

# EGM ON INNOVATIONS TO STRUCTURED DATA COLLECTION METHOD

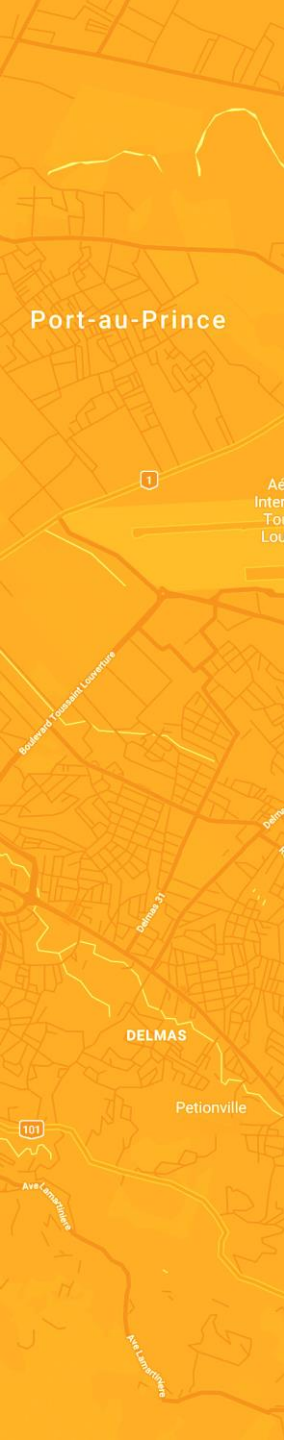
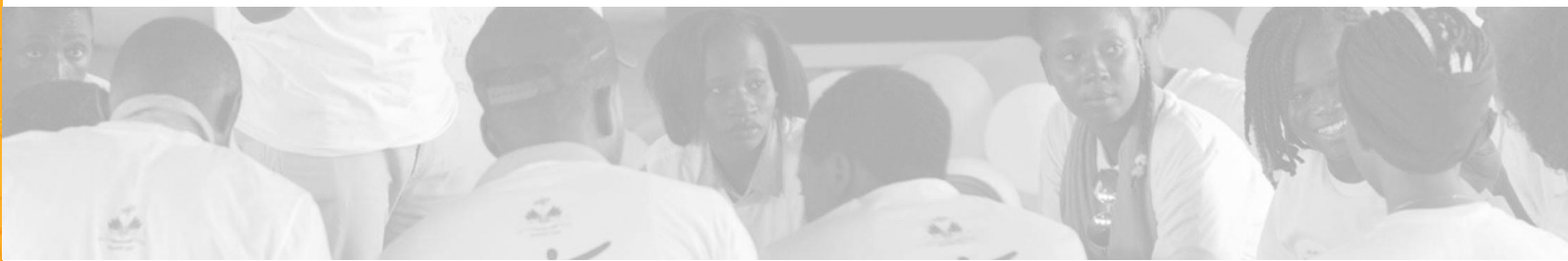
New York, 4-6 Dec 2019

## Cartographic Assessment and Quality Assurance for the Haiti's 5<sup>th</sup> Population and Housing Census

By :

Daniel Milbin, *National Director of the Census project, IHSI*

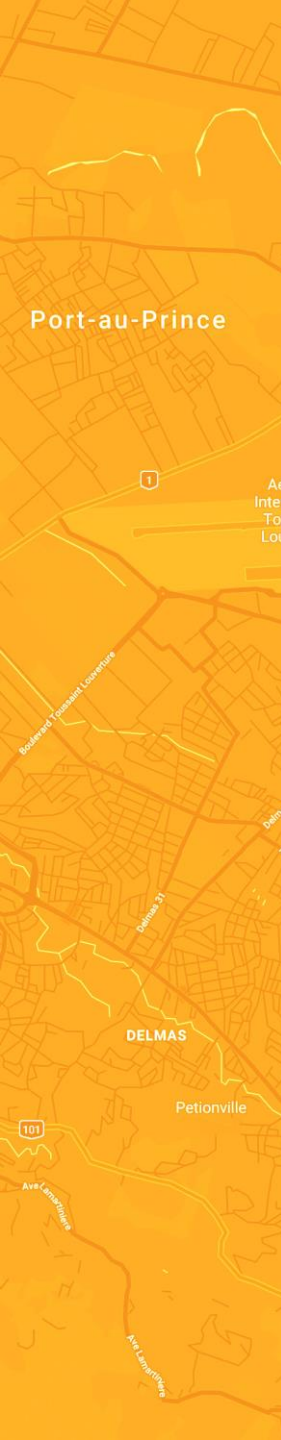
Mohamed Laghdaf Cheikh Melainine, *Chief Technical Adviser – Census, UNFPA*



# OUTLINE

≈ 18 min

- Introduction
- Census methodology
- Use of Cartography in Data Quality assessment
- Lessons learnt
- Conclusion





## CONTEXT

Haiti's 5<sup>th</sup> Census is the first digital census to be conducted in the country, a gender sensitive census, and one of the first censuses of the 2020 census round in the Latin America and Caribbean region.

Haiti's Census intervenes in a context of rarity of reliable statistical data in the country, where population censuses remain the most reliable data source.

The last census in the country was conducted 16 years ago, while the UN recommends conducting a population census every ten years.

