RECORD OF DISCUSSIONS

ON 007-2015

PROJECT FOR STRENGTHENING FLOOD RISK MANAGEMENT CAPACITY IN REPUBLIC OF COLOMBIA

AGREED UPON BETWEEN

THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF REPUBLIC OF COLOMBIA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Bogota, D.C., April 20, 2015

HIDEMITSU SAKURAI
Resident Representative
JICA Colombia Office
Japan International Cooperation Agency (JICA)

CARLOS IVAN MARQUEZ PEREZ
Director General
National Unit for Disaster Risk Management (UNGRD)

OMAR FRANCO TORRES
Director General
Institute of Hydrology, Meteorology and Environmental Studies (IDEAM)

ALEJANDRO GAMBOA CASTILLA
Director
Colombian Presidential Agency of International Cooperation (APC-Colombia)

ALVARO CRUZ VARGAS
Governor
Department of Cundinamarca

ALFRED IGNACIO BALLESTEROS ALARCÓN
Director General
Autonomous Regional Corporation of Cundinamarca (CAR)

007-2015

Based on the minutes of meetings on the Detailed Planning Survey on the Project for Strengthening Flood Risk Management Capacity (hereinafter referred to as "the Project") signed on October 23, 2014 between National Unit for Disaster Risk Management (hereinafter referred to as "UNGRD"), Institute of Hydrology, Meteorology and Environmental Studies (hereinafter referred to as "IDEAM") and Colombian Presidential Agency of International Cooperation (hereinafter referred to as "APC-Colombia") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with UNGRD, IDEAM, APC-Colombia and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that UNGRD, IDEAM, the counterparts to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Colombia.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on 22nd December, 1976 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 30th May, 2013 between the Government of Japan (hereinafter referred to as "GOJ") and the Government of the Republic of Colombia.

The Record of Discussions is written both in English and Spanish, both of which are equally official. The English text shall prevail in case of any divergence of interpretation.

Appendix 1: Project Description
Appendix 2: Main Points Discussed
Appendix 3: Minutes of Meetings on the Detailed Planning Survey

007-2015

Appendix 1

PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the Minutes of Meetings on the concerning Detailed Planning Survey on the Project signed on October 23, 2014 (Appendix 3).

I. BACKGROUND

The Republic of Colombia, (hereinafter referred to as "Colombia") located in the central Andes, has 11 active volcanos and various topographic characteristics, and because of that, the risk of natural disasters is extremely high. The Andes is split up into Cordillera Occidental in the west, Cordillera Central in the central, and Cordillera Oriental in the east. Cordillera Occidental and Cordillera Central have 3,000m-class and 5,000-class mountains, respectively. The major rivers are Río Magdalena which is the fourth largest river basin in the South America and Río Cauca and flow to the Caribbean Sea. Guaviare River which connects to Rio Negro in Brazil is also located in the eastern Colombia.

Flood is the most serious and large-scaled natural disasters in Colombia. The historical natural disaster occurred by La Nina in 2010-2011 with approximately 3 million affected people in Colombia by torrential rainfall and floods. In reaction to the disaster, the Government of Colombia has started to establish disaster risk management structure including "Sistema Nacional para la Gestión del Riesgo de Desastres (SNGRD)" and "Unidad Nacional para la Gestión del Riesgo de Desastres (UNGRD)". However, the role and responsibilities of the involved institutions in the disaster management, coordination development between central administration and local governments, still need to be strengthened and progress on coordination among the central and local governments is still slow. Therefore, Colombia today has the opportunity to strengthen SNGRD, promoting the elaboration and implementation mechanism of flood risk management plans at a river basin level.

In the National Development Plan (2010-2014), the risk prevention is listed as one of the five priority items and provision of high quality public service for adaptation to climate change and reduction of vulnerability is set as its policy. The enhancement of SNGRD is also mentioned in the plan as the objectives for the integrated risk management. UNGRD, the coordinating organization for SNGRD, is responsible to preside the comprehensive disaster management in coordination with relevant organizations. The close coordination with Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia (IDEAM), an organization responsible for dissemination of hydromet information at national level, is indispensable.

Under such circumstances, the Government of Colombia has requested the GOJ to implement the project on strengthening of disaster management capacity. In response, the Government of Japan has accepted the request.

II. OUTLINE OF THE PROJECT

The details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (Annex I) and the Tentative Plan of Operation (Annex II).

