



4ème RGP/H 2012,
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REPUBLIC OF NIGER
Fraternity - Work - Progress
MINISTRY OF FINANCE
NATIONAL INSTITUTE OF STATISTICS
CENTRAL BUREAU OF THE CENSUS



USE OF GPS AND GIS FOR THE CARTOGRAPHY OF 4th POPULATION AND HOUSING CENSUS OF NIGER

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Outline of the presentation

- I. Presentation of the general context of the country;
- II. Objectifs of the cartography of 4th census of 2012;
- III. Organisation of the 4th census of 2012 cartography;
- IV. Using of the GPS during the execution of 4th census of 2012 cartography;
- V. GIS and perspectives.



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I. Presentation and general context of the Country

Niger is a landlocked country of Western Africa in the sahel :

- Surface area : 1.267.000 km²;
- $\frac{3}{4}$ of the country is desertic;
- $\frac{1}{4}$ of the surface area covered arround 16 millions of people in 2012;
- Realisation of four (4) General Population Census : 1977, 1988, 2001 et 2012;
- 4th census of 2012 :
 - ✓ Cartography : janvier-juillet 2012;
 - ✓ General enumeration : 10 - 24 december 2012;
 - ✓ Preliminary results : March 2013
 - ✓ Final results : december 2013.

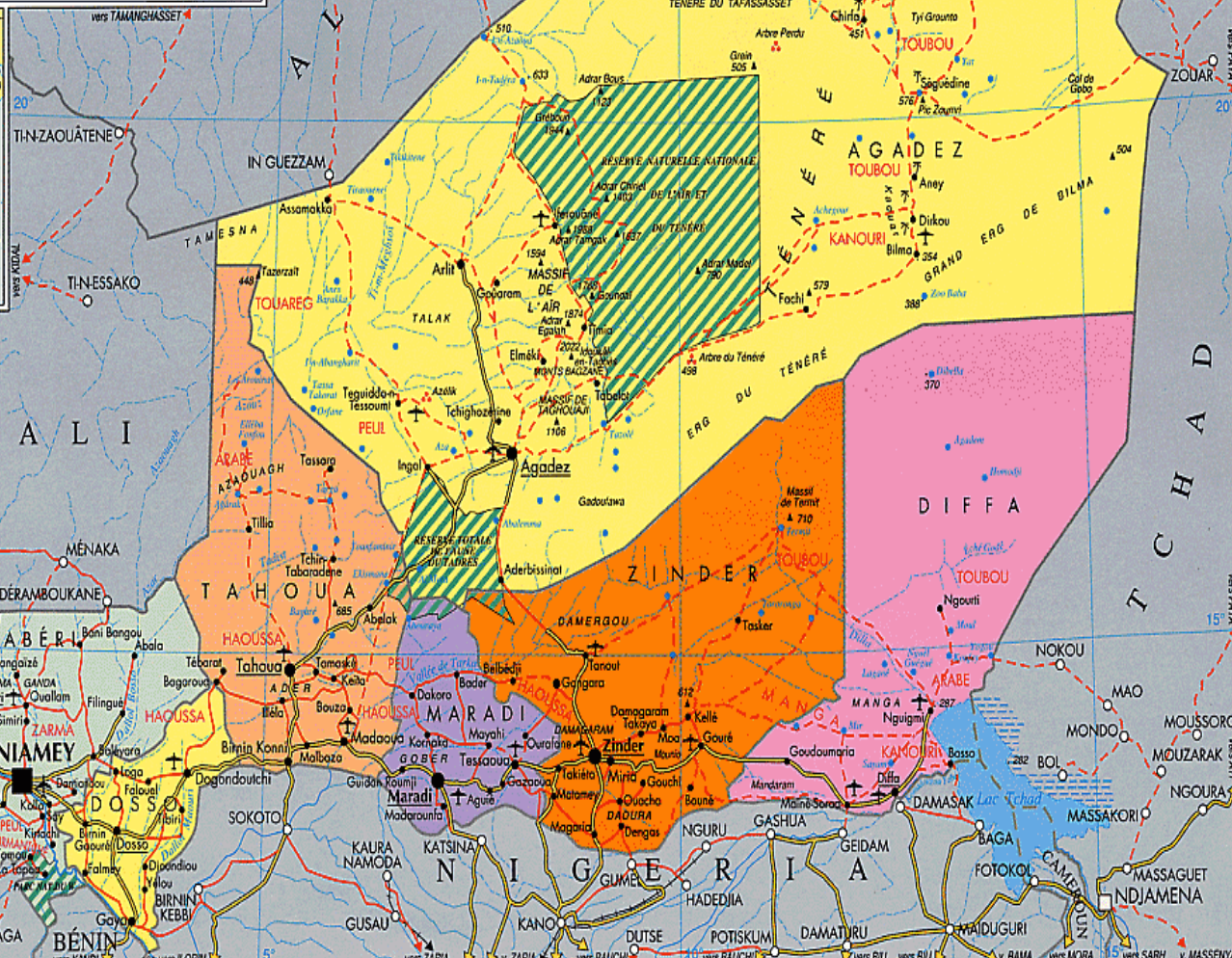


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Fig 1. Map of Niger



	Capitale d'Etat (plus de 390 000 hab.)		Route principale
	Plus de 100 000 hab.		Autre route
	Plus de 50 000 hab.		Piste
	Plus de 20 000 hab.		Voie ferrée
	Autre ville ou localité		Parc et réserve
	Limite de département		Zone inondable
Zinder	Chef-lieu de département		Point d'eau, oasis
PEUL	Groupe ethnique		Détail remarquable
	Aéroport, aérodrôme		



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II. Objectifs of the 4th population and housing census mapping

- Ensure the completeness and the rational organization of data collection RGPH;
- Updated census maps and the RENACOM;
- Creation of a master sample (sampling frame for intercensal surveys);
- Creation of GIS for creating and managing database of geo-referenced;
- Preparation of thematic maps for analysis and dissemination of data and the atlas of the population.



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III. Organisation the 4th population and housing census mapping

1. Preparation of communal census maps;
2. Recruitment and training of the personnel;
3. Update of population and housing census mapping;
4. Drawing of census maps;
5. Constitution of enumeration files for enumerators;
6. Implementation of GIS and scanning of census maps;
7. RENACOM and sampling frame for intercensal surveys.



