

Digital Topographic Mapping Project in Northern Senegal

Final Report

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Digital Topographic Mapping Project in Northern Senegal

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Digital Topographic Mapping

MINUTES OF MEETING

FOR

THE STUDY

ON

DIGITAL TOPOGRAPHIC MAPPING PROJECT IN NORTHERN SENEGAL

AGREED UPON BETWEEN

NATIONAL LAND PLANNING AGENCY OF
MINISTRY OF LAND TRANSPORTATION, RAILWAY TRANSPORTATION AND
LAND PLANNING, SENEGAL

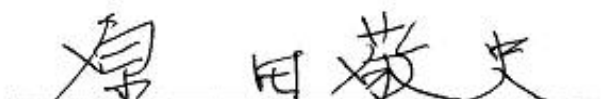
AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Dakar,
09 June 2011



Mr. Youssou NDONG
Director,
Direction of Geographical Works
and Mapping/ANAT



Mr. Takashi HARADA
Leader
JICA Study Team

I. Introduction

In response to the request of the Government of Senegal (hereinafter referred to as “GOS”), the Government of Japan (hereinafter referred to as “GOJ”) decided to conduct “Project of National Map Infrastructure of Senegal” (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 programs of the GOJ, will undertake the Study in close cooperation with the authorities concerned of the GOS.

On the part of the GOS, National Land Planning Agency of Ministry of Land Transportation, Railway Transportation and Land Planning (hereinafter referred to as “ANAT”) shall act as the representative of counterpart ministry to the JICA study team (hereinafter referred to as “Study team”) and also as the coordinating body in relation with other concerned governmental and non-governmental organizations for the smooth implementation of the Study.

Study team had a series of discussion with the Direction of Geographical Works and Mapping /ANAT. Attendances of discussion are listed in APPENDIX 1.

This document summaries major discussed points and remarks expressed by both sides and intend to supplement the Inception report.

II. Contents of Discussion

Before starting of the consultation and discussion of Inception report, Study team explained the outline of the project. The exchange of questions and answers were as below.

2. Basic policies of operations

2.1 Details of operation

DTGC asked about the schedule of (21) technology transfer. Study Team replied that technology transfer is scheduled suitable timing of the project and also explained the detailed schedule with work schedule table.

2.2 Technological policies

***Technological policies 1: Technology Transfer**

DTGC indicated that the name of the counterpart for technology transfer is not only DTGC but ANAT. Study team agreed that ANAT will be added to DTGC and changed to ANAT (DTGC) in this paragraph.

DTGC asked about the topographic mapping area for technology transfer. Study team replied that the area for the technology transfer will be used for the evaluation of technology transfer. Thus, the area will not be specified at the moment. DTGC agreed with Study Team.

***Technological policies 2: Survey Datum**

Study team suggested the changing of the ellipsoid from WGS84 to GRS80 because the coordinate system of ITRF2000 and WGS84 is not logical. Though DTGC has understood this matter already but most of the maps have made with this combination already. So DTGC requested that this project will follow ellipsoid of WGS84. Study team agreed.

***Technological policies 6: Quality control**

DTGC asked whether technology transfer on the quality control will be conducted or not. Study team replied that it will be done.

***Technological policies 7: Promotions of usage for product**

DTGC asked the name of the organization of this paragraph, the name of counterpart for technology transfer is not only DTGC but ANAT because ANAT is the administration organization of the project. Study team agreed that DTGC will be changed to ANAT (DTGC) in this paragraph.

***Technological policies 8: Customizing work plans with consideration of weather**

DTGC asked whether the ALOS imagery will be acquired in lump sum or in series. Study team answered that approx.30, 000km² of ALOS imagery for the topographic mapping area has been acquired already and approx. 45,000km² of ALOS imagery for west part of Senegal will be acquired later in suitable timing.

DTGC asked that the ALOS imageries are acquired around the same time or other. Study team replied that the image acquisition is not done at around the same time due to the weather condition such as clouds, haze and or so on.

DTGC asked if there is a possibility to increase the volume of field identification work due to the existence of secular changes for archive imageries. Study team replied if they are the important filed object information for the map expression, it necessary.

2.3 General operation policies

Study team asked the work management of DTGC during the Ramadan. DTGC replied that the work on Ramadan period will be done as usual but for the Eid holiday of 1~2 days, DTGC survey team will come back to Dakar and celebrate fest during Eid time.

***General operation policies 3: DTGC management**

Study team requested that the smooth assignment of the DTGC staffing for the implementation of the project should be done without problem. DTGC answered it should be adjusted.

***General operation policies 5: Conducting seminars**

DTGC proposed to change the organization of this paragraph from DTGC to ANAT(DTGC). Study team replied that seminar will be carried out mainly ANAT with the cooperation of JICA and Study team.

3. Operation methods

3.1 Flow process of creating map

(6) Purchasing of satellite imagery

DTGC asked about the ALOS satellite colored image which will be used to enhance land cover identification. The Study team answered that ALOS pan-sharpen image will be used.

(9) Local Survey and supplemental survey

DTGC asked what the interpretation key is. Study team explained that interpretation key is the assisting information tool for photo-identification during the digital plotting. This work also requires cooperation of DTGC surveyor.

(10) Digital plotting and compilation

DTGC asked whether the boundary information of existing map will be used or other data source. Study team replied that it is depending on the DTGC and all administrative information will be provided by DTGC.

Study team requested to confirm the topographic mapping area with DTGC. DTGC replied that topographic mapping area of the figure 3-8 in page 15 of Inception report is right area.

DTGC informed that Sheet numbering will be derived from the International World Map numbering system (1:1 000, 000). Study Team agreed on it.

(11) Interim report

DTGC asked to explain about the reason why the report of technology transfer is involved into Interim report. Study team explained that this project consists of two main purposes. One of them is the technology transfer. The technology transfer done before Interim report, it should be reported. Study team also explained the schedule of technology transfer on the work schedule table attached.

(13) Structuring of digital data

DTGC asked whether the software for the data structuring will be developed or ready made software used. Study team replied that software won't be developed through project implementation. Ready made software will be utilized. If necessary, extension of ArcGIS will be used.

DTGC asked whether specific software will be developed for other works or not. Study team replied such program won't be developed.

(15) Creation of data files

DTGC asked Study team whether it is possible to create other media such as external hard disks other than CD-ROM for the creation of data file. Study team replied it is possible.

(16) Structuring of website

DTGC asked if it is possible to set the limit such as password for data download. Study team answered yes, it is possible.

DTGC requested to discuss with Study team the data sharing among ANAT/ DTGC . Study team agreed and informed DTGC that actually there is no decision whether open source software is used or not in this moment. It will be concluded taking into account the result of study of this stage.

(17) Structure of User rules and regulations

DTGC asked what the data environment is and about the data communication speed. Study team explained that environment means the application and equipment for Website. Regarding the data communication speed will be studied on this stage.

DTGC told that the price should be reasonable for users and DTGC is the Executive Office of GICC.

(18) Facilitating promotional usage

DTGC announced that the seminar is very important for the project implementation and has an idea to hold the seminar. Actually, ADIE (State Computer science Agency) is conducting the improvement of internet in Senegal.

(22) Creation of Ortho imagery data

DTGC asked whether the provision of DEM for the west part (area 45,000km²)of the Senegal or not. Study team replied it won't be provided.

3.2 (21) Technological transfer

DTGC asked whether the Work Specification for National Base Mapping is in relation to ISO or not. Study team replied that it is not related to ISO. This work specification is prepared under the editing of JICA for overseas survey.

3.4 Equipment to be used for the Study

DTGC asked about production country of software LPS and the type of license of ArcGIS whether it is network license or not. DTGC requested to get network license for simultaneous operation. Study team replied that LPS is not Japanese made and it also replied that it is not possible to reply whether the license can apply to the network on this stage or not.

4. Personal planning

Study team informed DTGC that modified work schedule and personnel schedule will be provide after the meeting.

5. Reporting and delivery of product

Study team explained final result will be delivered to ANAT and JICA.

III. Inception Report

Both sides discussed and agreed on Inception Report for the project as attached APPENDIX 2.

IV. Number of Inception report to be submitted

Study team submitted 10 sets of each English and French version of Inception report to DTGC.

APPENDIX 1

List of Attendants

<Senegal side>

Mr. Youssou NDONG

Director of DTGC

Mr. Mamdou THIAM

Chief of the Division for Cartography/DTGC

Mr. Abdou Khadre DIATTA

Chief of the Communication Marketing/DTGC

<Japan side>

Study team

Mr. Takashi HARADA

Leader

Mr. Naoki GOTO

Team member

Mr. Takao IKEDA

Team member

Mr. Atsushi ITO

Interpreter

MINUTES OF MEETING

FOR

THE STUDY

ON

**THE DIGITAL TOPOGRAPHIC MAPPING PROJECT IN NORTHERN
SENEGAL**

AGREED UPON BETWEEN


**MINISTRY OF LAND PLANNING AND LOCAL AUTHORITIES
NATIONAL LAND PLANNING AGENCY**

AND

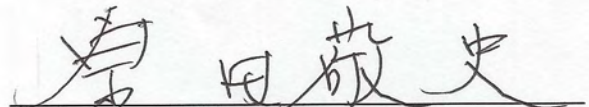
JAPAN INTERNATIONAL COOPERATION AGENCY

Dakar,

April 2012



Mr. Youssou NDONG
Director
ANAT/ Direction of Geographic Works
And Mapping



Takashi HARADA
Team Leader
JICA Study Team

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Accordingly, the Japan international Cooperation Agency (hereinafter referred to as “JICA”), the official agency responsible for the implementation of the technical cooperation programs of the GOJ, will undertake the Study in close cooperation with the authorities concerned of the GOS.

On the part of the GOS, National Land Planning Agency of Ministry of Land Planning and Local Government Authority (hereinafter referred to as “ANAT”) shall act as the representative of counterpart ministry to the JICA study team (hereinafter referred to as “Study team”) and also as the coordinating body in relation with other concerned governmental and non-governmental organizations for the smooth implementation of the Study.

Study team had a series of discussion with the Direction of Geographical Works and Mapping /ANAT/DTGC. Attendances of discussion are listed in APPENDIX 1.

This document summaries major discussed points and remarks expressed by both sides and intend to supplement the Interim report.

II. Contents of Discussion

Before starting of the consultation and discussion of Interim report, Study team explained the outline of the Interim Report. The comments from ANAT/DTGC, study team agreed are as follows.

1. New super-ordinate Ministry of ANAT/DTGC

The new ministry of ANAT/DTGC has been changed to “MINISTRY OF LAND PLANNING AND LOCAL AUTHORITY” from previous “MINISTRY OF LAND TRANSPORTATION, RAILWAY TRANSPORTATION, LAND PLANNING” since April 6th 2012. All documents related to the project and ANAT/DTGC need to be changed to new Ministry’s name.

2. Contents of Interim Report

There were no questionable items through the contents. Both of ANAT/DTGC and JICA Study Team agreed on the Interim report attached to the Minutes of Meeting.

List of Attendants

<Senegal side>

Mr. Youssou NDONG

Director of ANAT/DTGC

Mr. Mamdou THIAM

Chief of the Division for Cartography/ANAT/DTGC

Mr. Abdou Kahdre DIATTA

Chief of Communication Marketing/ANAT/DTGC

<Japan side>

Study team

Mr. Takashi HARADA

Team Leader

Mr. Hiromichi MARUYAMA

Team Member

Mr. Naoki GOTO

Team Member

Mr. Tomoyuki OTANI

Interpreter

MINUTES OF MEETING

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DIGITAL TOPOGRAPHIC MAPPING PROJECT IN NORTHERN SENEGAL


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**NATIONAL LAND PLANNING AGENCY OF
MINISTRY OF LAND TRANSPORTATION, RAILWAY TRANSPORTATION AND
LAND PLANNING, SENEGAL**

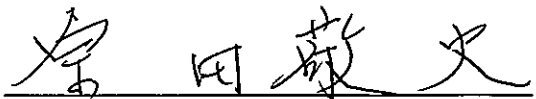
AND

JAPAN INTERNATIONAL COOPERATION AGENCY

**Dakar,
22 June 2011**



Mr. Youssou NDONG
Director,
Direction of Geographical Works
and Mapping/ANAT



Mr. Takashi HARADA
Leader
JICA Study Team

I. Introduction

In response to the request of the Government of Senegal (hereinafter referred to as “GOS”), the Government of Japan (hereinafter referred to as “GOJ”) decided to conduct “Project of National Map Infrastructure of Senegal” (hereinafter referred to as “the Study”), in accordance with the relevant laws and regulations in force in Japan.