007-2015

1. Input

(1) Input by JICA

(a) Dispatch of Experts

The details of the dispatch of experts are described in Annex III.

(b) Training

JICA will receive the Colombian personnel connected with the Project for technical training(s) in Japan.

(c) Machinery and Equipment

JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in Annex IV.

In case of importation, the machinery, equipment and other materials under II-1 (1) (c) above will become the property of the UNGRD and IDEAM upon being delivered C.I.F. (cost, insurance and freight) to Colombia authorities concerned at the ports and/or airports of disembarkation.

Input other than indicated above will be determined through mutual consultations among JICA, UNGRD, IDEAM and APC-Colombia during the implementation of the Project, as necessary.

(2) Input by the Colombian counterpart

The Colombian counterpart will take necessary measures to provide at its own expense:

(a) Services of counterpart personnel and administrative personnel from UNGRD, IDEAM, Autonomous Regional Corporation of Cundinamarca (hereinafter referred to as "CAR"), Department of Cundinamarca and local institutions in the area of influence of the river basin, as referred to in II-2;
(b) Suitable office space for experts with necessary equipment;
(c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
(d) Information as well as support in obtaining medical service;
(e) Credentials or identification cards;
(f) Available data (including maps and photographs) and information related to the Project;
(g) Running expenses necessary for the implementation of the Project;
(h) Expenses necessary for transportation within Colombia of the equipment referred to in II-1 (1) as well as for the installation, operation and maintenance thereof; and
(i) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Colombia from Japan in connection with the implementation of the Project

2. Implementation Structure

The Project organization chart is given in the Annex V. The roles and assignments of relevant organizations are as follows:

007-2015

(1) UNGRD

(a) Project Director

General Subdirector of UNGRD or person appointed by the General Director will bear overall responsibility for implementation, administration, monitoring and evaluation of the Project.

(b) Project Manager

Person appointed by the General Director will bear overall responsibility for management of the Project.

(c) Counterpart Personnel (hereinafter referred to as "C/P")

Personnel who will be assigned by the time of signing of R/D is expected to work closely with the JICA Experts.

(2) IDEAM

(a) Project Manager

Subdirector of Hydrology of IDEAM or person appointed by the General Director will bear overall responsibility for management of the Project.

(b) C/P

Personnel who will be assigned by the time of signing of R/D is expected to work closely with the JICA Experts.

(3) CAR

(a) C/P

Personnel who will be assigned by the time of signing of R/D is expected to work closely with the JICA Experts.

(4) Department of Cundinamarca

(a) C/P

Personnel who will be assigned by the time of signing of R/D is expected to work closely with the JICA Experts.

(5) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to UNGRD, IDEAM, CAR, and Department of Cundinamarca on any matters pertaining to the implementation of the Project.

(6) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the Annex VI.

3. Project Site(s) and Beneficiaries

(1) Project Site

-Direct Target: River basin of Rio Negro (no. 2306)

- Indirect Target: whole country of Colombia

(2) Direct Beneficiaries

- Staff of UNGRD, IDEAM, CAR and Department of Cundinamarca in the influential zone of the pilot river basin

(3) Indirect Beneficiaries

- People in Colombia

007-2015

4. Duration
The Project will be carried out for approximately three (3) years from the date when the first JICA expert arrives in Colombia as shown in Annex II (Tentative Plan of Operation).

5. Reports
UNGRD, IDEAM and the JICA experts will jointly prepare the following reports in English.
(1) Monitoring Sheet on semiannual basis until the project completion
(2) Project Completion Report at the time of project completion

6. Environmental and Social Considerations
UNGRD and IDEAM agreed to abide by JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF THE COUNTERPART – THE REPUBLIC OF COLOMBIA

1. The Counterparts of Colombia will take necessary measures to:
   (1) ensure that the technologies and knowledge acquired by Colombia nationals as a result of Japanese technical cooperation contributes to the economic and social development of Colombia, and that the knowledge and experience acquired by the personnel of Republic of Colombia from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
   (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-1 (1) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Colombia.

2. Other privileges, exemptions and benefits will be provided in accordance with the Agreement on Technical Cooperation signed on 22nd December, 1976 between GOJ and the Government of the Republic of Colombia.

