

APPENDIX 12

Minutes of Meetings on the Study on Formulation of Geographic

Database of Nouakchott in the Islamic Republic of Mauritania

May 25, 2007

MINUTES OF MEETINGS

ON

**THE STUDY ON FORMULATION OF GEOGRAPHIC DATA BASE OF
NOUAKCHOTT IN THE ISLAMIC REPUBLIC OF MAURITANIA**

AGREED UPON BETWEEN

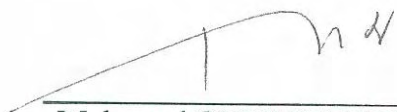
THE MINISTRY OF EQUIPMENT, URBAN PLANNING AND HABITAT

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

NOUAKCHOTT

MAY 25, 2007



Mohamed OULD BRAHIM
Director of Topography and Cartography
Ministry of Equipment, Urban Planning and
Habitat
The Islamic Republic of Mauritania



Eisaku TSURUMI
Team Leader
The Study Team of Japan International
Cooperation Agency

The JICA Mission (hereinafter referred to as “the Team”) for the Study on Formulation of Geographic Data Base of Nouakchott in the Islamic Republic of Mauritania (hereinafter referred to as “the Study”) organized by the Japan International Cooperation Agency (hereinafter referred to as JICA), being headed by Mr. Eisaku Tsurumi, visited the Islamic Republic of Mauritania (herein after referred to as “Mauritania”) on April 22, 2007 to carry out the first phase of the Study.

From April 24 to April 26, 2007 the Team explained the Inception Report on the Study to the Direction of Topography and Cartography, Ministry of Equipment, Urban Planning and Habitat (hereinafter referred to as “DTC”), which is the counterpart agency concerning the Study.

After then, the Team and DTC had a series of meetings for discussions on basic policy, method to apply and schedule of the Study presented in the Report until May 21.

On the other hand, both sides confirmed that efficient measures had been taken by the Mauritanian side in order to get authorizations for taking aerial photographs and the Team members’ accessing to the sites for their field works.

Through the discussions, both sides reached the following agreements.
The list of attendants is attached as Appendix 1.

1. Mapping area and photographing area

The Team said that the mapping area shown in the Scope of Works and the Inception Report is generalized one and more detailed outline of the area should be determined through a discussion between both sides from a viewpoint of practical use of the map.

Both sides discussed on desirable outline of the area in detail regarding the eastern area and southern area as important from a viewpoint of City development and agreed on determining the detailed outline with some modifications as shown in the figure attached as Appendix 2.

In order to ensure mapping of the determined area, both sides also agreed on modifying the photography plan as shown in the figure attached as Appendix 2.

Both sides confirmed that the size of the mapping area is 1,200km² and the size of the photographing area is 2,000km².

2. Plan of control point survey

Both sides agreed on modifying the plan of new GPS points and new leveling routes presented in the Inception Report, because unfavorable ground conditions for surveying were widely found by field reconnaissance and because the detailed mapping area was determined with modifications as mentioned in the foregoing paragraphs. The modified plan is shown in the figure attached as Appendix 2. The number of new GPS points will be twenty (20) and the

number of the existing GPS points will be three (3). Leveling works will be performed along main roads in forward and backward way. GPS points close to the leveling routes will be leveled. As a rule, those selected from the leveled points at the pitch of 1km will be pricked on the photographs, but, where it is difficult to identify the position on the photographs, the pitch of pricking will be left to the operator's discretion.

3. Area of field identification

Both sides confirmed that the field identification work would be performed only for the determined mapping area.

4. Period of field identification

Both sides discussed on the period of field identification because the work period scheduled in the Inception Report includes the Ramadan 2007. Through the discussion, both sides agreed on shifting the period a half-month earlier.

5. Contour interval

DTC said that the interval of normal contour should be less than 5m because the mapping area is mostly flat, and the contour interval is an important matter for DTC. Through the discussion, the normal contour interval was determined as two (2) meters. Both sides agreed that supplementary 1/2 interval contours should be applied to the areas of small undulation.

