

Programme de formation du Sur-le-Travail sur des données Structurization

Équipe D'Étude de JICA

Novembre 2009

Évaluation De Besoin de formation

But : Ce questionnaire doit comprendre les expériences et la connaissance du personnel de contre-parties avant de conduire la formation du Sur-le-Travail (OJT). L'équipe d'étude considérera son résultat en formulant les teneurs et les manières d'OJT.

1 **Nom:** Mousta Ramadan Saïden

2 **Organisation Filiale:** DATAR

3 **Position:** chef de service

4 **Sujet Scolaire De Degree/Major:** Marketing

5 **Veillez Énumérer Vos Trois Responsabilités Principales.**

- ① Aménagement du territoire
- ② Espace urbain
- ③ Espace rural

6 **Svp votre connaissance d'ordinateur?**

- Excellent Bon Juste Négligeable

7 **Svp indiquez votre connaissance sur des données de GIS?**

- Excellent Bon Juste Négligeable

8 **T'as jamais actionné le logiciel de GIS?**

- Oui Non

Si oui, répondez svp à la suite:

8.1 **Quel genre de logiciel de GIS as-tu actionné?**

- ArcView Ver.3.X ArcView (ArcGIS)
 ArcInfo (ArcGIS) ArcInfo Workstation
 MapInfo Autre ()

8.2 **Quelles étaient les teneurs des travaux? Veuillez les décrire en détail comprenant la balance travaillée de données (par exemple, 1:50,000; 1:1,000).**

théorique "cours universitaires" sur les principes
de la télé-détection et le SIG

9 Comprends-tu le système du même rang bien? (c.-à-d. , projection de carte, informations)?

Oui Non

Si tu as vérifié des ouis de, énumérer svp les projections de carte d'ome de s ci-dessous:

10 Tu comprends au sujet de la topologie des données de vecteur?

Oui Non

11 Have you ever created GIS data from CAD files?

Oui Non

Si "oui", mentionner le logiciel utilisé pour cela _____

12 Ce qui tu souhaitent apprendre par ce projet?

- maîtriser les principales fonctions de Arc Gis
- établir un projet SIG pour la DATAR
- produire des cartes d'occupation du sol par
Arc Gis et à l'aide des images satellitaires.

13 Si tu as n'importe quelles demandes à l'eam tudy de S T, sensation librement pour les décrire.

- ① nous aider à découvrir ^{de plus} les logiciels du SIG et la mise en place d'un projet propre à la DATAR
- ② - trouver un stage avec la JICA au Japon

Merci infiniment de votre coopération

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- 1 Nom: Sy ABDOUL
- 2 Organisation Filiale: Direction de l'Urbanisme
- 3 Position: Chef de Service de la planification urbaine
- 4 Sujet Scolaire De Degree/Major: -INGENIEUR EN GEODESIE (BAC + 5ans)
- D.SST (Diplome d'Etudes Supérieures a l'ENET)
- 5 Veuillez Énumérer Vos Trois Responsabilités Principales.
① Chef de Service de la topographie de 2005-2007
② Point focal de l'ONUS pour les données cartographiques géométriques et topographiques
③ Chef de Service de la planification urbaine
- 6 Svp votre connaissance d'ordinateur?
 Excellent Bon Juste Négligeable
- 7 Svp indiquez votre connaissance sur des données de GIS?
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9 Comprends-tu le système du même rang bien? (c.-à-d., projection de carte, informations)?

Oui Non

Si tu as vérifié des ouis de, énumérer svp les projections de carte d'ome de s ci-dessous:

① Projection UTM / Projection LAMBERT / Projection
Compas. etc.,

10 Tu comprends au sujet de la topologie des données de vecteur?

Oui Non

11 Have you ever created GIS data from CAD files?

Oui Non

Si "oui", mentionner le logiciel utilisé pour cela _____

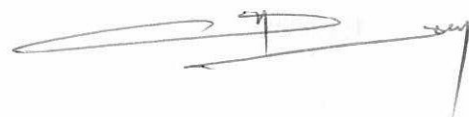
12 Ce qui tu souhaites apprendre par ce projet?

Je souhaite ~~apprendre~~ la maîtrise du logiciel ARC-GIS-9
surtout les applications du SIG pour la création des
banques de données topographiques et cartographiques

13 Si tu as n'importe quelles demandes à l'eam tudy de S T, sensation librement pour les décrire.

Il est souhaitable de combiner la théorie et
la pratique pour cette formation, sans lieu de
les séparer en deux temps.

Merci infiniment de votre coopération



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Octobre 2008

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1 **Nom:** Cheikh Tijani outd Cheikh Mohamedou

2 **Organisation Filiale:** CUN

3 **Position:** Conseiller Technique

4 **Sujet Scolaire De Degree/Major:** Ingenieur

5 **Veillez Énumérer Vos Trois Responsabilités Principales.**

- ① Travail Genie civil.
- ② cartographie
- ③ Passation / marché

6 **Svp votre connaissance d'ordinateur?**

- Excellent Bon Juste Négligeable

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sur MapInfo réalisation des cartes général
et thématique de pont d'eau et marche de
la ville de Nouakchott
sur ~~arc map~~ arc Map réalisation des cartes de
général et communale de la Base de données urbaine.
de NRTT

9 Comprends-tu le système du même rang bien? (c.-à-d.. , projection de carte,
informations)?

Oui Non

Si tu as vérifié des ouis de, énumérer svp les projections de carte d'ome de s ci-dessous:

le réseau de la SNDE est en UTM on a refait
en utilisant la projection WGS 1984

10 Tu comprends au sujet de la topologie des données de vecteur?

Oui Non

11 Have you ever created GIS data from CAD files?

Oui Non

Si "oui", mentionner le logiciel utilisé pour cela

~~de~~ MapInfo

12 Ce qui tu souhaitent apprendre par ce projet?

Nous souhaitons un approfondissement et savoir
les différent manipulation de ce logiciel, nous
connaissions quelque commandes mais
cette connaissance n'est pas structurée

13 Si tu as n'importe quelles demandes à l'eam tudy de S T, sensation librement pour
les décrire.

comme nous parlons pas la même langue et
comme que la traduction parfois, il est
difficile d'arriver à l'objectif, il est préférable
que la théorie soit en parallèle avec la
pratique

Merci infiniment de votre coopération

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Équipe D'Étude de JICA

Octobre 2008

Évaluation De Besoin de formation

But : Ce questionnaire doit comprendre les expériences et la connaissance du personnel de contre-parties avant de conduire la formation du Sur-le-Travail (OJT). L'équipe d'étude considérera son résultat en formulant les teneurs et les manières d'OJT.

