



Seminar on Population and Housing Census Practices of OIC Member Countries

POPULATION AND HOUSING CENSUS MALAYSIA 2010 NEW APPROACHES AND TECHNOLOGICAL ADVANCEMENTS

PRESENTER:

**HAJI ISMAIL BIN HAJI YUSOFF
DEPARTMENT OF STATISTICS MALAYSIA
(e-mail: ismaily@stats.gov.my)**

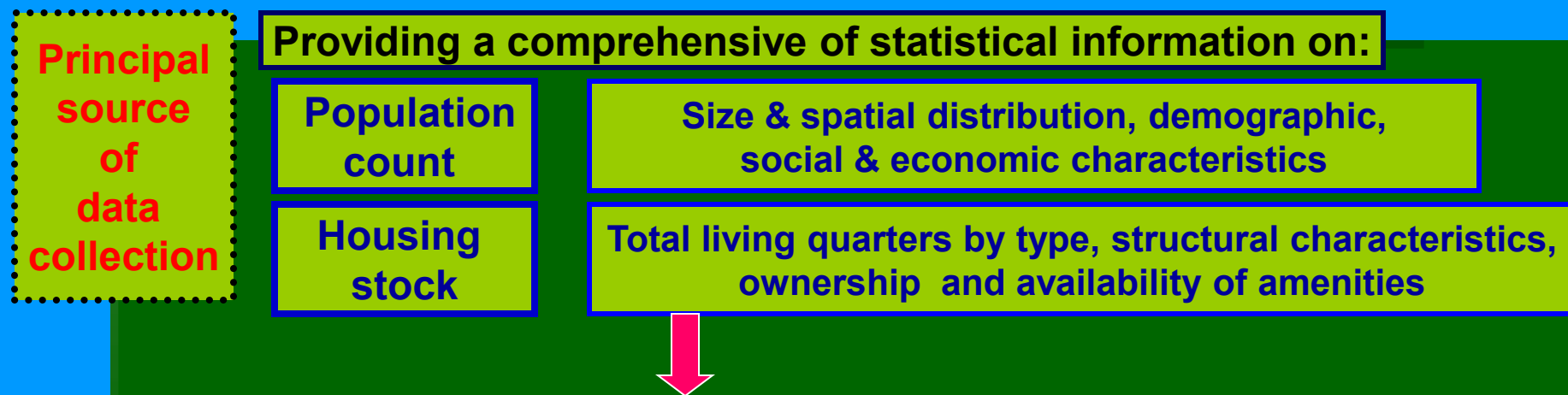
**6-8 March 2013
SESRIC
Ankara, Turkey.**

CONTENT:

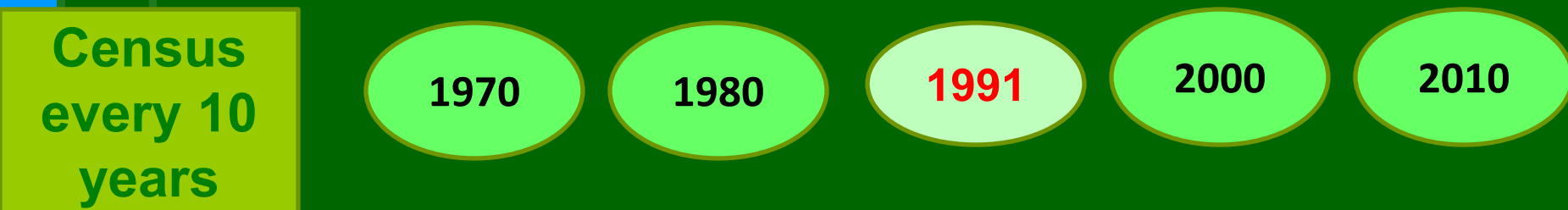
- i. Introduction
- ii. Objectives
- iii. Development
- iv. Products
- v. Challenges & Way Forward

i. Introduction

- DOSM main agency in generating statistical data for the country.
- Population & Housing Census 2010 is the 5th Census.



Key inputs for policy review and formulation, academicians, researchers and others in both government and private agency



Legal basis in undertaking of the Census is provided under Census Act 1960 (revised 1969)

ii. Objectives

WHY THE NEED FOR NEW APPROACHES & TECHNOLOGICAL ADVANCEMENTS?

