

**A1:Minutes of Meeting for the preparation of the study and
scope work**

MINUTES OF MEETING
FOR
THE PREPARATION OF THE STUDY
OF
THE NATIONAL TOPOGRAPHIC MAPPING
IN
THE REPUBLIC OF MALI
AGREED UPON
BETWEEN
LA DIRECTION NATIONAL DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
October 29, 1997

for Director,
La Direction National de la Cartographie
et de la Topographie,
Ministere de l'Urbanisme et de l'Habitat

Diakalia OUATTARA
Deputy Director,
La Direction National de la Cartographie et de la Topographie,
Ministere de l'Urbanisme et de l'Habitat



Kenji CHUJO
Leader,
Contact Mission
Japan International Cooperation Agency



The Japanese Contact Mission (hereinafter referred to as "the Team"), organized by Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Kenji CHUJO, Director of National Large Scale Mapping Division, Geographical Survey Institute, Ministry of Construction, visited the Republic of Mali from October 21st to 30th, 1997 in connection with The National Topographic Mapping in the Republic of Mali (hereinafter referred to as "the Study").

The Team held a series of discussions on the outline of the Study with officials of La Direction National de la Cartographie et de la Topographie, Ministere de l'Urbanisme et de l'Habitat (hereinafter referred to as "DNCT"), and other organizations concerned. A list of participants is given in Annex-1.

Through these discussions, both sides agreed on the outline of the Study, and confirmed the following points:

1. The Team and The Government of Mali confirmed that the DNCT is the Mali Counterpart for the Study.
2. The DNCT explained the needs of 1:50,000 topographic maps to establish regional development plans and to execute infrastructure development projects in the KITA circle and it's surroundings. The Team understood the needs.
3. The DNCT and the Team agreed that the scale of the maps will be 1:50,000 and the Study area will be bases on the KITA circle and it's surroundings as shown in Annex-2 (approximately 30,000km²). It was agreed that the Study area will be examined precisely in Japan, and the Study area will be exactly decided by the discussion with the S/W Mission.
4. The Team proposed to prepare the maps by the following means:
 - (1) The topographic data will be acquired from the newly obtained satellite images and 1:50,000 aerial photographs;
 - (2) The topographic data will be compiled to digital map by using computer aided cartographic system.

The DNCT explained the importance of vertical accuracy of the maps because the maps will be used to establish the master plan of road and irrigation system. The Team understood the opinion, and proposed to execute the necessary vertical control point survey to secure the vertical accuracy of the maps. The DNCT agreed the proposal.

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5. The Team requested that necessary information for compilation of the maps such as name of places, administrative boundary and international boundary shall be prepared by the DNCT, and the DNCT agreed to the request.
6. In the course of execution of the Study, necessary technology transfer to the Mali counterpart personnel will be carried out by Japanese engineers.
The DNCT promised to offer 5 engineers and 5 technicians as counterpart personnel with its own expense.
7. The DNCT requested that personnel training concerning the Study to be conducted in Japan and the Team promised to convey the request to the JICA Headquarters.
8. The DNCT requested that Instruments and facilities, data and information used and obtained through the execution of the Study should be delivered to the DNCT after the completion of the Study. The Team promised to convey the request to the JICA Headquarters.
9. The Team required that the maps to be prepared by the Study will be open to the public on request and the DNCT agreed to the request.
10. The Team explained the outline of Undertaking of Mali side for the Study. The DNCT promised to ask for Ministry of Foreign Affairs, Ministry of Finance to coordinate governmental organizations concerned to carry out the Undertaking before arrival of the S/W Mission, according the terms of reference of the development study of technical cooperation between the Government of Mali and Japan.
11. The Minutes of Meeting were written in English and French, and their validity should be equivalent, in case of any contradiction arises in writing, the English shall be the text.

