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## Ministry of Economy, Finance and Planning NSO - SENEGAL

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# Completeness and coverage of CRVS in Senegal : analyzing census data to identify barriers to death registration

Cheikh Tidiane NDIAYE<sup>1</sup>, Ibrahima DIOUF<sup>1</sup>, Oumy DIAGNEE<sup>1</sup>, Bruno MASQUELIER<sup>2</sup>, Ndeye Binta DIEME<sup>1</sup>, Samba NDIAYE<sup>1</sup>

<sup>1</sup>Agence Nationale de la Statistique et de la Démographie (ANSD)

<sup>2</sup>Université Catholique de Louvain (UCL)



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# PLAN

1. Introduction
2. Data and methods
3. Results (descriptive analysis and multi-level model)
4. Discussion and conclusion



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## Introduction (1) : SENEGAL IN BRIEF

- Population (2013 Census): 13.508.715
- Total area: 196.712 km<sup>2</sup>
- Density en 2013: 69 hab/km<sup>2</sup>
- Number of households : 1.607.768
- Median age: 18,7
- Life expectancy (both sexes): 64,8
- Total fertility rate: 4,1 in urban areas,  
6,2 in rural areas



## Introduction (2) : CRVS in Senegal

- Source of vital statistics in Senegal: censuses (1976, 1988, 2002, 2013), surveys (including DHS), CRVS and health records.
  - CRVS is the « Achilles heel » of the system
- Importance of CRVS in Senegal :
  - National Office for CRVS (CNEC) founded in 2004
  - Rapid assessment of CRVS identifying the main obstacles for improving CRVS
  - Survey on vital statistics in 2010 which reviewed the tools of vital statistic and recommended best ways for transmitting vital statistics to the NSO and others.
  - Large program (PAMEC) funded by the EU.



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## Introduction (3) : Content of vital statistics

- Birth
- Death
- Marriage
- Causes of death (Ministry of Health)
- Divorce (Ministry of Justice)



## Introduction (4) : Civil registration law

- **Family code:**

1. Article 40 provides that civil registrars (« officiers d'état civil ») should submit every 3 months the vital statistics to the NSO.
2. Article 67 stipulates that all deaths must be registered within a month and a half and late declarations are possible up to one year after the death. To register a death more than a year after its occurrence, a decision from the Justice of the Peace is required.



# Data and methods (1) : Data sources

- 1. Use of individual-level data from the 2013 census :**
  - Questions on recent household deaths (in the past 12 months)
  - For each death: Was this death registered ?
  - A similar question was included in censuses of Namibia in 2001, Nicaragua in 2005 and Belize in 2010, although this is not part of the United Nations Recommendations.
  
- 2. Diagnostic of CRVS system (2014) :**
  - Number of Civil registration offices for each region



## Data and methods (2) : Methods

- Regression model with two levels: (1) household level (using both the characteristics of the head of HH and the characteristics of the deceased), and (2) region.
- Combination of the two sources of data (census and diagnostic survey) at the regional level
- Dependent variable : whether the death was registered or not
- Predictors :
  - At household level : age and sex of the deceased, ethnicity, level of education of the head of household, age and sex of the head, and urban/rural type of residence
  - At the regional level: region of residence and the number of civil registration centers