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Study team had a series of discussion with the Direction of Geographical Works and Mapping /ANAT. Attendances of discussion are listed in APPENDIX 1.

This document summaries major discussed points and remarks expressed by both sides and intend to supplement the Inception report.

II. Contents of Discussion

Both Party discussed and agreed as following.

*Technological policies 2: Survey Datum

Both parties had agreed that the surveying datum is WGS84 when the consultation of inception report was held. However Study team had discussion with DTGC regarding the ellipsoid type from WGS84 to GRS80 again as the coordinate system of ITRF2000 should coincide to WGS84. Finally DTGC agreed to express and use the surveying standard as follows.

- | | |
|----------------------------------|--|
| * Projection | : UTM(Universal Transverse Mercator) |
| * Geographical coordinate system | : ITRF2000 |
| * Ellipsoid | : GRS80 |
| * Height Datum | : Based on the height of existing benchmarks |

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Mr. Youssou NDONG

Director of DTGC

Mr. Mamdou THIAM

Chief of the Division for Cartography/DTGC

<Japan side>

Study team

Mr. Takashi HARADA

Leader

Mr. Masanori TESHIMA

Team member

4

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**PROJET
DE
CARTOGRAPHIE TOPOGRAPHIQUE NUMERIQUE
DANS
LE NORD DU SENEGAL**






1/50,000

**Digital Topographic Mapping Project
in Northern Senegal**








Version 5.7 March 2013






Routes

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Autoroute, route à deux chaussées	Express Highway 自動車専用道路	100100	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express Express Highway Afficher les autoroutes 自動車専用道路を表示する。 Dakar only 線幅1.2mm、中心線0.05mm、サイド線0.1mm	—	○	○
Route nationale (bitumée)	National Road (paved) 国道 (舗装)	100200	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express paved National Highway. When a road number exists, number will be annotated Afficher les routes nationales bitumées Quand le numéro de route existe, le numéro sera annoté. 舗装されたNational Roadを表示する。 道路番号を有する道路は注記する。 線幅1.2mm、サイド線0.1mm	—	○	○
Route nationale (non bitumée)	National Road (unpaved) 国道 (未舗装)	100210	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express unpaved National Highway. When a road number exists, number will be annotated Afficher les routes nationales non bitumées Quand le numéro de route existe, le numéro sera annoté. 未舗装のNational Roadを表示する。 道路番号を有する道路は注記する。 線幅1.2mm、サイド線0.1mm、実部5.0mm、白部2.8mm	—	○	○
Route régionale (bitumée)	Regional Road (paved) 地方道路 (舗装)	100300	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express paved major road. When a road number exists, number will be annotated Afficher les routes régionales bitumées. Quand le numéro de route existe, le numéro sera annoté. 舗装されたRegional Roadを表示する。 道路番号を有する道路は注記する。 線幅0.7mm、サイド線0.1mm	—	○	○
Route régionale (non bitumée)	Regional Road (unpaved) 地方道路 (未舗装)	100310	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express unpaved major road. When a road number exists, number will be annotated Afficher les routes régionales non bitumées Quand le numéro de route existe, le numéro sera annoté. 未舗装のRegional Roadを表示する。 道路番号を有する道路は注記する。 線幅0.7mm、サイド線0.1mm、実部5.0mm、白部2.8mm	—	○	○






Routes

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Route Départementale (bitumée)	Departmental Road (paved) 県道(舗装)	100400	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Afficher les routes départementales bitumées Quand le numéro de route existe, le numéro sera annoté. 舗装されたDepartmental Roadを表示する。 道路番号を有する道路は注記する。 線幅0.6mm、サイド線0.1mm	—	○	○
Route Départementale (non bitumée)	Departmental Road (unpaved) 県道(未舗装)	100410	line	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Afficher les routes départementales non bitumées. Quand le numéro de route existe, le numéro sera annoté. 未舗装のDepartmental Roadを表示する。 道路番号を有する道路は注記する。 線幅0.6mm、サイド線0.1mm、実部5.0mm、白部2.8mm	—	○	○
Piste répertoriée (bitumée)	Track (paved) 軽車道	100500	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express the road which one vehicle can pass Afficher des routes que des véhicules comme jeep pourront passer. Quand le numéro de route existe, le numéro sera annoté. ジープ程度の車両1台が通行可能な道路(軽車道)を表示する。道路番号を有する道路は注記する。 線幅0.6mm、サイド線0.1mm	—	○	○
Piste répertoriée (non bitumée)	Track (unpaved) 軽車道	100510	ligne	name, layer, number of road		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Afficher les pistes non bitumées Quand le numéro de piste existe, le numéro sera annoté. 未舗装の軽車道を表示する。道路番号を有する道路は注記する。 線幅0.6mm、サイド線0.1mm、実部5.0mm、白部2.8mm	—	○	○
Piste (non classée)	Track (not clasified) 軽車道	100600	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express unclassified Tracks Afficher les pistes non classées 区分されていない軽車道を表示する。 線幅0.25mm、実部2.7mm、白部0.5mm	—	○	○






Routes

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Sentier	Footpath 徒歩道	100700	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express major road clearly identified on the image Afficher des sentiers principaux clairement visibles sur l'image 写真上で明瞭に見える主要な徒歩道を表示する。 線幅0.2mm、実部1.2mm、白部0.8mm	—	○	○
Route en construction	Road, underconstruction 建設中の道路	100800	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Departmental Road以上で建設中の道路を表示する。 Afficher des routes en construction parmi celles classées supérieures aux routes départementales. 線幅0.6mm、サイド線0.05mm	—	○	○
Voirie urbaine	Urban road 都市、町内の舗装道路	100900	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Afficher les routes urbaines, municipales et villageoises 都市、町、村落内の道路を表示する。 400300,400400内の道路 線幅0.35mm、サイド線0.05mm	—	○	○
coupe-feu pare-feu	Fire Belt, firebreak, fire line 防火帯	101000	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express fire line 防火帯を表示する。 線幅0.25mm	—	○	○
Route bordée d'arbres	Tree row 並木	110100	point	name, layer		Acquire duplicating with road edges (completely coincide) Acquérir en superposition avec le bord de route (coincidence totale) 道路と重ねて取得 (完全一致)	Express Tree row more than 250m in length Afficher des routes bordées d'arbres dont la longueur est supérieure à 250m.	×	○	×







Chemin de fer et Transmission

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Chemin de fer (voie normale) une voie	Standard gauge railway (single track) 標準軌道鉄道(単線)	200100	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express single line In case the railway and road running parallel, road must be displaced Afficher la voie unique. Au cas où la voie est parallèle avec la route, la route devra être déplacée. Standard gauge の単線を表示する。 鉄道と道路が平行する場合 道路を転位して表示する。 破棄された路線は注記で表す。 abandoned railway express with annotation	—	○	○
Chemin de fer (voie normale) double voie	Standard gauge railway (double track) 標準軌道鉄道(復線)	200110	ligne	name, layer		Acquire center line of double gauge Acquérir la ligne centrale de la double voie 中心線を取得する。	Express double line In case the railway and road running parallel, road must be displaced Afficher la double voie. Au cas où la voie est parallèle avec la route, la route devra être déplacée. Standard gauge の復線を表示する。 鉄道と道路が平行する場合 道路を転位して表示する。 破棄された路線は注記で表す。 abandoned railway express with annotation	—	○	○
Chemin de fer (voie étroite) une voie	Metric gauge (single) 狭軌道鉄道(単線)	200200	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express single line In case the railway and road running parallel, road must be displaced Afficher la voie unique. Au cas où la voie est parallèle avec la route, la route devra être déplacée. Standard gauge の復線を表示する。 鉄道と道路が平行する場合 道路を転位して表示する。	—	○	○
Chemin de fer (voie étroite) double voie	Metric gauge (double) 狭軌道鉄道(復線)	200210	ligne	name, layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	Express double line In case the railway and road running parallel, road must be displaced Afficher les doubles voies. Au cas où la voie est parallèle avec la route, la route devra être déplacée. Standard gauge の復線を表示する。 鉄道と道路が平行する場合 道路を転位して表示する。	—	○	○
	Railway (data marged line) 鉄道(データ結合線)	200301	ligne			Acquire center line of double gauge Acquérir la ligne centrale de la double voie 中心線を取得する。	When the railway change from double to single line, use this for data connection Quand la double voie devient la voie unique, utiliser le pour la connection de donnée. (Voie standard) 復線から単線に分かれる場合に データを結合するのに使用する。(Standard gauge)	—	×	○





Chemin de fer et Transmission

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
	Railway (data marged line) 鉄道(データ結合線)	200401	ligne			Acquire center line Acquérir la ligne centrale 中心線を取得する。	When the railway change from double to single line, use this for data connection Quand la double voie devient la voie unique, utiliser le pour la connection de donnée (voie métrique) 復線から単線に分かれる場合に データを結合するのに使用する。(Metric gauge)	—	×	○
Ligne électrique	Power transmission line 送電線	210100	ligne	name, layer		Acquire center line (consecutive line) Acquérir la ligne centrale (ligne consécutive) 中心線を取得する。 (連続データ)	Express trunk power line more than 30kv Afficher les lignes principales de haute tention de 30KV et plus 30kv以上の高圧送電線の幹線を表示する。	—	○	○
Point terminal	Terminal point of power transmission line 送電線終点	210110	point	name, layer		Acquire point information of symbol expressing position Acquérir l'information du point de la position d'affichage 記号の表示位置の点情報を取得する。	Express the terminal point of power transmission line Afficher la borne des lignes de haute tension. 高圧線の終点を表示する。	—	○	×
Ligne télégraphique et téléphonique	Telephone line 電話線	210200	ligne	name, layer		Acquire center line (consecutive line) Acquérir la ligne centrale (ligne consécutive) 中心線を取得する。 (連続データ)	Express trunk telecommunication line set to pylon will be expressed 鉄塔に架設された幹線通信線を表示する。	—	○	×
Antenne de parabole	Satellite dish パラボナアンテナ	210300	point	name, layer		Acquire point information of symbol expressing position Acquérir l'information du point de la position d'affichage 記号の表示位置の点情報を取得する。	Parabora antenna Afficher les antennes paraboles パラボナアンテナを表示する 携帯電話のアンテナも含む including mobil antenna	—	○	○




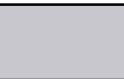
Frontières

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Frontière : Internationale	International boundary 国境	300100	ligne	name, layer		Collect or supplied data Données collectées ou fournies 貸与データ	Express International Boundary Afficher les frontières internationales 国境線を表示する。 Data has given from DTGC	—	○	○
Regional boundary Limite 1 ordre	Regional boundary (Limit 1st order) 州界	300200	ligne	name, layer		Collect or supplied data 貸与データ	Express State Boundary Afficher les délimitations régionales Regional boundary を表示する。 Data has given from DTGC	—	○	○
Départementale boundary Limite 2 ordre	Departmental boundary (Limit 2nd order) 県界	300300	ligne	name, layer		Collect or supplied data 貸与データ	Express Prefectural Boundary Afficher les délimitations départementales Departmental boundary を表示する。 Data has given from DTGC	—	○	○
District boundary Limite 3 ordre	District boundary (Limit 3rd order) 〇〇界	300400	ligne	name, layer		Collect or supplied data 貸与データ	Express District Boundary Afficher les délimitations de rurales District boundary を表示する。 Data has given from DTGC	—	○	○
Rural community boundary Limite 4 ordre	Rural community boundary (Limit 4th order) 〇〇界	300500	ligne	name, layer		Collect or supplied data 貸与データ	Express Rural Boundary Afficher les délimitations de districts Rural boundary を表示する。 Data has given from DTGC	—	○	○
Limite : Parc national ou forêt classée	Boundary of National park 国立公園等の境界	310200	polygon	name, layer		Collect or supplied data 貸与データ	Express the limit of National Park, forest reserve whose area is more than 10mm × 10mm on the map Afficher les délimitations de parcs nationaux et du réserve forestier dont la superficie est supérieures à 10mm × 10mm sur la carte. 国立公園、森林保護区の境界を表示する。 広さ図上10mm × 10mm以上を表示する。 基本的にポリゴンデータだが図解でき切れる箇所はラインとする	—	○	○