# METHODOLOGY

## De Juré Census

Each Enumerator is assigned 1 EA

Direct Interview with the HHH

2 months field staff training

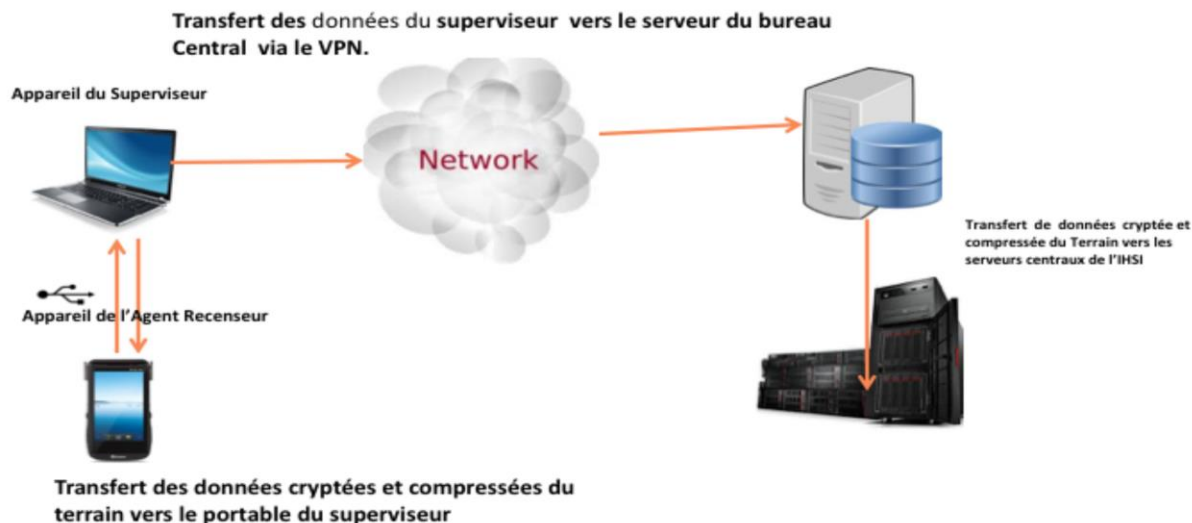
8 weeks Data Collection

PES is planned

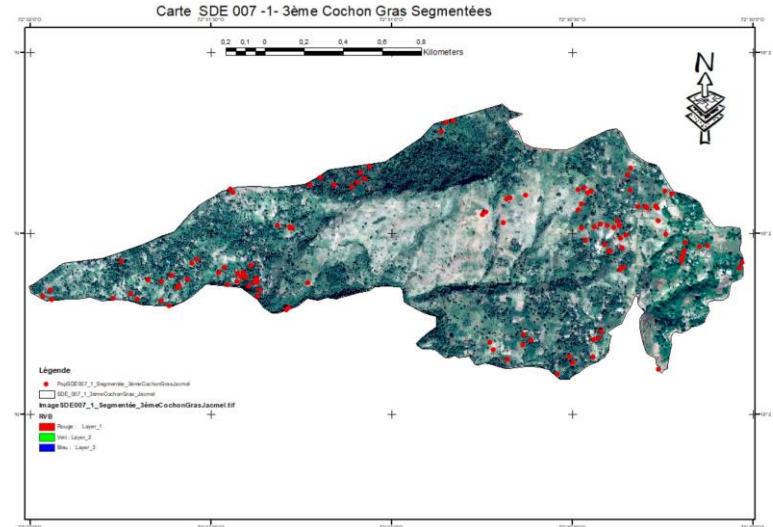
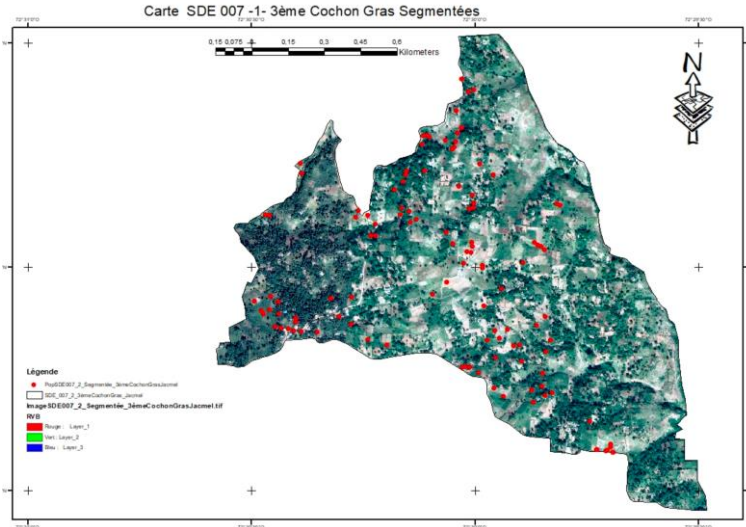
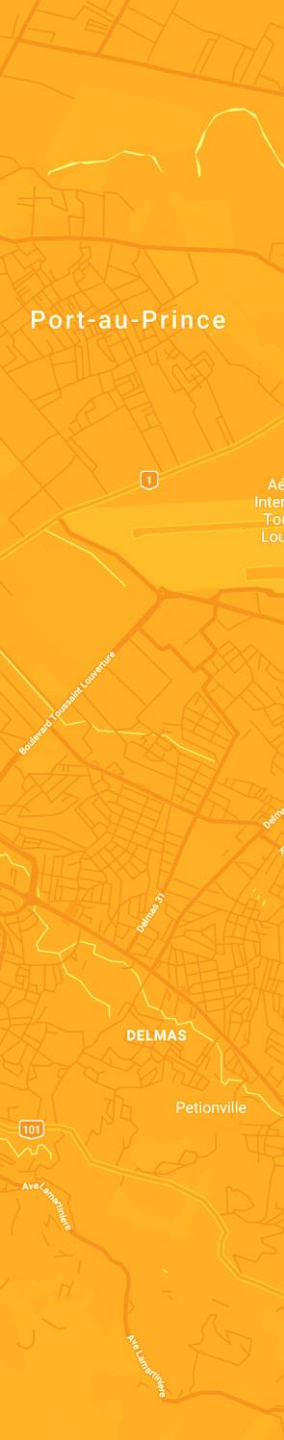
Wide dissemination and use of Census results.

## Pilot Census

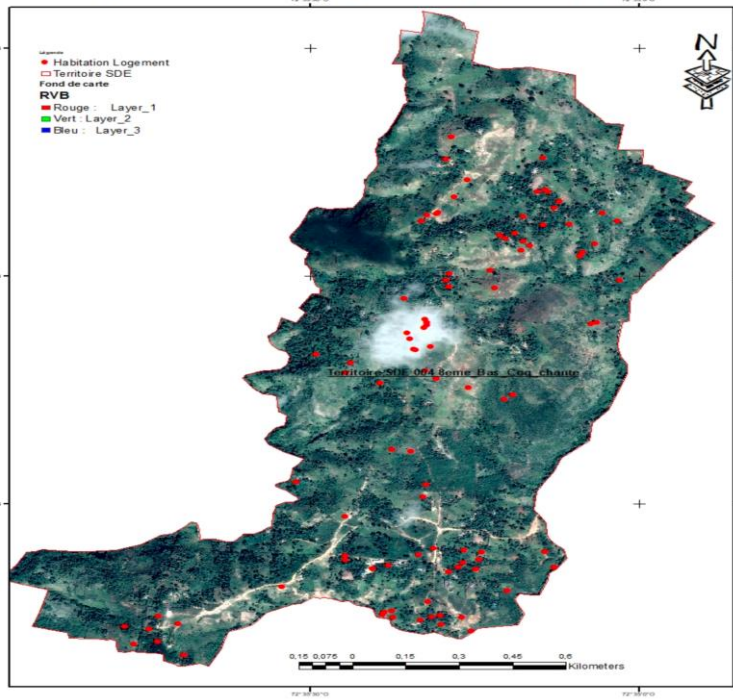
- Enumeration conducted in June-August 2018.
- 120 EA, 4 Departments, 8 communes
- 232 Field staff.
- Data collection monitored almost in real time.
- Transparent and exhaustive evaluation - 220 recommendations