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ANNEX 1-1

The List of Persons who met Japanese delegation

Ali SANKARE	Head Office of Ministère de l'Urbanisme et de l'Habitat
Gaoussou DIARRA	Technical councillor in MUH
Mamadi TRAORE	National Director of international cooperation
Moussa KOUYATE	Mali-Japan Coopération Official-International Cooperation Departement
Issa COULIBALY	National Director of Cartographic and Topographic departement
Diakalia OUATTARA	Deputy of Cartographic and Topographic departement
Aliou COULIBALY	Division leader of basic infrastructure of N.C.T..D
Mamadou CAMARA	Ingineer
Modibo CAMARA	Ingineer
Yala SIDIBE	Technician
Bakary DIARRA	Technician
Amadou SINGARE	Technician

Bamako, October 27th 1997

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Attendants List

The Japanese Side

Kenji CHUJO	Leader
Masanori SUGIYAMA	Member
Tomoyuki KOSAWA	Member
Seiichi TANIOKA	Member
Hiroshi MAGOME	Member
Rikizo MIYASAKA	Member
Masao MATSUBARA	Member

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CARTE AU 1 : 50 000**

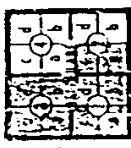
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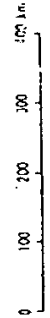
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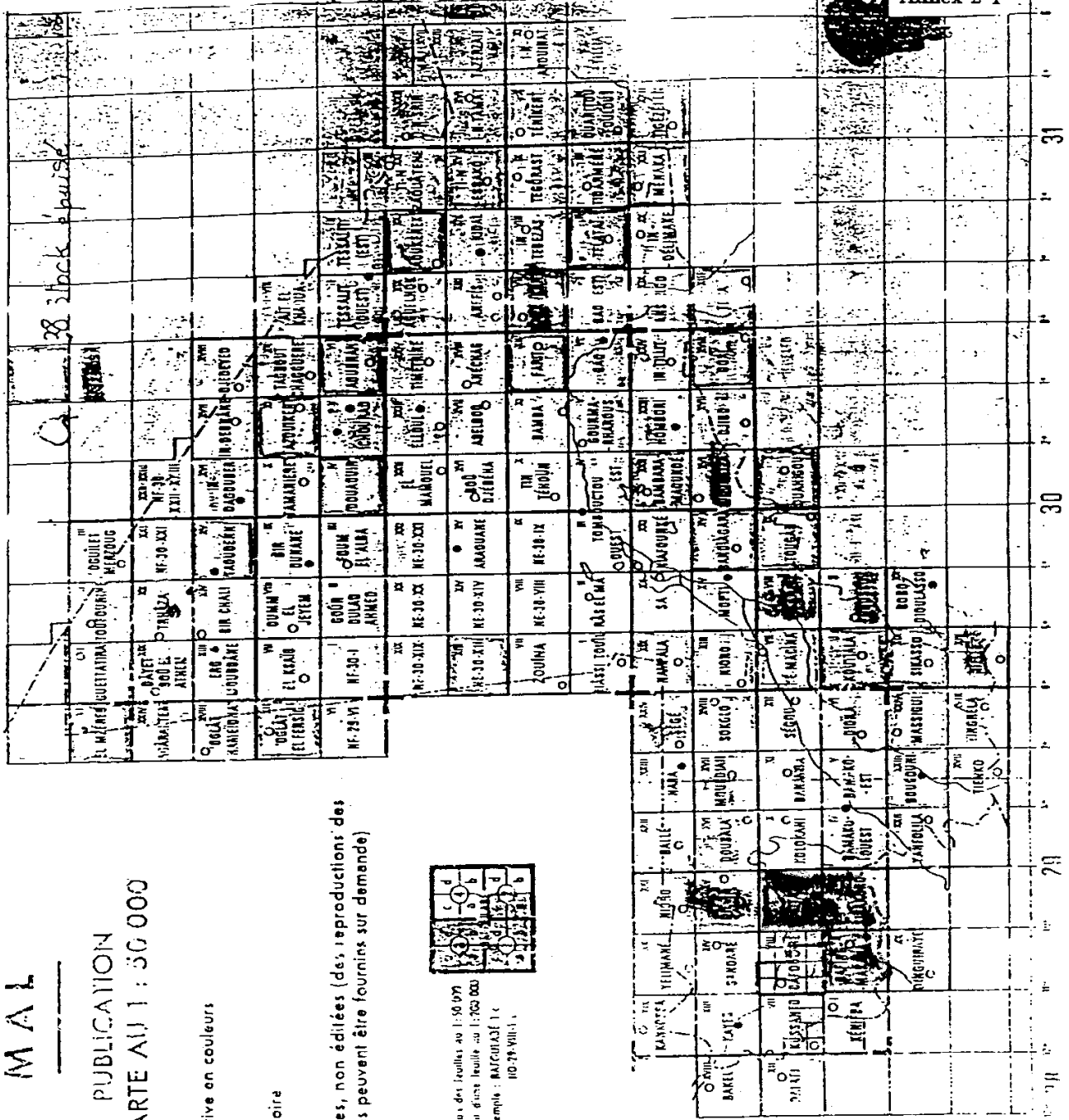
Plus renseignements complémentaires
s'adresser à la Direction Nationale
de la Géographie et de la Topographie
340 Bamako