6. Coordinating Committee

DTC said that a meeting of the Permanent Committee of the National Committee of Remote Sensing established in 1985 would be held for discussing a coordinating organization concerning the Study on May 24, at 16:30 at the meeting room of the Ministry of Equipment, Urban Planning and Habitat.

7. Technology Transfer Program

The Team presented DTC the Program of Technology Transfer to be done in Mauritania. The Program is shown in the table attached as Appendix 3. DTC expressed a wish to the Team that as many technicians as possible can receive the transfer of indoor processes. The Team said that it would do its best to meet the wish within the limits of equipment and the number of instructors. On the other hand, the Team suggested DTC to order the trained technicians to undertake of teaching the technology to other technicians. DTC accepted this suggestion.

8. Others

Both sides confirmed having discussions on the Specifications on Topographic Data Acquisition, the Technology Transfer Program and other matters during the first mission's stay in Mauritania.

List of Attendants

April 24 – May 21, 2007

Direction of Topography and Cartography, Nouakchott

Mauritanian Side

Direction of Topography and Cartography

Ministry of Equipment, Urban Planning and Habitat

Mr. Mohamed OULD BRAHIM	Director
Mr. Abdoul SY	Head of Topographic Department
Mr. Cheikh SOW	Head of Cartographic Department

Japanese Side

JICA Study Team

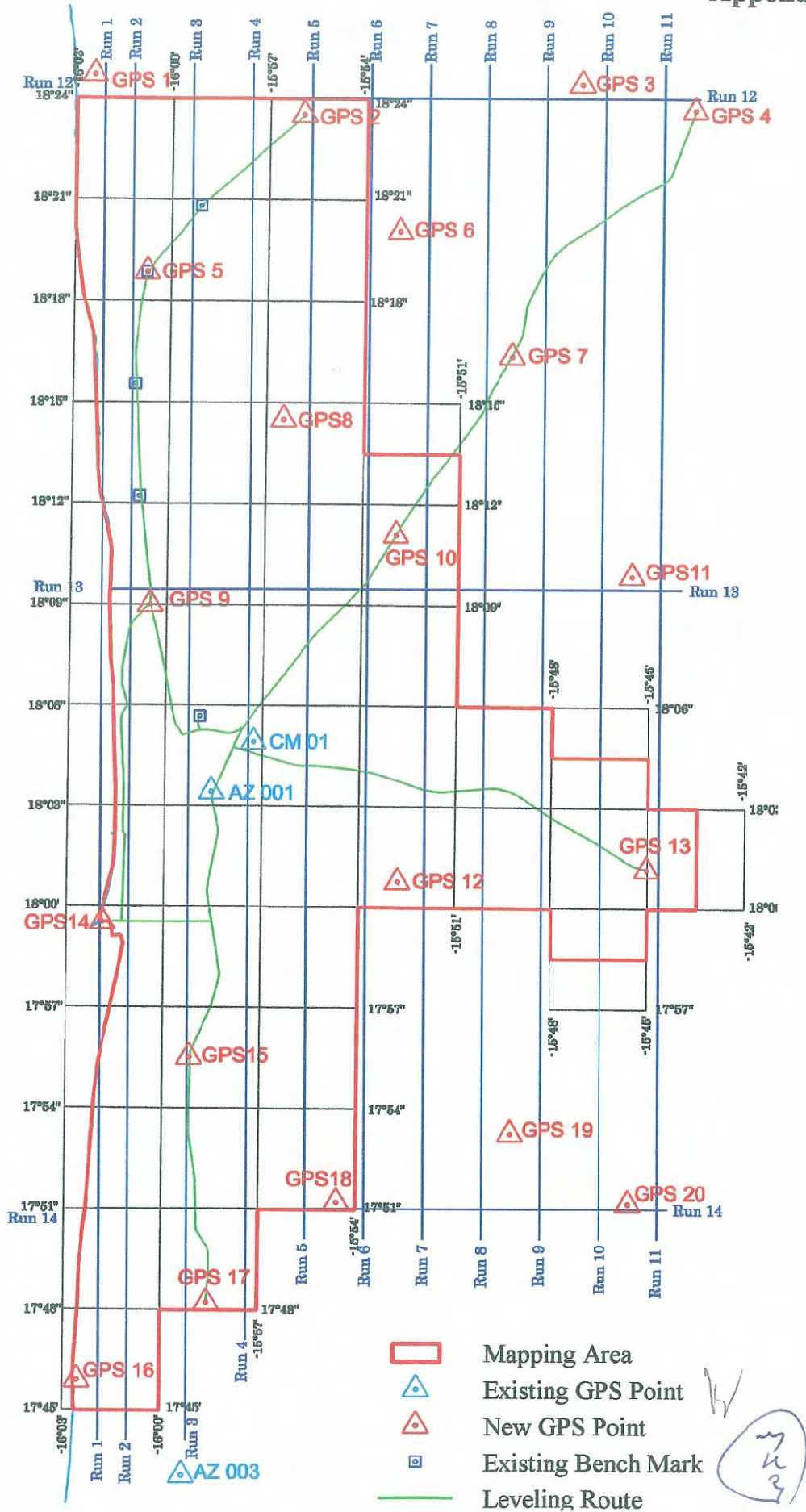
Mr. Eisaku TSURUMI	Team Leader
Mr. Jaeyoung CHOI	Team Member
Mr. Akira OTA	Team Member
Mr. Nobuo MARUYAMA	Interpreter