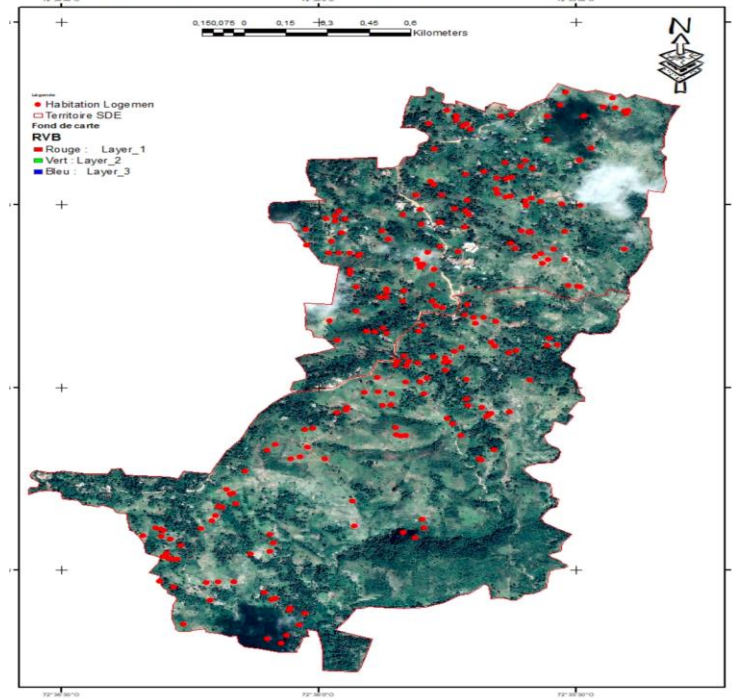
# MAPS



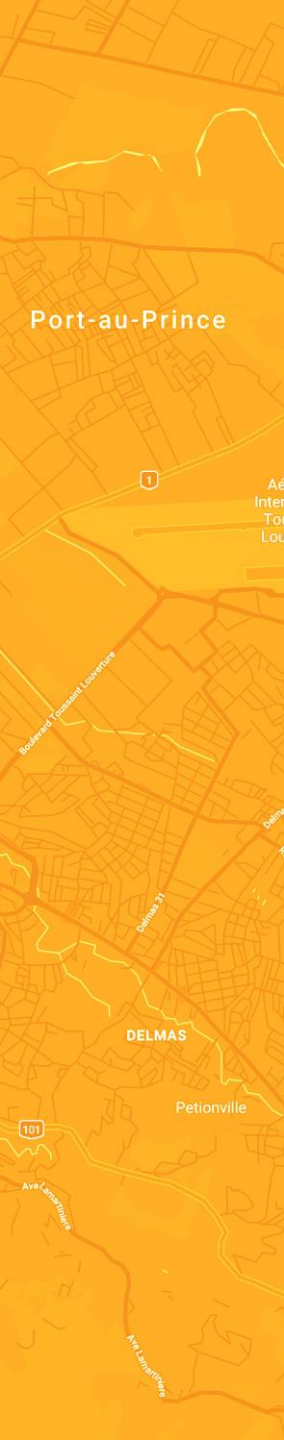
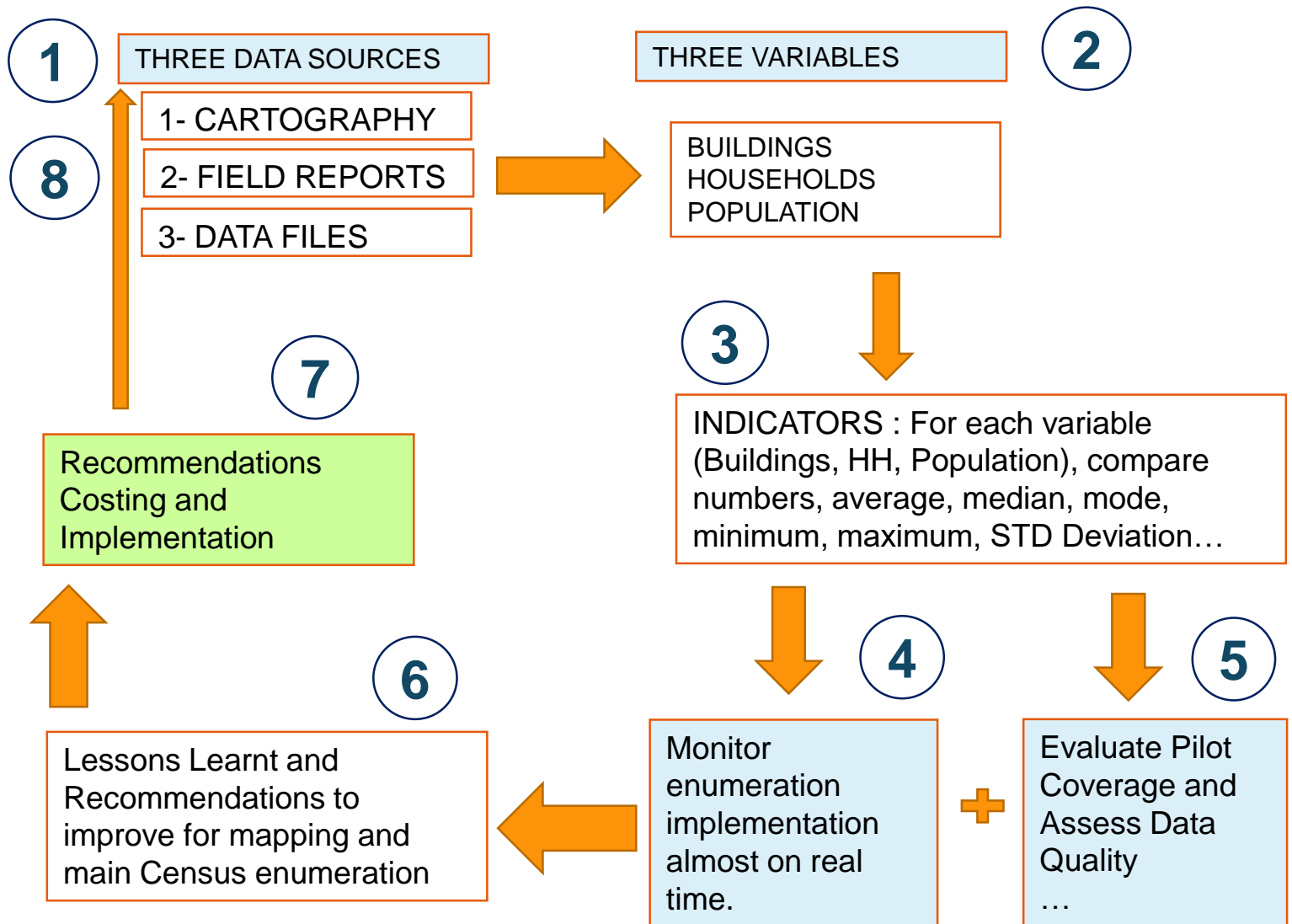
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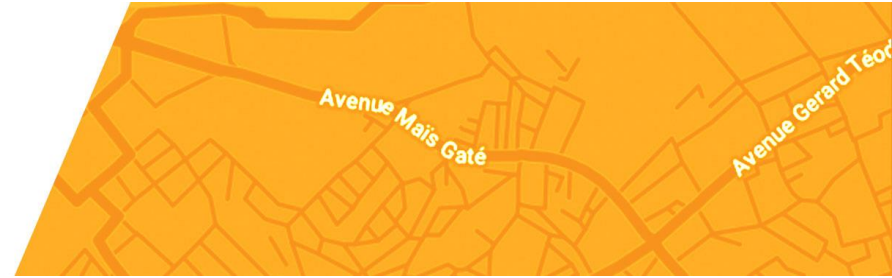


