Kersa Health and Demographic Surveillance System (Kersa HDSS)

Capacity Strengthening and Training (CST)

Strategic Group Workshop

Accra, August 2015

KERSA HDSS FIELD SITE, SOME IMPORTANT LAND-MARKS & PRODUCES

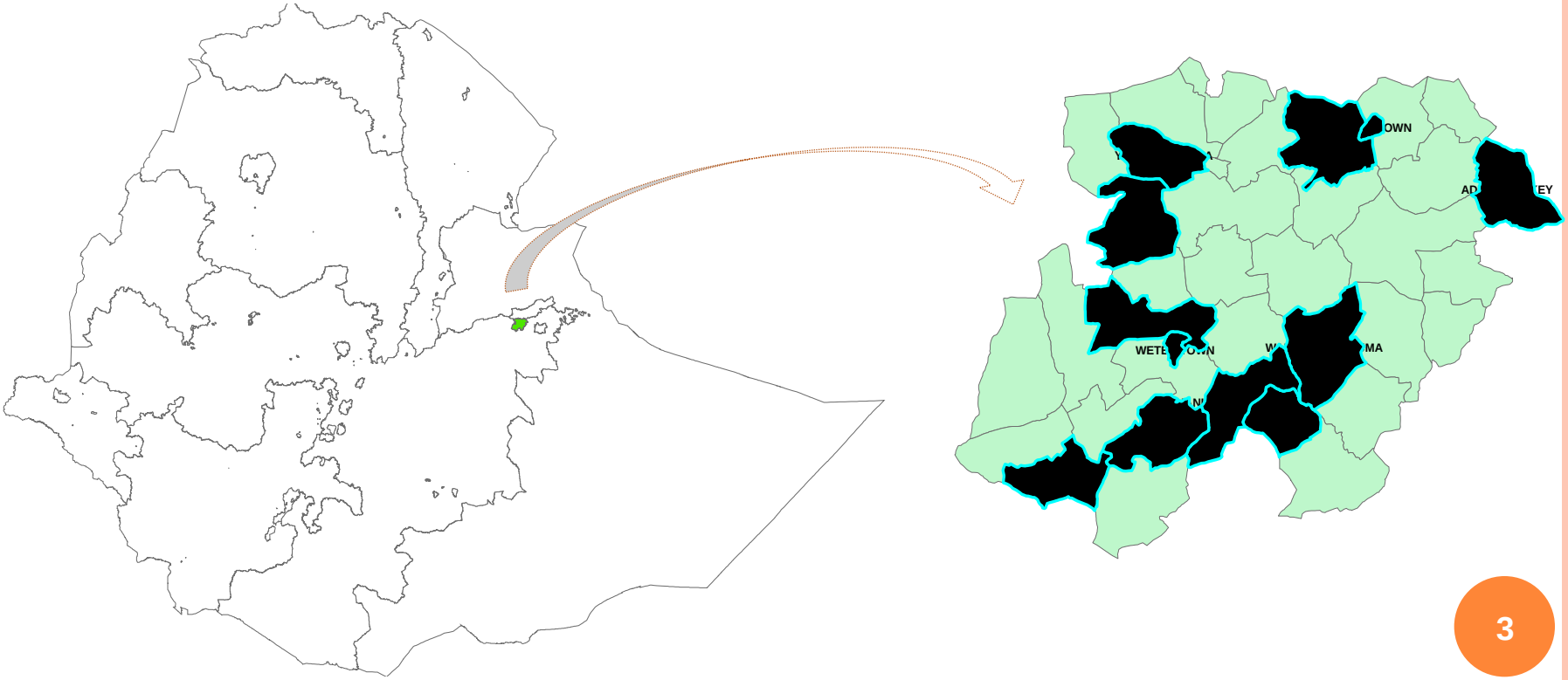
Lake Adele in Adele Key Key Kebele. It is one of the beauties of the site.

