happened in September 2022 in La Guillen next to Nueva Santa Rosa which is the pilot site for landslide in the Project. The disaster affected to Nueva Santa Rosa as well as La Guillen. Since it is necessary to consider the impact of disasters in the countermeasures in Nueva Santa Rosa, countermeasure plans and designs have changed significantly.

1-6 Progress of Actions undertaken by JICA

JICA Expert Team supports AMDC to re-consider the countermeasure plans in La Guillen and Nueva Santa Rosa.

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

AMDC needs to re-consider the countermeasure plans in La Guillen and Nueva Santa Rosa.

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

None.

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

None.

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.)

None.

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

2-1 Detail

Due to La Guillen disaster, the countermeasure plans have to be changed for Nueva Santa Rosa. The countermeasure works will be completed in December 2025 in La Guillen and Nueva Santa Rosa according

to the new plan prepared by AMDC, while the Project is finished in December 2023.

2-2 Cause

A huge landslide disaster happened in September 2022 in La Guillen.

2-3 Action to be taken

JICA Expert Team supports AMDC to re-consider the countermeasure plans in La Guillen and Nueva Santa Rosa.

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

None.

3 Modification of the Project Implementation Plan

3-1 PO

None.

3-2 Other modifications on detailed implementation plan

As Important Assumption in Project Design Matrix in the Project, "In the pilot site and its surroundings, significant disasters with large-scale topographical alterations does NOT happen during the period from the survey until the countermeasure construction" was added.

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

None.

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

Project Monitoring Sheet I (Revision of Project Design Matrix)

Project Title: Project for Control and Mitigation of Slope Disasters in the Central District[1]
Implementing Agency: The Central District Municipal Government (AMDC), National Disaster Prevention Committee (COPECO), National Autonomous University of Honduras (UNAH)
Project Period: 2019 to 2023 (about 4 years and 9 months)
Project Site: The Central District

Version: 6.0
Dated: March 15, 2023

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Necessary actions for control and mitigation for slope disaster risks in the -Central District will be undertaken based on the Action Plan for Risk Reduction for Slope Disasters in the Central District (the Action Plan)[2].	• Number of people living under slope disaster risks is reduced by implementing countermeasures based on the Action Plan. • 2 countermeasures for slope disasters risks in accordance with the Action Plan are undertaken within 3 years after the project completion. • The newly created land use regulation for special regime zones in Central District based on the Action Plan.	• Statistical data managed by AMDC • List of implemented countermeasure projects for slope disasters risks • Land use regulation for special regime zones for slope disasters risks issued by AMDC		(future activity)	
Project Purpose					
Capacity to manage slope disasters in the Central District is improved.	1. 2 pilot structural measures for small/medium size slope disasters are financed and constructed by AMDC.	1. Pilot project review report(s) (including an evaluation of completed construction projects by counterparts) prepared by JICA experts	• The level of importance given to control and mitigation of slope disaster risks by AMDC and the Government of Honduras stays high. • AMDC has access to the equipment and tools owned by UNAH.	The structural measure in Villa Nueva by C/P is being designed. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa.	
	2. "Action Plan for Risk Reduction for Slope Disasters in the Central District" is created.	2. Document on "Action Plan for Risk Reduction for Slope Disasters in the Central District"		Action Plan for each Output has been completed. The Integrated Action Plan is being finalized.	

[1] Slope disaster means disasters caused by phenomena of slope movements in Spanish.
[2] The Action Plan includes 1) project priorities of area selected by the Project and 2) the AMDC's plan to disseminate the outcomes of the Project.

Outputs					
1. Capacity to conduct detailed investigation and analysis to identify and characterize slope disaster phenomena is strengthened.	• Report on detailed investigation and analysis to identify slope disaster risks of pilot sites is produced.	・Report on detailed investigation and analysis to identify slope disaster risks of pilot sites ・JICA project monitoring report ・Manual for investigation and analyzing small/medium size slope disaster risk sites	・The key counterparts are assigned during the project period ・AMDC has access to the equipment and tools owned by UNAH. ・In the pilot site and its surroundings, significant disasters with large-scale topographical alterations does NOT happen during the period from the survey until the countermeasure construction	The report is being finalized.	
	• A manual for investigating and analyzing small/medium size slope disaster risk sites is prepared.			The manual was completed.	
2. Capacity to design, construct, supervise, and maintain structural measures for small/medium size slope disaster risk is enhanced.	• 4 structural measures for small/medium size slope disaster risks are constructed.	・Project designs of 4 structural measures for small/medium size slopes ・JICA project monitoring report ・4 structural measures at pilot sites ・Manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk		The structural measure in Villa Nueva by C/P is being designed. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa.	
	• A manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risks is prepared.			The manual is being prepared.	
3. Capacity to develop hazard and risk maps is enhanced	• The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map are created.	・The updated Slope Disaster Hazard Inventory Map and the Multi-hazard Map ・Manual for hazard and risk mapping		The maps are being drafted.	
	• A manual for hazard and risk mapping is prepared.			The manual is being finalized.	
4. Capacity to regulate land use for slope disasters is enhanced.	• A draft land use regulation for slope disaster risk area for pilot special regime zones is created.	・A draft land use regulation for slope disasters for pilot special regime zones ・Land use regulation map for slope disasters for pilot special regime zones		The land use regulation is being finalized.	
	• Land use regulation maps for slope disasters for pilot special regime zones are created.			The land use regulation maps are being finalized.	