Frontières

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Limite : Parc national ou forêt classée	Boundary of National park 国立公園等の境界	310200A	point				図化、編集用記号	—	×	—
Haie, Clôture végétale	Game reaserve, Hunting area limit 動物保護区域、狩猟区域界	310300	polygon	name, layer		Collect or supplied data Donnée collectée ou fournie 貸与データ	Express the limit of Game reserve, Hunting area whose area is more than 10mm X 10mm on the map Afficher les délimitations de réserves d'animaux sauvages ou des zones de chasse dont la superficie est supérieure à 10mm X 10mm sur la carte. 動物保護区域、又は狩猟区域の境界を表示する。 広さ図上10mm×10mm以上を表示する。 データが無いので使用しない no data so not use this project	—	○	○
Haie, Clôture végétale	Game reaserve, Hunting area limit 動物保護区域、狩猟区域界	310300A	point				図化、編集用記号	—	×	—
Levé de terre	Bank 堤防	310400	ligne	name, layer		Acquire centerline Acquéirir la ligne centrale 中心線を取得する。	Length more than 5m/m and height more than 2m will be expressed Afficher la longueur supérieure à 5mm et la hauteur supérieure à 2mm sur la carte. 図上長さ5mm以上、高さ2m以上を表示する。	—	○	×
Fossé	Deep Dike 深い溝	310500	ligne	name, layer		Acquire centerline Acquéirir la ligne centrale 中心線を取得する。	Express Length more than 5m/m and width more than 4m Afficher la longueur supérieure à 5mm et la largeur supérieure à 4mm sur la carte. 図上長さ5mm以上、幅4m以上を表示する	—	○	×
Clôture	Enclosure, fence 垣、柵	310600	ligne	name, layer		Acquire centerline Acquéirir la ligne centrale 中心線を取得する。	Express concrete wall, soil wall, hedge and fence whose length more than 5m/m on the map and height more than 2m Hedge for Sabo will not be required Afficher les murs en béton, les murs en sol, les haies, les clôtures dont la longueur supérieure à 5mm et la hauteur supérieure 2mm sur la carte. Les haies contre le sable ne sera pas affichée. コンクリート塀、土塀、生垣、フェンス等を表示する。 図上長さ5mm以上、高さ2.0m以上を表示する。 砂防用生垣は表示しない。	—	○	×







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
	Important Building, Public Building (at scaled) 重要建物、公共建物(実形)	400100	polygon	name, layer		Acquire outer shape, circumference (coordinate of start and end point coincide) Acquérir la forme extérieure et la circonférence extérieure (la coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 外形、外周を取得(始終点座標一致)	Express Important building and public building Alocate annotation and/or symbol Afficher des bâtiments importants et bâtiments publiques avec annotation et/ou symbole 重要建物、公共建物を表示する。 注記又は記号を配置する。	-	○	○
	Building symbol(square), city, town, village 建物記号(四角記号)都市、町、村落	400200	point	name, layer		Acquire point and direction of central position Acquérir le point et la direction de la position centrale 中央位置の点と方向を取得		○	○	○
Ville, noyau urbainisé	City, Big town 都市、町	400300	polygon	name, layer		Acquire outer shape, circumference (coordinate of start and end point coincide) 外形、外周を取得(始終点座標一致)	Generalization will be done for the houses of urban area and town Tous les bâtiments qui se trouvent dans les zones urbaines et les villes seront dessinés. 都市、町の建物を総描する。 Plotting decision サンルイ、ダガナ、リシャートル、ポドール、オロソギ、マタム、バケル、キディアの密集した住宅地に使用 Used for residential area in Saint-Louis,Dagana,Richard Toll,Podor,Ouro Sougi,Matam,Bakel,Kidira	-	○	○
Ville, noyau urbainisé	City, Big town 都市、町	400300A	point		VNU		図化、編集用記号	-	x	-
	Small city, Big village 村落	400400	polygon	name, layer		Acquire outer shape, circumference (coordinate of start and end point coincide) 外形、外周を取得(始終点座標一致)	Plotting decision national road沿いの中規模程度の住宅密集地に使用 along a national road middle scale class	-	○	○
	Small city, Big village 村落	400400A	point		VIL		図化、編集用記号	-	x	-







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Villages	Village , Settlement	400500	polygon	name_layer			Plotting decision 図面出力はしないがポリゴンとしてエリアを囲む、regional, department沿いの小規模程度住宅密集地に使用基本的に道路沿いにも適用、但し道路沿いでなくてもくもの巢状に道路が集合していて規模の大きいものには例外として使用する along a regional road and department road samll scale class	—	×	○
Villages	Village , Settlement	400500A	point		SET		図化、編集用記号	—	×	—
Divers types d'habitations rurales	Building symbol(circle shape) Settlement 建物記号(丸形記号)集落	400600	point	name_layer	●	Acquire center line of double gauge Acquérir la ligne centrale de la double voie 中心線を取得する。	Footpath and motorable road in settlement will not be expressed Les sentiers et les pistes non bitumées à l'intérieur du village ne seront pas affichées. 集落内の軽車道、徒歩道は表示しない。	×	○	○
Marché	Market area 市場	410100	point	name_layer	⊗	Acquire center line Acquérir la ligne centrale 中心線を取得する。	Publicness permanet market will be expressed Les marchés permanents à caractère publique seront affichés. 公共性のある常設市場を表示する。	×	○	○
Hôpital	Hospital 病院	410200	point	name_layer	⊕	Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Facility with hospital function will be expressed Les établissements qui fournissent le service hospitalier seront affichés. 病院としての機能を有する施設を表示する。	×	○	○
Centre de sante		410300	point	name_layer	⊕			×	○	○







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Poste de sante		410310	point	name, layer				x	o	o
Case de sante	Clinic 診療所	410320	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Facility with clinic function will be expressed Les établissements qui fonctionnent en tant que dispensaire seront affichés. 診療所としての機能を有する施設を表示する。	x	o	o
Hall	Hall 集会所	410400	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Facility with hall function will be expressed Les établissements qui fonctionnent en tant que lieu de réunion seront affichés. 集会所としての機能を有する施設を表示する。	x	o	o
Hotel	Hotel ホテル	410500	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Hotel will be expressed Les hôtels seront affichés. ホテルを表示する。	x	o	o
Police	Polis station 警察署	410600	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Facility with polis station function will be expressed Les établissements qui fonctionnent en tant que hôtel de police seront affichés. 警察署としての機能を有する施設を表示する。	x	o	o
Cyber espace	Cyber space サイバースペース	410700	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Les établissements qui fournissent l'accès internet à caractère publique seront affichés. 公共のインターネットアクセス施設を表示する。	x	o	o






Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Ecole	School 学校	410800	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Elementary, Junior high and high school will be expressed by symbol Academy, college and university will be with names Les écoles primaires, collèges et lycées sont affichées par symbole. Les écoles spécialisées et universités seront affichées avec leur nom. 小、中、高校は記号で表示する。現調に準ずる。 follow the field identification	×	○	○
Mosquée	Mosque モスク	410900	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Ceux qui sont connus et de grande taille seront affichés. 著名なもの規模の大きいものを表示する。	×	○	○
Minaret, kouba	Minaret 小さなイスラム寺院	411000	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Ceux qui sont connus et de grande taille seront affichés. 著名なもの規模の大きいものを表示する。	×	○	○
Eglise	Church 教会	411100	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Size more than 1.0mm X 1.0mm on the map will be expressed Ceux qui sont connus et de grande taille seront affichés. Ceux dont la superficie est supérieure à 1,0mm X 1,0mm sur la carte seront affichés. 著名なもの規模の大きいものを表示する。 大きさ図上 1.0mm X 1.0mm以上を表示する。	×	○	○
Chapelle	Chapel 礼拝所	411200	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Size more than 1.0mm X 1.0mm on the map will be expressed Celles qui sont connues et de grande taille seront affichées. Celles dont la supérieure à 1,0mm X 1,0mm sur la carte seront affichées. 著名なもの規模の大きいものを表示する。 大きさ図上 1.0mm X 1.0mm以上を表示する。	×	○	○
Mission	Mission station 伝導所	411300	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Size more than 1.0mm X 1.0mm on the map will be expressed Celles qui sont connues et de grande taille seront affichées. Celles dont la superficie est supérieure à 1,0mmX1,0mm sur la carte seront affichées. 著名なもの規模の大きいものを表示する。 大きさ図上 1.0mm X 1.0mm以上を表示する。	×	○	○







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Temple	Temple 寺院	411400	point	name, layer		Acquire the expression position of central point of symbol 記号の表示位置の中心を取得する。	Prominent and large sized will be expressed Size more than 1.0mm×1.0mm on the map will be expressed Ceux qui sont connus et de grande taille seront affichés. Ceux dont la superficie est supérieure à 1,0mmX1,0mm sur la carte seront affichés. 著名なものの規模の大きいものを表示する。 大きさ図上1.0mm×1.0mm以上を表示する。	×	○	○
Eolienne	Wind mill 風車	411500	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Large sized and under operation will be expressed Celles qui sont opérationnelles et de grande taille seront affichées. 規模の大きいもので現在作動中のものを表示する。	×	○	○
Moulin à eau	Water mill 水車	411600	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Large sized and under operation will be expressed Ceux qui sont opérationnels et de grande taille seront affichés. 規模の大きいもので現在作動中のものを表示する。	×	○	○
Cimetières, Musulman	Muslim cemetery (symbol) イスラム教墓地(範囲)	411700	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express 2~3 symbols adequately in the area Prominent independent grave will be expressed Afficher 2 ou 3 symboles convenables dans la zone. Les tombeaux indépendants qui sont connus seront affichés. 範囲内に適宜2~3表示する。 独立墓は著名なものを表示する。	×	○	○
Cimetières, Chrétien	Christian cemetery (symbol) キリスト教墓地(記号)	411800	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express 2~3 symbols adequately in the area Prominent independent grave will be expressed Afficher 2 ou 3 symboles convenables dans la zone. Les tombeaux indépendants qui sont connus seront affichés. 範囲内に適宜2~3表示する。 独立墓は著名なものを表示する。	×	○	○
Cimetières, Juif	Jewish cemetery (symbol) ユダヤ教墓地(記号)	411900	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express 2~3 symbols adequately in the area Prominent independent grave will be expressed Afficher 2 ou 3 symboles convenables dans la zone. Les tombeaux indépendants qui sont connus seront affichés. 範囲内に適宜2~3表示する。 独立墓は著名なものを表示する。	×	○	○







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Cimetières, Autre	Other cemetery (symbol) その他の墓地(記号)	412000	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express 2~3 symbols adequately in the area Prominent independent grave will be expressed 範囲内に適宜2~3表示する。 独立墓は著名なものを表示する。	×	○	○
Cimetiere	Cemetery 墓地	412101	polygon	name, layer		Acquire outer shape, circumfrance (coordinate of start and end point coincide) 外形、外周を取得(始終点座標一致)	Size is more than 5mm × 5mm and/or 2mm × 10mm on the map will be expressed Celles dont la superficie est supérieure à 5mmX5mm et/ou à 2mmX10mm sur la carte seront affichés. 規模が図上5mm × 5mm 又は2mm × 10mm以上を表示する。	—	×	○
Cimetiere	Cemetery 墓地	412101A	point		CEM		図化、編集用記号	—	×	—
Bureau de poste	post office 郵便局	412200	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Even there are more athn 2 functions in one facility, the symbol of bigger functioned will be expressed Un établissement qui a deux fonctions ou plus sera affiché avec un symbole utilisé pour l'établissement de grande taille. 1つの施設でも機能が2つ以上あれば機能の大きい方の記号を表示する。 Size more athn 0.5mm × 1.0mm on the map will be expressed Ceux dont la superficie est supérieure à 0,5mmX1,0mm sur la carte seront affichés. 図上0.5mm × 1.0mm以上を表示する。	×	○	○
Télégraphe	Telegram station 電信局	412300	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Even there are more than 2 functions in one facility, the symbol of bigger functioned will be expressed Un établissement qui a deux fonctions ou plus sera affiché avec un symbole utilisé pour l'établissement de grande taille. 1つの施設でも機能が2つ以上あれば機能の大きい方の記号を表示する。 Size more athn 0.5mm × 1.0mm on the map will be expressed Celles dont la superficie est supérieure à 0,5mmX1,0mm sur la carte seront affichées. 図上0.5mm × 1.0mm以上を表示する。	×	○	○
Téléphone	Telephone pffice 電話局	412400	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Even there are more than 2 functions in one facility, the symbol of bigger functioned will be expressed 1つの施設でも機能が2つ以上あれば機能の大きい方の記号を表示する。 Size more athn 0.5mm × 1.0mm on the map will be expressed 図上0.5mm × 1.0mm以上を表示する。	×	○	○





