

Ouagadougou Health and Demographic Surveillance System

What assessment after one year of implementation?

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Introduction (1)

- Many HDSS in sub-Saharan Africa over the past 60 years
- But few are located in urban areas
 - Development efforts, for a long time, have focused on the rural world
 - ➔ Socio-economic and health conditions are better on average in urban than in rural areas
 - The longitudinal monitoring of population presents many challenges in urban settings
 - ➔ Concepts such as household, residency, and migration are different in urban and rural settings, and are thought to be more complex in urban settings

But in Ouagadougou, as in a few others cities (Nairobi, ...) we decided to go against this grain of thought to show that it is useful and possible to sample a DSS in urban setting.



Overview (1)

- Objective

- Provide regular, up-to-date, and consistent empirical evidence to policy makers on poverty, health, education, and housing

- Previous work

- A pilot DSS undertaken in 2002 and ended in 2006
 - ➔ Many forms to collect events and other information have been tested
 - ➔ Data management software has been adapted to the use of PDAs by fieldworkers
 - ➔ Out-migration rate was low

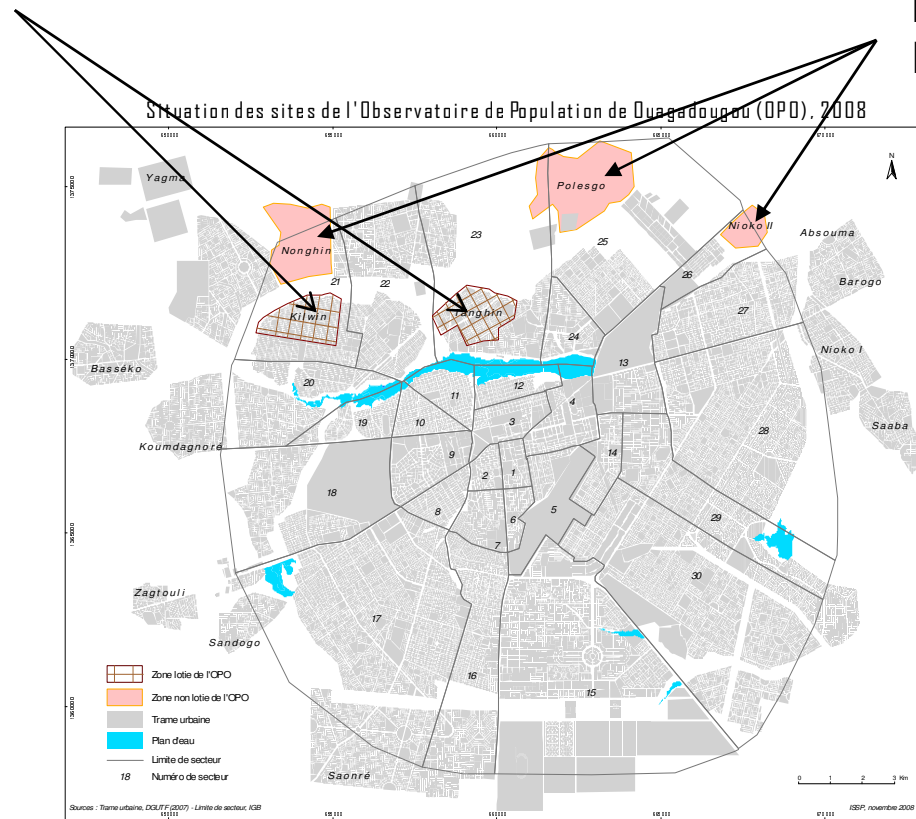


Overview (2)

- Approximately 80,000 individuals are followed

Two zoned areas (Kilwin, Thangin)

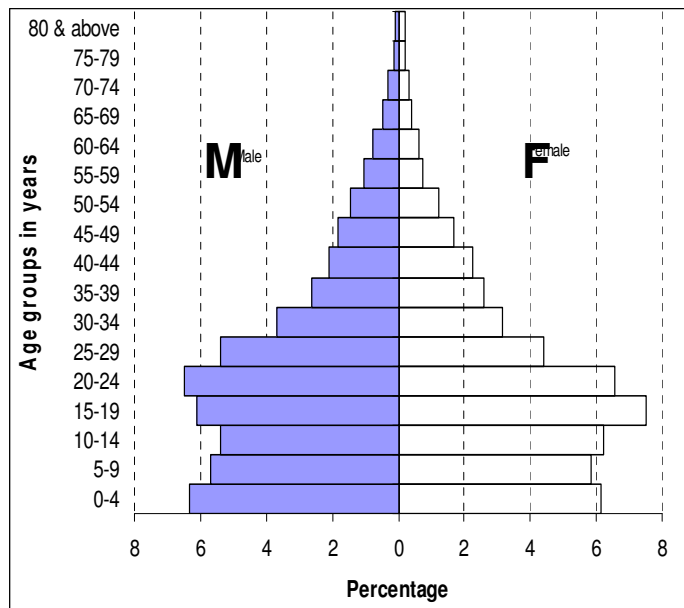
Three areas of informal habitat (Nonghin, Polesgo, Nioko)