# CARTOGRAPHIC DATA USE IN PILOT DATA QUALITY ASSESSMENT AND IMPROVEMENT

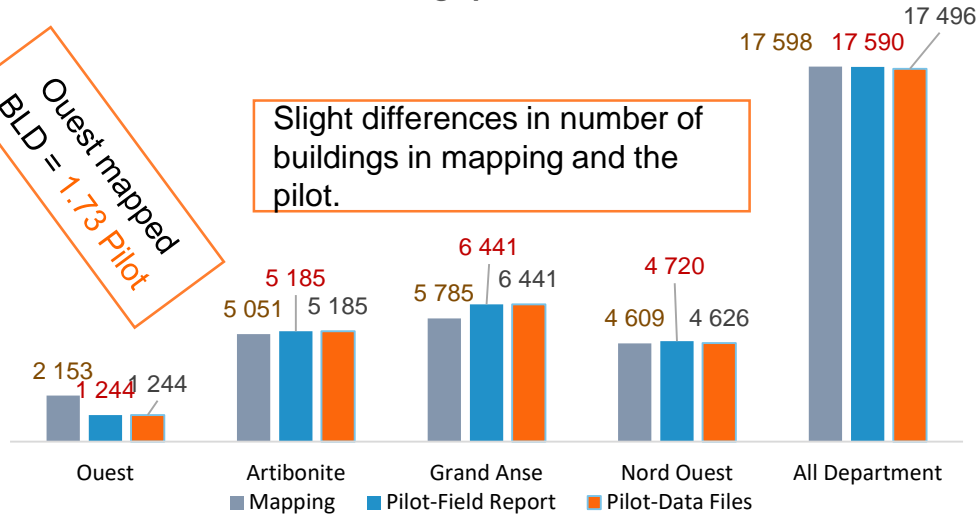


# RESULTS

## PILOT DATA QUALITY ASSESMENT

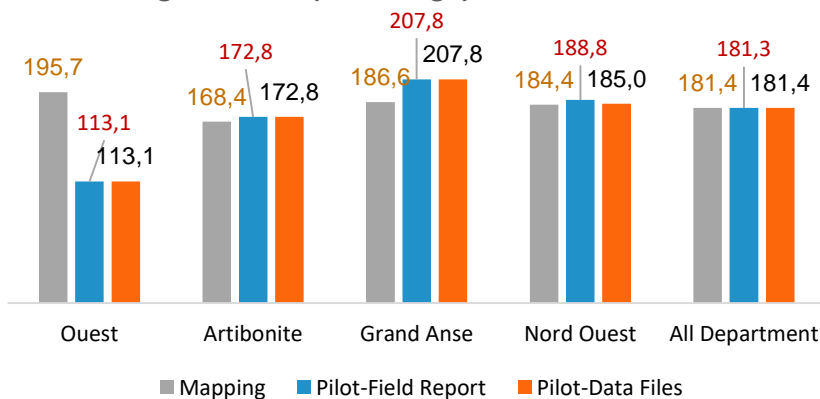


Number of Buildings per source and domain

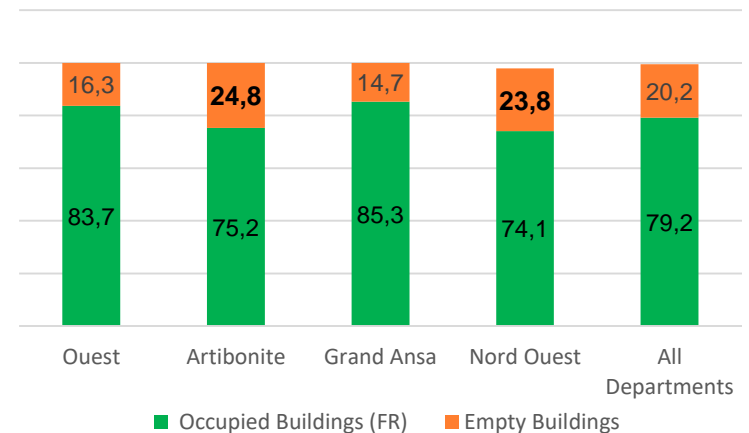


- Less than **0.05%** of difference between the number of buildings in mapping and the pilot.
- The pilot enumeration was not completed in some EAs in the Ouest Department due to security reason.
- The average EA size in buildings was reasonable to be completed by an enumerator in 4 weeks' time.
- About **1 in 5** mapped buildings were found empty.
- In 2 departments, about **1 in 4** mapped buildings were empty, due to Rural-Urban migrations.

Average EA size ( Buildings )