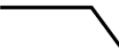

Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Central thermo électrique	Power station 発電所	412500	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Express a generating power plant Afficher les centrales thermiques. 火力発電所を表示する	x	○	○
Réservoir de gaz et hydrocarbure	Oil & Gas tank ガス石油貯蔵タンク	412600	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Express more than 10m in diameter and 5m in height Afficher ceux dont le diamètre est supérieur à 10m et la hauteur supérieure à 5m seront affichés. 直径10m、高さ5m以上を表示する。	x	○	○
Terrain de sport ou stade	Stadium 競技場	412700	point	name, layer		Acquire point and direction of central position 中央位置の点と方向を取得	Express permanent stadium with pavilion Afficher les stades qui sont à caractère permanente et équipées de gradins. 観覧席を整備した常設競技場を表示する。 Express more than 2m/m x 4m/m on the map Afficher celles dont la superficie est supérieure à 2.0mmX4.0mm sur la carte. 図上2.0mm x 4.0mm以上を表示する。	○	○	○
Abri	Emergency evacuation area 避難所	412800	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Emergency evacuation area for nomado and travellers and when casus major occurred Afficher ceux qui sont destinés à abriter des nomades et des travailleurs ou des sinistrés lors de fléaux. 災害時及び遊牧民、旅人の避難所を示す。 Express more than 2.0m/m x 2m/m on the map Afficher ceux dont la superficie est supérieure à 2.0mmX2.0mm sur la carte. 図上2.0mm x 2.0mm以上を表示する。	x	○	○
Point de vue	Landscape point 展望地点	412900	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	As being land mark, even small size will be expressed Etant le point de repère, même ceux qui sont de petite taille seront affichés. 目標となるので小規模でも表示する。	x	○	○
Phare	Light tower 灯台	413000	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Afficher les phares. 灯台を表示する。	x	○	○







Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Signalistion	Simple light tower 簡易灯台	413100	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Afficher les feux. 簡易灯台を表示する。	x	○	○
Fort	Fort 保壘	413200	point	name, layer		Acquire point and direction of central position 中央位置の点と方向を取得	Prominent one will be expressed Ceux qui sont connus seront affichés. 著名なものを表示する。	○	○	○
Bord fortifié	Gun battery in fort 小砲台	413300	point	name, layer		Acquire point and direction of central position 中央位置の点と方向を取得	Prominent one will be expressed Ceux qui sont connus seront affichés. 著名なものを表示する。	○	○	○
Palais	Palace 宮殿、王宮	413400	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Prominent one will be expressed Ceux qui sont connus seront affichés. 著名なものを表示する。	x	○	○
Tour	Tower 高塔	413500	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Fire tower, pylon will be expressed Afficher les tourelles et tours. 火の見櫓、鉄塔等を表示する。 Express height more than 20m Afficher ceux dont la hauteur est supérieure à 20m. 高さ20m以上を表示する。	x	○	○
Station de Radio	Radio station 送信所	413600	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の中心を取得する。	Transmitter station such as radio and TV station will be expressed Afficher les stations d'émission de radio et TV. ラジオ局、テレビ局等の送信局を表示する。 Express the area more than 2.0mm x 2.0mm on the map Afficher celles dont la superficie est supérieure à 2,0mmX2,0mm sur la carte. 広さ図上2.0mm x 2.0mm以上を表示する。	x	○	○





Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Murs en ruines	Ancient rampart 古代城壁	413700	line	name, layer		Acquire center line 中心線を取得する。	Express prominent and large sized one Afficher ceux qui sont connus et de grande tailles. 著名なもの及び規模の大きいものを表示する。 Express the area more than 2.0mm×2.0mm on the map Afficher ceux dont la superficie est supérieures à 2.0mmX2.0mm sur la carte. 広さ図上2.0mm×2.0mm以上を表示する。	×	○	○
Site ancien	Ancient site 旧跡	413800	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express prominent and large sized one Afficher ceux qui sont connus et de grande taille. 著名なもの及び規模の大きいものを表示する。 Express the area more than 2.0mm×2.0mm on the map Afficher ceux dont la superficie est supérieure à 2.0mmX2.0mm sur la carte. 広さ図上2.0mm×2.0mm以上を表示する。	×	○	○
Jetée	Jetty 埠頭	413900	point	name, layer			Area where the passenger's getting on and off and loading of freight are done in harbors Zone destinée aux passagers et marchandises pour embarquement et déchargement 港湾において乗客の乗降や貨物の荷役が行われる区域のこと。 Express permanent area Afficher les aires permanentes. 恒久的なものを表示する。 Express the area more than 2.0m/m on the map Afficher celles dont la superficie es supérieure à 2.0mm sur la carte. 図上2.0mm以上を表示する。	○	○	○
Quai	Coast levee 防波堤	414000	ligne	name, layer		Acquire outer shape, circumference (coordinate of start and end point coincide) 外形、外周を取得 (始終点座標一致)	The structure constructed in the sea to defend continental areas from the damage of the tsunami to keep a rest the inside in the prevention harbors as for waves from the open sea. 外洋からの波浪を防ぎ港湾の内部を安静に保つため、もしくは津波の被害から陸域を守るため、海中の設置された構造物 Express permanent structure 恒久的なものを表示する。 Express more than 2.0m/m on the map 図上2.0mm以上を表示する。	—	○	○
Embarcadère	Wharf 波止場	414100	line	name, layer			Place where wave break exist in the port. And it means Wharf. Lieu où il y a des digues ou des quais. Lieu qu'on appelle le port. 港で、波止のある所。埠頭。また、港のこと。 Express permanent structure Afficher les installations permanentes. 恒久的なものを表示する。 Express length more than 2.0m/m on the map Afficher celles dont la longueur est supérieure à 2.0mm sur la carte. 図上2.0mm以上を表示する。	—	○	○
Mine	Mine 鉱山	414200	point	name, layer		Acquire the point information of expression position of symbol 記号の表示位置の点情報を取得する。	Express prominent and large sized one Afficher celles qui sont connues et de grande taille. 著名なもの規模の大きいものを表示する。 The large-scale one displays the ore category. Afficher celles de grande taille avec leur catégorie minière. 規模の大きいものは鉱種も表示する。	—	○	○





Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Gare	Station 駅舎	414300	point	name, layer		Acquire point and direction of central position 中央位置の点と方向を取得	Express more than 2.0m/m × 1.0m/m on the map Afficher celles dont la superficie est supérieure à 2,0mmX1,0mm sur la carte. 図上2.0mm × 1.0mm以上を表示する。	○	○	○
Arrêt	Halt 停車場	414400	point	name, layer		Acquire point and direction of central position 中央位置の点と方向を取得	Express more than 1.2m/m × 1.0m/m on the map Afficher ceux dont la superficie est supérieure à 1,2mmX1,0mm sur la carte. 図上1.2mm × 1.0mm以上を表示する。	○	○	○
Aire d'aiguillage	Railway shunting area 操車場	414500	ligne	name, layer			Express the compound more than 4.0m/m × 3.0m/m on the map Afficher les aires dont la superficie est supérieure à 4,0mmX3,0mm sur la carte. 敷地が図上4.0mmX3.0mmを表示する。	—	○	○
Aéroport	Airport 空港 (airport)	414600	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Afficher ceux dont la superficie est supérieure à 4,0mmX3,0mm sur la carte. 敷地が図上4.0mm × 3.0mm以上を表示する。	×	○	○
Aérodrome	Aerodrome 飛行場 (aerodrome)	414700	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。	Express the airport for Domestic flight Afficher ceux qui sont destinés aux lignes domestiques. 国内線の空港を表示する。	×	○	○
Terrain d'atterrissage	Landing field 着陸場 (landing field)	414800	point	name, layer		Acquire the center point of expression position of symbol 記号の表示位置の中心を取得する。		×	○	○

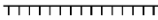


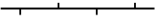
Figuré du terrain,Orographi

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Courbes de niveau	Index contour 計曲線	500100	ligne	name, layer, height(meter)		Acquire contour line (continuous data) Acquérir le courge de niveau (donnée continuele) 等高線を取得 (連続データ)	Acquire every 50m Tous les 50m 50mごと	—	○	×
Courbes intercallaires	Intermediate contour 主曲線	500200	ligne	name, layer, height(meter)		Acquire contour line (continuous data) Acquérir le courbe de niveau (donnée continuele) 等高線を取得 (連続データ)	Acquire every 10m Tous les 10m 10mごと	—	○	×
Dépression de niveau	Index contour, depression 凹地計曲線	500300	ligne	name, layer, height(meter)		Acquire contour line in clockwise Acquérir le courbe de niveau dans le sens des aiguilles de la montre 高いほうを左にみるように(時計回り) 等高線を取	Acquire every 50m of depression other than depression composited with artificial structure Acquérir tous les 50m d'autres dépressions que celles qui sont faites lors de la construction de la structure artificielle 人工構築物との合成で生じた以外の凹地を50mごと	—	○	×
Dépression intercallaires	Intermediate contour, depression 凹地主曲線	500400	ligne	name, layer, height(meter)		Acquire contour line in clockwise Acquérir le courbe de niveau dans le sens des aiguilles de la montre 高いほうを左にみるように(時計回り) 等高線を取得		—	○	×



Figuré du terrain,Orographi

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Cuvettes de niveau	Index contour, concave 凹地計曲線	500500	ligne	name, layer, height(meter)		Acquire contour line in clockwise Acquérir des courbes de niveau dans le sens des aiguilles de la montre. 高いほうを左にみるように(時計回り) 等高線を取得	Afficher tous les 50m les dépressions supérieures à 9m ² et inférieures à 25m ² sur la carte. 図上9~25mm2の凹地を50m毎に表示する。	-	○	×
Cuvettes intercalaires	Intermediate contour, concave 凹地主曲線	500600	ligne	name, layer, height(meter)		Acquire contour line in clockwise Acquérir des courbes de niveau dans le sens des aiguilles de la montre. 高いほうを左にみるように(時計回り) 等高線を取得	Afficher tous les 10m les dépressions supérieure à 9m ² et inférieures à 25m ² sur la carte. 図上9~25mm2の凹地を10m毎に表示する。	-	○	×
	Direction arrow for concave 凹地矢印	500700	ligne			Acquire the arrow from the top to the bottom. Acquérir une flèche du haut vers le bas 終点側に矢印を発生させるので高い方から低い方へ2点で取得	Express arrow from the top to the bottom Afficher les flèches du haut vers le bas. 矢印は高い方から最低部の方に向けて表示する。 2.0mm~4.0mmの長さ	-	○	×
Zones rocheuses	露岩、散岩	510100	ligne	name, layer		Acquire in anticlockwise Acquérir dans le sens inverse des aiguilles de la montre 低い方を右に取得	Steep rock slope Express slope more than 5m/m on the map and 2m in height difference Escarpement rocheux Afficher ceux dont la longueur est supérieure à 5mm sur la carte et dont la hauteur relative est supérieure à 2m. 岩でできた急斜面 長さ図上5mm、比高2m以上を表示する。	-	○	×



Figuré du terrain,Orographi

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Terrain rocheux	Steep Slope 急斜面	510200	ligne	name, layer		Acquire in anticlockwise Acqué rir dans le sens inverse des aiguilles de la montre 低い方を右に取得	The inclination of the surrounding such as the plateau or the soils is sudden and expression of topographic feature by the contour line is difficult or the actual condition is not clarified. Express it more than 5m/m on the map and 2m in height difference	—	○	×
Pierres, falaises	Cliff 断崖、岩がけ	510300	ligne	name, layer		Acquire in anticlockwise Acqué rir dans le sens inverse des aiguilles de la montre 低い方を右に取得	Topographic slope feature which is vertical and/or almost vertical Express length more than 5mm on the map and 2m in height difference Relief vertical ou presque. Afficher ceux dont la longueur est supérieure à 5mm et la hauteur supé rieure à 2mm sur la	—	○	×
Talus	Bank 盛土斜面	510400	ligne	name, layer		Acquire in anticlockwise Acqué rir dans le sens inverse des aiguilles de la montre 低い方を右に取得	Steep slope made artificially (cut and fill bank of road, railway and steep slope of developed land) Express length more than 5m/m on the map and 2m in height difference Pente artificielle (talus fait par remblai ou par creusement pour route ou voies de ch	—	○	×
Détails non rocheux	Slope 土砂の斜面	510500	ligne	name, layer		Acquire in anticlockwise Acqué rir dans le sens inverse des aiguilles de la montre 低い方を右に取得	Steep slope made naturally with earth and sand fall Express length more than 5m/m on the map and 2m in height difference Escarpement naturel fait par l'éboulement du sol et du sable. Afficher ceux dont la longueur est supérieure à 5mm sur la carte et dont	—	○	×