The highland majesty around Gola Belinakebele

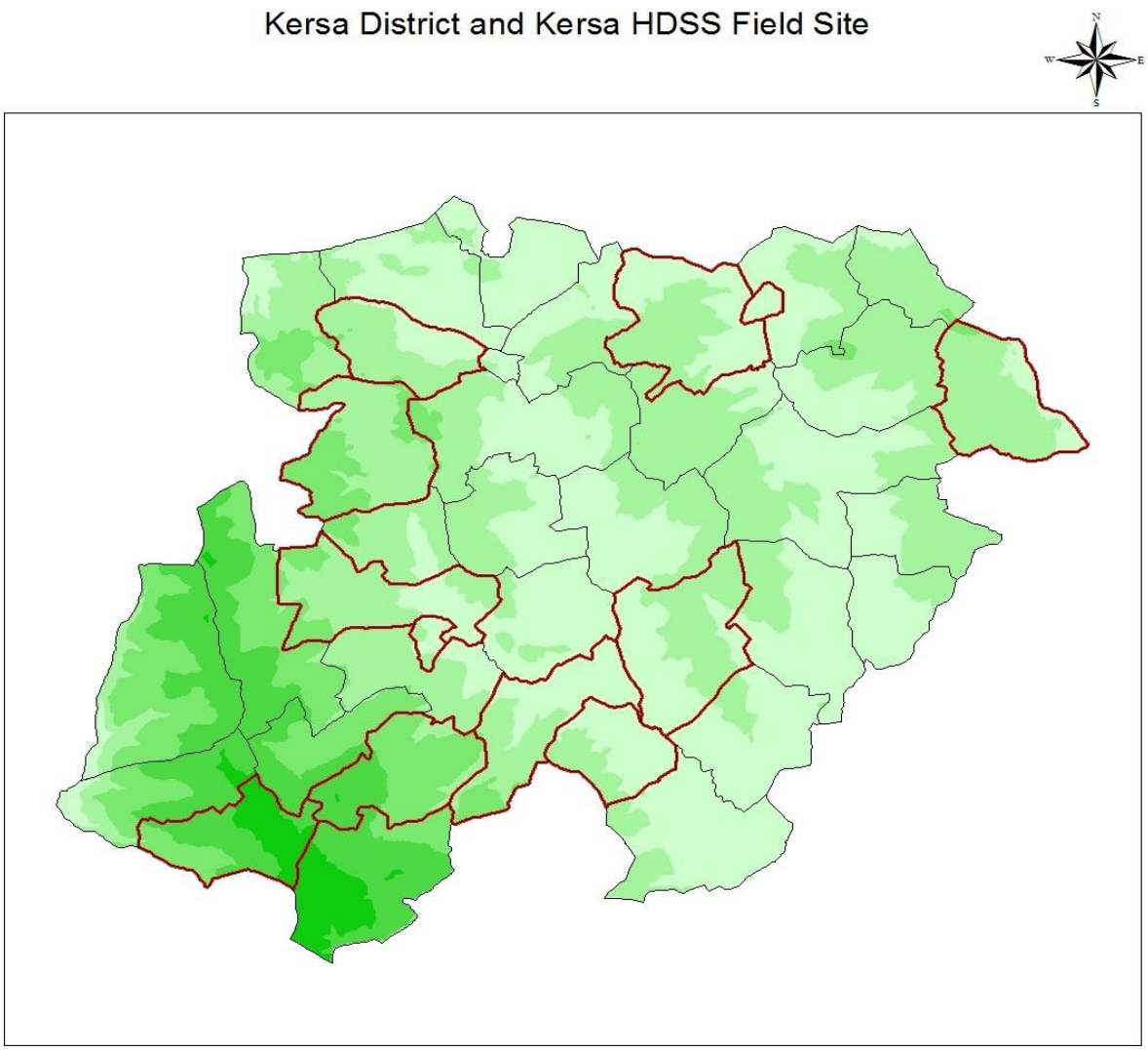
Sorghum, the dominant crop for food production at the mid and low lands