- In view of the current and emerging needs where privacy , public perception & confidentiality is of high concern
- To keep abreast with the emergence of new technology
- A continuous and ever increasing demand for data from where there is a need to check the data relevance, quality , cost, timeliness of delivery and products (ie . satisfaction of user needs)

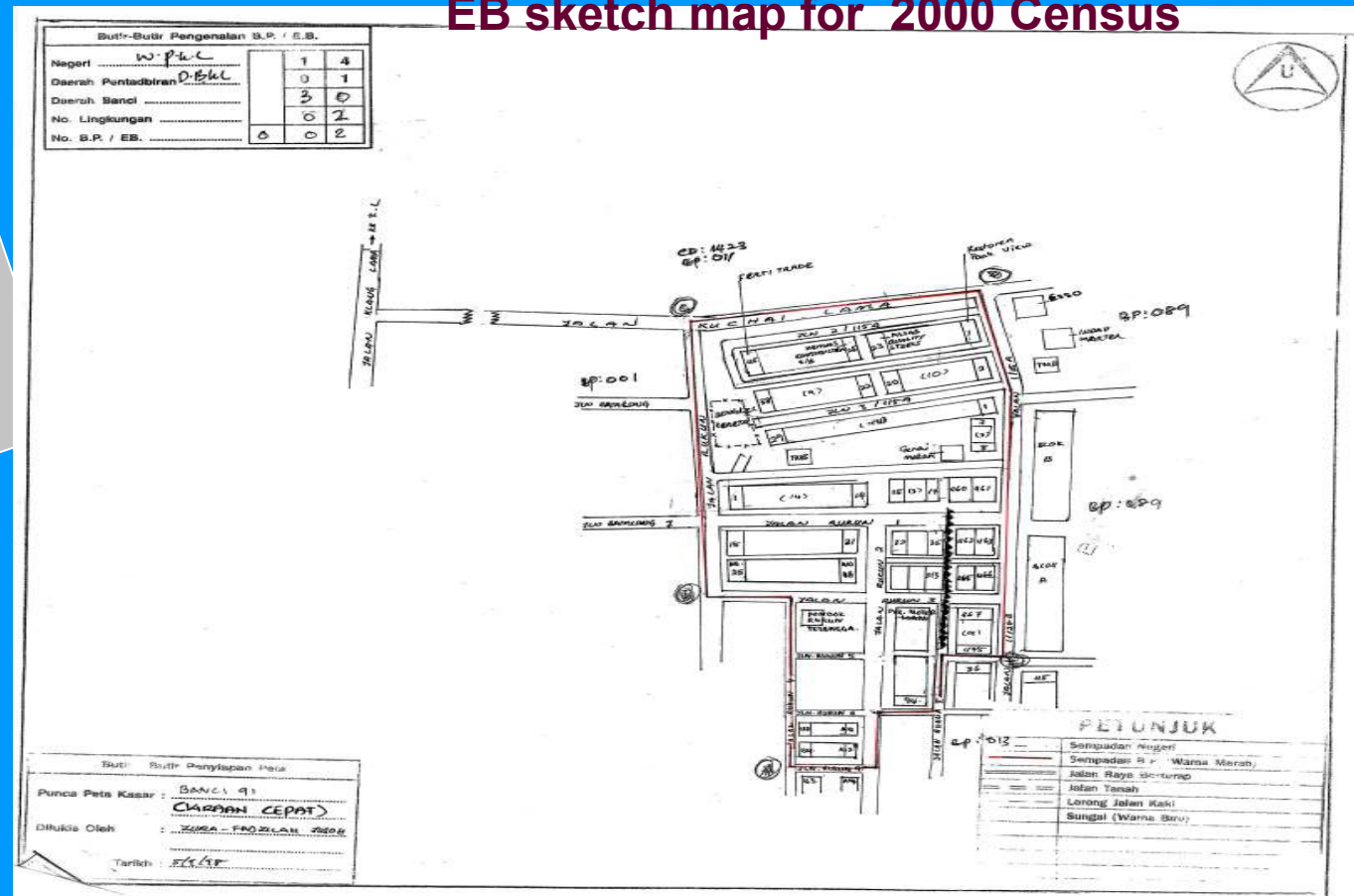
iii. Development

1. Technology advancement in Mapping

Country divided into blocks (EBs) – 74,756. It encompasses the administrative & statistical boundaries. The purpose is complete area coverage, assist in data collection and monitoring various level of Census activities

EB sketch map for 2000 Census

Hand drawn manual sketch map



iii. Development (cont'd)

Digital map -2010

Enhancement of GIS system expanded from head office to state.

The screenshot shows a GIS application window with a map on the left and an attribute table on the right. The map displays various land parcels, some highlighted in green and others in yellow, with labels like '033' and '034'. The attribute table, titled 'Attributes of BP2000', lists data for 71 records. The columns are: NGDBBP00, NEGERI, NAMADP, MUKIM, PENDUDUK, JUM_TK, DBBP, and klas_BP. The table shows a mix of residential types such as 'Kondominium', 'BP Biasa', and 'Hotel Besar'.