IV. MONITORING AND EVALUATION

JICA, UNGRD and IDEAM will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the Project Design Matrix (PDM) and Tentative Plan of Operation (PO). The Monitoring Sheets shall be reviewed every six (6) months.

Also, Project Completion Report shall be drawn up one (1) month before the termination of the Project.

JICA will conduct the following evaluations and surveys to mainly verify sustainability and impact of the Project and draw lessons. UNGRD and IDEAM are required to provide necessary support for them.

007-2015

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, UNGRD and IDEAM will take appropriate measures to make the Project widely known to the people of Colombia.

VI. MISCONDUCT

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, UNGRD, IDEAM and relevant organizations shall provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of Colombia.

UNGRD, IDEAM and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA, UNGRD and IDEAM will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The Record of Discussions may be amended by the Minutes of Meetings between JICA, UNGRD and IDEAM.

The Minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the Record of Discussions.

Annex I Project Design Matrix: PDM
Annex II Tentative Plan of Operation
Annex III List of Japanese Experts
Annex IV List of Equipment
Annex V Project Organization Chart
Annex VI Joint Coordinating Committee

Project Design Matrix: PDM (Version-0)

Project Title: Project for Strengthening Flood Risk Management Capacity
Duration: three (3) years
Target Area: River basin of Rio Negro (direct target), and the whole country of Colombia (indirect target)
Target Group: Staff of UNGRD, IDEAM, CAR and Department of Cundinamarca

Narrative summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal: The reduction of flood risk in Colombia	1. Realization of flood risk management related recommendations made through the project. 2. Number of Integrated Flood Risk Management Plan (IFMP) formulated for non-pilot river basin. (Or Ratio of POMCA which introduced the concept of Integrated Flood Risk Management) (XX %)	1. Annual Reports of CP. 2. Policy paper on IFMP (POMCA)	
Project Purpose: Capacity of Colombian institutions in flood risk management is enhanced.	1. Analysis capacity regarding flood disaster (enhancement degree) 2. Accuracy of flood forecasting and warning (improvement degree) 3. Effective use and share of data for flood risk management 4. IFMP formulation guideline developed	1 & 2. Ability test & effect measurement by JICA experts 3. Data exchange/ user agencies, quantity of data use 4. Formulation guideline	Vulnerability against flood disaster is not dramatically increased.
Outputs: 1. Capacity on flood risk assessment is improved and concept of integrated flood risk management planning and river basin management is introduced	1. IDEAM's capacity on technology of; a) hydrologic & hydraulic modeling, and b) flood risk mapping (enhancement degree) 2. IDEAM and UNGRD' capacity enhancement on the technology of vulnerability analysis using GIS (enhancement degree) 3. Knowledge / understanding at IDEAM, UNGRD, CAR, and Department on river basin wise IFMP (enhancement degree)	Ability test & effect measurement by JICA experts	Hydrological and meteorological network of IDEAM and CAR is neither degraded nor diluted.
2. Capacity on flood forecasting, warning and information dissemination to relevant organizations is improved (mainly IDEAM and UNGRD)	1. IDEAM's capacity on technology of hydrologic observation and data analysis (enhancement degree) 2. Recommendation on IDEAM's flood forecasting and warning	1. Effect measurement by JICA experts 2. Recommendations report on flood forecasting and warning	

007-2015

Annex

3. Roles and responsibility of the central and local government for flood risk reduction are elucidated and enhanced (mainly UNGRD and IDEAM)	1. Issues clarified and recommendations draw regarding flood risk administration among UNGRD, IDEAM, CAR, department and municipalities. 2. Matrix of data holder by data type related to flood risk management	1. Terms of reference of actors in flood risk management 2. Matrix	
4. Capacity of flood risk management planning is enhanced through formulation of Integrated Flood Risk Management Plan (IFMP) in the pilot river basin	1. Integrated Flood Risk Management Plan (IFMP) of pilot river basin 2. IFMP formulation guideline developed	1. IFMP 2. IFMP formulation guideline	