- 1 Nom: AMINATOU / Med MOUKTAR
- 2 Organisation Filiale: CJIX
- 3 Position: Responsable Base de données + SIG
- 4 Sujet Scolaire De Degree/Major: Master de Recherche en Info + Modélisation
- 5 Veuillez Énumérer Vos Trois Responsabilités Principales.
- ① Base de donnée
 - ② SIG
 - ③
- 6 Svp votre connaissance d'ordinateur?
- Excellent Bon Juste Négligeable
- 7 Svp indiquez votre connaissance sur des données de GIS?
- Excellent Bon Juste Négligeable
- 8 T'as jamais actionné le logiciel de GIS?
- Oui Non
- Si oui, répondre svp à la suite:
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- 8.2 Quelles étaient les teneurs des travaux? Veuillez les décrire en détail comprenant la balance travaillée de données (par exemple, 1:50,000; 1:1,000).

9 Comprends-tu le système du même rang bien? (c.-à-d.. , projection de carte, informations)?

Oui Non

Si tu as vérifié des ouis de, énumérer svp les projections de carte d'ome de s ci-dessous:

WGS_1984 / 28N

10 Tu comprends au sujet de la topologie des données de vecteur?

Oui Non

11 Have you ever created GIS data from CAD files?

Oui Non

Si "oui ", mentionner le logiciel utilisé pour cela HAPTInfo

12 Ce qui tu souhaitent apprendre par ce projet?

Apprentissage de ArcGIS

13 Si tu as n'importe quelles demandes à l'eam tudy de S T, sensation librement pour les décrire.

Merci infiniment de votre coopération

APPENDIX 8

Summaries of meetings for digital map data diffusion

Summaries of meetings for digital map data diffusion

Organ	Participant	Position	Date
U.S. Embassy in Mauritania	Susan C. N'GARNIM (3 others)	Management Officer	22/11/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Management Model System ◆ Address Search Model System ◆ Water Supply Points Management Model System ◆ Facility Management Model System <p>2. Questions and Answers</p> <p>Q1) What software is used for GIS Model System.</p> <p>A1) ArcGIS9.3 and some extensions of it are used.</p> <p>Q2) How and when the data will be distributed after it is completed?</p> <p>A2) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after the final products will be delivered next year (March – April).</p>			

Organ	Participant	Position	Date
WB in Nouakchott Mauritania	Brahim Ould Abdelwedoud	Specialist of Urban Planning AFTU2	22/11/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Management Model System ◆ Address Search Model System <p>2. Questions and Answers</p> <p>Q1) Considering the pace of growth in urban development in Nouakchott, the coverage of study area seems small. Is there any way to do with this problem?</p> <p>A1) The technology transfer is being conducted so that the counterpart (DCIG) will be able to update data for themselves.</p> <p>Q2) The “Flood Risk Management Model System” shows that there is a land suitable for evacuation area in the northern part of Ksar. Rapid urbanization which is in progress may change the land use evaluated as suitable for the evacuation area into the housing area. Therefore, there might be some problems in the allocation of this area as an evacuation site.</p> <p>A2) It is necessary to set up evacuation areas for the big city. The authority concerned could select candidate areas easily using this kind of system.</p> <p>Q3) How and when the data will be distributed after it is completed?</p> <p>A3) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after final products delivered next year (March – April).</p> <p>Q4) Is paper-base map included in the deliverables of final products?</p> <p>A4) Instead of paper-base map, the equipment for map print such as plotter and other material will be delivered.</p> <p>Q5) The equipments for map print might cause troubles such as problem of plotter, lack of supplies or others.</p> <p>A5) Proper manipulation and maintaining equipment in good condition will be necessary.</p> <p>Q6) What is the distribution way of final products? For example, CD, etc?</p> <p>A6) Digital data will be written on digital media such as DVD and CD for distributing.</p>			

Organ	Participant	Position	Date
Ministry Delegate Office of Prime Minister in charge of Environment	Mohamed Yahya O. Lafdal	Director	23/11/2009
<p data-bbox="225 555 347 584">< Topic ></p> <ol style="list-style-type: none"> <li data-bbox="225 600 443 629">1. Presentation <ol style="list-style-type: none"> <li data-bbox="225 645 488 674">1) Outline of study <li data-bbox="225 689 895 719">2) Specification of topographic map to be produced <li data-bbox="225 734 847 815">3) GIS Model system: <ul style="list-style-type: none"> <li data-bbox="284 786 847 815">◆ Flood Risk Management Model System <li data-bbox="225 920 580 949">2. Questions and Answers <ol style="list-style-type: none"> <li data-bbox="225 965 1366 1093">Q1) Development of an environmental management system is presently scheduled for introducing. Is there anything in particular to be paid attention to technically when the data set and model system are used in the system to be developed. <ol style="list-style-type: none"> <li data-bbox="225 1108 1366 1323">A1) DGN and DXF file formats are adopted as topographic map data. These data format are de-facto standard in CAD data. ArcGIS9.3 and some extension of it such as spatial analysis, 3D analysis and others are being used for the model system. In order to install the model system on the “environment management system”, at least one license of ArcGIS9.3 (Info version) is necessary. <li data-bbox="225 1339 1366 1420">Q2) There are some licenses in the office for the system development. How the data will be distributed after it is completed? <ol style="list-style-type: none"> <li data-bbox="225 1435 1334 1516">A2) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after final product delivered next year (March – April). 			