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Infrastructure Development Institute

Mr. Hiromichi MARUYAMA	Technical Supervisor
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Appendix 2



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Appendix 3

Technology Transfer Program (May 2007 - March 2009)

Subject	Period	Number of Teams	Number of Trainees	Principal Equipment, Materials, and Data	Instructor
Field Work Processes	Premarking (Setting of aerial signals)	4	4	Stakes, Shovels, Sacks, Paint, Handy GPS navigators, and Cars	OTA, Akira ONAKA, Minori
	GPS Survey and Analysis	4	4	GPS sets, Handy GPS navigators, Satellite mobile telephones, Cars, Analysis software	SHIMIZU, Nobuo TAKAGI, Shun
	Leveling and Pricking	2	4	Digital levels, Leveling staffs, Handy GPS navigators, Portable telephones, Orthophotos, Double-enlarged photos(black and white), and Cars	ONAKA, Minori TOMIMURA, Shunsuke
	Field Identification	4	4	Contact photos (color), Stereoscopes, Handy GPS navigators, Orthophotos, Double-enlarged photos (black and white), and Cars	ONAKA, Minori TOMIMURA, Shunsuke
	Field Completion	4	4	Symbolized maps, Handy GPS navigators, and Cars	ONAKA, Minori TOMIMURA, Shunsuke
	Aerial Triangulation	-	2	GPS point data, Leveling data, Scanned photo image data, Digital photogrammetric system, and Aerial triangulation software	SATA, Nobuhiro
	Digital Plotting	May 2008 - June 2008 Oct. 2008 - Nov. 2008	-	Aerial triangulation data, Scanned photo image data, Results of field identification, and Digital photogrammetric system	SATA, Nobuhiro
	Digital Compilation	Oct. 2008 - Dec. 2008	-	Plotting data, Digital compilation system, Large size plotter, and Printer	OTA, Akira
	Map Symbolization	Feb. 2009 - March 2009	-	Compiled data, Digital compilation system, Large size plotter, and Printer	YAMAGA, Hitoshi
	Data Structurization	May 2008 - June 2008	-	GIS software, Large size plotter, and Printer	SAH, Awadh Kishor
Indoor Work Processes	Creation of GIS Model Systems	-	2	GIS software, Large size plotter, and Printer	SAH, Awadh Kishor CHOI, Jaeyoung

APPENDIX 13

Minutes of Meetings on the Study on Formulation of Geographic
Database of Nouakchott in the Islamic Republic of Mauritania