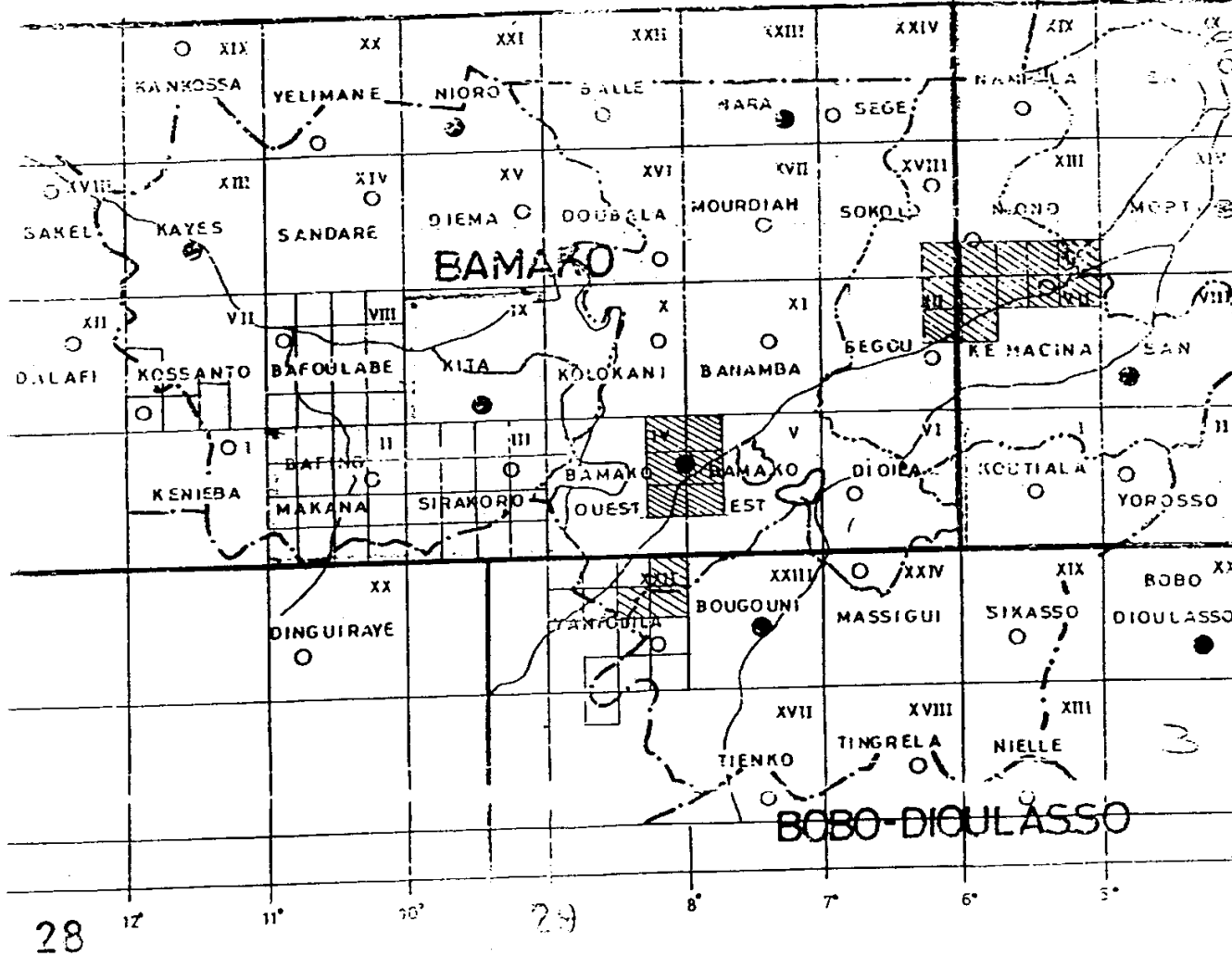
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Bureau de vente des
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107, rue La Boétie
75008 Paris
Tél : 723.86.57



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SCOPE OF WORK
ON
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

AGREED UPON BETWEEN

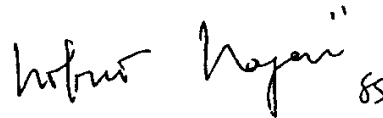
LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO

February 3rd, 1998



Issa COULIBALY
Director
La Direction Nationale de la Cartographie
et de la Topographie,
Ministère de l'Urbanisme et de l'Habitat



Nobuo NAGAI
Leader
Preparatory Study Team
Japan International Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of Mali, the Government of Japan has decided to conduct "The National Topographic Mapping of the Republic of Mali in the Kita area (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation program of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of the Republic of Mali.