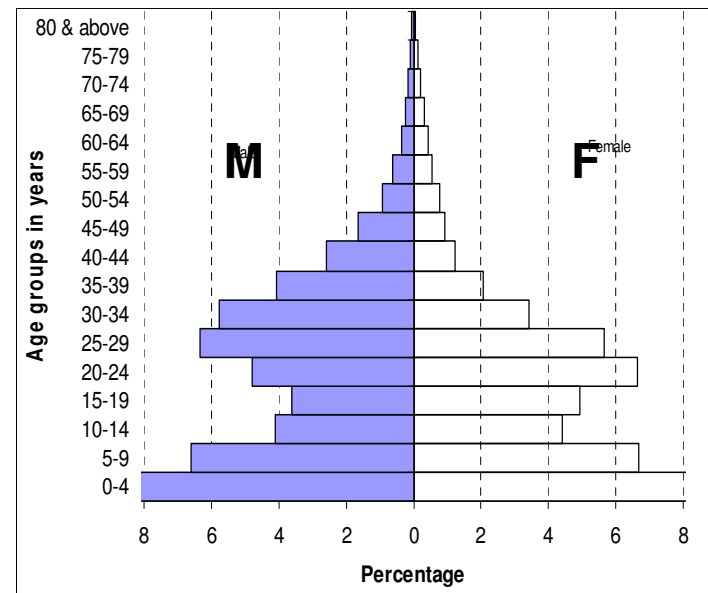
Overview (3)

Age-sex profiles of the Ouagadougou DSS

Zoned areas



Un-zoned areas



Under-five mortality rate

24‰

Under-five mortality rate

57‰



Overview (4)

- ❖ The baseline conducted between October 2008 and March 2009
- ❖ Updating information on the events of interest (pregnancies, births, deaths, migrations, changes in unions) every 6 months
- ❖ Verbal autopsy used in case of death
- ❖ Updating information on household assets and education attainments every 12 months
- ❖ GPS coordinate for each location
- ❖ GPS Coordinate of health services and schools in the whole city of Ouagadougou
- ❖ Data collected on PDAs
- ❖ 25 keys informants also collecting births and deaths



Challenges (1)

The fictitious individuals in the un-zoned neighbourhood

- ❖ persons who claim to live in our areas and manage to be there during our visits but who actually reside elsewhere
- ❖ behaviour observed since the beginning of data collection (the initial census) in un-zoned areas
- ❖ Because when an un-zoned area gets zoned, the people who live there are the first beneficiaries of plots for residential use
- ❖ Inhabitants remained sceptical despite repeated explanations
- ❖ Between baseline and round 1, 1,679 households (3,729 individuals) were identified as fictitious and removed from our database.



Challenges (2)

The issue of absences

- ❖ Absent household = household the field-worker cannot reach to conduct the interview after five home visits
- ❖ More numerous un-zoned neighborhoods during the rainy season because many go back to their villages for farmwork
- ❖ some absences may also be related to the fact that field visits take place at times (8 am - 4 pm) when many respondents are at their workplaces
- ❖ A strategy to minimize the number of absent households = to work weekends with sweeps toward the end of each round by shifting the hours for fieldwork
- ❖ But, the number of household remain high, 3,020 (corresponding to 4830 individuals) for round 1.



Challenges (3)

The issue of weariness

- ❖ respondent fatigue resulting from repeated interviews with the same questions
- ❖ over time, fatigue may result in refusals
- ❖ 33 refusals, until now (September 8, 2010)
- ❖ strengthening the acceptance of the populations surveyed in the HDSS
 - a health day
 - meetings to disseminate the HDSS results to the study population
 - interventions to provide some indirect benefits to the population



Challenges (4)

Difficulties in following the migration within sites

- ❖ Important to locate the former place of residence for a household or individual newly arrived in a courtyard
- ❖ These are not visitors but residents whose address in the system has simply changed
- ❖ PDAs used to develop a matching system, taking into account the full names (the emphasis here is on sound and not the spelling)
- ❖ But, that system not very operational
- ❖ Alternative for field-workers=identifying people by using information regarding their former place of residence, their former location ID, their prior involvement in the HDSS activities (eg, presence of the informed consent form), the name of their parents, etc.
- ❖ Between baseline and round 1, 243 people were identified as those who had moved within the HDSS



Challenges (5)

Challenges related to the use of PDAs

- ❖ difficult adaptation to the hot and dusty climate.
- ❖ PDA battery power decreases after 2-3 months of use
- ❖ a memory problem

The more data stored on the PDA, the slower the performance !