August 9, 2008

MINUTES OF MEETINGS

ON

**THE STUDY ON FORMULATION OF GEOGRAPHIC DATA BASE OF
NOUAKCHOTT IN THE ISLAMIC REPUBLIC OF MAURITANIA**

AGREED UPON BETWEEN

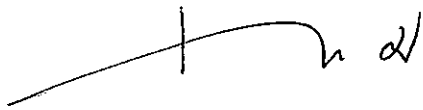
**THE MINISTRY OF DECENTRALIZATION AND NATIONAL
LAND DEVELOPMENT**

AND

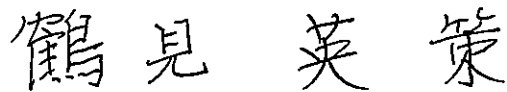
JAPAN INTERNATIONAL COOPERATION AGENCY

NOUAKCHOTT

AUGUST 9, 2008



Mohamed OULD BRAHIM
Director of Cartography and Geographic
Information, Ministry of Decentralization and
National Land Development, The Islamic
Republic of Mauritania



Eisaku TSURUMI
Team Leader
The Study Team of Japan International
Cooperation Agency

The JICA Mission (hereinafter referred to as “the Team”) for the Study on Formulation of Geographic Data Base of Nouakchott in the Islamic Republic of Mauritania (hereinafter referred to as “the Study”) organized by the Japan International Cooperation Agency (hereinafter referred to as JICA), being headed by Mr. Eisaku Tsurumi, visited the Islamic Republic of Mauritania (herein after referred to as “Mauritania”) on July 22, 2008 to carry out the second phase of the Study.

On July 31, 2008 the Team explained the Interim Report to the Direction of Cartography and Geographic Information, the Ministry of Decentralization and National Land Development (hereinafter referred to as “DCIG”), which is the counterpart agency to the Team. The Report presents the process and progress of the works made during the first phase and the plan of works to be done for the second phase. The Team also showed sample sheets of symbolized maps and proposed that discussions on map symbols should be made before field completion. The explanation and proposition were basically accepted by DCIG. On August 3, both sides had a supplementary meeting on expressions in the Report. The list of attendants for both meetings is attached as Appendix.

Questions and comments from DCIG are as follows.

- 1) DCIG asked the degree of accuracy of the elevation of contour line. The Team answered that the accuracy is $\pm 1.5\text{m}$ and the contour lines properly express the relief of ground. The Team also mentioned that 135 elevation points had been distributed in the Study area, which could be used as references for determining more accurate ground elevation for any purposes in the future.
- 2) DCIG remarked that scanning of aerial photos is not included in the technology transfer program. The Team explained that it is not included because, in general, aerial photography, photo-processing and scanning should be made by contractors.
- 3) DCIG made comments on French expressions and technical terms to be used in the Report. The Team stated that some expressions would be revised with the comments.

The Team emphasized that, in order to facilitate effective use of geographic information, the Mauritanian side should organize a coordinating committee and start its meetings urgently. DCIG stated that the National Committee of Geographic Information (CNIG) is subject to the approval of the Government and could examine the matter of the Study.

Both sides agreed that more detailed discussions on the specifications on map

symbols, layout of marginal information and other matters would be made in the future.

List of Attendants

July 31 and August 3, 2008

Direction of Cartography and Geographic Information,
Ministry of Decentralization and National Land Development, Nouakchott

Mauritanian Side

Direction of Cartography and Geographic Information

Mr. Mohamed Ould Brahim	Director
Mr. Cheikh Sow	Assistant Director
Mr. Malick Vall	Head of Cartographic Division
Mr. El Hady Seuhoury	Head of Geographic Information Division
Mr. Harouna Mamadou Doucoure	Head of Cadastral Division
Mr. Thiam Babaciar Cadre	Assistant engineer
Mr. Diagana Mohamedou	Assistant engineer

Direction of National Development and Regional Action (DATAR)

Ms. Mariam Mamoudou Kane	Geographer
Mr. El Moustapha	Assistant engineer

Région Ile de France

Mr. Mathieu Gamba	Representative, attaché to the Urban Community of Nouakchott
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Urban Community of Nouakchott (CUN)