Organ	Participant	Position	Date
France Embassy	Julien ROUYAT	Department of Cooperation and Cultural Action Chief of Department	25/11/2009
<p data-bbox="225 508 347 539">< Topic ></p> <ol style="list-style-type: none"> <li data-bbox="225 555 443 586">1. Presentation <ol style="list-style-type: none"> <li data-bbox="225 600 488 631">1) Outline of study <li data-bbox="225 645 898 676">2) Specification of topographic map to be produced <li data-bbox="225 689 523 721">3) GIS Model system: <ul style="list-style-type: none"> <li data-bbox="284 734 850 766">◆ Flood Risk Management Model System <li data-bbox="284 779 735 810">◆ Address Search Model System <li data-bbox="225 878 580 909">2. Questions and Answers <ol style="list-style-type: none"> <li data-bbox="225 922 1118 954">Q1) How and when the data will be distributed after it is completed? <ol style="list-style-type: none"> <li data-bbox="225 967 1334 1093">A1) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after final product delivered next year (around march-April). 			

Organ	Participant	Position	Date
City of Nouakchott	Cecilie Dagmey (3 others)	GRET Assistante Technique	25/11/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Management Model System <p>2. Questions and Answers</p> <p>Q1) How and when the data set and model system can be distributed to end users?</p> <p>A1) The format for topographic map data to be distributed is DGN/ DXF and for model system is shape format and others supported with ArcGIS9.3. Everyone who wants to use this data can apply to DCIG for use after final product delivered next year (around march- April). The intermediate topographic map data distributed previously is already being used in CUN.</p> <p>Q2) Is the topographic map data set useful for installing of underground installation for water supply network or sewerage system network?</p> <p>A2) Considering the map scale 1/10,000, the data set will be useful for schematic design of underground installation, quantity survey or others. For the purpose of detailed drawing, the map at the scale of 1/2,500 – 1/5,000 is generally used.</p> <p>Q3) What kinds of classification are in building data?</p> <p>A3) There are two types of data, the one is constituted of point feature for small buildings and the other is of polygon feature for big buildings of which the shortest side of building is longer than 4m.</p> <p>Q4) Is it possible to classify buildings which have more than three stories, differentiating from all the other buildings?</p> <p>A4) The building of which the code number is 3002 is higher than three story building. The code table of topographic map data has already been provided to CUN.</p>			

Organ	Participant	Position	Date
City of Nouakchott	Mr. Tijani, Ms. Aminetou	GIS Technician	30/11/2009
<p data-bbox="225 461 347 495">< Topic ></p> <ul style="list-style-type: none"> <li data-bbox="225 506 884 539">• ArcGIS9.3 Workshop for GIS Technician of CUN <li data-bbox="225 551 1259 584">1. Components of ArcGIS9.3; ArcCatalogue, ArcMap, ArcTool, Other Extensions <li data-bbox="225 595 509 629">2. Data for ArcGIS9.3 <li data-bbox="225 640 887 674">3. Feature classes and creating a new feature class <li data-bbox="225 685 523 719">4. Creating a new map <li data-bbox="225 730 464 763">5. Geo referencing <li data-bbox="225 775 488 808">6. Edit feature class <li data-bbox="225 819 847 853">7. Geodatabase and creating a new geodatabase 			

Organ	Participant	Position	Date
Direction of Civil Protection, Ministry of Interior and Decentralization	Abdoul Aziz Sall	Regional Director of Civil Protection	1/12/2009
	Isselmou Mohamdy	Logistic Director	
	Mohamed Hanani	Director of the Prevention,	
	Cissoko Birama	Director	

< Topic >

1. Presentation

- 1) Outline of study
- 2) Specification of topographic map to be produced
- 3) GIS Model system:
 - ◆ Flood Risk Management Model System
 - ◆ Address Search Model System
 - ◆ Water supply Model System

2. Questions and Answers

Q1) What is the accuracy of DEM data?

A1) The accuracy is between 1.5m – 2.0m. The DEM data was generated from contour line and edge point data. The digital contour line acquired by 2m interval initially after then interpolation line of 1m was inserted with equal distance between each 2m interval contours by manually for topography.

Q2) How the “Flood Risk Model System” could be used?

A2) At first, you can understand the condition of land use, the distribution of buildings and the location of urban facility in Nouakchott briefly with this system. The second, DEM provides the condition of terrain such as low-lying land, high-lying land, sloping land and etc. Overlapping with these data, you can find out the place or facility which is vulnerable to flood. These kinds of information will be useful for evacuation plan in flood disaster.

Q3) How the address data of “Address search model system” has been developed.

A3) The address data is made up of street address and block address. The source of these data was provided by CUN (City of Nouakchott). The street address data has been organized by allocating the street addresses of source to the streets of new street data which has been built by extracting streets from topography of this study and structuralizing them. Some street of which address are left unknown remained blank because of mismatches between the source and new street data. Anyway this

data will help you to complete the address data of Nouakchott very easily.

Q4) How and when the data will be distributed after it is completed?

A4) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after final product delivered next year (March – April).