Activities	Input	Pre-condition
1.1. Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters. 1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites. 1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model). 1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites. 1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites. 1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas.	Input: Japanese Side 1. Experts 1) Team leader 2) Geological investigation and analysis 3) Topographic survey 4) Structural measures 5) Slope disaster hazard evaluation 6) GIS mapping 7) Land use regulation	Working members are assigned.

1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites. 1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites. 1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites. 1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects. 1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 – 1.9. 1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project. 1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	8) Coordinator 2. Training in Japan • Training on Slope Disaster Risk Reduction 3. Procurement of Equipment • Digital Terrain Model	
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1. 2.2. Organize applicability of structural measure methods for different slope disasters. 2.3. Conduct the environmental impact/social assessment. 2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC 2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget). 2.6. Conduct bidding and award process 2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works. 2.8. Implement and supervise structural measure works. 2.9. Prepare a monitoring and maintenance plan. 2.10. Conduct monitoring and maintenance of the structural measure works. 2.11. Prepare a manual for designing, procuring, constructing, and maintaining small/medium size slope disaster risk sites based on activities 2.1 – 2.10. 2.12. Provide training course, seminar, or/and conference to share the manual and experience produced by the Project 2.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	<u>Input: Honduras Side</u> 1. Counterpart Personnel: • Project Director (Mayor of AMDC) • Project Manager (Coordinator of UMGIR) • WG members for Output 1 • WG members for Output 2 • WG members for Output 3 • WG members for Output 4 2. Working Space and Facilities for JICA Experts at: • UMGIR • UNAH 3. Project Cost: • Local operation cost • Construction of 2 pilot projects	
3.1. Review slope disaster risk related maps and related information 3.2. Identify and select a pilot area to update the Slope Disaster Risk Hazard Inventory Map and the Multi-Hazard Map 3.3. Prepare check sheets for simple hazard/risk evaluation at field visits and organize the simple hazard/risk evaluation method. 3.4. Investigate the slope disaster conditions at field visits with the check sheets in the pilot area. 3.5. Collect the existing geo-spatial data in the pilot area. 3.6. Analyze the geo-spatial data in the pilot area. 3.7. Interpret the results of the field visits in activity 3.4 and the geo-spatial data analysis in activity 3.6. 3.8. Define the level of slope disaster hazard and risks in the pilot area. 3.9. Update the Slope Disaster Risk Hazard Inventory Map and Multi-Hazard Map in the pilot area for integrating SIMET based on the prioritization in activity 3.8. 3.10. Prepare a manual for hazard and risk mapping based on activities 3.1 – 3.9. 3.11. Provide training course, seminar, or/and conference to share the hazard map produced by the Project. 3.12. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		**<u>Issues and Countermeasures</u>**

4.1. Review the current approach and information on the land use regulation 4.2. Define scope of work for land use regulation of special regime zones for slope disaster risks. 4.3. Select pilot special regime zones to develop a proposal of land use regulation. 4.4. Prepare technical materials based on Output 3 for explanation of land use regulation of the pilot special regime zones. 4.5. Elaborate draft regulations for land use on the pilot special regime zones. 4.6. Prepare land use regulation map indicating the zoning for the regulation on the pilot special regime zones. 4.7. Submit the draft regulations and the draft land use regulation map to the Municipal Corporation of the Central District 4.8. Prepare a manual for land use regulation of slopes disaster based on activities 4.1 – 4.6. 4.9. Provide training course, seminar, or/and conference to share the draft/approved regulation produced by the Project. 4.10. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas		

Project Monitoring Sheet II (Revision of Plan of Operation)