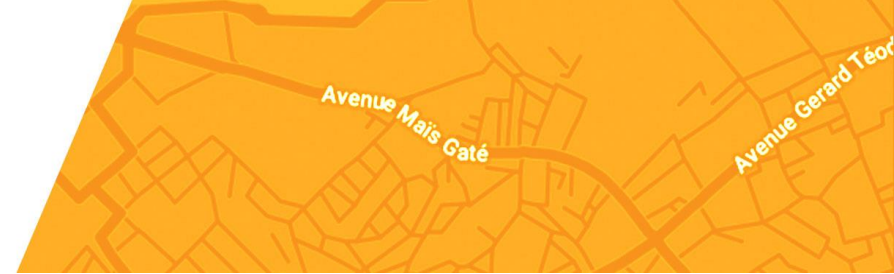


% of Occupied buildings

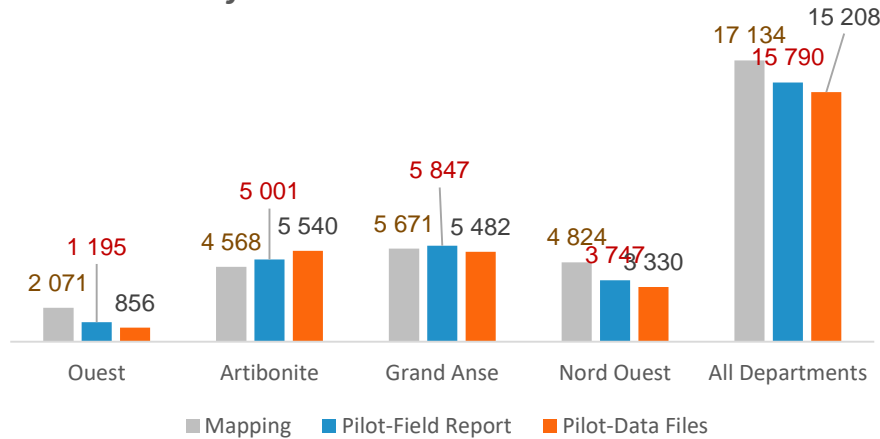


# RESULTS

## PILOT DATA QUALITY ASSESSMENT

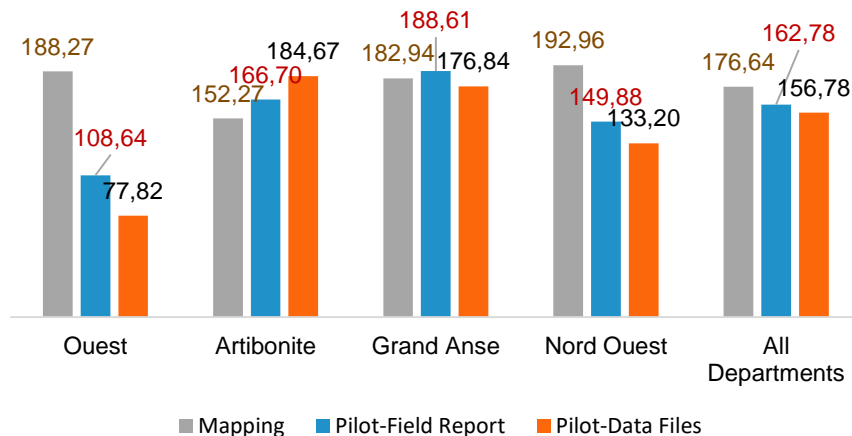


**Number of Households**

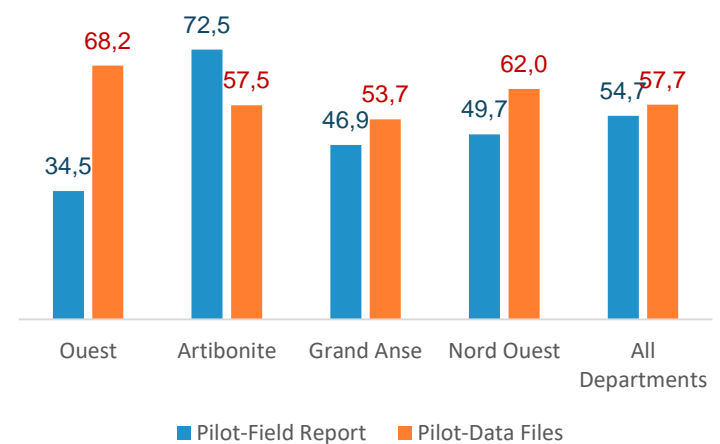


- The number of HH is different by up to **11%** between the 3 sources.
- **582 HH** were reported in the field staff report, but not found in the raw data files – misunderstanding by some field staff of concept of Head of HH.
- Up to **33.7** percentage points difference between female headed HH in the field staff reports and the raw data file.
- The average EA size in HH is reasonable to be completed in 4 weeks. On average an enumerator completed **7HH per Day**.