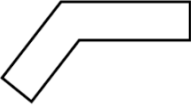
Figuré du terrain,Orographi

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Dépôt de terre de Mine	Slag repository (Slag dam) 鉱滓集積所 (鉱滓ダム)	510600	polygon	name_layer		Acquire outer shape and circumference (as clockwise) Acquérir la forme extérieure et la circonférence extérieure (dans le sens des aiguilles de la montre) 外形、外周を取得 (時計周り)	Slag deposit for the mine Express length more than 5.0m/m x 4.0m/m on the map and 4m in height difference Entassement de stériles miniers. Afficher ceux dont la superficie est supérieure à 2,0mmX4,0mm sur la carte et dont la hauteur est supérieure à 4,0m	—	○	×
Dépôt de terre de Mine	Slag repository (Slag dam) 鉱滓集積所 (鉱滓ダム)	510600A	point		DTM		図化、編集用記号	—	×	—
Sables secs, Zones sableuses	Sand 砂地	510700	polygon	name_layer		Acquire outer shape and circumference (coordinates of start and end points shall coincide) Acquérir la forme extérieure et la circonférence extérieure (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 外形、外周を取得 (始終点座標一致)	Land covered with sand Express area more than 5.0m/m x 5.0m/m on the map Terre couverte en permanence du sable. Afficher celles dont la superficie est supérieure à 5,0mmX5,0mm. 常時砂で覆われている土地 図上5.0mm x 5.0mm以上を表示する。	—	○	○
Sables secs, Zones sableuses	Sand 砂地	510700A	point		SAB		図化、編集用記号	—	×	—





Figuré du terrain,Orographi

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Dunes	Dune 砂丘	510800	polygon	name, layer		Acquire outer shape and circumference (as clockwise) 外形、外周を取得 (時計周り)	Topographic feature with sand sedimentation Express area more than 5.0m/m × 5.0m/m on the map Relief élevé par entassement de sable Afficher ceux dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 砂が堆積してできた丘状の地形 図上5.0mm × 5.0mm以上を表示する。	—	○	○
Dunes	Dune 砂丘	510800A	point		DUN		図化、編集用記号	—	×	—
Tranchée de prospection	Excavated trench 掘削溝	510900	ligne	name, layer		Acquire centerline 中心線を取得する。	Ditch or Trench on the ground or bed rock excavated by heavy equipment or man power Express length more than 5.0m/m and width 4.0m/m on the map Fossé ou tranchée excavé par l'engin ou force humaine sur le sol ou roche. Afficher celles dont la longueur est	—	○	×





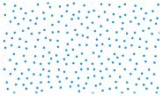
Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Piste (aéroport)	Runway 滑走路	414900	polygon	name, layer		Acquire the limit line 界線を取得	Express runway of International airport Afficher les pistes destinées aux lignes internationales. 国際線の空港の滑走路を表示する。	—	○	○
Piste (aéroport)	Runway 滑走路	414900A	point		PIS		図化、編集用記号	—	×	—





hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Fleuve	River 河川	600100	polygon	name_layer		Border line Acquérir la délimitation. 界線を取得	Express river width more than 0.4m/m on the map and 250m in length Afficher celles dont la largeur est supérieure à 0,4mm sur la carte et dont la longueur est supérieure à 250m. 川幅が図上0.4mm以上、長さ250m以上を表示する。	—	○	○
Fleuves	River 河川	600100A	point		FLE		図化、編集用記号	—	×	—
Riviere	River (Single line) 一条河川	600200	ligne	name_layer		Acquire center ligne Acquérir la ligne centrale 中心線を取得する。	River width less than 0.4m/m on the map Largeur inférieure à 0,4mm sur la carte 川幅が図上0.4mm未満のもの	—	○	○
cours d'eau temporaires	Wadi, intermitent river 枯川・間欠川	600300	ligne	name_layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。	River without water flow Rivière sans écoulement d'eau 水の流れていない川	—	○	○
Tracé incertain	uncertain river	600400	ligne	name_layer		Acquire center line Acquérir la ligne centrale 中心線を取得する。		—	○	○





hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Rivière navigable	Navigable river 航行可能な川	600500	point	name, layer		記号の表示位置の点情報を取得する。 Acquérir les points et la direction de la position de l'affichage du symbole.	Navigable river Afficher l'extrémité de l'amont des rivières navigables 航行可能な河川の上流端を表示する。	—	○	○
Chute	Fall 滝	600600	point	name, layer		Symbol inclined 60 degrees to the river center Le symbole sera incliné à 60 degrés vers la rivière. 河川に対し60度角度を持たせる	Height difference more than 5.0m Afficher celles dont la hauteur relative est supérieure à 5,0m. 比高5.0m以上のものを表示する。	○	○	○
Rapide	Rapid 急流	600700	point	name, layer		Symbol inclined 60 degrees to the river center Le symbole sera incliné à 60 degrés vers la rivière. 河川に対し60度角度を持たせる		○	○	○
ravines sans eau	Gully ガリー	600800	ligne	name, layer		Center line Acquérir la ligne centrale. 中心線を取得	Gully Afficher des ravins. ガリーを表示する。	—	○	○
Zone humide	Wet sand	600900	polygon	name, layer		Border line Acquérir la délimitation. 界線を取得	Intermittent sand area (when high tide or rainy season) Afficher des zones sableuses inondables à marée haute et durant la saison hivernale. 満潮時または雨季などに浸水する砂地を表示する。	—	○	○



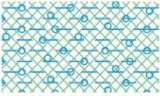
hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Zone humide	Wet sand	600900A	point		WSA		図化、編集用記号	—	×	—
Sens de l'écoulement	Flow direction 流水方向	601000	point	name, layer		Acquérir le point et la direction de la position de l'affichage 表示位置の点と方向を取得	Express if necessary Afficher les selon les besoins. 必要に応じて表示する。	○	○	×
Source, puits, réservoir, point d'eau	Spring, well 泉、井戸	610100	point	name, layer		記号の表示位置の点情報を取得する。 Acquérir l'information du point et la direction de la position de l'affichage.	The large-scale one such as joint wells in the settlement is expressed Express spring short side length more than 1.9m/m Afficher ceux qui sont de grande taille comme borne fontaine aux villages. Afficher des sources dont la longueur du côté court est supérieure à 1.9mm. 集落の共同井戸など規模の大きいものを表示する。 泉は短辺図上1.0mm以上を表示する。	×	○	○
Réservoir d'eau sur terre	Water tank 貯水槽	610200	point	name, layer		記号の表示位置の点情報を取得する。 Acquérir les points et la direction de la position de l'affichage du symbole.	The large-scale one such as joint water tank in the settlement is expressed Express joint water tank diameter more than 10m Afficher des réservoirs de grande taille aux villages. Afficher ceux dont le diamètre est supérieur à 10,0m. 集落の共同貯水槽で規模の大きいものを表示する。 直径10.0m以上を表示する。	×	○	○
Equipement Construction é levée	Elevated water tank 高架貯水槽	610300	point	name, layer		記号の表示位置の点情報を取得する。 Acquérir les points et la direction de la position de l'affichage du symbole.	The large-scale one such as joint elevated water tank in the settlement is expressed Express joint water tank diameter more than 5m Afficher les réservoirs de grande taille aux villages. Afficher ceux dont le diamètre est supérieur à 5,0m. 集落の共同貯水槽で規模の大きいものを表示する。 直径5.0m以上を表示する。	×	○	○






hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Canal d'irrigation	Irrigation Canal 用水路	610400	ligne	name, layer		中心線を取得 Acquérir la ligne centrale	Express canal width more than 0.4m/m on the map and 5.0m/m in length Afficher ceux dont la largeur est supérieure à 0,4mm et la longueur supérieure à 5,0mm sur la carte. 水路幅が図上0.4mm以上、長さ5.0mm以上を表示する。	-	○	○
Canal navigable	Navigable river 舟行水路	610500	ligne	name, layer		中心線を取得 Acquérir la ligne centrale	Express canal width more than 0.4m/m on the map and 5.0m/m in length Irrigation canal vessel possible to pass Afficher ceux dont la largeur est supérieure à 0,4mm et la longueur supérieure à 5,0mm sur la carte. 水路幅が図上0.4mm以上、長さ5.0mm以上を表示する。 舟が通行可能な用水路	-	○	○
Lac	Pond, bog, Lake 池、沼、湖	610600	polygon	name, layer		界線を取得(始終点座標一致) Acquérir la délimitation (la coordonnée du point de départ et celle du point d'arrivée doivent coïncider)	Expression of shoreline can be done at the date of photography Express short side length more than 2.0m/m on the map Afficher la côte qui correspond au niveau d'eau pris en photo. Afficher ceux dont la longueur du côté court est supérieure à 2,0mm sur la carte. 汀線の表示は写真撮影時の水位を表示する。 短辺図上2.0mm以上を表示する。	-	○	○
Lac	Pond, bog, Lake 池、沼、湖	610600A	point		LAC		図化、編集用記号	-	×	-
Barrage	Dam ダム	610700	ligne	name, layer		低い方を右に取得 Acquérir dans le sens des aiguilles de la montre	Express more than 2.0m/m on the map Afficher ceux dont la longueur est supérieure à 2,0mm. 図上2.0mm以上を表示する。	-	○	○






hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Zone inondable	Swamp 湿地	610800	polygon	name_layer		界線を取得(始終点座標一致) Acquérir la délimitation (la coordonnée du point de départ et celle du point d'arrivée doivent coïncider)	Express the area covered with water (flooding) Area more than 5.0m/m x 5.0m/m on the map Afficher des zones inondables. Afficher celles dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 浸水する地域を表示する。 広さ図上5.0mm×5.0mm以上を表示する。	—	○	○
Zone inondable	Swamp 湿地	610800A	point		INO		図化、編集用記号	—	×	—
Zone marécageuse	flood plain 氾濫源	610900	polygon	name_layer		界線を取得 (始終点座標一致)	Express the area covered with water when flooding Area more than 5.0m/m x 5.0m/m on the map 洪水時に浸水する範囲を表示する。 広さ図上5.0mm×5.0mm以上を表示する。	—	○	○
Zone marécageuse	flood plain 氾濫源	610900A	point		MAR		図化、編集用記号	—	×	—
Mangrove	Mangrove マングローブ	611000	polygon	name_layer		界線を取得 (始終点座標一致)	Area more than 5.0m/m x 5.0m/m on the map Afficher celles dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm×5.0mm以上を表示する。	—	○	○