Organ	Participant	Position	Date
Direction of Healthcare, Ministry of Health	Ould Elvak	DRAS of Nouakchott	2/12/2009
	Lemrabatt ould Cheickna	Vice DRAS of Nouakchott	
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Facility Management Model System ◆ Address Search Model System ◆ Water Supply Model System <p>2. Questions and Answers</p> <p>Q1) How was the building data acquired?</p> <p>A1) All buildings identified as building on aerial photography were acquired. The buildings of which the shortest side is longer than 4m were acquired as polygon data and the rest of the buildings were acquired as point data.</p> <p>Q2) The population of Nouakchott or of any given area could be estimated with building data. In the same way, it would also be possible to estimate that how many people live in a service area from a specific healthcare facility.</p> <p>A2) For estimating population with building data, some additional information such as average number of people per household is necessary. Various kinds of assessments such as service area of a facility, service level of a region, number of people who can't benefit by the service, etc. can also be easily estimated by GIS processing.</p> <p>Q3) Is paper-base map included in the deliverables of final product??</p> <p>A3) Instead of paper-base map, the equipment for map print such as plotter and other material will be delivered.</p> <p>Q4) A computer system is scheduled for introduction in this direction. What should be done for installing the data set on the system?</p> <p>A4) The data set will be distributed from around March – April next year after the final edition delivered to DCIG. Distribution of data will be possible after then by applying to DCIG. Some software such as Micro-station, Auto-CAD, etc as a CAD system, ArcGIS as a GIS software will be necessary for the system.</p>			

Organ	Participant	Position	Date
Direction of Purification, Ministry of Hydraulic and Purification	Ba Gatta	Chief of the service	3/12/2009
<p data-bbox="225 508 347 539">< Topic ></p> <p data-bbox="225 555 427 586">1. Presentation</p> <p data-bbox="225 600 488 631">1) Outline of study</p> <p data-bbox="225 645 898 676">2) Specification of topographic map to be produced</p> <p data-bbox="225 689 520 721">3) GIS Model system:</p> <ul style="list-style-type: none"> <li data-bbox="284 734 671 766">◆ Flood Risk Model System <li data-bbox="284 779 735 810">◆ Address Search Model System <p data-bbox="225 878 564 909">2. Questions and Answers</p> <p data-bbox="225 922 1326 999">Q1) Information on underground facility such as drainpipe is primary concern in our direction. Is there such information in the data set?</p> <p data-bbox="225 1012 1337 1088">A1) Some information about underground installation such as water supply facility is included in the data set but information about drainpipe is not.</p> <p data-bbox="225 1102 1350 1133">Q2) Water flow is very important for our direction. What is the accuracy of DEM data?</p> <p data-bbox="225 1146 842 1178">A2) The accuracy of DEM is around 1.5m-2.0m.</p> <p data-bbox="225 1245 1342 1321">Q3) A project for setting up drainage facility is scheduled next year. What should we do, if we try to use the data set of JICA study for this project?</p> <p data-bbox="225 1335 1337 1411">A3) The delivery of the final edition data set is scheduled around March- April next year. After then the data set will be available for use by applying for use to DCIG.</p>			

Organ	Participant	Position	Date
Direction of infrastructure Transportation, Ministry of Equipment and Transportation	Mohamed Mahmoud ould Sidi (3 others)	Director of Transportation & equipments Director	8/12/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Model System ◆ Address Search Model System <p>2. Questions and Answers</p> <p>Q1) There are many road-construction program in Nouakchott. How will the data be updated when the roads in program are completed?</p> <p>A1) The technology transfer is being conducted so that the counterpart (DCIG) will be able to update data for themselves.</p> <p>Q2) How is the elevation data which is being used in “Flood Risk Model System” created?</p> <p>A2)The DEM data set is created by using the data of contour lines and edge point, which have been collected, being based on the result of the leveling executed by this study, for about 200km in length.</p> <p>Q3) Is it possible to have the intermediate data set already in service?</p> <p>A3) Yes, the data set is still available to use with applying to DCIG.</p>			

Organ	Participant	Position	Date
Ministry of Habitat Urbanism and Development of Territorial	Sy Abdoul	Direction of Urbanism Chief of Service of Urban Plan	9/12/2009
<p data-bbox="225 555 344 584">< Topic ></p> <p data-bbox="225 600 427 629">1. Presentation</p> <p data-bbox="225 645 488 674">1) Outline of study</p> <p data-bbox="225 689 895 719">2) Specification of topographic map to be produced</p> <p data-bbox="225 734 520 763">3) GIS Model system:</p> <ul style="list-style-type: none"> <li data-bbox="284 779 671 808">◆ Flood Risk Model System <li data-bbox="284 824 735 853">◆ Address Search Model System <p data-bbox="225 920 564 949">2. Questions and Answers</p> <p data-bbox="225 965 1369 1182">Q1) The review of redevelopment plan for informal settlement in Arafat is underway. After the aerial photography taken in this study informal buildings have been built additionally in this area. For the review of redevelopment plan, a new map reflecting the current condition is in urgent need. Are there any appropriate and effective manners to solve the problem?</p> <p data-bbox="225 1198 1369 1415">A1) The following are examples to update data for your own use; Measuring coordinates of buildings with GPS, then, after adaptation, adding them on the existing data set; such a method is the typical way to update data. Another simple method is to edit the existing building data acquired on the basis of aerial photo, according to the visual observation of the site.</p> <p data-bbox="225 1431 1369 1550">Q2) There are well-built buildings in the area of redevelopment. How these buildings should be treated is one of difficult problems in the plan. Do you have any advices for this problem?</p> <p data-bbox="225 1565 1369 1736">A2) Generally speaking, we should evaluate the plan from the standpoint of cost-effectiveness and then decide how to execute it. Even if the buildings are very important they should be adjusted to the plan if they have a major impact on the plan. Similar cases could be found in Japan.</p>			