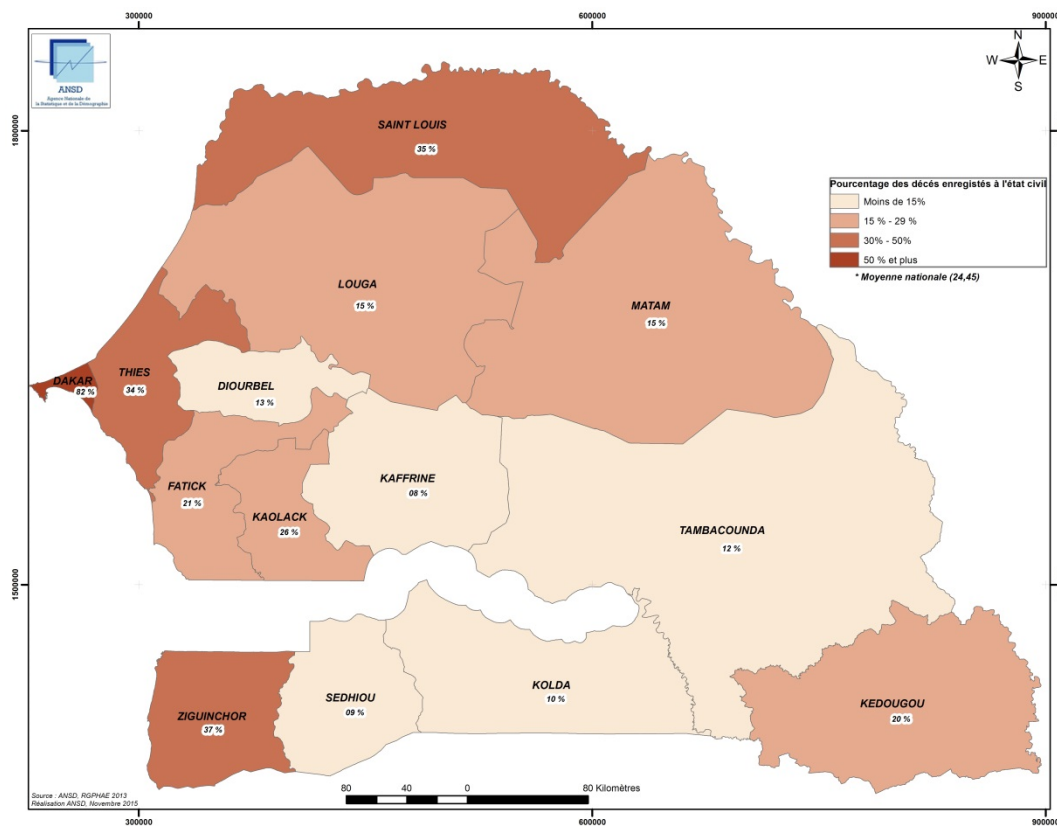


## Results (1)

- **Descriptive analysis:**
  - **Low proportion of registered deaths** : Overall 30 % of all deaths were registered (according to the 2013 census).
  - **Large variations between regions:** with Dakar (83 %), Ziguinchor (38%), and Saint Louis (35%) on the one side, and Kolda (10%), Sédhiou (9%) and Kaffrine (8%) on the other side.
  - **Little progress since 2002 (previous census):** Overall, 29.6% of all deaths were also registered in 2002. Wide regional variations were also observed in 2002. In Dakar, the percentage of registered deaths was 85% in the city of Dakar, 84% in Guédiawaye, 82% in Pikine and 73% in Bambey.