Activities	Inputs	
1.1 Capacity assessment and training on comprehensive utilization of meteorological and hydrological data for flood risk assessment including the satellite image mapping from the perspectives of temporal and spatial resolutions and accuracy (mainly IDEAM) 1.2 Capacity assessment and training on hydrological and hydraulic modelling from rainfall-runoff analysis to flood inundation analysis and mapping technology (mainly IDEAM) 1.3 Capacity assessment and training on flood risk mapping technology using GIS with flood inundation and socio-economic data including vulnerability of structures (mainly IDEAM and UNGRD) 1.4 Training on integrated flood risk management planning and river basin management (IDEAM, UNGRD, CAR, Department of Cundinamarca and local institutions in pilot river basin) 1.4.1 Training in Colombia on; i) probabilistic hazard assessment of flood, ii) physical, environmental and social vulnerability analysis, iii) monitoring and evaluation of flood disaster risk, iv) management processes on flood events, v) flood disaster prevention and mitigation measures, and vi) development and operation of flood early warning systems 1.4.2 Training in Japan on; i) strategies and policies for adaptation and flood risk management, ii) infrastructure models (housing, hospitals, schools, etc.) adapted to flood events, and iii) flood control schemes	**Japanese side** Expert - Chief Advisor/Expert of Flood Management - Expert of River Planning - Expert of Hydrology, Hydraulics, and Flood Forecasting - Expert of Warning Information Dissemination and Evacuation - Expert of Flood Risk Mapping, Flood Risk Assessment, and GIS - Expert of Disaster Risk Management Policy Machinery and Equipment - Desktop / Laptop Computer - Multifunction machine (Printer / Photocopy) - Inkjet Color Printer - Hydrological Analysis Software - GIS Software	Hydrological and meteorological network of IDEAM and CAR is neither degraded nor diluted.
2.1 Capacity assessment and training on hydrological observation (mainly IDEAM) 2.2 Capacity assessment and training on flood forecasting (mainly IDEAM) 2.3 Capacity assessment and training on dissemination of real-time risk information and warning for appropriate response (mainly IDEAM and UNGRD)	**Colombia side** Administration:	

3.1 Assessment of functions of both central and local governments in activities of river basin management 3.2 Recommendation on effective and efficient roles and responsibility of central and local governments on flood risk reduction, using experiences in Japan and other countries. 3.3 Evaluation and recommendation on enhanced institutional functions of flood risk reduction at the final stage of the project	Project Director, Project Manager <u>Counterpart personnel:</u> C/P personnel from the relevant divisions under UNGRD, IDEAM and other institutions in the area of influence of the river basin	
4.1 Formulation of IFMP for the pilot river basin with considering prevention, mitigation, preparedness and response. Formulation process includes following items. -Preparation of management plan of Magdalena - Cauca river basin. -Preparation of hydrological and hydraulic models (mainly for IDEAM with the support of the regional autonomous corporations who will have the model to be used for them.) -Proposal of priority measures. 4.2 Preparation of IFMP formulation guideline utilizing lessons learned from pilot river basin activities (4.1).	<u>Facilities and Equipment</u> - Office space - Office furniture, facilities and equipment <u>Budgetary Arrangement by UNGRD, IDEAM, and other institutions in the area of influence of the river basin</u> Administration and local operation costs	<u>Pre-conditions</u> Central and pilot region's institutions agreed upon the exchange of data needed and available at each agency.

Remark: Indicators should be refined upon the completion of the baseline survey that is to be conducted during the initial 1 month of the project implementation

Annex I

Annex II

Tentative Plan of Operation (PO) (Ver.0)