La Direction Nationale de la Cartographie et de la Topographie, Ministère de l'Urbanisme et de l'Habitat (hereinafter referred to as "DNCT") shall act as counterpart agency to the Japanese Study Team (hereinafter referred to as "the Study Team") and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study, and DNCT shall support the Study Team technically for the implementation of the Study.

The present document sets forth the scope of work with regard to the Study.

II. OBJECTIVE OF THE STUDY

The objectives of the Study are

- 1) to prepare digital topographic data for regional development plans and infrastructure development projects in the Kita circle and its surroundings; and
- 2) to transfer related technology to Malian counterpart personnel.

III. STUDY AREA

The digital topographic mapping shall cover the area of existing 1:200,000 map sheets of "Kita" "Sirakoro" and "Bafing-Makana". The location of digital topographic mapping area is shown in ANNEX-1.

- 1:50,000 scale digital topographic mapping approximately 31,000 km²

IV. SCOPE OF THE STUDY

In order to achieve the objective mentioned above, the Study shall cover following items.

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1) Satellite Images

Satellite images covering study area shall be taken for digital mapping.

2) Aerial photography

1:50,000 new Black and White aerial photos covering study area without clear aerial photos which were taken by GTZ in 1995, shall be taken for interpretation of planimetric feature data.
(ANNEX-2)

3) Geoid survey

The Geoid map shall be made by direct leveling and GPS survey.

4) Ground control point survey

Ground control point survey with GPS survey to decide horizontal and vertical coordinates of ground control points shall be carried out.

5) Interpretation of aerial photo

Interpretation of aerial photos shall be carried out.

6) Field identification

Field identification to identify natural, artificial terrain features, geographic names and boundaries which are difficult or impossible to interpret on the aerial photographs shall be carried out in the study area.

7) Digital mapping

Digital mapping shall be carried out to prepare 1:50,000 scale digital topographic data with 20 m contour intervals.

8) Field completion

Field completion to identify natural, artificial terrain features, geographic names and boundaries which are difficult or impossible to interpret on the aerial photographs shall be carried out in the study area.

9) Structurizing

Digital topographic data shall be structured topologically.

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10) Printing of Maps

Digital topographic data shall be printed at 1:50,000 scale.

11) Technology transfer

Following courses of the Study shall be carried out by counterpart personnel under the technical supervision of the Study Team.

- " 3) Geoid survey "
- " 4) Ground control point survey "
- " 5) Interpretation of aerial photo "
- " 6) Field identification "
- " 7) Digital mapping " (partially)
- " 8) Field completion "
- " 9) Structurizing " (partially)

V. STUDY SCHEDULE

The Study shall be conducted in accordance with the attached tentative schedule shown in ANNEX-3.

VI. REPORTS AND FINAL PRODUCTS

JICA shall prepare and submit the following reports in English and final products of topographic mapping works to the Government of the Republic of Mali.

1. Inception Report
20 copies At the time of starting of the Study
2. Progress Reports
20 copies At the end of the first year and the second year
3. Draft Final report
20 copies At the end of the third year
4. Final report (written in English and French)
20 copies At the end of the Study
5. Final products of topographic mapping
 - a. Negative film of aerial photos 1 set
 - b. Contact prints of aerial photos 1 set
 - c. Printed satellite images 1 set
 - d. Results of ground control point survey 1 set

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|--|------------|
| e. Result of aerial triangulation | 1 set |
| f. 1:50,000 scale topographic maps | |
| - Printed topographic maps | 500 copies |
| g. 1:50,000 scale digital topographic data | |
| - digital topographic data file (eg. CD-ROM) | 50 sets |

VII. UNDERTAKING OF THE GOVERNMENT OF THE REPUBLIC OF MALI

1. To facilitate smooth conduct of the Study the Government of the Republic of Mali shall take the following necessary measures:

- (1) to secure the safety of the Study Team ;
- (2) to permit the members of the Study Team to enter, leave and sojourn in the Republic of Mali for the duration of their assignment therein and exempt them alien registration requirements and consular fees;
- (3) to exempt the member of the Study Team, from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into and out of the Republic of Mali for the conduct of the Study;
- (4) to exempt the member of the Study Team from income taxes and charges of any kind imposed on or in connection with any emoluments or allowance paid to the members of the Study Team for their services in connection with implementation of the Study;
- (5) to provide necessary facilities to the Study Team for remittance as well as utilization of the funds introduced into the Republic of Mali from Japan in connection with the implementation of the Study;
- (6) to secure permission for entry into private properties and restricted areas for the implementation of the Study;
- (7) to secure permission to acquire necessary radio frequency for the implementation of the Study ;
- (8) to secure permission for the Study Team to take all data and documents including topographic maps, original manuscripts, aerial photos related to the Study out of the Republic of Mali;
- (9) to secure necessary permission for aerial photography by foreign registered aircraft for the implementation of the Study;
- (10) to obtain the necessary permission from the Government of Guinea for the execution of aerial photography by the Study Team at the area of border line; and
- (11) to provide the medical services as needed, including Airtransportation. Its expenses will be

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chargeable on the members of the Study Team.

2. The Government of Republic of Mali shall bear claims, if any arises, against the members of the Study Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Study Team.

3. The DNCT shall act as a counterpart agency to the Study Team and also as a coordinating body in relation with other government and non-governmental organizations concerned for the smooth implementation of the Study .

4. The DNCT shall, at its own expense, provide the Study Team with the following, in cooperation with other organization concerned:

- (1) Available data and information related to the Study;
- (2) Counterpart personnel;
- (3) Suitable office space with necessary equipment in Bamako ;
- (4) Vehicles with drives; and
- (5) Credentials or identification cards.

VIII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

- (1) to dispatch, at its own expense, the Study Team to the Republic of Mali; and
- (2) to pursue technology transfer to the Malian counterpart personnel in the course of the Study.