Organ	Participant	Position	Date
European Union. Delegation of European Commission in Mauritania	Mohamed Lemine Ould Sidi Mohamed	Infrastructure section Chief of the Program	10/12/2009
<p data-bbox="225 508 347 539">< Topic ></p> <p data-bbox="225 555 427 586">1. Presentation</p> <p data-bbox="225 600 488 631">1) Outline of study</p> <p data-bbox="225 645 898 676">2) Specification of topographic map to be produced</p> <p data-bbox="225 689 520 721">3) GIS Model system:</p> <ul style="list-style-type: none"> <li data-bbox="284 734 671 766">◆ Flood Risk Model System <li data-bbox="284 779 735 810">◆ Address Search Model System <p data-bbox="225 878 564 909">2. Questions and Answers</p> <p data-bbox="225 922 1305 999">Q1) What is the assumption of the principal use of topographic map created in this study?</p> <p data-bbox="225 1012 1369 1133">A1) Considering the map scale, 1/10,000, this map could be used for urban planning, disaster mitigation plan, management of infra facility, address search, facility guide, tourist guide, etc.</p> <p data-bbox="225 1146 943 1178">Q2) What is the coverage of the topographic map data?</p> <p data-bbox="225 1191 1161 1223">A2) The coverage is the city center and the surroundings of Nouakchott.</p> <p data-bbox="225 1236 810 1267">Q3) Until when this study will be continued?</p> <p data-bbox="225 1281 970 1312">A3) This study is scheduled to end in next March – April.</p>			

Organ	Participant	Position	Date
SOMELEC	Athie Abdoul Wehab	Technical Director	14/12/2009
	Ahmed Ramdane Sylla	Chief of Distribution Department	
	Jemalould Mahfoud	Chief of Survey Services	

< Topic >

1. Presentation

- 1) Outline of study
- 2) Specification of topographic map to be produced
- 3) GIS Model system:
 - ◆ Flood Risk Model System
 - ◆ Address Search Model System

2. Questions and Answers

Q1) Map data set developed for urban planning, and provided by the direction of Urbanism, is being used in the computer system for customer service in here. The main purpose of this system is to identify the customer of electric power on the map for maintaining the facility and improving service level. The data created in this study is presenting the real street condition. For the purpose of identification, such a map data is necessary. Is it possible to replace the existing data set installed in the system, by the data to be created by JICA project?

A1) Yes, it is possible. But in order to replace the existing data by the topographic map data created in our project, it is necessary to adapt the new data in accordance with the existing data. It will take considerable time and labor to do, but this is the necessary step for the development of management system using GIS.

Q2) Will the data set covering the whole study area be also delivered (in one file) without dividing into map sheet?

A2) Some layers for GIS model system such as building, road network covering the whole study area will be delivered in one file.

Q3) How the data set will be updated in the future?

A3) The technology transfer is being conducted so that the counterpart (DCIG) will be able to update data for themselves.

Organ	Participant	Position	Date
French Development Agency	Gilles Laine Moussa Beddiyouh	Director in charge of Project	15/12/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Model System ◆ Address Search Model System <p>2. Questions and Answers</p> <p>Q1) AFD is conducting various projects such as construction of highway, disposal center and etc. What should we do for using the data set to be created in the projects?</p> <p>A1) DCIG will be in charge of data distribution. Everyone who wants to use this data can apply to DCIG for use after final product delivered next year (around march-April).</p> <p>Q2) How the data set will be updated in the future?</p> <p>A2) The technology transfer is being conducted so that the counterpart (DCIG) will be able to update data for themselves.</p> <p>Q3) What is the difference between the address data which have been being developed by CUN and JICA study team?</p> <p>A3) The street and bloc address data structuralized on new topographic map, which represent the real street and district, were adapted from the source of address data provided by CUN.</p>			

Organ	Participant	Position	Date
UNDP	Amie DACKO	Coordinator Associate	22/12/2009
UNICEF	Mohamed Ould Zeidane	Chief of Program and Partenariat	
WFP	Boubacar Konté	In charge of Program	
WHO	Lemlih Mint Baba	PHE	
FAO	Mamadou Diarra	Program Assistant	
	Mariana Gomez	Coordination of Program and Urgency	
WFP	Boubacar Konté	In charge of Program	

< Topic >

1. Presentation

- 1) Outline of study
- 2) Specification of topographic map to be produced
- 3) GIS Model system:
 - ◆ Flood Risk Model System
 - ◆ Address Search Model System
 - ◆ Facility Management Model System

2. Questions and Answers

Q1) Schools and health care facilities are included in the data set?

A1) Yes, those are on the data set of topography to be used in facility management model system.

Q2) I'd like to know in detail what the flood risk model system involves.

A2) At first, with this system, you can understand easily the condition of land use, the distribution of buildings and the location of urban facility in Nouakchott. The second, DEM provides the condition of terrain such as low-lying land, high-lying land, sloping land and etc. Overlapping with these data, you can find out the place or facility which is vulnerable to flood. These kinds of information will be useful for evacuation plan in flood disaster.

Organ	Participant	Position	Date
Ministry of Economic Affaires and Development Direction of Finance and Evaluation	Mohamed Elhassen Ould Boukreiss	Director of Finance and Evaluation	22/12/2009
<p>< Topic ></p> <p>1. Presentation</p> <p>1) Outline of study</p> <p>2) Specification of topographic map to be produced</p> <p>3) GIS Model system:</p> <ul style="list-style-type: none"> ◆ Flood Risk Model System ◆ Address Search Model System <p>2. Questions and Answers</p> <p>Q1) Is the area of this study Nouakchott only?</p> <p>A1) Yes, the coverage of this study is the center of Nouakchott and the surrounding area. It is possible to extend the area of topographic data along with the expansion of urban land use.</p> <p>Q2) In this year in particular, many flood have struck this country and the effect of global warming are also a great concern. Under such circumstances, this kind of study for Nouadhibou is necessary in my thought.</p> <p>A2) What you mentioned now will be reported to the authority concerned in Japan.</p> <p>Q3) Is it possible to create a guide map of Nouakchott city using the topographic map developed in this study?</p> <p>A3) Yes, it is possible to create by GIS technology. The technology transfer is being conducted so that the counterpart (DCIG) will be able to create such kind of map for themselves. There are various kinds of usage in digital topographic map data. In that sense, it is called as a social infra data.</p> <p>Q4) It seems to me that the address data is useful for not only identification of position but also improvement of security.</p> <p>A4) Identification of a person is critical factor for security. Address data is key information to identify resident.</p>			