**Average EA size ( Households)**



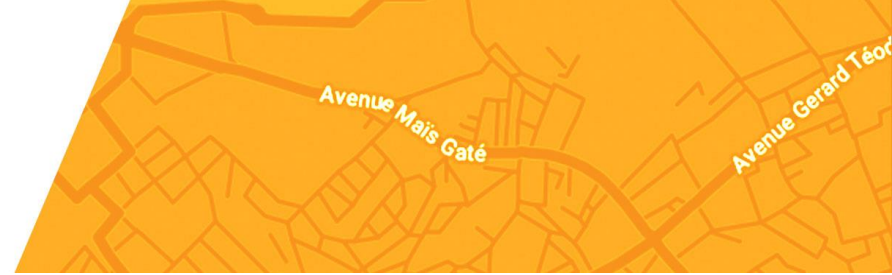
**% of Female headed HH**



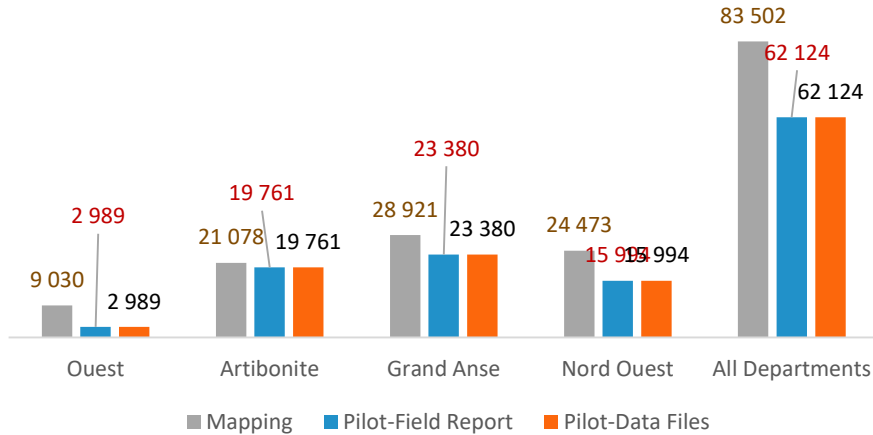


# RESULTS

## PILOT DATA QUALITY ASSESSMENT

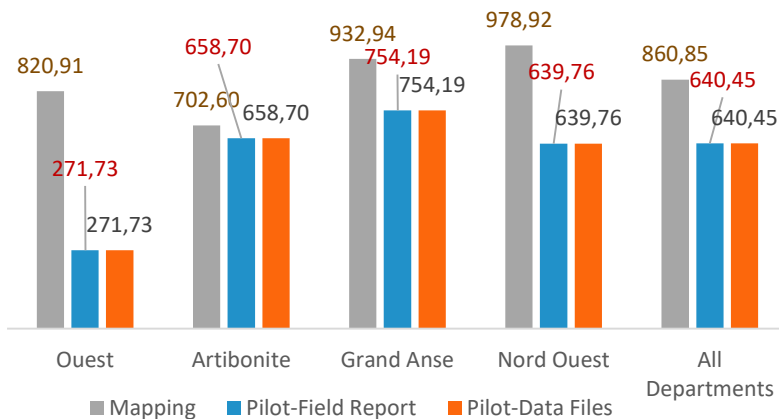


Population per source and domain

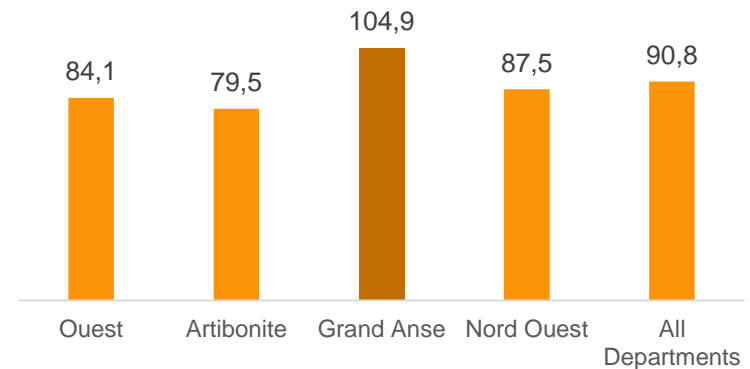


- The population estimated by mapping is **25.6%** higher than the actual enumerated population.
- Mapping counts all persons in a building, while the enumeration counts only resident population.
- The population from the field reports is **equal** to the one in the raw data files.
- The average EA size is **641 inhabitants**.
- Sex Ratio is 90,8 M/100 F. It reaches 104.9 in Grand Anse

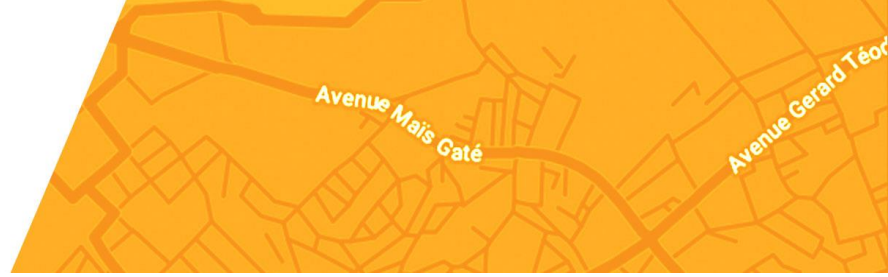
Average EA size ( Population)



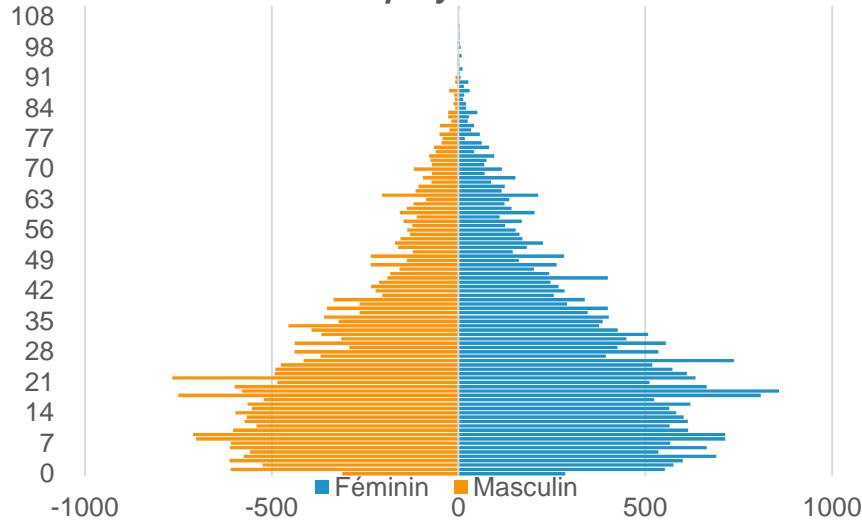
Sex Ratio (M/100F)



# PILOT CENSUS *SELECTED RESULTS*

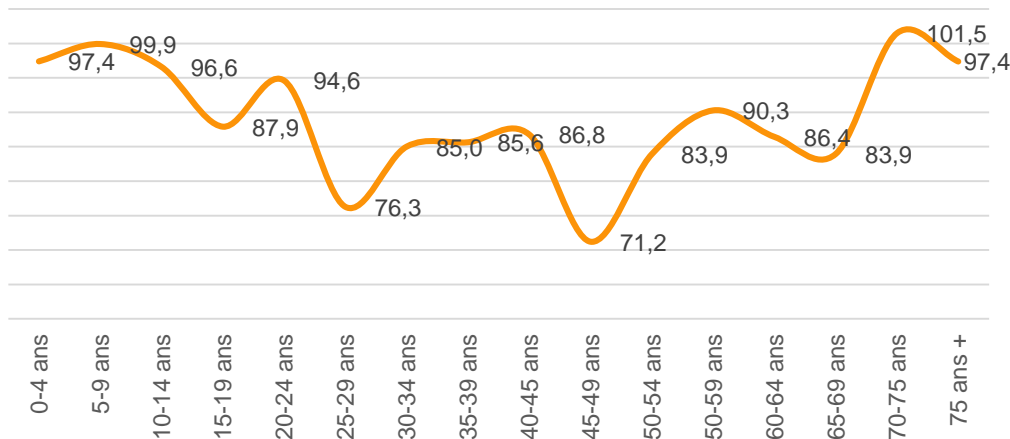


**Pop Pyramid**

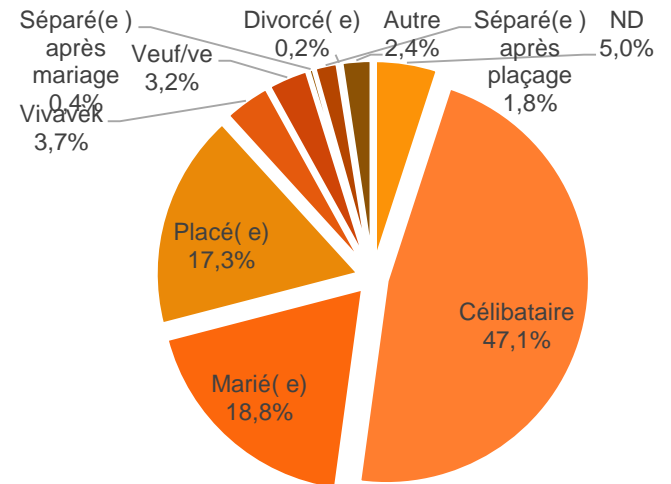


- The Pilot Census data reflects the country's sociodemographic profile.
- Marked heaping on ages ending in the digits **0, 5 and 8**.
- Broad base of the pop pyramid, which reflects **high fertility and child and infant mortality** levels.
- Low Sex Ratio for the age group 20 to 45 years – due to economic migration.
- Only 18.8% of population aged 10 years + are legally married.