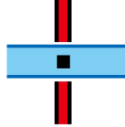
hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Mangrove	Mangrove マングローブ	611000A	point				図化、編集用記号	—	×	—
Aqueduc	Aqueduct 導水管	611100	ligne	name, layer		中心線を取得	Pipe transporting water from river and preserve pond to water purifying plant Express radian more than 50cm and 1cm in length on the map Express the pipe appearing on the ground only Conduite de la rivière ou du bassin de réserve d'eau à la station de filtrage des eaux. Afficher celles dont le rayon est supérieure à 50cm et à 1cm sur la carte. Afficher seulement la partie sortie du sol. 河川、貯水池などから取水した上水の源泉を浄水場まで運ぶ管 半径50cm以上、図上1cm以上を表示する。地上に表れている部分を表示する。 ほとんど存在しないがDTGCよりデータは提供される。	—	○	○
	Bridge(symbol) 1.2mm in width 道路橋(記号)1.2mm幅	611200	point	name, layer		中央位置の点と方向を取得 Acquérir le point et la direction de la position centrale	Bridge length more than 10m and less than 75m Afficher ceux dont la longueur est supérieure à 10m et inférieure à 75mm. 10m以上75m未満の橋を表示する。	○	○	○
	Bridge(symbol) 0.9mm in width 道路橋(記号)0.9mm幅	611300	point	name, layer		中央位置の点と方向を取得	Bridge length more than 10m and less than 75m 10m以上75m未満の橋を表示する。	○	○	○
	Bridge(symbol) 0.6mm in width 道路橋(記号)0.6mm幅	611400	point	name, layer		中央位置の点と方向を取得	Bridge length more than 10m and less than 75m 10m以上75m未満の橋を表示する。	○	○	○




hydrographie et détails particu

Name	LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Bridge(scaled) 1.2mm in width 道路橋(実形)1.2mm幅	611500	ligne	name_layer		道路と重ねて取得(完全一致) Acquérir deux symboles superposés (coïncidence totale)	Apply this when scaled bridge is larger than symbol Appliquer le pour des ponts plus grands que le symbole. 記号より大きな橋に適用する。	-	<input type="radio"/>	<input type="radio"/>
Bridge(scaled) 0.9mm in width 道路橋(実形)0.9mm幅	611600	ligne	name_layer		道路と重ねて取得(完全一致) Acquérir deux symboles superposés (coïncidence totale)	Apply this when scaled bridge is larger than symbol 記号より大きな橋に適用する。	-	<input type="radio"/>	<input type="radio"/>
Bridge(scaled) 0.6mm in width 道路橋(実形)0.6mm幅	611700	ligne	name_layer		道路と重ねて取得(完全一致)	Apply this when scaled bridge is larger than symbol 記号より大きな橋に適用する。	-	<input type="radio"/>	<input type="radio"/>
Railway bridge(symbol) 鉄道橋(記号)	611800	point	name_layer		中央位置の点と方向を取得	Apply this when scaled bridge is larger than symbol 10m以上75m未満の橋を表示する。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Railway bridge(symbol) 鉄道橋(記号)	611900	point	name_layer		中央位置の点と方向を取得	Apply this when scaled bridge is larger than symbol 10m以上75m未満の橋を表示する。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


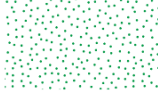
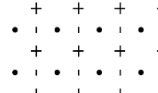
hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
	Railway bridge(scaled) 鉄道橋(実形)	612000	ligne	name, layer		鉄道と重ねて取得(完全一致) Acquérir deux symboles superposés (coïncidence totale)	Apply this when scaled bridge is larger than symbol 記号より大きな橋に適用する。	-	○	○
	Railway bridge(scaled) 鉄道橋(実形)	612100	ligne	name, layer		鉄道と重ねて取得(完全一致)	Apply this when scaled bridge is larger than symbol 記号より大きな橋に適用する。	-	○	○
Digue	Dam, Embankment (symbol) 堰、堤防(記号)	612200	point	name, layer			Structure installed to protect control of stream and riverbed Ouvrage d'art construit en vue de protéger le lit de rivière et de contrôler le cours d'eau 流水の制御や河床の保護を目的として設けられた工作物。	○	○	○
Digue	Dam, Embankment (scaled) 堰(実形)	612300	ligne	name, layer			Structure installed to protect control of stream and riverbed 流水の制御や河床の保護を目的として設けられた工作物。	-	○	○
chaussée submersible	Submergent bridge 沈水橋	612400	point	name, layer		中心線を取得	A passable part with traffic such as hardening vehicles and people in riverbed by concrete etc. Express bridge when flooding submerged Lit de rivière bétonné pour la circulation des véhicules et des piétons. Afficher des ponts submersibles à la crue. 河床をコンクリート等で固め車輛・人等の通行可能な箇所 増水時には水面下に沈んでしまう橋を表示する。	○	○	○



hydrographie et détails particu

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Bac	Ferry 渡船場	612500	ligne	name, layer		界線を取得	Express permanent ferry at the river width more than 20m Afficher des arrêts de bac permanents pour la largeur de rivière qui est supérieure à 20m. 川幅20m以上の常設渡船所を表示する。	—	○	○
Trait de côte	Coastal line 海岸線	612600	polygon	name, layer		界線を取得	Express shoreline at the time of photography Afficher des côtes pris en photo. 写真撮影時の汀線を表示する。	—	○	○
	River mouth line 河口線	612701	ligne			端点一致 Les points d'exptémités doivent coïncider	Use this at the border between river and sea Utiliser le pour des limites entre la rivière et la mer 河川と海の境に使用する。 池、湖と2条河川との境に使用する。	—	×	—




Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Bois/Forêt	Forest 森林	700100	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得(始終点座標一致)	The jungle where the tree whose height is more than 8m is growing thick Express the area more than 5.0mm × 5.0mm on the map Forêt dense remplie d'arbres de hauteur supérieure à 8,0m Afficher celles dont la superficie est supérieure à 5,0mmX5,0mm 樹高8.0m以上の樹木の繁った密林を表示する。 広さ図上5.0mm × 5.0mm以上を表示する。	—	○	○
Bois/Forêt	Forest 森林	700100A	point		FOR		図化、編集用記号	—	×	—
Broussailles, forêt dégradée	Bush 灌木	700200	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)	The jungle where the tree whose height is more than 2m and less than 8m is growing thick Express the area more than 5.0mm × 5.0mm on the map Forêt dense remplie d'arbres de hauteur supérieure à 2,0m et inférieure à 8,0m Afficher celles dont la superficie est supérieure à 5,0mmX5,0mm 樹高2.0m～8.0m未満の樹木の繁った密林を表示する。 広さ図上5.0mm × 5.0mm以上を表示する。	—	○	○
Broussailles, forêt dégradée	Bush 灌木	700200A	point		BRO		図化、編集用記号	—	×	—
Jardins	Graden 庭園	700300	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得 (始終点座標一致)	Express the Garden area more than 5.0mm × 5.0mm on the map Afficher les jardins dont la superficie est supérieure à 5,0mmX5,0mm sur la carte 広さ図上5.0mm × 5.0mm以上の庭園を表示する。	—	○	○



Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Jardins	Graden 庭園	700300A	point		JAR		図化、編集用記号	—	×	—
Vergers	Orchard 果樹園	700400	polygon	name, layer		Acquire bounday line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)		—	○	○
Vergers	Orchard 果樹園	700400A	point		VER		図化、編集用記号	—	×	—
Savane, forêt claire ou savane boisée	Savanna サバンナ	700500	polygon	name, layer		Acquire bounday line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)	Express the savanna area more than 5.0mm × 5.0mm on the map Afficher les savanes dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上のサバンナを表示する。	—	○	○
Savane, forêt claire ou savane boisée	Savanna サバンナ	700500A	point		SAV		図化、編集用記号	—	×	—




Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Brousse tigrée	scrub thicket 低木林	700600	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得 (始終点座標一致)	Express the scrub thicket area more than 5.0mm × 5.0mm on the map Afficher les brousses dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上の低木地を表示する。	—	○	○
Brousse tigrée	scrub thicket 低木林	700600A	point		TIG		図化、編集用記号	—	×	—
Cactus	Cactus サボテン	700700	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得 (始終点座標一致)	Express the scrub thicket area more than 5.0mm × 5.0mm on the map Afficher les zones de cactus dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上のサボテン園を表示する。	—	○	○
Cactus	Cactus サボテン	700700A	point		CAC		図化、編集用記号	—	×	—
Plantation	Plantation 農園	700800	polygon	name_layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得 (始終点座標一致)	Express the scrub thicket area more than 5.0mm × 5.0mm on the map Afficher les plantations dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上の大規模で整備された畑を表示する。	—	○	○






Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Plantation	Plantation 農園	700800A	point		PLA		図化、編集用記号	—	×	—
Culture	Cultivated land 耕地	700900	polygon	name, layer		<p>Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得(始終点座標一致)</p>	<p>Express the scrub thicket area more than 5.0mm × 5.0mm on the map Afficher les cultures dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上の整備が充分でない畑を表示する。</p>	—	○	○
Culture	Cultivated land 耕地	700900A	point		CUL		図化、編集用記号	—	×	—
Rizières	Rice paddy 水田	701000	polygon	name, layer		<p>Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得(始終点座標一致)</p>	<p>Express the Rice paddy area more than 5.0mm × 5.0mm on the map Afficher des rizières dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 広さ図上5.0mm × 5.0mm以上の水田を表示する。</p>	—	○	○
Rizières	Rice paddy 水田	701000A	point		RIZ		図化、編集用記号	—	×	—

Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Bambou	Bamboo forest 竹林	701100	polygon	name, layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得(始終点座標一致)	Express the Bnaboo forestt area more than 5.0mm×5.0mm on the map Afficher les bois de bambous dont la superficie est supérieure à 5.0mmX5.0mm sur la carte. 広さ図上5.0mm×5.0mm以上の竹林を表示する。	—	○	○
Bambou	Bamboo forest 竹林	701100A	point		BAM		図化、編集用記号	—	×	—
Arbre	Open forest 疎林	701200	polygon	name, layer		Acquire boundary line (Coordinate of start and end point must coincide) Acquérir la délimitation (La coordonnée du point de départ et celle du point d'arrivée doivent coïncider) 界線を取得(始終点座標一致)	Express the forest with the scuttered tree whose height is arround 8m and area is more than 5.0mmX5.0mm on the map Afficher les forêts peu denses remplies d'arbres de hauteur d'environ 8m et dont la superficie est supérieure à 5.0mmX5.0mm sur la carte. 広さ図上5.0mmX5.0mm以上の樹高8m程度の樹木がまばらにある林を表示する。	—	○	○
Arbre	Open forest 疎林	701200A	point		ARB		図化、編集用記号	—	×	—
Papyrus	Papyrus パピルス	701300	polygon	name, layer		Acquire boundary line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)	Express the Papyrus area more than 5.0mm×5.0mm on the map Afficher les zones de papyrus dont la superficie est supérieure à 5.0mmX5.0mm sur la carte. 広さが図上5.0mm×5.0mm以上のパピルスを表示する。	—	○	○

Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Papyrus	Papyrus パピルス	701300A	point				図化、編集用記号	—	×	—
Prairie	Grass land 草地	701400	polygon	name, layer		Acquire boundary line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)	Express the Grass land area more than 5.0mm×5.0mm on the map Afficher des prairies remplies d'herbes et d'arbustes en 30% dont la superficie est supérieure à 5,0mmX5,0mm sur la carte. 草のある荒地及び灌木が30%程度を占める草地等を表示する。 広さが図上5.0mm×5.0mm以上を表示する。	—	○	○
Prairie	Grass land 草地	701400A	point				図化、編集用記号	—	×	—
Palmier	Coconuts tree 椰子	710100	point	name, layer		Acquérir l'information des points pour la position d'affichage du symbole 記号の表示位置の点情報を取得する。	Express scattered condition Afficher la situation de la densité. 点在状況を表示する。	×	○	×
Fromager	Kapok tree パンヤの木	710200	point	name, layer		Acquérir l'information des points pour la position d'affichage du symbole. 記号の表示位置の点情報を取得する。	Express scattered condition Afficher la situation de la densité. 点在状況を表示する。	×	○	×

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol	Acquisition method	color	Size	Rotation	Printing	Web GIS
Capital d'État	Capital, Country 首都、国	900100	text	name, layer, strings	COUNTRY			6.0mm	—	○	○
Chef lieu de région	Name of capital city of State 州	900200	text	name, layer, strings	THIÈS	州の州都の街の名前 州(エリア)自体の名前とは違う		4.5mm	—	○	○
Chef lieu de département	Name of capital city of Prefecture 県	900300	text	name, layer, strings	Mbour	県の県庁所在地の街の名前 県(エリア)自体の名前とは違う		4.0mm	—	○	○
Chef lieu d'arrondissement, commune	Name of capital city of County 郡	900400	text	name, layer, strings	Ndande	郡の郡都の街の名前 郡(エリア)自体の名前とは違う		3.5mm	—	○	○
Chef lieu de communauté rurale,	Name of capital city of City 市	900500	text	name, layer, strings	Sakal	市の市役所所在地の街の名前 市(エリア)自体の名前とは違う		3.0mm	—	○	○

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol	Acquisition method	color	Size	Rotation	Printing	Web GIS
	Name of State 州	900600	text					4.5mm	—	×	—
	Name of Prefecture 県	900700	text					4.0mm	—	×	—
	Name of County 郡	900800	text					3.5mm	—	×	—
	Name of City 市	900900	text					3.0mm	—	×	—