Ms. Aminatou mt El Moctar	Computer scientist
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Japanese Side

JICA Study Team

Mr. Eisaku Tsurumi	Team leader
Mr. Jaeyoung Choi	Team member
Mr. Akihiro Sugita	Team member
Mr. Takashi Shirani	Interpreter

Infrastructure Development Institute

Mr. Masakatsu Abe	Technical supervisor
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APPENDIX 14

Report of Discussions on the Study on Formulation of Geographic
Database of Nouakchott in the Islamic Republic of Mauritania

February 19, 2009

REPORT OF DISCUSSIONS
ON
THE STUDY ON FORMULATION OF GEOGRAPHIC DATA BASE OF
NOUAKCHOTT IN THE ISLAMIC REPUBLIC OF MAURITANIA

BETWEEN

DIRECTION OF CARTOGRAPHY AND GEOGRAPHIC INFORMATION

AND

JICA STUDY MISSION

NOUAKCHOTT, FEBRUARY 19, 2009



Mohamed Ould BRAHIM
Director of Cartography and Geographic
Information, Ministry of Habitat, Urbanism,
and Development of Territory, Islamic
Republic of Mauritania



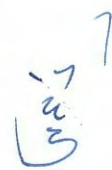
Eisaku TSURUMI
Leader of Study Mission,
Japan International Cooperation Agency

The JICA Mission, headed by Mr. Eisaku Tsurumi, visited the Islamic Republic of Mauritania on February 3, 2009 to finish the second phase of the Study.

On February 12, 2009, the Mission presented the Progress Report to the meeting with Direction of Cartography and Geographic Information, the Ministry of Habitat, Urbanism, and Development of Territory (hereinafter referred to as "DCIG").

The Report presented the process and progress of the works carried out during the first and second phases and the plan of works to be done in the third phase. The list of attendants to the meeting is attached as Appendix.

DCIG made observations on general form such as French expressions and technical terms to be used in the Report. The Team confirmed that the observations would be taken into consideration.



List of Attendants

February 12, 2009

Direction of Cartography and Geographic Information,
Ministry of Habitat, Urbanism and Development of Territory, Nouakchott

Mauritanian Side

Direction of Cartography and Geographic Information

Mr. Mohamed Ould Brahim	Director
Mr. Cheikh Sow	Assistant Director
Mr. Maleck Vall	Head of Cartographic Division

Japanese Side

JICA Study Team

Mr. Eisaku Tsurumi	Mission Leader
Mr. Akihiro Sugita	Mission Member
Mr. Takashi Shirani	Interpreter

Infrastructure Development Institute

Mr. Hiromichi Maruyama	Technical supervisor
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APPENDIX 15

Minutes of Meeting on the Study on Formulation of Geographic
Database of Nouakchott in the Islamic Republic of Mauritania

April 14, 2010

MINUTES OF MEETINGS

ON

THE STUDY ON FORMULATION OF GEOGRAPHIC DATA BASE
OF NOUAKCHOTT IN THE ISLAMIC REPUBLIC OF
MAURITANIA

AGREED UPON BETWEEN

THE MINISTRY OF HABITAT, URBANISM AND TERRITORY
DEVELOPMENT

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

NOUAKCHOTT

APRIL 14, 2010



Mohamed OULD BRAHIM
Director of Cartography and Geo-
graphic Information, Ministry of
Habitat, Urbanism and Territory
Development, The Islamic
Republic of Mauritania



Eisaku TSURUMI
Team Leader
The Study Team of Japan
International Cooperation
Agency

The JICA Study Team (hereinafter referred to as “the Team”) for the Study on Formulation of Geographic Data Base of Nouakchott in the Islamic Republic of Mauritania (hereinafter referred to as “the Study”) organized by the Japan International Cooperation Agency (hereinafter referred to as JICA), being headed by Mr. Eisaku TSURUMI, stays in the Islamic Republic of Mauritania from March 25 to April 18, 2010 to carry out the last stage of the Study.

