SESRIC on sharing statistical experience

“Population and Housing Census, Round 2020: Census Data Editing and Validation”

Mozambique experience
September 6, 2022

Introduction

- Since independence in 1975, the country has carried out 4 Censuses (1980, 1997, 2007 and 2017) Censuses in Mozambique are carried out every 10 years;
- All have national coverage and are based on the 1st of August;
- All censuses were done on paper, the 2017 Census had some particularities;

ORGANIC STRUCTURE OF CENSUSES

Creation of **census offices**:

1. Conselho Coordenador do Recenseamento Geral da População e Habitação (CCRGPH)
2. Gabinete Central do Recenseamento (GCR)
3. Gabinete Provincial do Receseamento (GPR)
4. Gabinete Distrital do Recenseamento (GDR)
5. Gabinete do Recenseamento do Posto Administrativo (GRPA)
6. Orgão Executivo do Recenseamento (OER)

Gabinete Central do Recenseamento (GCR)

This cabinet was composed of nine working committees, namely:

- Methods and Analysis Committee
- Training Commission
- Data Processing Commission
- Cartography Commission
- Communication and Social Mobilization
- Commission administration and finance committee
- Logistics and operations commission
- Census security commission

Census Stages

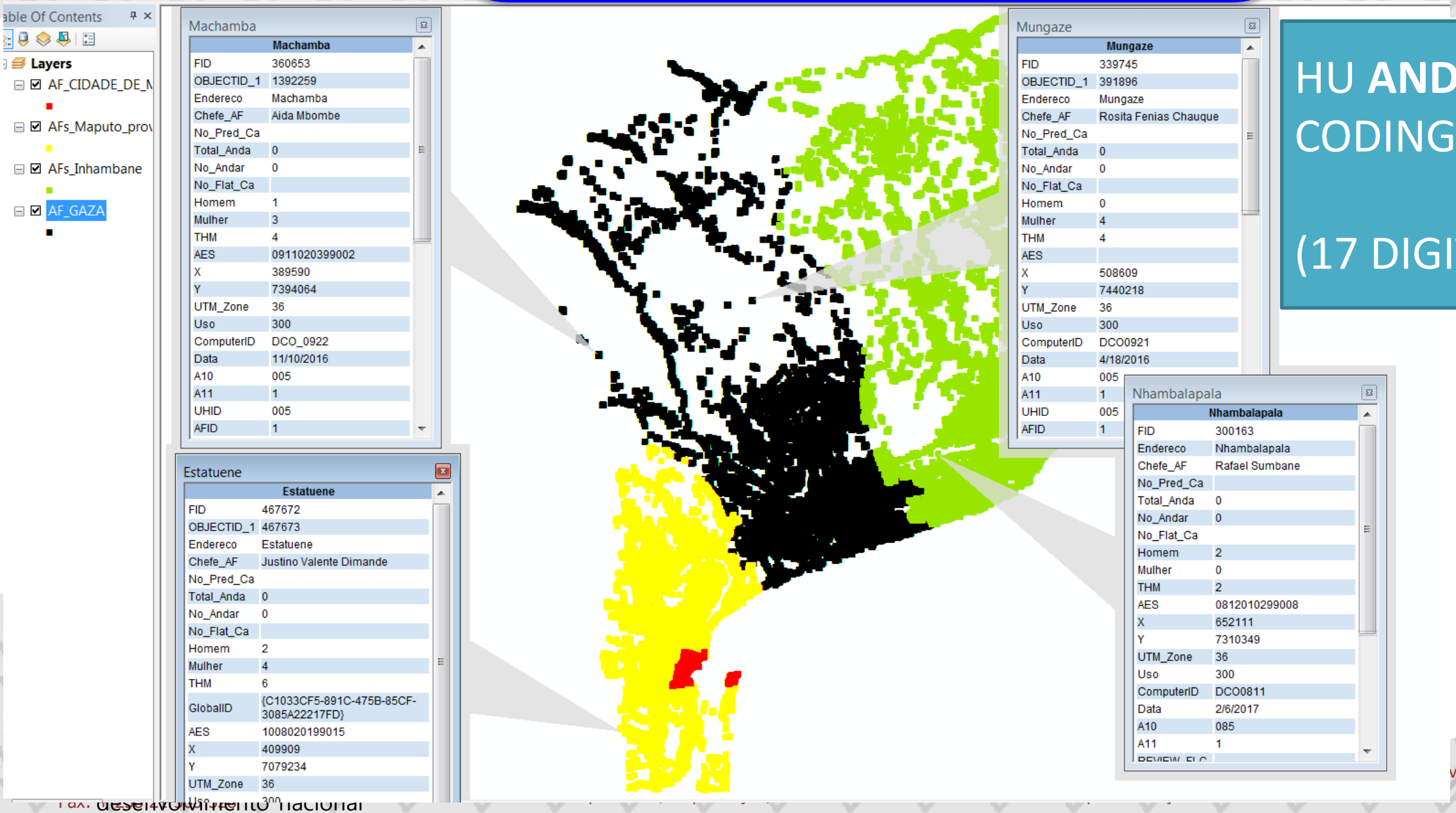
Cartographic update

It consisted of updating *the administrative boundaries, dividing the territory into enumeration areas* (work area for each census agent), and surveying the geographical coordinates of all households in the dwelling.