Version 6
Dated: March 17 , 2023

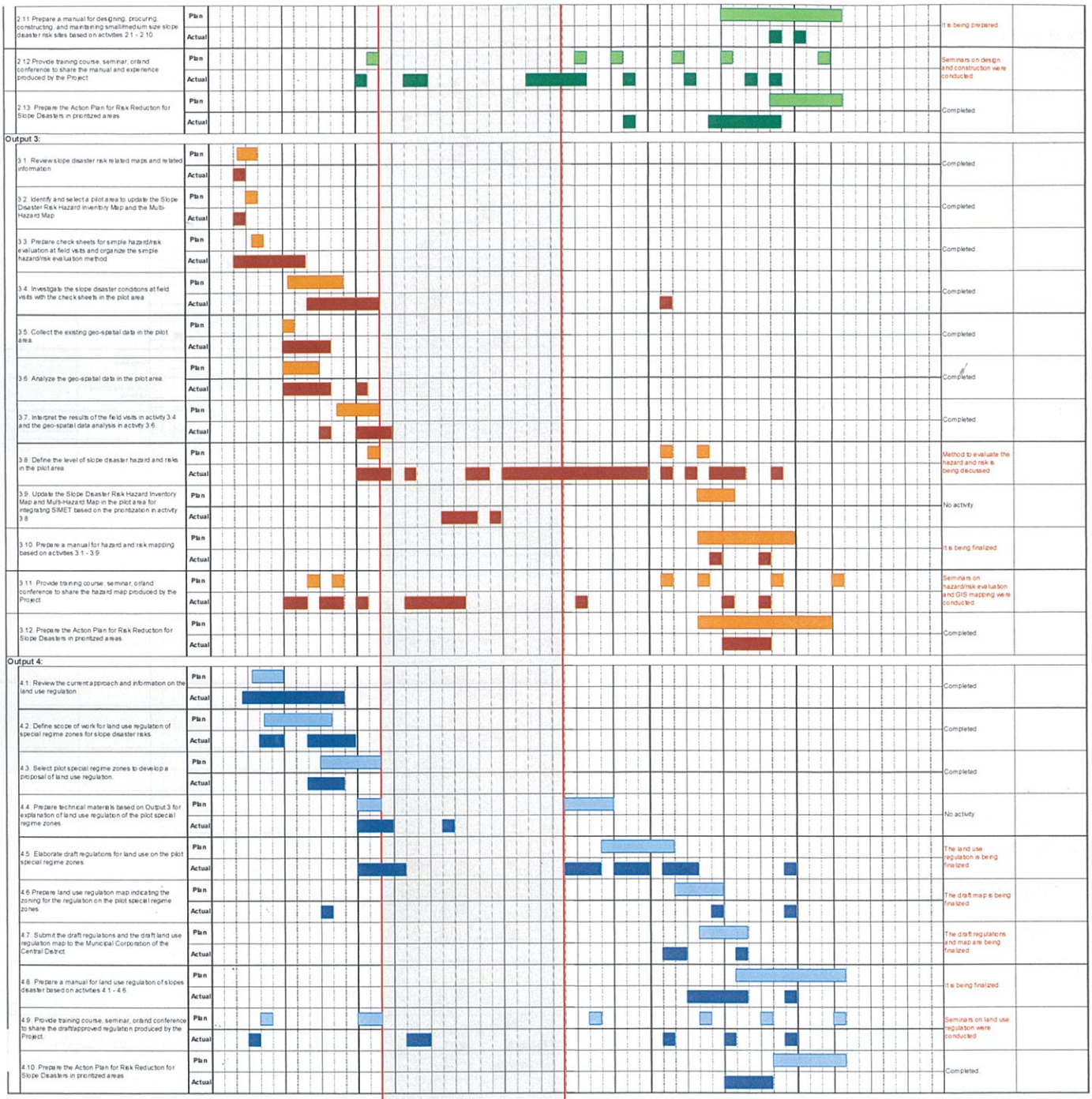
Project Title: Project for Control and Mitigation of Slope Disasters in the Central District

Schedule columns: 2019 (months 1–12), 2020 (months 1–12), 2021 (months 1–12), 2022 (months 1–12), 2023 (months 1–12).