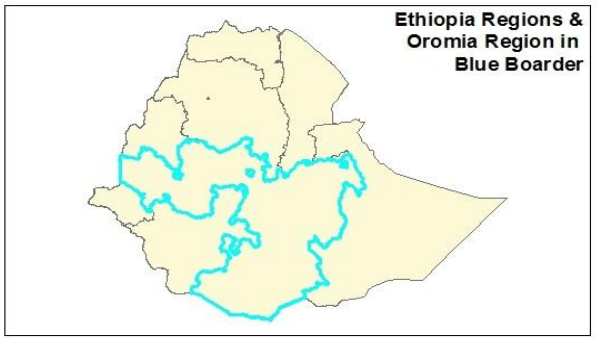
Wheat, barely, major crop for food around High lands (Tolla)

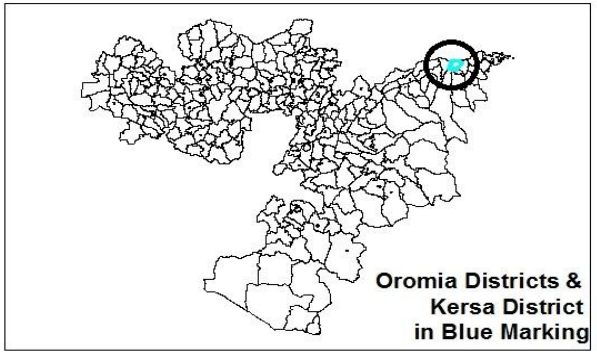
Study Area-Kersa HDSS



2007-2014-It constituted 12 kebeles-13,500 Households- 62,000 population







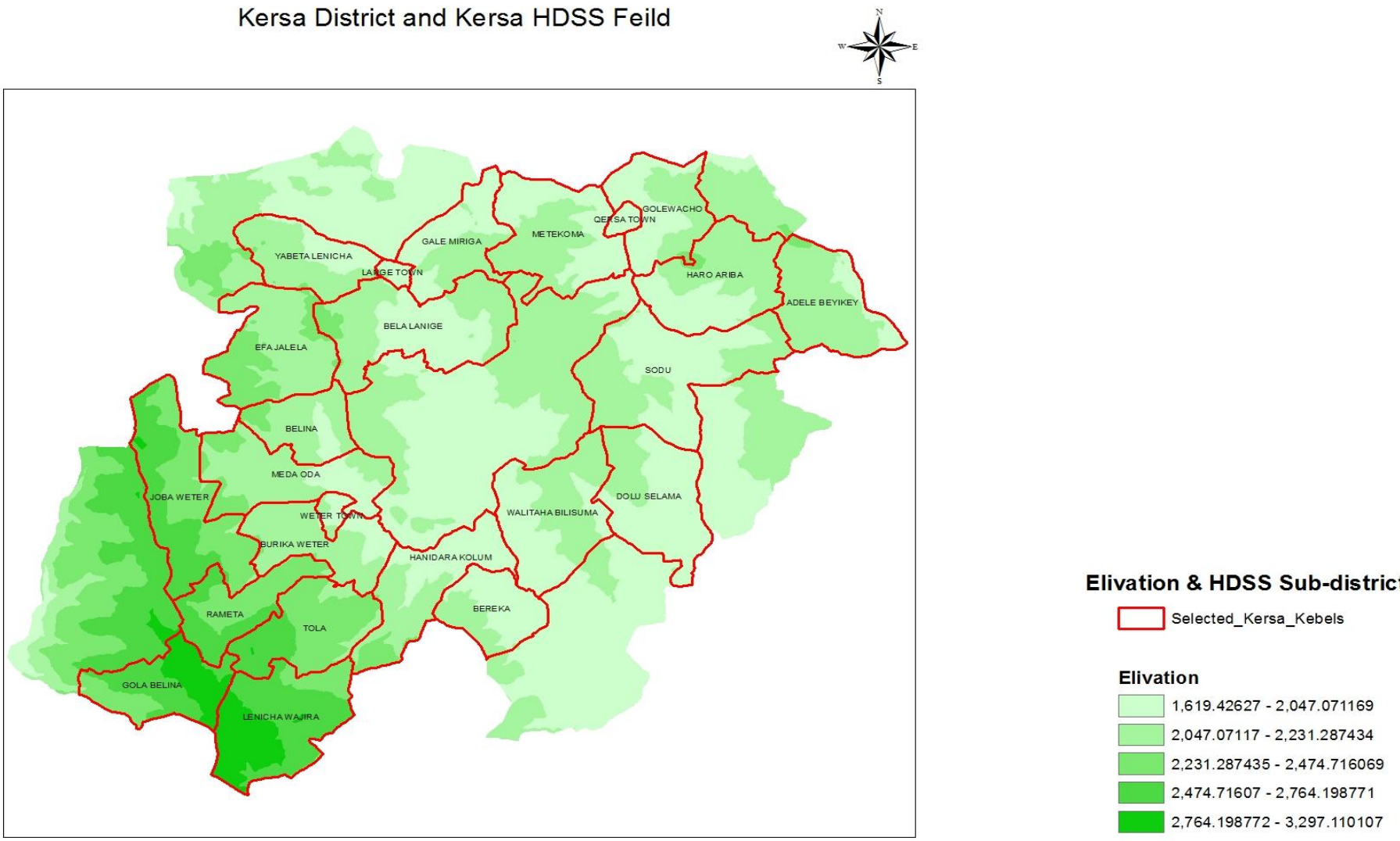
Elevation in Meters & HDSS Sub-districts