APPENDIX 9

Program of the seminar

April 4, 2010

Le Ministère de l'Habitat, de l'Urbanisme et de l'Aménagement du Territoire / JICA

Le séminaire sur L'ETUDE DE FORMULATION DE BASE DES DONNEES GEOGRAPHIQUES DE NOUAKCHOTT EN REPUBLIQUE ISLAMIQUE DE MAURITANIE

Date : 4 Avril, 2010
Heure d'Ouverture : 9:30
Lieu : Hôtel Alkhaima

Programme

Horaire	Thèmes	Présentateurs	Affiliation
9:30-9:40	Discours d'ouverture	Mr. Ismail Ould Bedde Ould Cheikh Sidiya	Le Ministre de l'Habitat, de l'Urbanisme et l'Aménagement du Territoire
9:40- 9:45	Remerciements	Mr. Hiroshi Azuma	L'Ambassade du Japon en Mauritanie
Pause café (9:45 - 10:00)			
Partie-1 : Présentation des résultats de l'Etude			
10:00-10:15	Aperçu général du Projet et production	Mr. Eisaku Tsurumi	Chef de l'équipe d'étude de l'Agence Japonaise de Coopération Internationale (JICA)
10:15-10:30	Situation de la cartographie de la RIM	Mr. Mohamed Ould Brahim	Directeur, Direction de la Cartographie et de l'Information Géographique (DCIG)
10:30-10:45	Produits numériques	Mr. Akihiro Sugita	L'Equipe d'Etude de JICA
10:45-11:00	Application numérique des données	Mr. Awadh Kishor Sah	L'Equipe d'Etude de JICA
11:00-11:15	Diffusion des données des cartes numériques et du Système d'Informations Géographiques, SIG	Mr. Jaeyoung Choi	L'Equipe d'Etude de JICA
11:15-11:30	Transfert de technologie	Mr. Maleck Vall	DCIG
11:30-11:45	Discussion (Questions-réponses)		
Pause café (11:45 - 12:00)			
Partie-2 : Application sur la diffusion des données spatiales			
12:00-12:15	Utilisation des Données de Base de JICA, Comme Support Cartographique pour la Restructuration des Quartiers Précaires de la Ville de Nouakchott	Mr. Sy Abdoul	DUH
12:15-12:30	Application SIG : Identification des zones adaptées pour construire des nouvelles écoles primaires	Ms. Aminetou Mint Mokhtar	CUN
12:30-12:45	Creation d'un Modele SIG pour Identifier les Zones Inondees dans un Quartier de Nouakchott	Mr. Maleck Vall	DCIG
12:45-13:00	Identification d'un Site Fonctionnel pour une Gare Routiere Centrale de Nouakchott	Mr. Moussa Mamadou Saidou	DATAR
13:00-13:15	Discussion (Questions-réponses)		
13:15-13:25	Discours de cloture	Mr. Koichi Kato	JICA Sénégal
Déjeuner (13:30 -)			

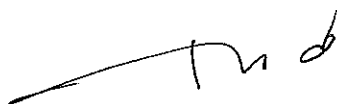
APPENDIX 10

Scope of Work for the Study on Formulation of Geographic
Database of Nouakchott in the Islamic Republic of Mauritania

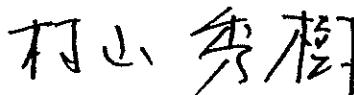
December 15, 2006

SCOPE OF WORK
FOR
THE STUDY
ON
FORMULATION OF GEOGRAPHIC DATA BASE OF NOUAKCHOTT
IN THE ISLAMIC REPUBLIC OF MAURITANIA
AGREED UPON BETWEEN
MINISTRY OF EQUIPMENT AND TRANSPORTATION
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

NOUAKCHOTT, 15th December, 2006



M. Mohamed OULD BRAHIM
Director of Topography and Cartography
Ministry of Equipment and Transportation
Islamic Republic of Mauritania



Mr. Hideki MURAYAMA
Leader
Preparatory Study Team
Japan International Cooperation Agency

I INTRODUCTION

In response to the request of the Government of Mauritania (hereinafter referred to as "the GOM"), the Government of Japan (hereinafter referred to as "the GOJ") decided to conduct "The Study on Formulation of Geographic Data Base of Nouakchott in the Islamic Republic of Mauritania" (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 GOJ, will undertake the Study in close cooperation with the authorities concerned of the GOM.

On the part of GOM, Ministry of Equipment and Transportation shall act as the representative of counterpart agencies to the Japanese study team and also as the coordinating body in relation with other concerned government and non-governmental organizations for the smooth implementation of the Study.

II OBJECTIVES OF THE STUDY

The objectives of the Study are:

- 1) the preparation of the digital topographic maps covering as shown in Attachment 1 at the scale of 1:10,000, including taking new aerial photographs.
- 2) the creation of GIS (geographic information systems) model as city management.
- 3) the implementation of the necessary technology transfer to the Direction of Topography and Cartography and others relevant agencies.

III SCOPE OF THE STUDY

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

1. Review of Existing Conditions

Existing conditions relevant to the Study including organization set-up, mapping system, facilities management and control points shall be reviewed.

2. Aerial Photography

Colored aerial photographs at the scale of 1:20,000 covering as shown in Attachment 1 shall be taken.

3. Map Production for covering the area as shown in Attachment 1.

1) Control Point Survey, Leveling and Pricking

Control point survey, leveling and pricking shall be carried out.

2) Aerial Triangulation

Aerial triangulation shall be carried out.