Inputs		Monitoring: Issue	Monitoring: Solution
Expert			
Team leader / Slope disaster risk analysis	Plan / Actual		
Geological investigation and analysis (Landslide)	Plan / Actual		
Structural measures (Landslide)	Plan / Actual		
Structural measures (Slope failure and Rockfall)	Plan / Actual		
Geological investigation and analysis 1 (Slope failure and rockfall)	Plan / Actual		
Geological investigation and analysis 2 (Slope failure and rockfall)	Plan / Actual		
Topographic survey	Plan / Actual		
Construction Planning/Bid Supervision	Plan / Actual	No issue	
Construction Supervision	Plan / Actual		
Slope disaster hazard evaluation	Plan / Actual		
GIS Mapping	Plan / Actual		
Land use regulation	Plan / Actual		
Land use regulation 1	Plan / Actual		
Land use regulation 2	Plan / Actual		
Project coordinator/ Training plan	Plan / Actual		
Equipment			
Equipement	Plan / Actual	Completed	
Training in Japan			
Traning in japan	Plan / Actual	2nd training is being prepared	

Activities / Sub-Activities		Achievements	Issue & Countermeasures
Output 1:			
1.1 Identify and select pilot sites (2 small/medium-size landslides, 2 small/medium-size slope failures/rock falls, 2 large-size landslides) to implement structural measures on slope disasters	Plan / Actual	Completed	
1.2. Prepare Work Plan for the investigation of the 4 small/medium-size slope disaster risk sites	Plan / Actual	Completed	
1.3. Investigate the topographic conditions of the 4 small/medium-size slope disaster risk sites (generating geo spatial information for the terrain elevation model)	Plan / Actual	Completed	
1.4. Investigate the geophysical (elastic wave exploration, electrical exploration, and others) and mechanical (laboratory test and others) characteristics of the 4 small/medium-size slope disaster risk sites	Plan / Actual	Completed. The monitoring is being continued in the landslide sites	
1.5. Analyze and interpret the data from the investigation of the 4 small/medium-size slope disaster risk sites	Plan / Actual	Completed	
1.6. Evaluate the vulnerability of the 4 small/medium-size slope disaster risks sites, including their surrounding areas	Plan / Actual	Completed	
1.7. Define risk and characterize the risk zones of the 4 small/medium-size slope disaster risk sites	Plan / Actual	Completed	
1.8. Prepare the conceptual proposals of design and inputs required for the structural measures in the Output 2 for the 4 small/medium-size slope disaster risk sites	Plan / Actual	Completed	
1.9. Systematize the mechanism and the procedure applied in the characterization process of the 4 pilot small/medium-size slope disaster risk sites	Plan / Actual	Completed	
1.10. Prepare project concepts of the 2 large-sized slope disaster risk sites selected in activity 1.1 for future projects	Plan / Actual	Proposal report is being finalized	
1.11. Prepare a manual for investigating and analyzing small/medium size slope disasters risk sites based on activities 1.1 - 1.9	Plan / Actual	Completed	
1.12. Provide training course, seminar, or/and conference to share the manual produced by the Project	Plan / Actual	No activity	
1.13. Prepare the Action Plan for Risk Reduction for Slope Disasters in prioritized areas	Plan / Actual	Completed	
Output 2:			
2.1. Design structural measure works at the 4 small/medium-size slope disaster risk sites based on the data provided by the Output 1	Plan / Actual	2 structural measures by C/P are being designed. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa	Continuous discussion is needed for the design of La Guillen and Nueva Santa Rosa
2.2 Organize applicability of structural measure methods for different slope disasters	Plan / Actual	No activity	
2.3 Conduct the environmental impact/social assessment	Plan / Actual	2 sites by C/P are being implemented. Due to La Guillen disaster, the plan was changed for Nueva Santa Rosa	Continuous discussion is needed for the design of La Guillen and Nueva Santa Rosa
2.4. Assign budget items for the investment for 2 small/medium structural measures conducted by AMDC	Plan / Actual	AMDC approved the budget for Villa Nueva and Nueva Santa Rosa	
2.5. Develop bidding documents (technical specification, calculation reports, cost estimation, and estimation of material needed and budget)	Plan / Actual	2 sites by C/P are being implemented	
2.6. Conduct bidding and award process	Plan / Actual	No activity	
2.7. Make contracts with subcontractors selected in the procurement process to implement the structural measure works	Plan / Actual	No activity	
2.8. Implement and supervise structural measure works	Plan / Actual	Supervision was conducted for 2 sites by JICA Project	
2.9. Prepare a monitoring and maintenance plan	Plan / Actual	The plan was prepared for 2 sites by JICA Project	
2.10. Conduct monitoring and maintenance of the structural measure works	Plan / Actual	Monitoring and maintenance are being conducted for 2 sites by JICA Project	

DJGV



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