Selected_Kersa_Kebels

Elevation in Meters

- 1,619.4 - 2,047.1
- 2,047.1 - 2,231.3
- 2,231.3 - 2,474.7
- 2,474.7 - 2,764.2
- 2,764.2 - 3,297.1

2015-IT ADDED 12 MORE KELBELES
24 KEBLES- 24,500 HOUSEHOLDS- 120,000 POPULATION



KEY INDICATORS-1

Characteristics	2008	2009	2010	2011	2012	2013
Midyear population	51398	52969	54378	58633	59459	60694
Total houses	10,863	11,046	11,984	12,496	12,783	13,544
Persons per household	4.7	4.8	4.5	4.7	4.7	4.5
Sex ratio per 100 (male to female)	1.02	1.02	1.02	1.02	1.02	1.02
Sex ratio at birth (male to female)	1.08	1.07	1.04	1.00	1.20	1.12
Life expectancy at birth for Males	66.0	60.7	59.9	59.8	67.1	62.7
Life expectancy at birth for Females	57.8	59.9	57.5	54.4	57.36	60.1
Dependency ratio	1.00	0.98	0.97	0.91	0.91	0.89
Young dependency ratio	0.96	0.95	0.94	0.88	0.88	0.83
Old dependency ratio	0.04	0.04	0.03	0.03	0.03	0.06
Women of reproductive age (15-49 years) %	21.2	20.9	22.1	21.3	21.5	22.3

KEY INDCATORS-2

Total number of live births	1616	1756	1983	1549	1770	2260
Crude birth rate per 1000	31.4	33.2	36.5	26.4	29.8	37.2
Crude death rate per 1000	9.7	8.4	9.4	10.1	8.8	7.8
Crude in-migration rate per 1000	3.6	3.0	4.5	4.3	5.0	7.4
Crude out-migration rate per 1000	15.0	11.7	19.3	21.9	20.6	20.5
Crude population growth rate per 100	2.17	2.48	2.71	1.63	2.10	2.94
Net population growth rate per 100	1.0	1.6	1.2	-0.1	0.5	1.6
Total Fertility Rate (TFR)	4.5	4.6	5.1	4.0	4.2	5.3
Neonatal mortality per 1000 live births	37.7	37.6	40.8	38.1	35.6	32.7
Infant mortality rate per 1000 live births	60.7	55.2	64.6	66.3	58.3	53.9
Child mortality rate per 1000	37.7	37.6	40.8	38.1	35.6	32.7
Under-five mortality per 1000 live births	132.4	90.5	106.4	158.2	107.3	77.9

Achievements
Training and Capacity Strengthening

1. In 2007 sensitization workshop for more than 50 participants selected from the district and the University in the presence of University officials.