- ❖ The wear on PDAs is such that we must plan to purchase for 20 PDAs per year, which has a significant cost (18,300 euros)
- ❖ The transfer of data from the PDA to the central server is problematic



The dual collection of births and deaths: a review of key informants' activities (1)

- ❖ The role of key informants is ideally to help raise awareness among respondents about the interest of the HDSS and to identify deaths and births, to help detect omissions of events by field workers
- ❖ They have all participated in training sessions on birth and death registration
- ❖ Each of them is in charge of a very specific area
- ❖ They are paid a fixed base salary of 5000 CFA per month (7.6 euros), with an additional 500 CFA per reported event (0.76 euros)



The dual collection of births and deaths: a review of key informants' activities (2)

Relative performance of key informant in terms of deaths registration

Type of Neighborhood	Valid deaths registered by key informants and field workers	Valid deaths registered by key informants but not by field workers	Valid deaths registered by field workers but not by key informants	Total of deaths
Zoned neighborhood	2	0	98	100
Un-zoned neighborhood	33	3	68	104
Total	35	3	166	204

- ❖ Only 38 deaths out of 204 (about 19%) were identified by key informants
- ❖ This record is poorer for key informants of zoned neighbourhoods



The dual collection of births and deaths: a review of key informants' activities (3)

Relative performance of key informant in terms of births registration

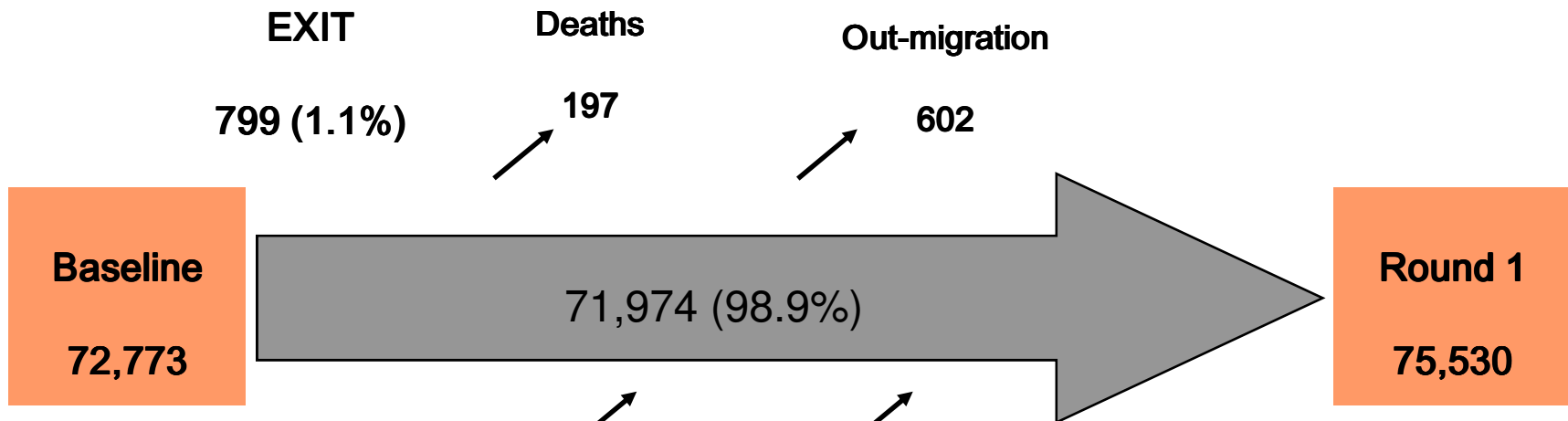
Type of neighborhood	Valid births registered by key informants and field workers	Valid births registered by key informants but not by field workers	Valid births registered by field workers but not by key informants	Total of births
Zoned neighborhood	46	-	452	495
Un-zoned neighborhood	367	-	293	660
Total	413	-	745	1,155

- ❖ Only 36% of births (413 of 1,155) were identified by key informants
- ❖ This record is poorer for key informants of zoned neighbourhoods



The issue of population loss

- The biggest challenges of an urban DSS since city-dwellers use to change faster home
- In case of high residential mobility, it is possible to see a renewal of the original population, which is not interesting for long-term researches



Conclusion

- ❖ Ouagadougou can be regarded as a medium sized city that lends itself with fewer challenges to the sampling of a DSS
- ❖ The issue of fictitious individuals will be completely resolved after a few rounds
- ❖ Some actions have already been undertaken to strengthen the acceptance of these populations to the HDSS activities
- ❖ A reorganization of hours and working methods of the fieldworkers showed that the phenomenon of absence has considerably diminished in round 2
- ❖ The real challenge of the Ouagadougou HDSS in long term (from a data production point of view) concerns that of population renewal in un-zoned areas; and the use of PDAs, which are costly
 - ➔ Un-zoned areas are likely to know anytime a displacement of the population, although the administrative and political authorities have not yet placed the event of a subdivision of the Ouagadougou HDSS sites in their planning.





Thank you !