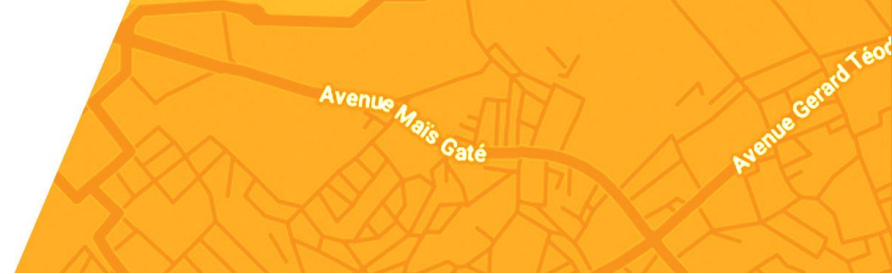
**Sex Ratio**



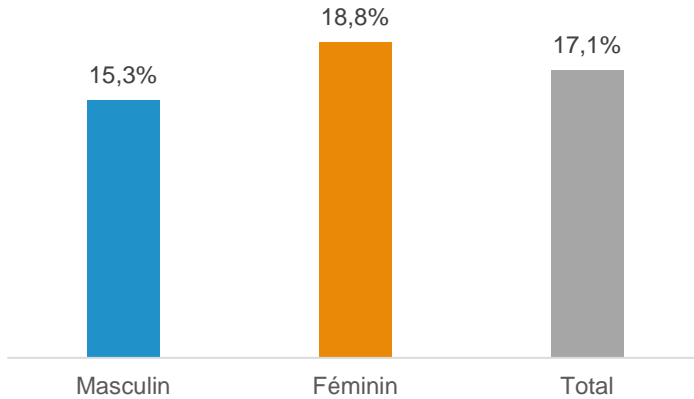
**Marital Status**



# PILOT CENSUS *SELECTED RESULTS*

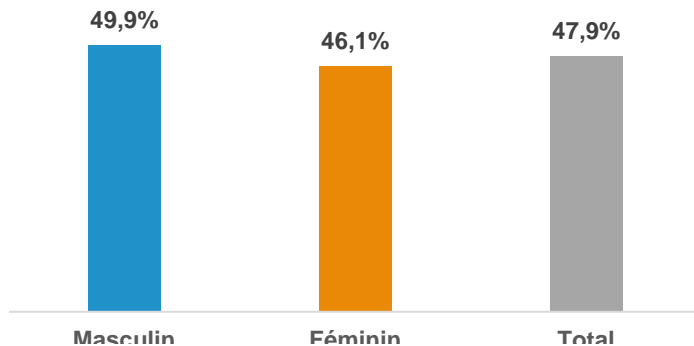


**Illiteracy Rates (6 years +)**

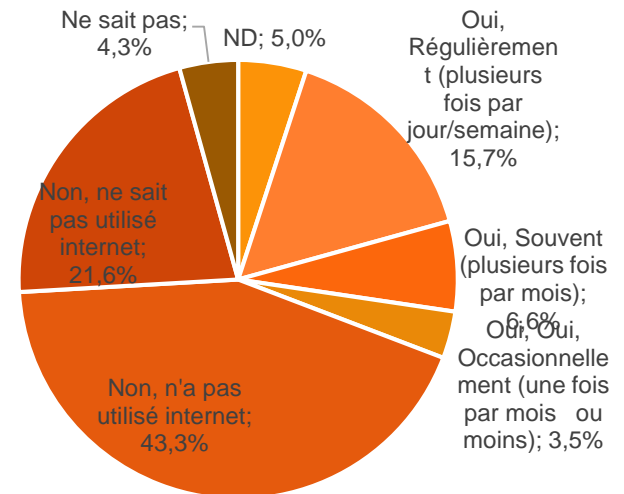


- 17.1% of pop 6 years &+ are illiterate - 15.3% males versus 18.8% females
- 47.9 % of pop 10 years &+ own a cell phone.
- 15.7 % of pop aged 10 years &+ use internet regularly, 43.3% have never used internet and 21.6% don't know how to use Internet.

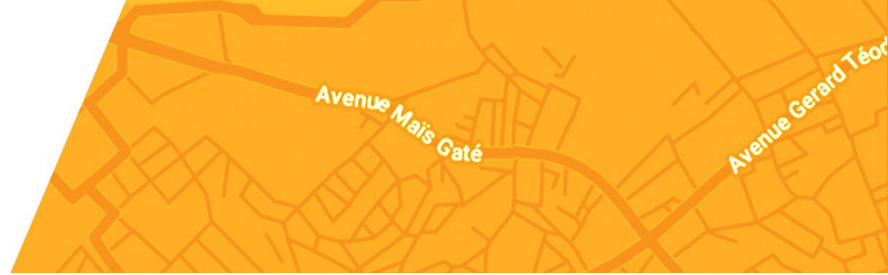
**Have a Cell Phone**



**Internet use**



# PILOT CENSUS *SELECTED RESULTS*

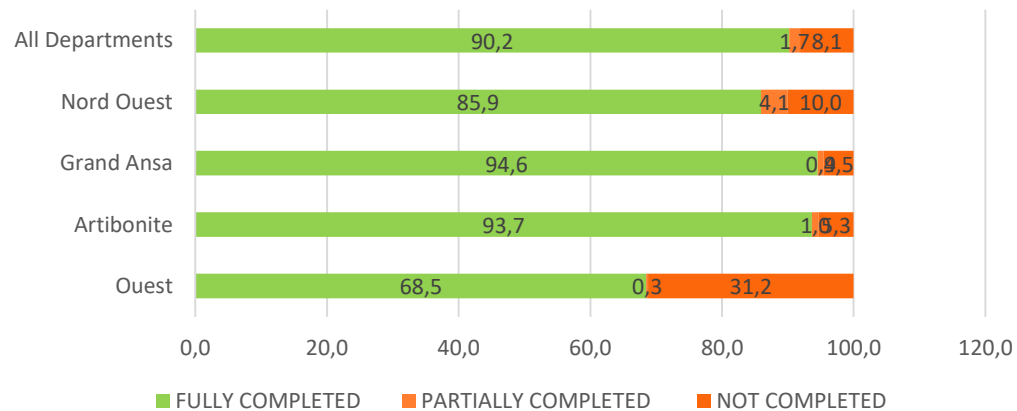


## Response Rates (HH)

Variable	Response Rate
EA	100%
Qp3 - Relationship to HHH	97.59%
Qp4 - Sex	99.99%
Qp5- DOB - Day	70.14%
Qp5- DOB - Month	72.32%
Qp5- DOB - Year	84.49%
Qp6- Religion	95.77%
Qp7- Citizenship	95.54%
Qp8- Mother still alive	95.45%
Qp10- Place of Birth	95.51%
Qp11- Place of Residence	95.41%
Qe1- Literacy	95.86%
Qt1- Own a Cell Phone	94.98%
Qt2- Use of Internet	94.98%
Qsm1- Marital Status	94.98%