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol		Acquisition method	color	Size	Rotation	Printing	Web GIS
Commune		910100	text	name, layer, strings	Commune				3.5mm	—	○	○
village important		910200	text	name, layer, strings	Village important				3.0mm	—	○	○
Autre village Quartier		910300	text	name, layer, strings	Autre village Quartier				2.0mm	—	○	○
Noms des zones spéciales, parcs nationaux, etc	National Park, Forest reserve 国立公園、森林保護区等 特別区域	920100	text	name, layer, strings	<i>National Park</i> National Park	規模に応じて 2種類の大きさを適用する use different depends on how large of area for different purposes	Font:Times New Roman Italic		4.0mm 2.0mm	—	○	○
Fleuve	River 河川	930100	text	name, layer, strings	<i>River</i> River	規模に応じて 2種類の大きさを適用する use different depends on how large of area for different purposes	Font:Swiss 721 Light Italic BT		4.0mm 2.0mm	○	○	○
Noms de lieu (plateau, plaine, vallée, lac, mares, etc)	Terrace, Plain, Valley, Lake and swamp 台地、平野、谷、湖沼等	940100	text	name, layer, strings	<i>Lake</i> Lake <i>Terrace</i> Terrace	規模に応じて 2種類の大きさを適用する use different depends on how large of area for different purposes	水部系(池、湖、沼のみ青字イタリック) 他は黒字、イタリック フロント青字:Font:Swiss 721 Light Italic BT フロント黒字:Times New Roman Italic		4.0mm 2.0mm	—	○	○

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol		Acquisition method	color	Size	Rotation	Printing	Web GIS
Noms de bâtiment	Building(includes abbreviation) 建物(略注記含む)	950100	text	name, layer, strings	Port	港			1.5mm	—	○	○
Noms de bâtiment	Building(includes abbreviation) 建物(略注記含む)	950200	text	name, layer, strings	Prison	刑務所			1.5mm	—	○	○
Noms de bâtiment	Building(includes abbreviation) 建物(略注記含む)	950300	text	name, layer, strings	Carrière	採石場			1.5mm	—	○	○
Noms de bâtiment	Building(includes abbreviation) 建物(略注記含む)	950400	text	name, layer, strings	Douane	税関			1.5mm	—	○	○
Noms de bâtiment	Building(includes abbreviation) 建物(略注記含む)	950500	text	name, layer, strings	Silo	サイロ			1.5mm	—	○	○
	説明注記	950600	text	name, layer, strings		フェリー 浅瀬 高圧線…etc	フォント : Arial		2.0mm	—	○	○

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol		Acquisition method	color	Size	Rotation	Printing	Web GIS
mentionnés dans	Area 場地等	960100	text	name, layer, strings	Area Area	規模に応じて 2種類の大きさを適用する use different depends on how large of area for different purposes	Font:Times New Roman Italic		4.0mm 2.0mm	—	○	○
	Road name (Number) 道路名称(番号)	970100	text	name, layer, strings	[N]				2.0mm	○	○	○
	Railway name 鉄道の名称(including abandoned express)	970200	text	name, layer, strings	Railway		廃棄された鉄道の注記にも使用する		2.0mm	○	○	○
	Geodetic control point 測地基準点	980100	text	name, layer, strings	000		Express 1st decimal place below meter m以下1位を表示とする。		2.0mm	—	○	○
	Spot height 標高点	980200	text	name, layer, strings	000		Express in meter m単位表示とする。		2.0mm	—	○	○

annotations

Name		Layer name	Data type GIS	GIS Database file units	Symbol		Acquisition method	color	Size	Rotation	Printing	Web GIS
	Benchmark 水準点	980300	text	name, layer, strings	000		Express 1st decimal place below meter m以下1位を表示とする。		2.0mm	—	○	○
	Simple Benchmark 簡易水準点	980400	text	name, layer, strings	000		Express 1st decimal place below meter m以下1位を表示とする。		2.0mm	—	○	○
	Contour number 等高線数値	980500	text	name, layer, strings	000		Allocate number toward higher plcae 高い方に向かって配置する。		2.0mm	○	○	×






Abréviation des annotations

No	Name	LAYER NUMBER	GIS Database file units		abbreviation note			
192	Gouvernance 州庁 State building	990100	name, layer	text	Gouv	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
193	Préfecture 県庁 Prefectural Building	990200	name, layer	text	Préf	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
194	Sous Préfecture 郡事務所 County office	990300	name, layer	text	S/Préf	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
195	Hôtel de Ville 市役所 Municipal office	990400	name, layer	text	Hôt-Ville	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
196	Université 大学 University	990500	name, layer	text	Univ 学校名は入力しないで本略注記のみ not express name of university	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
197	Ecole Nationale des Cadres Ruraux 専門学校 Academy	990600	name, layer	text	Encr Ec. 補測図通り、配置するスペースに応じて Encr.とEo.を使い分ける follow the field identification	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
198	Ecole, Lycée 高校 High school	990700	name, layer	text	Lycée 補測図通り follow the field identification	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
199	Travaux publics 土木現業所 Civil Engineering Office	990800	name, layer	text	TP	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
200	Institut National de Développement Rural 農業研究所 Agricultural office	990900	name, layer	text	INDR	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
201	Station Météorologique 測候所 Meteorological station	991000	name, layer	text	Metéo	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
202	Palais de Justice 裁判所 Court	991100	name, layer	text	Justice	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
203	Usine 工場 Factory	991200	name, layer	text	Usine Us.	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
204	Camp Militaire 兵舎 Base camp, army barrack	991300	name, layer	text	Camp Mil	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
205	Sous-Station 変電所 Substation	991400	name, layer	text	S/st sm	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
206	Sapeur pompier 消防署 Fire station	991500	name, layer	text	Pompier	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	
207	Cooperative agricole 農業共同組合 Agricultural cooperative	991600	name, layer	text	Coop-Agri	Express is annotation only without building is possible. Spelling and how to express is still under discussion	1.5mm	

Végétation

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Baobab	Baobab バオバブ	710300	point	name, layer		Acquérir l'information des points pour la position d'affichage du symbole 記号の表示位置の点情報を取得する。	Express scattered condition Afficher la situation de la densité. 点在状況を表示する。	×	○	×
Sol nu	Nude land 荒地(裸地)	701500	polygon	name, layer		Acquire bounday line (Coordinate of start and end point must coincide) 界線を取得 (始終点座標一致)	Express the Abandoned area more than 5.0mm × 5.0mm on the map Afficher les terrains nus dont la superficie est supérieure à 5.0mmX5.0mm sur la carte. 広さが図上5.0mm × 5.0mm以上の荒地を表示する。	—	○	○
Sol nu	Nude land 荒地(裸地)	701500A	point		NUD		図化、編集用記号	—	×	—
	Area limit 区域界	701600	line	name, layer	— — — — —	Acquire the limit ligne Acquéirir la délimitation. 界線を取得	When the area should distinguish especially from other districts of place ground etc. , and the district cannot be displayed by the vegetation boundary etc. Quand une zone devra être distinguée particulièrement d'autres zones et que cette zone ne pourra pas être affichée avec la ligne de quoi que ce soit, la délimitation sera utilisée. 場地等のうち特に他の地区と区別する必要がある場合で、その区域が地物線などで表示できない場合に使用する。	—	○	×
	植生界	701700	line		—————	Acquire the limit ligne Acquéirir la délimitation. 界線を取得	図化、編集用	—	×	—

Constructions Diverses

Name		LAYER NUMBER	Data type GIS	GIS Database file units	Symbol	Acquisition method	Application	Rotation	Printing	Web GIS
Points géodésiques(GPS)	Geodetic control point 測地基準点	420100	point	name, layer, height(meter)		Acquire the position of indication point 指示点表示位置を取得	Express all required control point for the mapping Afficher tous les points de repère utilisés pour la cartographie. 地形図作成に使用した全ての基準点を表示する。	x	○	○
Point de Niveau	Leveling point 実測点	420200	point	name, layer, height(meter)		Acquire the position of indication point 指示点表示位置を取得		x	○	○
Point cote	Restitution point 標高点	420300	point	name, layer, height(meter)		Acquire the position of indication point 指示点表示位置を取得	Density will be 2.5cm x 2.5cm on the map La densité sera de 2,5cmX2,5cm sur la carte. Acquérir les points à intervalles de 2,5mm 2.5mm間隔で取得する。	x	○	○
Repère de nivellement	Benchmark 水準点	420400	point	name, layer, height(meter)		Acquire the position of indication point 指示点表示位置を取得	Express all required benchmarks for the mapping Afficher tous les points de référence utilisés pour la cartographie. 地形図作成に使用した全ての水準点を表示する。	x	○	○
Borne de nivellement	benchmark 水準点	420500	point	name, layer, height(meter)		Acquire the position of indication point Acquire point and direction of central position 指示点表示位置を取得 中央位置の点と方向を取得	Express all required simple benchmarks for the mapping Afficher tous les points de référence sommaires utilisés pour la cartographie. 地形図作成に使用した全ての簡易水準点を表示する。	○	○	○

Confirmed Items on Consultation of Map Specification

No.	Items for meeting	Result of Meeting
1. Symbol Specification		
a)	Confirmation of the contents of consultation done in Japan before work start and intension of DTGC-----	done
b)	Acquisition Items of the object-----	done
c)	Symbol Specification-----	done
d)	Map Expression Items-----	done
e)	Data Type for GIS structuring-----	done
f)	Input data items and management of attribute for GIS-structuring	Later, when work goes
g)	Items for Web GIS (Expression Item and Category)-----	Proposed by JST
2. Mapping Area		
a)	Mapping area will extend around 2 cm from international-border	agreed
b)	Management of Vacant area of map sheet- Ortho-imagery-will be used for filling up of vacant area	Satellite image identification/referring of collected data are used for map production
3. Sheet Layout		
a)	Number of Map sheet-----	54 sheets*refer to attached
b)	Map Sheet number and Map sheet name-----	Refer to existing map (1/50000 & 1/200000)
c)	Coordinates of 4 corners of each map sheet (Particular map sheet number and data for mapping territory)-----	Basically 15'x15' Regarding the particular sheet will be informed by DTGC
4. Marginal Information		

- a) Information items----- Basically some information will be from existing map.
- b) Symbols to be expressed in Legend----- Some symbols should be corrected for new map production

5. Final Result_ it has been consulted already based on S/W and work specification of JICA

- a) Data file format----- DXF (or any) for CAD, SHP for GIS, pdf, esp (or any) for Symbolized data
- b) File Unit for GIS data----- Decided later
- c) Specification of Orthophoto Imagery ----- 300 ~400MB if 2.5m GSD (Ground Sample Distance)

6. Collection of existing data _ Contact office for data collection will be needed

- a) 50000 exiting map----- Already acquired (2 sets)
- b) Organization chart of local government----- After arrival of Mr. Iwase
- c) Road network (with distinct road management-classification, Road classification, Ex. Carriage way, First class and second class highway) By DTGC
- d) River name data----- By DTGC
- e) High tension voltage line data----- By DTGC
- f) Radio relay station data----- By DTGC
- g) Population statistics data----- After arrival of Mr. Iwase
- h) Administrative name and boundary data (Check the Coincidence of rank of administrative symbols. Ex. International, Region, Department, District) By DTGC
- i) List of Public facility: Census or other. If with positional-data. It would be batter. By DTGC
- j) Control Point data (BM positional data)----- By DTGC
- k) Area and name data of National park, Forest preserved-area, Sanctuary, World heritage By DTGC

7. Technology Transfer

- a) Area for OJT----- 3 types of area

-
- b) Schedule for OJT----- Refer to Inception R.
 - c) Arrangement of C/P personnel----- DTGC will make a list
 - d) Work Specification — Refer to Specification of Overseas- JST will provide French
Surveying and Production Standard for 1/50,000 version and English
Topographic Map (Map information) Using ALOS Optical version for Production
Sensor Images Standard for
Topographic mapping

8. Others

- a) Letter from ANAT to the local governor for requesting of- Already done
cooperation to the JST and DTGC
- b) Arrangement of C/P for Field identification (at least 4- By DTGC
personnel)



MINUTES OF MEETING

FOR

THE STUDY

ON

THE DIGITAL TOPOGRAPHIC MAPPING PROJECT FOR NORTHERN SENEGAL

AGREED UPON BETWEEN

NATIONAL AGENCY FOR TERRITORY PLANNING

OF

MINISTRY FOR THE LOCAL COMMUNITY AND TERRITORY PLANNING

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

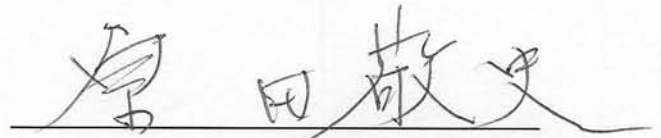
Dakar,
25th February 2013



Mr. Mamadou DJIGO
Director General,
National Agency for Territory Planning
Ministry for the Local Community
and Territory Planning



Mr. Kazunao SHIBATA
Senior Representative,
JICA Senegal Office



Mr. Takashi HARADA
Leader
JICA Study Team

1. Introduction

In response to the request of the Government of Senegal (hereinafter referred to as "GOS"), the Government of Japan (hereinafter referred to as "GOJ") decided to conduct "Study for the Digital Topographic Mapping Project for Northern Senegal" (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") has undertaken the Study in close cooperation with the authorities concerned of the GOS.