Sanitization program at the start.
Officials of the University and District attended the program.
Dr. Tena (AVP), Dr. Tadele (RPO), Ato Melake (Dean, COHS), Ato Abdurahman (District head)

2. Preparation of the study material and training field workers
3. Baseline survey, September 2007
   - **mapping** and **numbering,** data collection **formats prepared** and **translated**.

Left: preparation of study material:

Right: The field workers took picture after completion of their refresher training in Kersa town

4. Repeat Census
   - October 2008 (used for reconciling the base data using census)
5. Continues tracking of vital events

Villagers were supportive of our activities.
The left: A typical school day in one of our follow-up kebele were singing on our visit day.

The right: Mothers and children were egger to answer our questions

6. Mortality surveillance
   - Continuous Data collection and verification
     - VA format used
     - Physicians for interpretation

7. Morbidity, pregnancy outcome, immunization surveillance: started as of September 2010

Letf: Mede Oda kebele, near water town: Newborn baby being inspected for vital records in our follow up.

Right: quality check, the data collectors are measuring themselves before measuring other. It is a test of confirming doing it appropriately.

8. Data storage and Entry

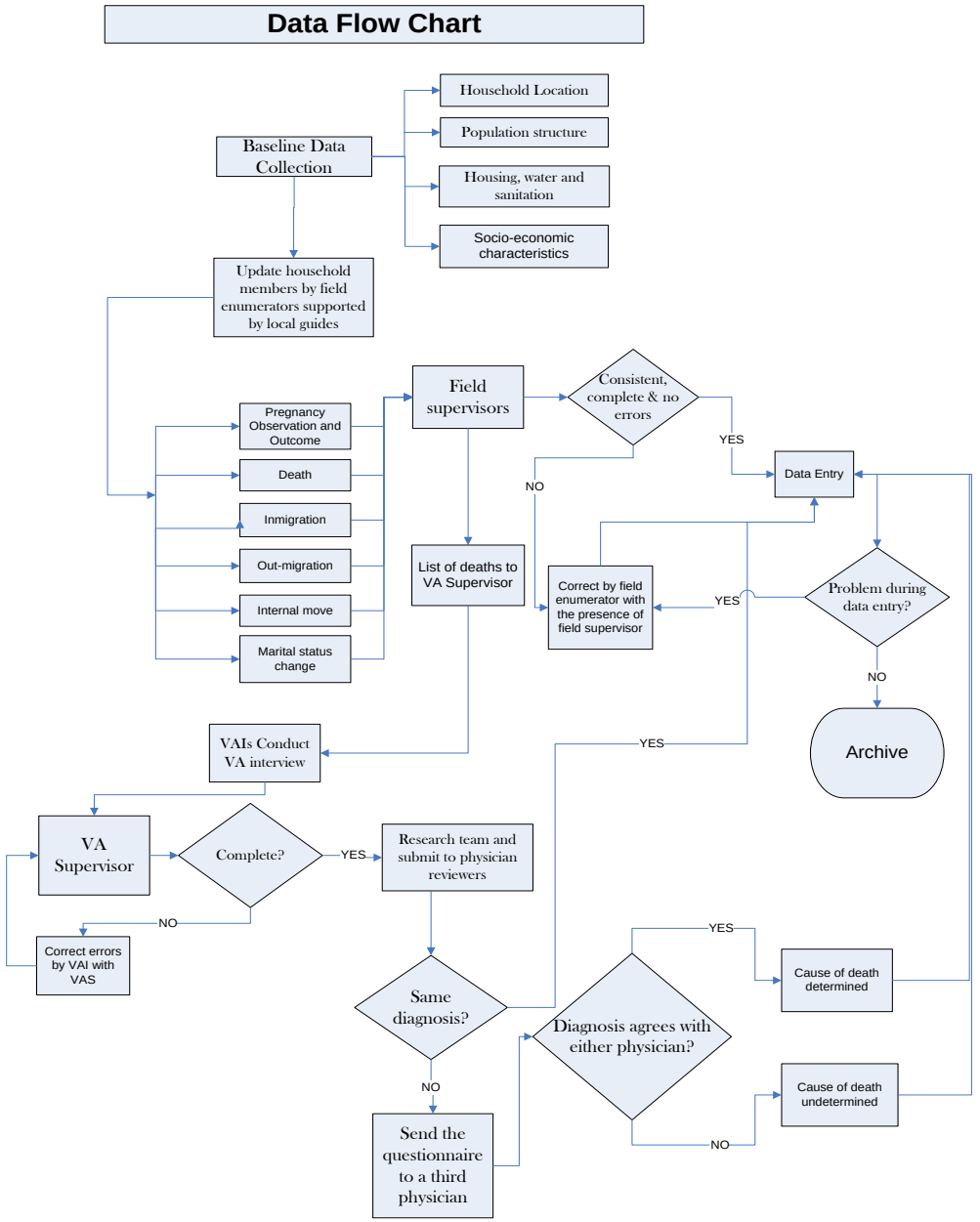
- After three sequential review
- Entry to HRS-2 program
- The hard copies are put in respective folders