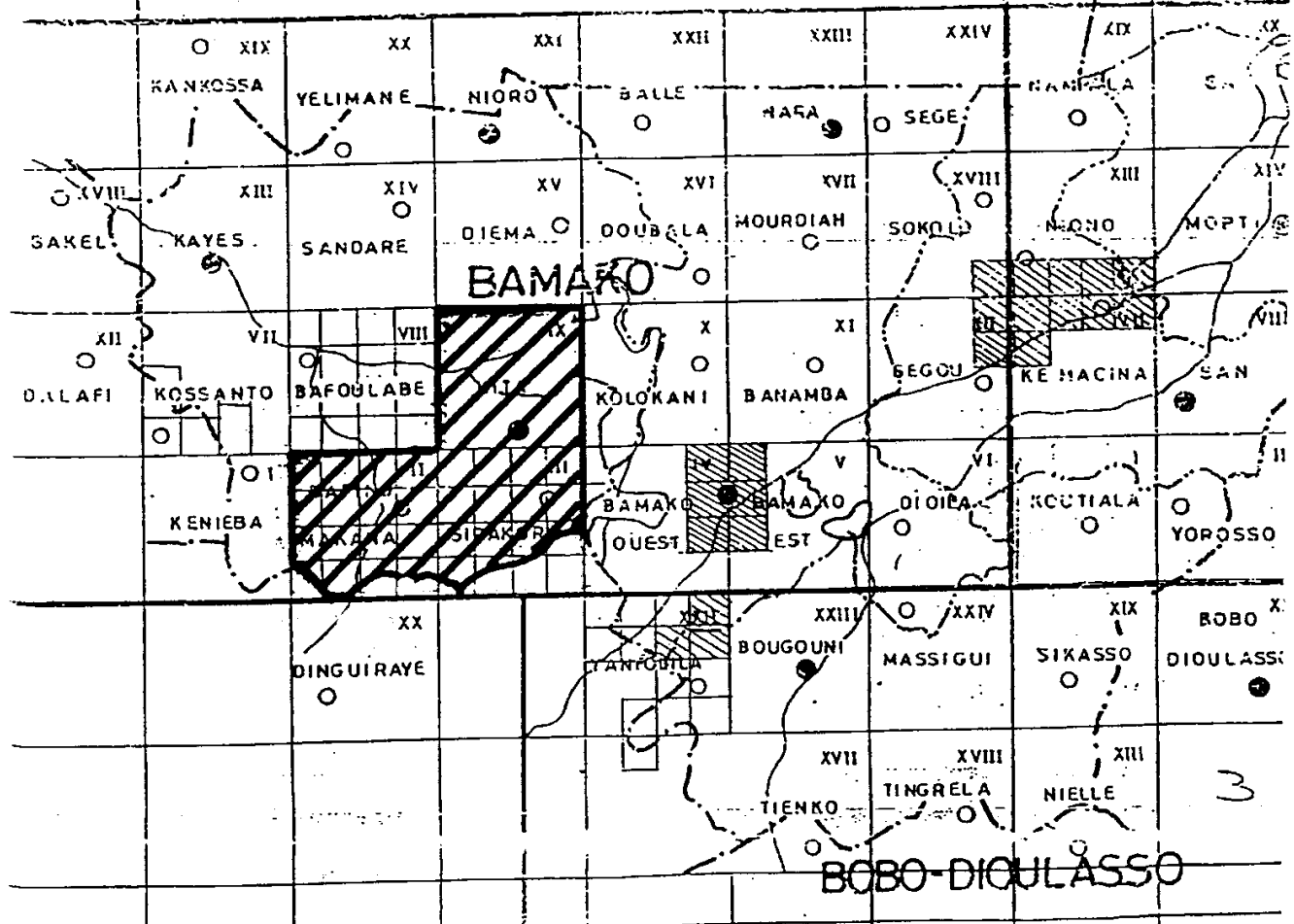
IX. CONSULTATION

1. DNCT and JICA shall consult with each other in respect of any matter that may arise from or in connection with the Study.

2. The Scope of Work were written in English and French, and their validity should be equivalent, in case of any contradiction arises in writing, the English shall be the text.

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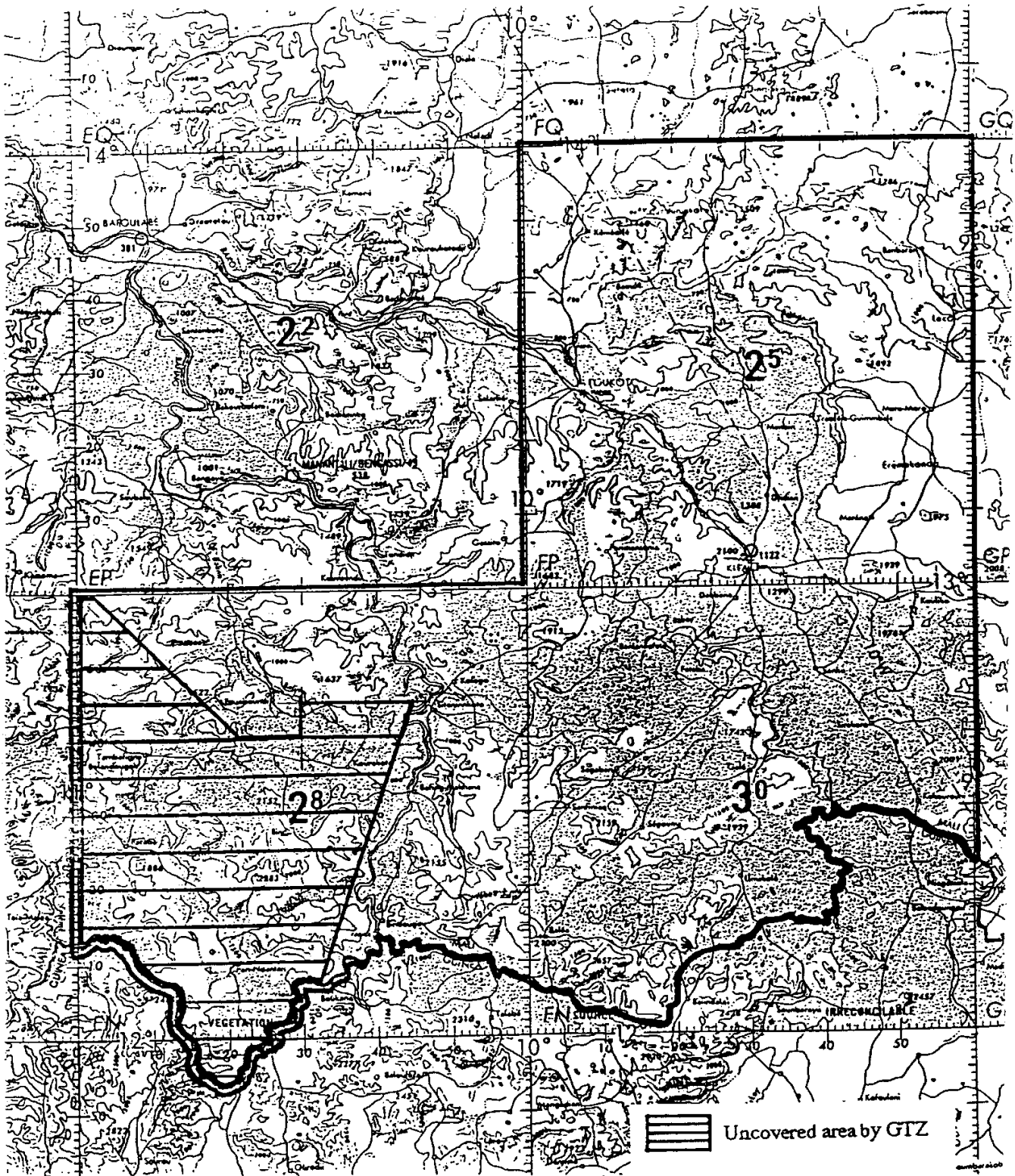