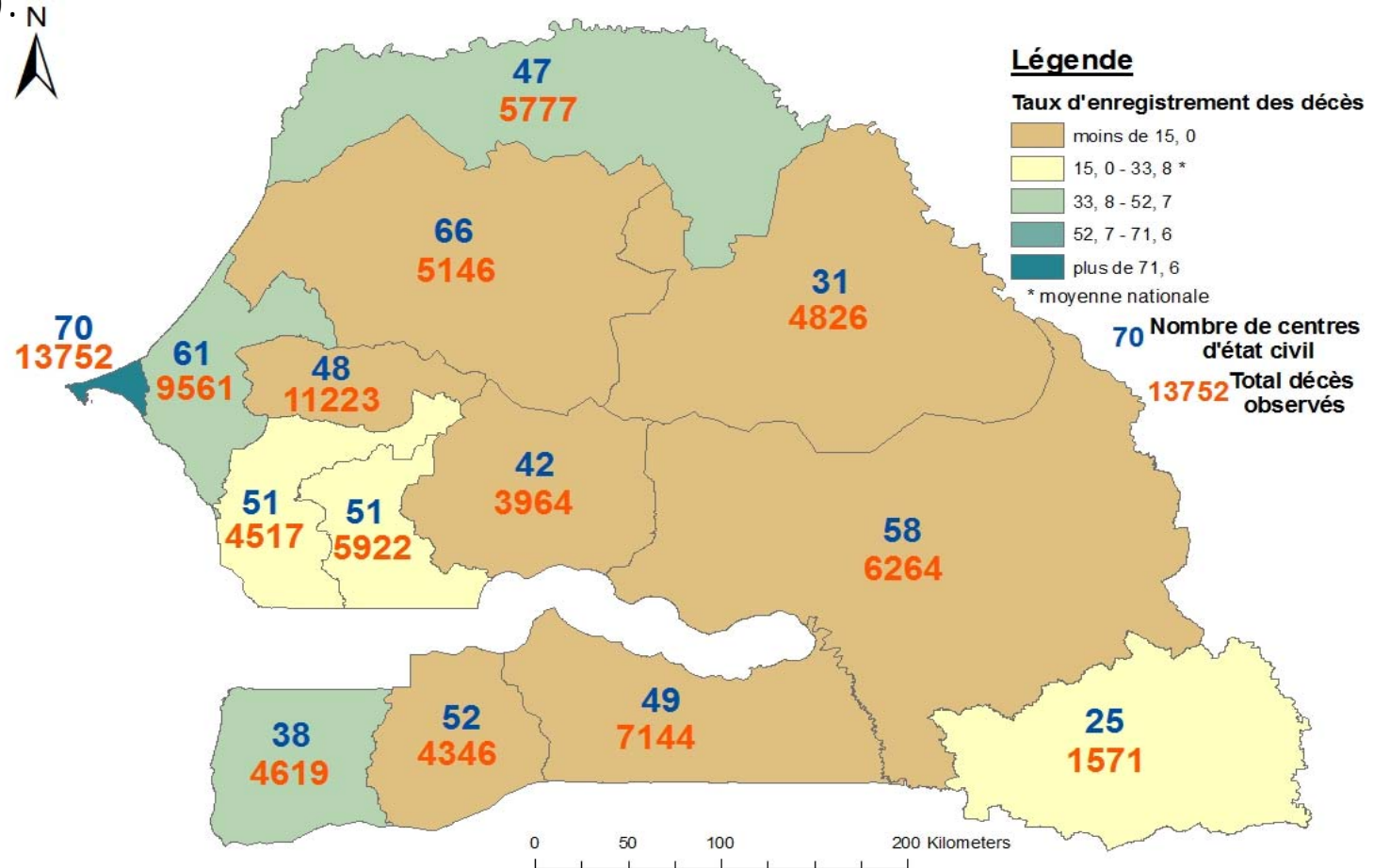
# Results (2)

Regions with the highest completeness of death reporting are located in north-west of the country



# Results (3)

There is no clear relationship between the number of registration offices (689 in total for Senegal) and the completeness of death reporting (ex. Ziguinchor).



## Results (4): Descriptive analysis

- At the household level:
  - Male deaths are more frequently registered than female deaths (32.2% against 27.5 %)
  - Registration is more frequent when the HH head is a female (48.7% against 24.2%)
  - Completeness varies by age : higher for 18-59 (38%), lower for children aged less than 5 (15%) and 5-17 (20%)
  - Registration is more frequent when the HH head is more educated : 25% for HH without diploma, 57% for primary education, 62% secondary education and 72% for higher
- At the regional level
  - When ranking regions according to the total number of offices, no clear relationship (regions in ranks 10-14 register more deaths than regions in ranks 5-9)

## Results (5): Multi-level model

- Significant covariates at the individual level:
  - + Level of educational attainment of the HH head
  - + HH head being a female
  - + Deceased being a male
  - + Deceased being aged 18-59
  - + Household being in urban areas
  
- At the regional level:
  - + Dakar/Thies differ from other regions
  - No significant association with the ranking of the region in terms of number of registration offices.

# Conclusions

- The registration of deaths is still a national problem as the coverage/completeness are very low, especially in rural areas;
- The population still ignores the importance of registering deaths
- People are registering in urban areas because of the need to obtain a burial permit or to have documentation for heritage or pension;
- There is no obvious link between availability of registration centers and registration of deaths;



## Conclusions (2)

- **More research is needed to explore other dimensions of the service offered by registration offices:**
  - their accessibility (distance to get to the registration center, quality of the road and availability of public transportation, etc.)
  - their equipment



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**THANK YOU FOR YOUR ATTENTION**