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IV. Using of the GPS during the execution of 4th census of 2012 cartography

⇒ Using of Global Positioning System (GPS) in census of 2001 et 2012.

- ✓ Taking the coordinates of localities and social infrastructures of base, etc.;
- ✓ Reporting the coordinates on communal maps surface;
- ✓ Localising and direct the temporary elements such as living place, etc.;
- ✓ Feed up the data base géo-referenced of the National Institut;
- ✓ Transferring data from the GPS to computers for the GIS need.

Note : The maps are overloaded with grid coordinates in degrees minutes to facilitate the transfer and positioning of sites by cartographers.



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V. GIS et perspectives

⇒ Implementation of a Geographic Information System (GIS)

- ✓ GIS with regard to the needs of the INS:
 - Collection, management, and analysis ;
 - Representation of spatial reference data ;
 - Synthesis for decision making.

- ✓ The inventory of GIS within INS :
 - Creation of the Mapping and GIS Service ;
 - Creating a group of GIS actors managing by INS ;
 - Establishment of a database of geo-referenced localities with unique code from the 4th census ;
 - **Implementation of GIS through the creation of a database of geo-referenced data and digitization of census maps of 4th Population and Housing Census ;**
 - **Preparation of thematic and poverty maps.**

Fig 2. Digitalisation of Kabalewa Enumeration Areas



V. GIS and perspectives

⇒ For perspectives, in the context of GIS, the INS plans :

- ✓ The harmonization of databases (IRH / SIGN / INS) integrated positioning of all villages and infrastructures;
- ✓ The digitization of census maps of the 4th Population and Housing Census of 2012;
- ✓ Updated The database of geo-referenced localities;
- ✓ The development of an Atlas and spatial analysis using GPS;



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- ✓ Strengthening the technical capacity of the mapping and GIS service of INS;
- ✓ Capacity building frameworks for the INS in the field of GIS through extensive training and study tours;
- ✓ Creating a GIS at the INS;
- ✓ Finalization of the Geo-referencing elements by mapping corrections after enumeration..

Fig 3. 16 agents were trained in digitization of population and housing census cards



Fig 3. Updating a communal map through positioning coordinates during mapping operations of the 4th Population and Housing census of 2012





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THANK YOU FOR YOUR KIND ATTENTION

WITH THE 4th RGPH2012, WE MUST INSURED ALL TO BE COUNTED!