Above:
KDS-HRC data entry personnel at work, in the main office located at Harar Campus.

Above:
The Hard copies are put properly for future references. Each household has a separate folder

9. Data flow and Base data cleaning continuously being done

10. GPS labeling of houses



11. Use of site for academic purpose
    - 4 Ph.D students used the site, 2 currently using
    - 2 M.Sc. Students used the site
    - 5 undergraduate students used data from the site for research purpose

12. Use of part of data for graduate teaching, for MPH students.

13. Availing sample frame for researchers: 8 researchers used sample frame

14. Established urban HDSS (Harar HDSS)

- Located in Harar on Six sub-districts with a total population of 32,000 at the start
  - Now it constitutes 12 Sub-districts and the population becomes 60 thousand
- Mapping, number platting and census done

Now we have two HDSS

1. Kersa HDSS-Rural-24 Kebles-120,000 population
2. Harar HDSS-Urban-12 Kebeles-60,000 population

15. Collaborative statistics training with other HDSS in Ethiopia and EPHA
16. With in Ethiopia Joint Network Health and demographic data analysis and write up
17. Support from Other HDSS in Ethiopia in customizing HRS-2 to fit into our data collection system
18. By the support of CDC, EPHA, and INDEPTH HRS-2 training
19. By the support of INDEPTH-ishare-2 (cib) and open HDS training

Challenges

1. Trained field workers turn-over is high-main reason is low salary pay
2. Paper work is too much-the possibility of changing data collection system to electronic system (PDA) is needed yet constraints to start:
   - Budget to buy the device
   - Training on how to use
   - Maintenance issues
3. The training we get on Open HDS was not enough to help us kick of the program

5. Collaborative effort to generate more funds, more research and joint works are not adequate
6. Longitudinal and panel data analysis is at its lowest level of use, it needs much effort to produce information that match the surveillance activities; most analysis are descriptive
7. An organized laboratory and health facility linked surveillance is lacking

Future plan

1. Generate more information based on available data
2. Improving the usability of data by Masters and PhD students, and other researchers
3. Changing data collection system to electronic (PDA)
4. Application of Open HDS
5. Link studies with existing laboratory services and improving reporting facilities to match with HDSS
6. Be center of excellence in statistical trainings; longitudinal, panel data, economic analysis,

7. Collaborate on every aspect of the work with potential collaborators/researchers
   - Initiation of new studies
   - Use of existing data
8. Encouraging students from abroad and in-country universities to use existing data to generate more information
9. Availing important indicators and policy briefs for FMOH/RHBs based on the existing data

- Our website:

http://www.haramaya.edu.et/research/projects/kds-hrc/