On the part of the GOS, National Agency for Territory Planning of Ministry for the Local Community and Territory Planning (hereinafter referred to as "ANAT") took action as the representative of counterpart ministry to the JICA study team (hereinafter referred to as "Study team") and also as the coordinating body in relation with other concerned governmental and non-governmental organizations for the smooth implementation of the Study.

Study team had a series of discussion with the ANAT. Attendances of discussion are listed in APPENDIX 1.

Both parties discussed following items.

- Draft Final Report
- Internal Rules of Price setting and Secondary use of JSMAF products
- Digital Topographic Mapping Project in the Western Part of Senegal
- Server for JSwebMap

Results of discussion are described in the following chapters.

2. Draft Final Report

Both sides discussed and agreed on the Draft Final Report referred in APPENDIX 2.

3. Internal Rules of price setting and secondary use of JSMAF products

ANAT promised that the Internal Rules for Price Setting and Secondary Use of JSMAF products should be set up by 1st of March 2013.

4. Digital Topographic Mapping Project in the Western Part of Senegal

According to Minutes of Meeting signed by the representatives of ANAT and JICA on 24th of December 2010, JICA requested ANAT to make a work program for the production of topographic map in the west part of Senegal, the area of 45,000 km² covered by ALOS image. ANAT submitted the draft of work programs as APPENDIX 3 and promised to make efforts to get necessary budget. ANAT also asked the technical support to JICA and JICA took note it

5. Server for JSwebMap

The web site structured by Study Team, should be transferred from server in Japan to ANAT server before the end of December 2013, the contract expiration date of the server in Japan. ANAT promised to carry out the transfer under their responsibility and get the necessary budget

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for it.

6. Others


The Minutes of Meeting is prepared in English and French, and both versions are signed by the both partners. In case any doubt arises in interpretation, the French text shall prevail.

APPENDIX 1: List of Attendants

APPENDIX 2: Draft Final Report

APPENDIX 3: Digital Topographic Mapping Project in the Western Part of Senegal

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21. 

List of Attendants

<Senegal side>

Mr. Mamadou DIOUF	Director/Administration and Financial/ANAT
Mr. Youssou NDONG	Director/DTGC
Mr. Mamdou THIAM	Chief/Division for Cartography/DTGC
Mr. Abdou Khadre DIATTA	Project Manager/DTGC

<Japan side>

JICA

Ms. Ayumi TAKAGI	Representative
Ms. Diariétou GUEYE	Consultant

Study team

Mr. Takashi HARADA	Leader
Mr. Hiromichi MARUYAMA	Team member
Mr. Takao IKEDA	Team member
Mr. Tomoyuki OTANI	Team member

Republic of Senegal

National Agency for Territory Planning (ANAT)

Study on the Digital Topographic Mapping Project for Northern Senegal

Draft Final Report

February 2013

Japan International Cooperation Agency (JICA)

Aero Asahi Corporation

Asia Air Survey Co., Ltd.

基盤

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République du Sénégal

Un Peuple - Un But - Une Foi

Ministère l'Aménagement du Territoire
et des Collectivités locales



.....MATCL/ANAT/DTGC

Dakar, le

The Director General,

Subject:

**DIGITAL TOPOGRAPHIC MAPPING PROJECT
IN THE WESTERN PART OF SENEGAL**

The digital topographic mapping project in northern Senegal, which started in April 2011, is ending in the end of March 2013. It is financed under the technical cooperation program of the Government of Japan.

The North and North-east from Saint Louis to Kéniéba, on the border with the Republic of Mali along the Senegal River has been completely mapped at a scale of 1/50,000 for the total project area of 30,000 km² approx.

The Japanese side has delivered to Senegal ALOS/AVNIR2 and PRISM satellite imageries for continuing the realization of the digital database 1 : 50 000 for the West Zone covering an area of 45,000 km² approximately.

Taking into account the initial results and their real impact for good control of territorial information, the National Agency of Land Management (ANAT) commits to achieve the digital mapping of this west part with the support of our strategic partner, JICA, as soon as possible.

Methodology

In the phase of project implementation, technology transfer was carried out by Japanese experts at all stages and allowed technicians of ANAT acquire knowledge to continue the activities of surveying, scanning and installation of geo-referenced databases.

However, it should be noted that given time for technology transfer was very limited and the lack of digitization equipment, communication problems and constraints time related to the post-election period. Especially aerial triangulation process of ALOS images and the symbolization should be deserved further.

It is for this reason that JICA's support is desired to enable ANAT to achieve all results written in the project reference document.

Implementation process

The importance of the work to be done is with the restitution on three-dimensional (3D) and requires four years of operation.

Phase 1: Fieldwork

- Ground Control Point Survey: 4 months
- Field Identification: 6 months
- Field Completion: 6 months

These activities are carried out by the ANAT's staffs who have acquired knowledge in these field but they would be hopefully supported by Japanese experts for the phases of calculation of geodetic data processing as far as possible

- Equipment

4 Vehicles for Ground Control Survey, Field Identification and Field Completion activities

4 Technicians

4 Drivers

3 Differential GPS (acquired)

Phase 2: Aerial Triangulation

- Correction of image blocks based on the control points defined on the finalized images in the framework of the implementation of the Northern zone: 60% of the work.

- Correction with ground control points to achieve

Duration of activity is one month with two ANAT's technicians and supervision of one expert Japanese.

Phase 3: Restitution and Digital Data Compilation

- The 3D digital restitution, the major operation, shall cover a period of 20 months.
- The data processing and compilation period is estimated 20 months.
- The structuring of data and their integration into a GIS will be conducted by ANAT's staff with the support of experts:
- Equipment:
 - 3 sets of LPS, ERDAS imagine software, combined with Micro station
 - 3 sets of Planar and computers with dual screen

Note: One LPS, ERDAS imagine software, with one computer and Planar was already acquired in the frame of northern zone project.

This digitization phase will be performed with two alternating teams (2 working shifts). Choosing this digital database option in three dimensions through digital restitution offers several advantages in the medium and long term, and allows economies of scale:

- Availability to user precise vector data
- Opportunities to integrate these data into a GIS for local management
- Continued updating of database for information
- Development of new products

• Staff

- 6 digital restitution operators consist of two teams; three operators /team

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- Two quality control technicians for data validation and compilation.
- One technician project coordinator
- Material
- Processed and ortho-rectified satellite images of JICA (acquired)
- Existing data, existing paper maps, ANAT digital data

Phase 4: Symbolization

This activity will be completed within four months by two ANAT's technicians with the support of one expert to complete the training.

Phase 5: Data Promotion

This activity, an important step in the promotion, sharing and using process of produced data, initiated by ANAT, will take the form of:

- Seminars and workshops of sharing at the regional level
- Training in schools level
- Editions of data promotion material

Estimated budget:

B1. Field work costs are as follows:

- Fuel:	<u>64,512,000 F CFA</u>
- Mission expenses:	<u>98,560,000 F CFA</u>

B2. Support of six operators who will be recruited and trained by ANAT in this project is distributed as follows:

- Digital restitution :20 months
- Digital compilation of data: 20 months

Total Compensation:	<u>40 800 000 F CFA</u>
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B3. Equipment for digital restitution, data compilation and symbolization:

Two digital photogrammetric restitution Work Stations (Planar)

- Two sets 2 x 9,620,000:	<u>19,240,000 F CFA</u>
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Data processing software:

- Two sets 2x 19,200,000:	<u>38,400,000 F CFA</u>
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B4. Consumables

(Paper, ink, print head, ribbon, office ...):	<u>3,539,600 F CFA</u>
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B5. Data Promotion and publication

Price:	<u>25,000,000 F CFA</u>
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B6: Miscellaneous and unforeseen: 10% of total items:

Maintains vehicles, incidental expenses, medical expenses etc.	<u>22,382,000 F CFA</u>
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Overall cost of the project without taking into account the experts: 319,521,160 F CFA

This amount does not include the cost of equipment used in the project of digital topographic mapping in northern Senegal listed below as well as the acquisition of ALOS satellite images high resolution.

- 04 4x4 all terrain vehicles (02 vehicles will be transferred to the ANAT from JICA at the end of the Project.)
- 03 Leica differential GPS
- 01 Planar computer with software ERDAS LPS imagine
- 01 Computer for GIS data
- 01 Laptop for field work
- 04 GPS Navigation
- 04 Digital cameras coupled with GPS
- 01 A0 color scanner High Definition
- 01 A0 plotter
- 01 A4 printer
- 04 Boards and codes identifying objects

To ensure the successful implementation of the project, the ANAT request the support from JICA for the provision of Japanese experts to ensure appropriate technical training.

The ANAT has committed to find the necessary funding to carry out the various phases of the project.

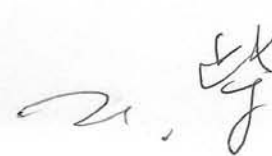
The training in Japan for officials and executives of the ANAT to organizations and institutions specialized in production and management of geographic information would be greatly appreciated.

**The Director-General
National Agency
for
Territory Planning**

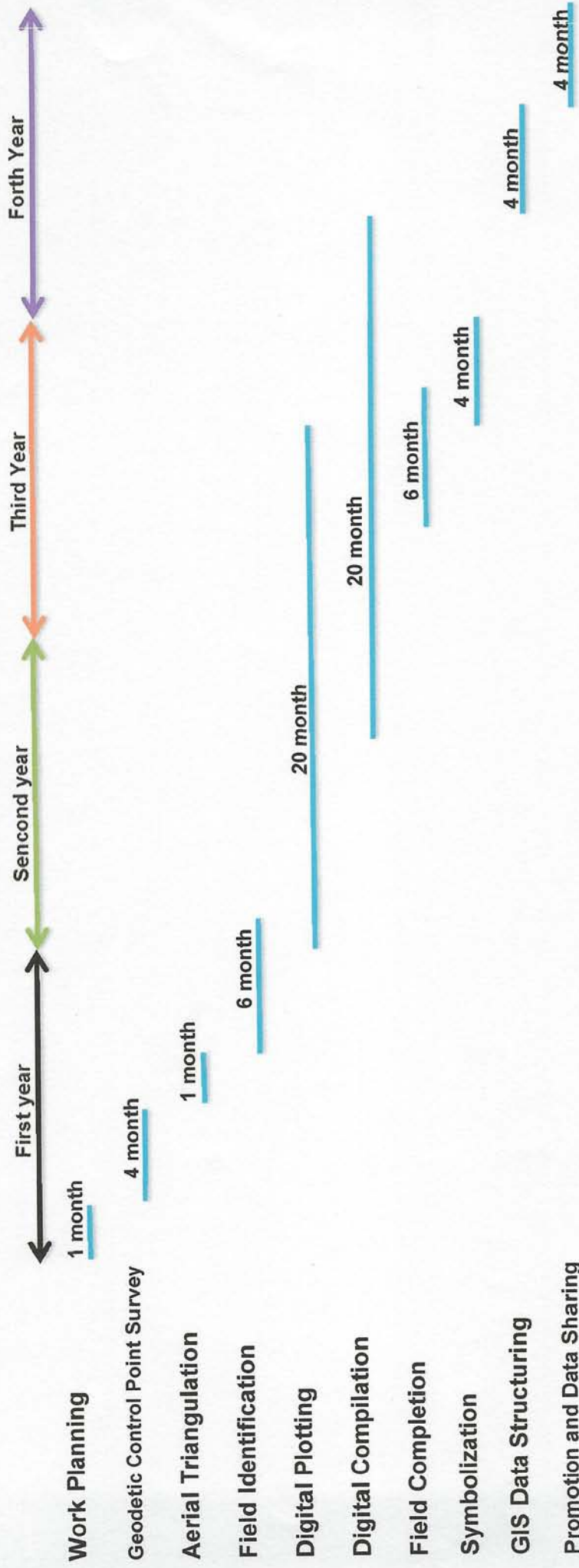
Mamadou Djigo



4



WORK PLANNING



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