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 Study area

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-  Uncovered area by GTZ
-  Study area

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TENTATIVE SCHEDULE

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Work in Japan	[Box]	[Bar]							[Bar]					[Bar]												[Box]	[Box]	[Box]									
Report and Final Products	△ IC/R	△ PG/R1								△ PG/R2												△ DF/R												△ F/R	△ F/P		

*Work in Mali : Including work by only Malian counterpart personnel

IC/R : Inception Report
 PG/R: Progress Report
 DF/R: Draft Final Report
 F/R : Final Report
 F/P : Final Products

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MINUTES OF MEETING
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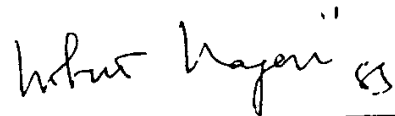
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February 3rd, 1998



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La Direction Nationale de la Cartographie
et de la Topographie,
Ministère de l'Urbanisme et de l'Habitat



Nobuo NAGAI
Leader
Preparatory Study Team
Japan International Cooperation Agency

The Japanese Preparatory Study Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Nobuo NAGAI (Director of Geographical Department, Geographical Survey Institute, Ministry of Construction) visited the Republic of Mali from January 27th to February 3rd, 1998 in connection with the Study on "The National Topographic Mapping of the Republic of Mali in the Kita area" (hereafter referred to as "the Study").

The Team had a series of discussions on the Scope of Work of the Study with officials of La Direction Nationale de la Cartographie et de la Topographie, Ministère de l'Urbanisme et de l'Habitat (hereinafter referred to as "DNCT").

The discussions were held on January 28th, 30th and February 2nd, 1998, to completed the Scope of Work. The attendance list is attached in ANNEX-1.

Main items which were agreed upon by both sides are as follows:

1. It was agreed that the title of the Study be amended to read "The National Topographic Mapping of the Republic of Mali in the Kita area".
2. The DNCT promised to provide 10 counterpart personnel with its own expense in the course of the Study, and the DNCT requested technology transfer related to the Study for them. The Team agreed that request.
3. Both sides agreed that in case the aerial photography is not completed by unseasonable weather, the photographing will be extended within the limits of 1 year and both sides will consult with each other in respect of changing the interpretation method.
4. The Team requested that the maps and digital topographic data to be prepared by the Study will be open to the public on request. The DNCT agreed that request.
5. The DNCT requested that Malian counterpart personnel take advantage of training in Japan related to the Study to promote an effective technology transfer. The Team promised to convey this request to JICA Headquarters in Tokyo.
6. The DNCT requested that the equipments and materials utilized in the implementation of the Study in Mali shall be transferred to Malian side after the completion of the Study in order to promote the effective technology transfer. The Team promised to convey this request to JICA Headquarters in Tokyo.

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7. The DNCT requested that the vehicles with drivers required for the field survey should be arranged by JICA. The Team promised to convey this request to JICA Headquarters in Tokyo.

8. The Minutes of Meeting were written in English and French, and their validity should be equivalent, in case of any contradiction arises in writing, the English shall be the text.

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