Project Name: Project for Strengthening Flood Risk Management Capacity

		1st Year				2nd Year				3rd Year			
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
	JCC ▲				▲				▲				▲
Output1: Capacity on flood risk assessment is improved and concept of integrated flood management planning and river basin management is introduced.													
1-1.	Capacity assessment and training on comprehensive utilization of meteorological and hydrological data for flood risk assessment including the satellite image mapping from the perspectives of temporal and spatial resolutions and accuracy (mainly IDEAM).												
1-2.	Capacity assessment and training on hydrological and hydraulic modelling from rainfall-runoff analysis to flood inundation analysis and mapping technology (mainly IDEAM).												
1-3.	Capacity assessment and training on flood risk mapping technology using GIS with flood inundation and socio-economic data including vulnerability of structures (mainly IDEAM and UNGRD).												
1-4.	Training on integrated flood management planning and river basin management (IDEAM, UNGRD, CAR, Department of Cundinamarca and local institutions in pilot river basin).												
	1-4-1. Training in Colombia on; i) probabilistic hazard assessment of flood, ii) physical, environmental and social vulnerability analysis, iii) monitoring and evaluation of flood disaster risk, iv) management processes on flood events, v) flood disaster prevention and mitigation measures, and vi) development and operation of flood early warning system												
	1-4-2. Training in Japan on; i) strategies and policies for adaptation and flood risk management, ii) infrastructure models (housing, hospitals, schools, etc.) adapted to flood events, and iii) flood control schemes.												
Output2: Capacity on flood forecasting, warning and information dissemination to relevant organizations is improved (mainly IDEAM and UNGRD).													
2-1.	Capacity assessment and training on hydrological observation (mainly IDEAM).												
2-2.	Capacity assessment and training on flood forecasting (mainly IDEAM).												
2-3.	Capacity assessment and training on dissemination of real-time risk information and warning for appropriate response (mainly IDEAM and UNGRD).												
Output3: Roles and responsibility of the central and local government for flood risk reduction are elucidated and enhanced (mainly UNGRD and IDEAM).													
3-1.	Assessment of functions of both central and local governments in activities of river basin management.												
3-2.	Recommendation on effective and efficient roles and responsibility of central and local governments on flood risk reduction, using experiences in Japan and other countries.												
3-3.	Evaluation and recommendation on enhanced institutional functions of flood risk reduction at the final stage of the project.												
Output4: Capacity of flood management planning is enhanced through formulation of integrated flood management plan (IFMP) in the pilot river basin.													
4-1.	Formulation of IFMP for the pilot river basin with considering prevention, mitigation, preparedness and response. Formulation process includes following items. -Preparation of management plan of Magdalena Cauca river basin. -Preparation of hydrological and hydraulic models (mainly for IDEAM with the support of the regional autonomous corporations who will have the model to be used for them.) -Proposal of priority measures.												
4-2.	Preparation of IFMP formulation guideline utilizing lessons learned from pilot river basin activities (4.1)												

007-2015

Annex III

List of Japanese Experts

Fields of experts to be covered by the Japanese experts are as follows:

1. Chief Advisor/Expert of Flood Risk Management
2. Expert River Planning
3. Expert of Hydrology, Hydraulics, and Flood Forecasting
4. Expert of Warning Information Dissemination and Evacuation
5. Expert of Flood Risk Mapping, Flood Risk Assessment, and GIS
6. Expert of Disaster Risk Management Policy
7. Other Experts, if necessity arises, upon mutual consultation