Department	No of EA	Completed EAs	Average EA Area (km2)	Average EA area (Km2)
Ouest	15	11	0.33	0.03
Artibonite	15	30	52.26	1.74
Grand Anse	15	31	88.23	2.85
Nord Ouest	15	25	49.35	1.97
<b>All Department</b>	<b>120</b>	<b>97</b>	<b>190.17</b>	<b>1.96</b>

## Response rates (Buildings)



# EXAMPLES OF RECOMMENDATIONS PILOT DATA QUALITY ASSESSMENT



No	Issue / Lessons Learnt	Recommendations	Comments
1	Slight difference between the number of buildings in mapping and the pilot.	<p>Use number of buildings as indicators for:</p> <ul style="list-style-type: none"> <li>- Monitoring enumeration progress.</li> <li>- Payment of field staff.</li> <li>- Evaluation of mapping.</li> <li>- 2<sup>nd</sup> quality control Vble for EA Demarcation.</li> </ul>	For better supervision, the number of mapped buildings in an EA is not shared with enumerators.
2	About 1 in 5 mapped building were found empty.	<ul style="list-style-type: none"> <li>- The number of buildings is no longer used as first variable for EA demarcation.</li> <li>- Provide the list and GPS coordinate of empty buildings for field supervision missions.</li> <li>- Add to Supervisor's task to check at least 5 buildings reported as empty in an EA.</li> <li>- If the number of empty buildings in an EA exceeds 20%, a field supervisory mission should be sent to double check.</li> </ul>	Most empty buildings were found in rural areas, due to Rural-urban migration.
3	The average EA of 156.8 buildings, 181.4 HH, 641 inhabitants and 1.96 km <sup>2</sup> , is reasonable to complete in 4 weeks by an enumerator.	<ul style="list-style-type: none"> <li>- Initial 4 weeks data collection time is confirmed enough for an enumerator to complete his entire EA.</li> <li>- The initial 15,000 enumerators and 3,600 supervisors are enough, no additional costs are required.</li> <li>- The pilot EA average sizes where used in the enumeration planning (nbr of field staff in each commune department, distribution plan, logistics plan, payments plan, etc.)</li> </ul>	On average, an enumerator completes 7HH/Day.

# EXAMPLES OF RECOMMENDATIONS PILOT DATA QUALITY ASSESSMENT



No	Issue / Lessons Learnt	Recommendations	Comments
4	Module on buildings was not completed in the census questionnaire for about <b>10%</b> of occupied buildings.	<ul style="list-style-type: none"> <li>- Review the module on buildings in field staff's manuals of instructions.</li> <li>- Review the test of concordance and edit specifications for the part concerning buildings.</li> <li>- Add a task to enumerators' and supervisors' ToR to explain the reasons for all buildings where the module on building was not completed on census questionnaire.</li> <li>- Add to the ToR of field supervision missions to check at least 5 buildings where the module on building was not completed.</li> </ul>	
5	The number of HH is different by up to <b>11%</b> between the 3 sources.	<ul style="list-style-type: none"> <li>- Review the module on HH definition in field staff's manuals of instructions.</li> <li>- Review the test of concordance and edit specification for the part concerning the HH. and HHH.</li> <li>- Extend the field staff training by 3 days.</li> <li>- Add more field practices in the field staff training.</li> </ul>	Misunderstanding of some field staff of the concept of Household.
6	Up to <b>33.7 percentage</b> points difference between female headed HH in the field staff reports and the raw data file.	<ul style="list-style-type: none"> <li>- Review the module on HHH definition in field staff's manuals of instructions.</li> <li>- Review the test of concordance and edit specification for the part concerning the HHH.</li> </ul>	

# EXAMPLES OF RECOMMENDATIONS PILOT DATA QUALITY ASSESSMENT



No	Issue / Lessons Learnt	Recommendations	Comments
7	The population estimated by mapping is 25.6% higher than the actual enumerated population.	<ul style="list-style-type: none"> <li>- Use the number of HH, instead of population, as a primary variable in EA demarcation.</li> <li>- Use the number of HH in monitoring the enumeration progress.</li> </ul>	Thanks to the VPN and IT applications, the data collection monitoring was done almost on a real time basis and at all levels (EAs, Communes, Departments and Country).
8	The population from the field report is equal to the one in the raw data files.	<ul style="list-style-type: none"> <li>- Confirmation that the reports generated by field staff are correct and can be used for the main census enumeration.</li> <li>- Confirmation that all the data transfer system (from Enumerator to Supervisors to Data Center) is working perfectly.</li> </ul>	
9	For 6 Pilot EA (out of 120), enumeration couldn't be conducted because of security reasons.	<ul style="list-style-type: none"> <li>- Estimation of number of HH, Housing Units, and superficies of insecure areas.</li> <li>- Use of Hybrid Census in areas controlled by gangs.</li> <li>- Use of proxy-publicity in areas controlled by gangs.</li> </ul>	Thanks to cartographic data, the Haiti's Census team was able to produce maps of security levels (High, medium and low) for the entire country



# CONCLUSION

The Cartographic data helped in monitoring the enumeration progress almost in real time, in the evaluation of the pilot census and in formulating over 200 recommendations to improve the main census coverage and data quality.

The Cartographic data resulted in the review of census manuals of instructions, IT applications, tests of concordance, edits specifications and training timeline and contents.

The pilot census data are of good quality and reflect the country's sociodemographic profile.

**Over 220 recommendations** from the pilot and mapping assessment were drafted and about to be implemented to improve for the main census.

Haiti's 5th Census is expected to be one of the best censuses in the country, and probably in the region.



# THE PRESENTERS

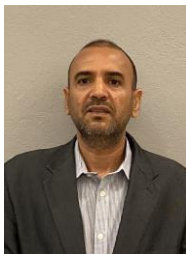


Mr. Daniel Milbin has a Bachelor's degree in Statistics Specialized in Sampling, Specialized Diploma in Demography and a Master's degree in Population and Development and Public Policy.

He has over 35 years of professional experience in sociodemographic data collection and analysis. His experience includes 3 population censuses and 4 large households surveys.

His current position is Director of National Survey at Haiti's Statistical Office, and national Director of the Haiti's 5th Census.

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Mr. Mohamed Laghdaf CHEIKH MELAININE is an engineer in Statistics, with M.Phil. in Demography and Bachelor's degree in Economics.

He has over 21 years of professional experience in sociodemographic data collection, analysis and dissemination. His experience includes 9 population censuses, 4 Census Post Enumeration Surveys, and over 15 large households' surveys (DHS, MICS, SLMS...).

His current position is UNFPA Census Chief Technical Adviser for Haiti's 5th Census.

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# *Thank You*

Questions and Comments, please.