Coding of each household in the dwelling

INSTITUTO NACIONAL DE ESTATÍASTICA

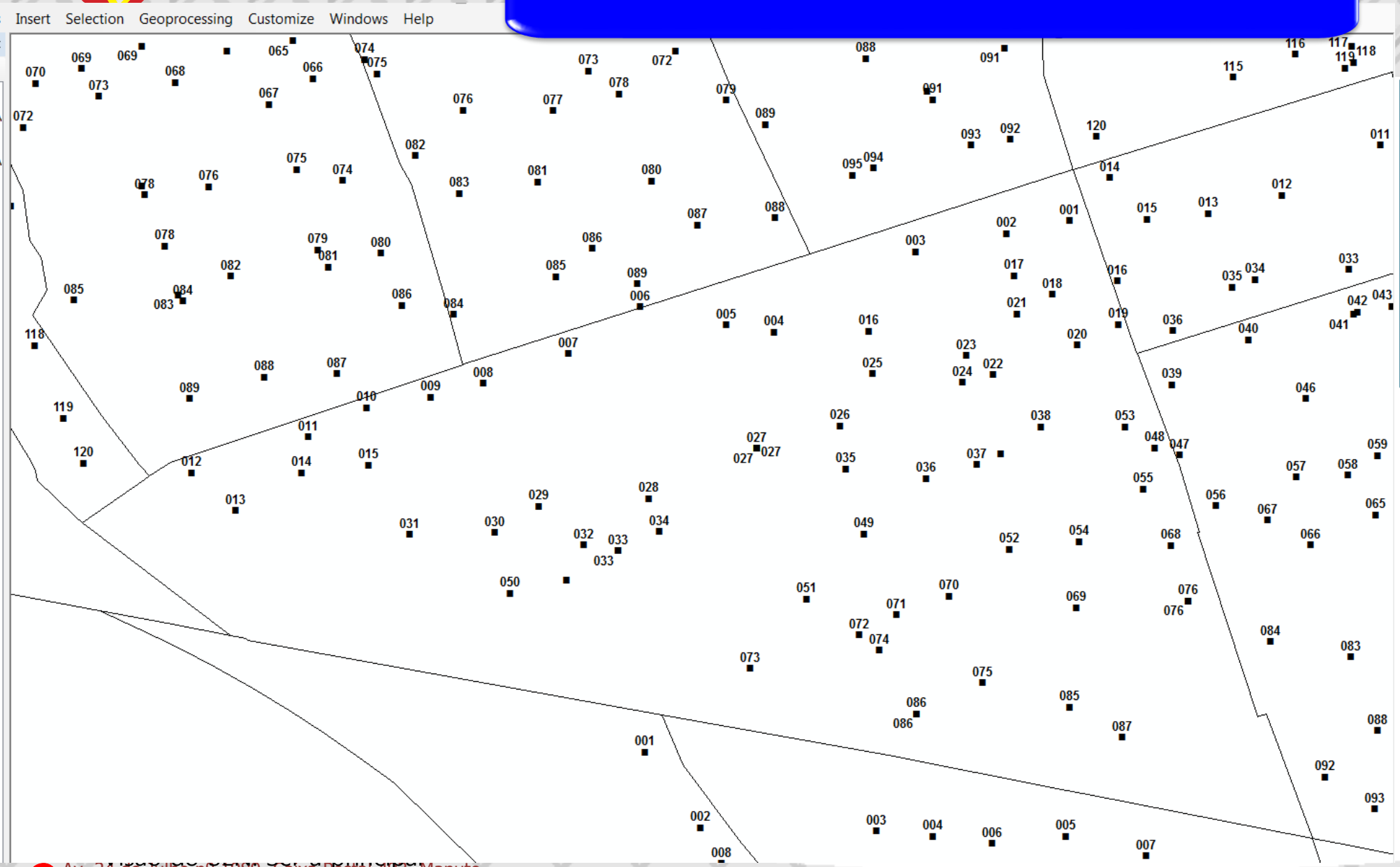
CENSO DE 2017



HU **AND** AF CODING

(17 DIGITS)

CENSO DE 2017



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referência estatística para o desenvolvimento nacional

Visão do SEN: Ser um Sistema Estatístico Nacional moderno, sustentável e credível, que cumpre os mais elevados padrões qualidade, na produção, análise e difusão de estatísticas oficiais que satisfaça as necessidades dos utilizadores

CODING SYSTEM AND CONNECTIVITY BETWEEN THE CENSUS QUESTIONNAIRE AND DWELLING POINTS

PAÍS

Província

Distrito

Posto Administrativo

Localidade (rural e vilas)

N1

N2

Enumeration Area

Bairros (cidades)

N1

N2

Enumeration Area

00	Administrativo
000	Estatística

AE ID

00 00 00 00 00 000

AEID + UHID+AFID

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ID FOR BULLETIN CONNECTIVITY