3) Field Identification

Topographic information shall be interpreted mainly using the aerial photographs. The field identification shall be conducted in case that the information on the aerial photographs is difficult to be interpreted.

4) Digital Plotting

Digital topographic data shall be plotted.

5) Editing and Symbolization

The digital topographic data shall be edited.

6) Field Completion

Field completion shall be carried out.

7) CD-ROM Production

The digital topographic data shall be compiled into CD-ROM.

4. Creation of GIS model

Existing data necessary for GIS shall be digitized and structured.

5. Technology Transfer

In order to facilitate technology transfer to the counterpart personnel, part of the above-mentioned items shall be undertaken by the counterpart personnel under the technical supervision of the Study Team.

6. Dissemination of the Final Products

Recommendations for the wide and effective use of the topographic data produced under the Study shall be prepared.

IV STUDY SCHEDULE

The Study will be implemented in accordance with the tentative schedule as shown in Attachment 2. The schedule, including report submission dates stated in the next clause (V), is tentative and subject to be modified when both sides agree upon and any necessity that arises in the course of the Study.

V REPORTS AND FINAL PRODUCTS

JICA will prepare and submit the following reports and the final products of topographic mapping works to the GOM

1. Inception Report

Twenty (20) copies (ten (10) copies in English and ten (10) copies in French) at the commencement of the Study

2. Interim Report

Twenty (20) copies (ten (10) copies in English and ten (10) copies in French) within twelfth (12) months after the beginning of the Study

3. Progress Report

Twenty (20) copies (ten (10) copies in English and ten (10) copies in French) within twenty-fourth (24) months after the beginning of the Study

4. Draft Final Report

Twenty (20) copies (ten (10) copies in English and ten (10) copies in French) within twenty-ninth (29) months after the beginning of the Study


The Direction of Topography and Cartography (hereinafter referred to as "the DTC"), as representative of Ministry of Equipment and Transportation, will submit its comments within one (1) month after the receipt of the Draft Final report.

5. Final Report

Twenty (20) copies (ten (10) copies in English and ten (10) copies in French) within one (1) month after the receipt of the comments on the Draft Final Report.

6. Final products of topographic mapping
 - 1) One (1) set of negative films of aerial photographs
 - 2) One (1) set of contact prints of aerial photographs
 - 3) One (1) set of digital data of aerial photographs
 - 4) One (1) copy of result of ground control point survey for map production of the Mapping Area
 - 5) One (1) copy of result of aerial triangulation for map production of the Mapping Area.
 - 6) Five (5) sets of 1:10,000 scale digital topographic data for the Mapping Area
 - 7) One (1) set of Geographic Information System model

VI UNDERTAKING OF THE GOM

1. To facilitate the smooth conduct of the Study, the GOM shall take the following necessary measures:
 - 1) to secure the safety of the Study Team ;
 - 2) to permit the members of the Study Team to enter, leave and sojourn in Mauritania for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
 - 3) to exempt the members of the Study Team from taxes, duties and other charges on equipment, machinery and other materials brought into Mauritania for the implementation of the Study ;
 - 4) to exempt the members of the Study Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowance paid to the members of the Study Team for their service in connection with the implementation of the Study ;
 - 5) to provide the necessary facilities to the Study Team for the remittance as well as utilization of the funds introduced into Mauritania from Japan in connection with the implementation of the Study ;
 - 6) to secure necessary permission to use aircraft for aerial photography in connection with the implementation of the Study ;
 - 7) to facilitate legal entry with permission (or, to secure permission for the Study Team for entry) into private properties and restricted areas for the implementation of the Study ; and
 - 8) to secure permission for the Study Team to take all data (including topographic maps, negative films, contact prints and digital data of aerial photographs) related to the Study out of Mauritania.
2. The GOM shall bear claims, if any arises, against the members of the Study Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Study Team. 
3. The DTC shall act as counterpart agency to the Study team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the study.
4. The DTC shall, at its own expense, provide the Study Team with the following:
 - 1) available data and information related to the Study ;
 - 2) security-related information on as well as measures to ensure the safety of the Study Team;

- 3) information on as well as support in obtaining medical service;
- 4) counterpart personnel ;
- 5) suitable office space with necessary office equipment and furniture ;
- 6) credentials or identification cards ;

Note: The DTC shall have cooperation with other organizations concerned for above 1), 2) and 3).

VII UNDERTAKING OF JICA

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

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

VIII OTHERS

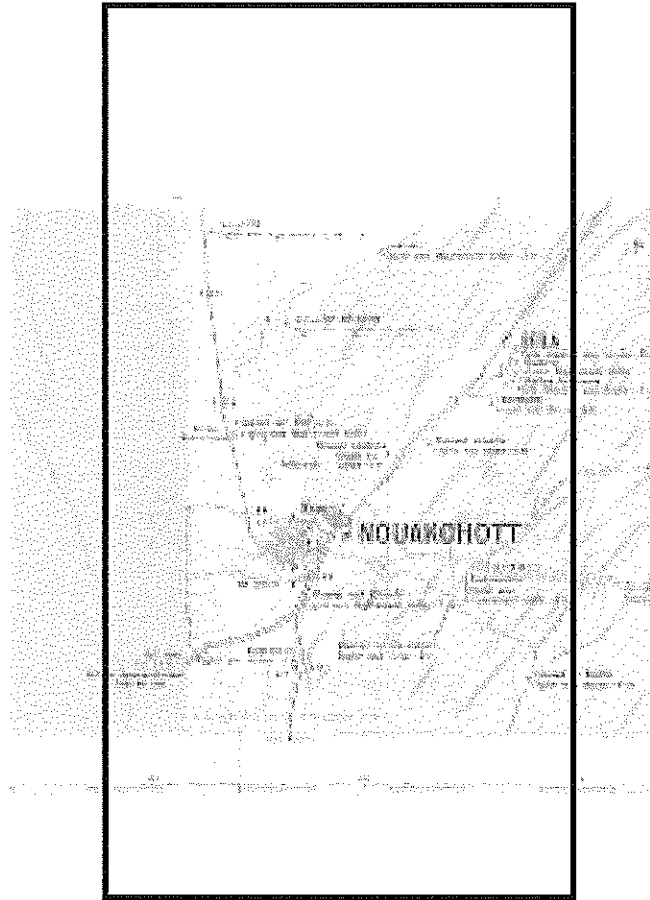
1. JICA and the DTC shall consult with each other in respect of any matter that may arise from or in connection with the Study.
2. The Scope of Work is prepared in English and French, and both versions are signed by the both partners. In case any doubt arises in interpretation, the English text shall prevail.
3. The present document will become valid after authorization by JICA Headquarters.