007-2015

Annex IV

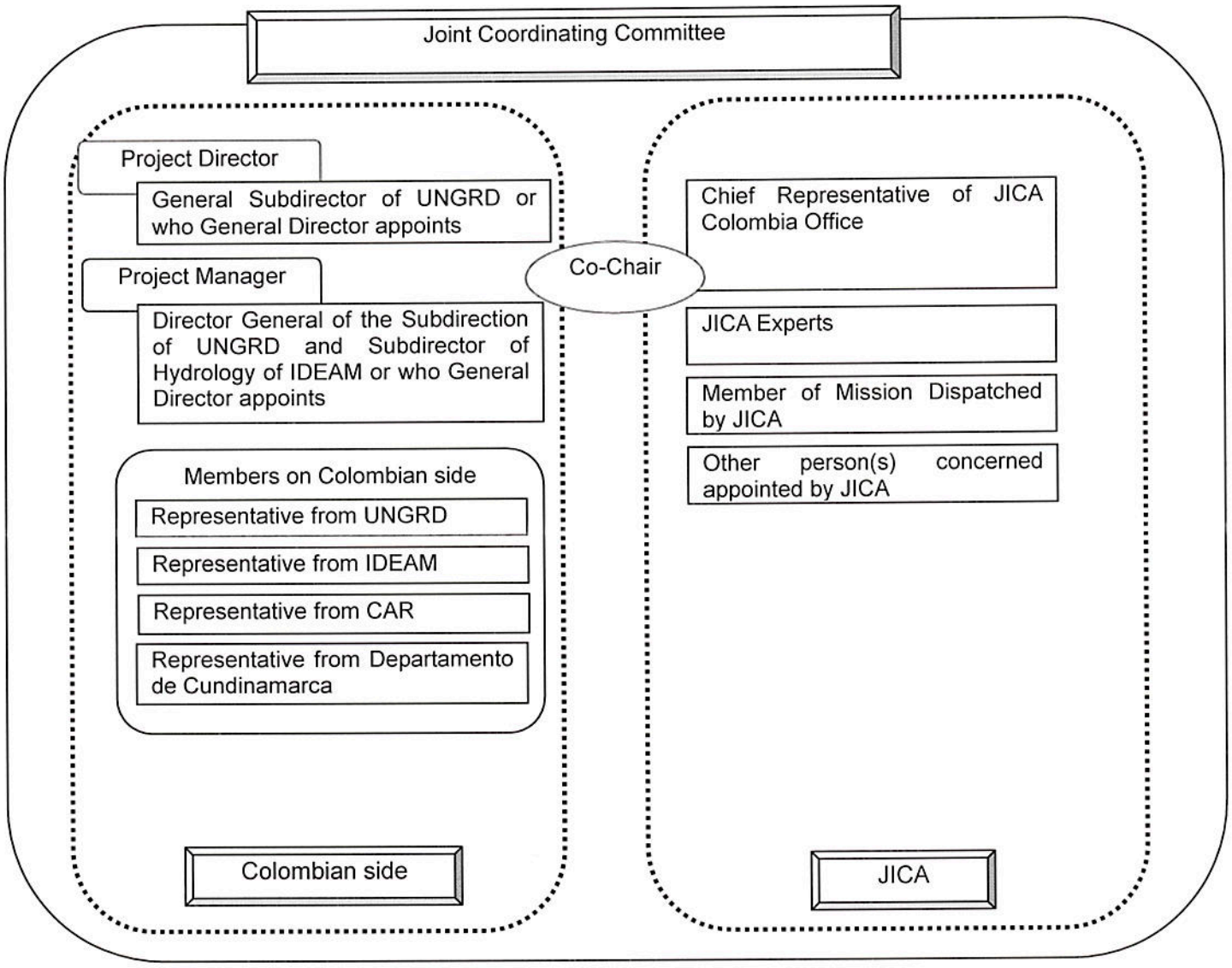
List of Equipment

1. Desktop / Laptop Computer : 2 sets
2. Multifunction machine (Printer / Photocopy) : 2 units
3. Inkjet Color Printer: 2 units
4. Hydrological Analysis Software: 2 sets
5. GIS Software: 2 sets
6. Other equipment mutually agreed upon as necessary for implementation of the Project

007-2015

Annex V

Project Organization Chart



Observers:

- Observers may attend upon agreement between Colombian side and JICA.

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007-2015

Annex VI

Joint Coordinating Committee

1. Function

For the effective and successful implementation of the Project, the Joint Coordination Committee will be established in order to make decisions relevant to the Project. The Joint Coordination Committee will meet when necessary and annually in order to fulfill the following functions:

(1) To supervise the annual work plan of the Project in line with the Project Design Matrix (PDM) and Plan of Operation (PO);
(2) To review the annual and overall progress of the Project and to evaluate the accomplishment of the annual targets and achievement of the objectives;
(3) To find out proper ways and means of solution of the major issues arising from and in connection with the Project;
(4) To evaluate PDM during the course of the Project and suggest revision, if necessary; and
(5) Any other related issues.

2. Committee Members

The Committee will be composed of the chairperson and the members. The rules and guidelines for the management of the committee will be determined at the initial stage of the Project. The agreed composition is as follows:

(1) Chairperson:
Project Director

(2) Project Director Members on Colombian side:
1) Representative from UNGRD (including Project Director)
2) Representative from IDEAM (including Project Manager),
3) Representative from CAR
4) Representative from Departamento de Cundinamarca

(3) Members on Japanese side:
1) Chief Representative of JICA Colombia Office
2) JICA Experts
3) Members of Mission Dispatched by JICA
4) Other person(s) concerned appointed by JICA

Note: Official(s) of the Embassy of Japan may attend the Committee meeting as observer(s).

007-2015

Appendix 2

MAIN POINTS DISCUSSED

1. Target disaster type is flood and does not include sediment disaster such as landslide and debris flow.

2. IDEAM requested to include training on radar data analysis in activity (1-1). This topic will be included if radar output data from aeronautic civil will be available to IDEAM and the data format is adequate for the analysis purpose.

3. Both sides understood that the close relationship within the authorities concerned of Colombian side in charge of flood risk assessment and flood risk reduction in Colombia is important to implement the Project smoothly and effectively. UNGRD and IDEAM should take necessary measures for coordinating with CAR, Department of Cundinamarca and for collecting the data and information required for the Project implementation from those institutions.