SECÇÃO A: LOCALIZAÇÃO GEOGRÁFICA DA HABITAÇÃO

A1. Área de Residência Urbano ☐ Rural ☐

A2. Província	**A3**. Distrito	**A4**.Posto Administrativo	**A5**.Localidade / Vila	**A6**.Bairro	**A7**.Área de Enumeração	**A8**.Povoação / Unid.Comunal / Quarteirão	**A9**.Zona / Quarteirão	Nº da Casa	Nº de Agregados nesta casa	Nº deste Agregado Familiar

Povoação / Unid. Comunal / Quarteirão

Pre-test (Pilot Census)

A sample of two areas was selected, one urban and the other rural, in which a complete Census was carried out with the aim of:

- Test all the methodology that would be used in the Census itself;
- Test the data capture and treatment model.
- Review of methodology collection and validation instruments

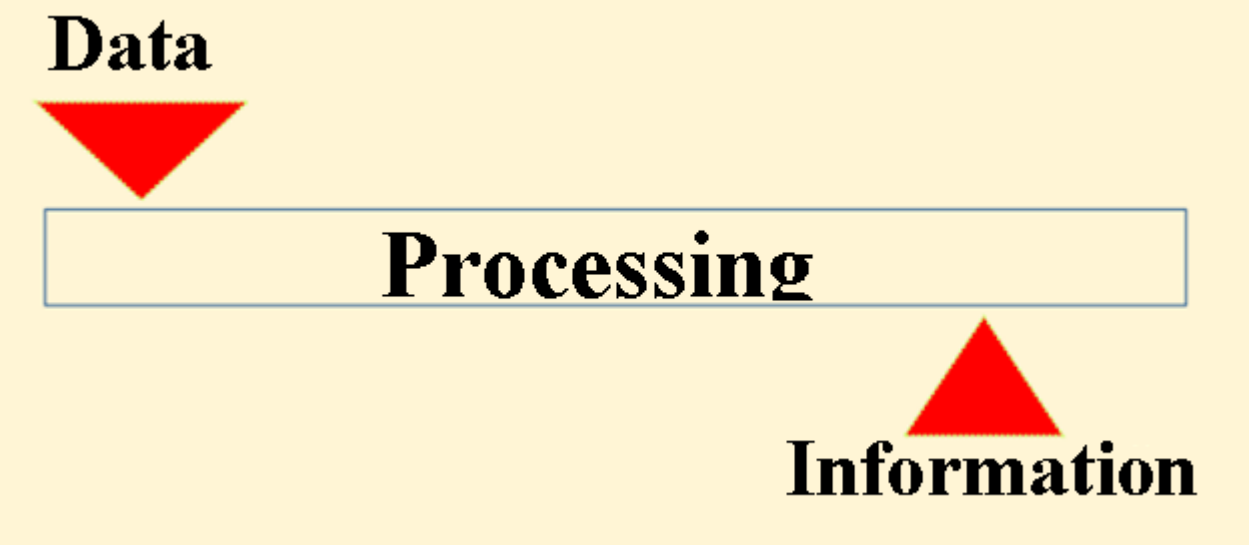
THE CENSUS

- Training of agents following the methodology of cascades in 3 levels (train the trainers of the trainers of the agents);
- Collection of paper data;
- Operational Control System (SCO);
- Calculation of preliminary results by combining data from the SCO system with the census agent's tabulation sheets;
- Optical reading and automatic character recognition
- Auto-coding of open-ended question answers

DATA PROCESSING

Data processing consisted of:

- ❑ Digitizing census bulletins
- ❑ Converting images to data
- ❑ Data "Cleaning"
- ❑ Production of tables – Tabulation



- **Operation duration:** 12 months
- **Personnel involved in processing**: About 800 people

DATA PROCESSING

Stages

i. Preparation of Census Bulletins (Questionnaires)

ii. Cut of Questionnaires

iii. Scanning(Scanner / Character recognition)

iv. Quality control and validation

v. Export to database (from the Questionnaire Processing System that uses ORACLE Database for CSPro

vi. manual coding of expressions (languages, religions, occupations and geographic location)

vii. Quality control

viii. Automatic data correction (handling of non-responses, invalid values, inconsistent values, and others), based on the Specifications Manual.

ix. data validation

DATA PROCESSING

Technology Used

- **Optical reading (DATA INPUT)** for the following reasons:
  - ✓ Significant reduction of data entry time;
  - ✓ Error reduction compared to manual data entry;
  - ✓ Greater credibility and reliability to the process;
  - ✓ Follow-up to United Nations recommendations and standards;
  - ✓ Horizontal monitoring of technological modernization and good data processing practices.
- **Laptops, Desktops and Tablets**

DATA PROCESSING

Challenges

- **Bulletin protection:** Actions were taken to avoid damage to the bulletins by rain, humidity, dust, erasures, among others.
- **Data security:** Backups were performed systematically and archived remotely.
- **Operational control:** Web system was developed to manage and control the flow of bulletins, between the various stages of data processing.
- **Quality control:** Manual typing (double entry) of a sample (5%) of bulletins.

Obrigado

Website: www.ine.gov.mz

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