Attachment 1 : Study area

Attachment 2 : Study schedule

V

TH



Study area
2,000km²

Y

Aerial photograph area: 2,000km²
Mapping area: 1,200km²

JJ

Study Schedule

	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Work in Mauritania	[Redacted]																		
Work in Japan	<input type="checkbox"/>								<input type="checkbox"/>										
Report										△ IC/R									

	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09
Month	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Work in Mauritania	[Redacted]													
Work in Japan	<input type="checkbox"/>								<input type="checkbox"/>				<input type="checkbox"/>	
Report		△ IT/R									△ DF/R			△ F/R

- Legend
- IC/R Inception Report
 - PR/R Progress Report
 - IT/R Interim Report
 - DF/R Draft Final Report
 - F/R Final Report

APPENDIX 11

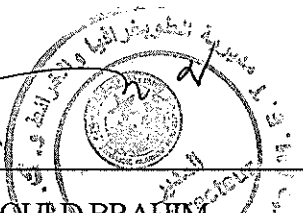
Minutes of Meeting on Scope of Work for the Study on
Formulation of Geographic Database of Nouakchott in the Islamic

Republic of Mauritania

December 15, 2006

MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE STUDY ON FORMULATION OF GEOGRAPHIC DATA BASE OF NOUAKCHOTT
IN THE ISLAMIC REPUBLIC OF MAURITANIA
AGREED UPON BETWEEN
MINISTRY OF EQUIPMENT AND TRANSPORTATION
AND
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NOUAKCHOTT, 15th December, 2006



M. Mohamed OULD BRAHIM
Director of Topography and Cartography
Ministry of Equipment and Transportation
Islamic Republic of Mauritania

村山秀樹

Mr. Hideki MURAYAMA
Leader
Preparatory Study Team
Japan International Cooperation Agency

The Japanese Preparatory Study Team (hereinafter referred to as "the Study Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Hideki Murayama visited Mauritania from 5 to 20 December 2006 to discuss the Scope of Work for "The Study on Formulation of Geographic Data Base of Nouakchott in the Islamic Republic of Mauritania" (hereinafter referred to as "the Study").

During their stay in Mauritania, the Team held a series of meetings with the officials of the Ministry of Equipment and Transportation of Mauritania (hereinafter referred to as the "MET") and the authorities concerned.

A list of participants is given in Attachment.

Based on the discussions, MET and the Study Team agreed to the Scope of Work for the Study.

The main issues discussed by both sides in relation to the Scope of Work for the Study are summarized below.

1. Counterpart Personnel

Both sides recognized the necessity of technology transfer to the staff of the MET so that the MET builds up the capability to produce the digital topographic maps by themselves. Based on the recognition, the MET shall provide sufficient counterpart personnel at its own expense in the course of the Study.

2. Securing the Safety

The Study Team requested to secure the safety for the Study Team especially during the field survey.

The MET agreed to arrange required measures for the Study Team in cooperation with relevant organizations.

3. Permission for aerial photography

The MET is responsible to secure necessary permission for aerial photography by a foreign registered aircraft for the implementation of the Study.

4. Office Space and Equipment

The MET confirmed to provide the furnished office space in the MET with necessary equipment and utilities such as desks, chairs, telephone lines and internet access, etc.

5. Import of Equipment

Both sides agreed that the MET shall act as consignee of the equipment, and shall carry out all the necessary procedure, such as duty-free clearance, etc., and if duty is not exempted, the MET shall pay all the necessary expenses for import procedure of the equipment.

Both sides also agreed that the equipment thus imported shall be used exclusively for the implementation of the Study under the supervision of the Study Team.

6. Publicity of the Final Report and Products

The Study Team requested the MET that the final report and products to be prepared by the Study shall be open to the public immediately after completion at the DTC upon request of users.

The MET promised to take full responsibility for necessary procedure.

7. Planning and Management

In addition to the realization of the map at 1/10,000, the MET explained to the Mission the necessity of a large scale map for the management of principal problems to which the City of Nouakchott is confronted.

- Cleaning, drainage and sewage
- Restrictions of urban quarters
- Coastal protection
- Treatment of solid waste

Appendix 1 : List of Attendants

V

FF

List of Attendants

<Mauritania Side>

MET

M. Mohamed OULD KEHEL	Secretary general par interim
M. Mohamed OULD ABDELLAHI	Technical consoler
M. Mohamed OULD BRAHIM	Director of Topography and Cartography
M. Mohamed El Moctar OULD MOHAMED	Director of Housing and Urbanism
M. Sy ABDOUL	Chief of Division of Topography, DTC/MET
M. Sow CHEIKH	Chief of Division of Cartography, DTC/MET

<Japanese Side>

Preparatory Study Team

Mr. Hideki Murayama	Leader
Mr. Tomio Yoshinari	Precious Management Planning
Mr. Kenji Chujo	Basic Planning / Equipment Planning
Mr. Masakatsu Abe	GIS Planning / Technical Transfer Planning
Mr. Toshiyuki Morita	Translator