Ministry of Habitat, Urbanism and Territory Development and the Team co-organized a seminar on April 4 in Nouakchott to present the map data and its applications to the users.

1. Discussion on the Final Report

On April 8, the Team presented the draft of the Final Report on the Study to the Direction of Cartography and Geographic Information (hereinafter referred to as “DCIG”) of Ministry of Habitat Urbanism and Territory Development (MHUAT), which is the counterpart agency concerning the Study.

On April 11 and 12, both sides had discussions on the Report. DCIG accepted the contents and made some comments on French expressions and technical terms to be used in the Report. The Team stated that the Team would complete the Final Report in Japan taking these comments into account.

2. Other discussions

During the Team’s stay in Nouakchott, both sides had a series of discussions on the future tasks to be tackled by the Government of Mauritania and reached the following agreements.

2.1. Distribution of the map data

The map data produced under the project should be provided to all potential users who apply to use the data and who accept to cooperate with DCIG in updating the database.

2.2. Establishment of organ

The Government of Mauritania should establish an organ which is responsible to update, maintain and distribute the map data.

2.3. Organization of the National Commission of Geographic Information

The National Commission of Geographic Information should be organized for the purpose of coordinating the needs of users. DCIG stated that the Commission would be organized within the year.

2.4. Improvement of level of technologies

The technical staffs who took the sessions of technology transfer under the project should continue voluntary training in order to raise and maintain their level of technologies.

2.5. Spread of technologies

The technical staffs who took the sessions of technology transfer should spread the technologies to other staffs.

2.6. Maintenance of equipment

The equipment which will be delivered from JICA to the Mauritanian Government should be carefully maintained in order to distribute the map data without trouble.

The attendants to meetings for the above-mentioned discussions are listed in Appendix 1.

3. Delivery of the final products under the Study

The Team presented DCIC the list of final products made under the Study. It shows that some of the products had been delivered to the Government of Mauritania through the Team and the rest will be delivered through the JICA. The list is attached in Appendix 2.

Appendix 1

List of Attendants

Period: March 25 – April 12, 2010

Place: Direction of Cartography and Geographic Information,
Nouakchott

Mauritanian Side

DCIG / MHUAT

Mr. Mohamed Ould BRAHIM	Director
Mr. Almedou Ould BABA	Assistant director
Mr. Maleck VALL	Chief of Cartographic Service

Japanese Side

The JICA Study Team

Mr. Eisaku TSURUMI	Team leader
Mr. Akihiro SUGITA	Team member
Mr. Jaeyoung CHOI	Team member
Mr. Awadh Kishor SAH	Team member
Mr. Hitoshi YAMAGA	Team member
Mr. Takashi SHIRANI	Interpreter

Infrastructure Development Institute (IDI)

Mr. Masakatsu ABE	Technical supervisor
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Appendix 2

List of the final products to be delivered

Item	Qty	Description	Remarks	Delivery
Negative films of aerial photographs	1 set	2 rolls	Scale 1:20,000, Coverage 2,000 km ²	Delivered
Scanned images of aerial photographs	1 set	tiff format	The data will be stored in a external hard disk.	Delivering through the JICA
Contact prints of aerial photographs	1 set	Color. 478 frames	They were stored in photo-books	Delivered
Flight index sheet of aerial photographs	1 set	DXF format & PDF format	The data will be stored in a external hard disk.	Delivering through the JICA
Result of control point survey	1 set	Result of Survey and Leveling	The data will be stored in a external hard disk.	Delivering through the JICA
Result of aerial triangulation	1 set	For 1,441 models	The data will be stored in a external hard disk.	Delivering through the JICA
Digital topographic data	1 set	DXF format, KML format & PDF format	Scale 1:10,000, Coverage 1,200 km ² , 47sheets The data was stored in a DVD.	Delivered
GIS Model systems	1 set (4 models)	ArcGIS mxd format with the related data respectively	The data was stored in a DVD.	Delivered
Report on the Study	10 copies each	English and French respectively	Binding. The data is stored in a CD-ROM.	Delivering through the JICA
	10 copies each	English and French respectively		