NGDBBP00	NEGERI	NAMADP	MUKIM	PENDUDUK	JUM_TK	DBBP	klas_BP
1043024	Selangor	Petaling	Damansara	384	87	43024	Kondominium
1043025	Selangor	Petaling	Damansara	618	123	43025	BP Biasa
1043026	Selangor	Petaling	Damansara	348	72	43026	Hotel Besar
1043027	Selangor	Petaling	Damansara	401	75	43027	BP Biasa
1043028	Selangor	Petaling	Damansara	787	143	43028	BP Biasa
1043029	Selangor	Petaling	Damansara	587	103	43029	Hotel Besar
1043030	Selangor	Petaling	Damansara	813	148	43030	Hotel Besar
1043031	Selangor	Petaling	Damansara	399	70	43031	BP Biasa
1043032	Selangor	Petaling	Damansara	352	75	43032	Hotel Besar
1043033	Selangor	Petaling	Damansara	561	108	43033	Kondominium
1043034	Selangor	Petaling	Damansara	340	61	43034	BP Biasa
1043035	Selangor	Petaling	Damansara	607	127	43035	BP Biasa
1043036	Selangor	Petaling	Damansara	755	129	43036	BP Biasa
1043037A	Selangor	Petaling	Damansara	406	75	43037	BP Biasa
1043037B	Selangor	Petaling	Damansara	406	75	43037	BP Biasa
1043038A	Selangor	Petaling	Damansara	508	91	43038	BP Berisiko
1043038B	Selangor	Petaling	Damansara	508	91	43038	BP Biasa
1043039	Selangor	Petaling	Damansara	17	6	43039	BP Biasa
1043040	Selangor	Petaling	Damansara	28	7	43040	BP Biasa
1043041	Selangor	Petaling	Damansara	451	136	43041	BP Biasa
1043042	Selangor	Petaling	Damansara	479	120	43042	BP Biasa
1043043	Selangor	Petaling	Damansara	627	121	43043	BP Biasa
1043044	Selangor	Petaling	Damansara	434	107	43044	BP Biasa
1043045	Selangor	Petaling	Damansara	460	99	43045	BP Biasa
1043046	Selangor	Petaling	Damansara	552	110	43046	BP Biasa

Spatial data joined with attribute. in 2010 census additional specification levels for building unit & living quarters was included apart from spatial data of State boundary, AD/mukim, cd and EB maps

GIS ADDED VALUE -DOSM products-small area statistics

User's needs are met

iii. Development (cont'd)

Strength in GIS development - DOSM

- **72 % of digital maps used in urban areas .**
- **Enable the enumerators to identify their coverage area with accuracy and ease.**
- **Extensive training was provided for the staff – nurturing human capital development & future expertise in GIS operations in the making.**
- **Making DOSM a center of reference in GIS development .**

2. Adoption of new technology in data processing

- Voluminous questionnaires for the first time in a census taking was scanned & processed using the intelligent character recognition (ICR) technology.
- Coding process (CAC) and quality checks was conducted on-screen.

STRENGTH

- Time taken to process reduced & less manpower needed compared to manual
- CAC improves coding activities by enhancing the quality of operations , reducing coding errors and speeding up the coding process.

3. Approaches and Methodology

- Multi-modal data collection strategy was implemented:
 - Face to face interview
 - Self enumeration
 - hard copy form - drop off pick up
 - electronic form (on line) - e-census

The screenshot shows the homepage of the e-Census portal. At the top, there is a banner with the Malaysian coat of arms, the text 'BANCI PENDUDUK DAN PERUMAHAN MALAYSIA 2010', and the logo for 'Banci Penggerak Wawasan Negara'. Below the banner is a navigation bar with icons for 'Login Kali Pertama', 'Login', 'Lupa Kata Laluan', 'Bantuan & Garis Panduan', 'Cadangan', and 'Info Banci'. A central message reads 'SELAMAT DATANG KE e-Census'. To the right, there is a clock showing the date 'Tarikh: 13-6-2010' and a hotline number '1-800-88-7828'. Below the navigation bar, there are two main sections: 'Langkah 1: Pendaftaran Pengguna baru' and 'Langkah 2: Login'. The 'Langkah 1' section includes instructions on how to obtain identification forms and a list of steps: 'Klik Login Kali Pertama' and 'Masukkan butir-butir pengenalan, alamat e-mel dan kata laluan.' The 'Langkah 2' section includes 'Klik Login' and 'Masukkan alamat e-mel dan kata laluan anda untuk mengakses e-Census.' A 'PERHATIAN!' section notes that identification forms should be obtained from the census taker. On the right side, there are two calendar grids for 'JULAI' and 'OGOS' with days of the week (A, I, S, R, K, J, S) and dates. At the bottom, there is a footer with the text 'Bantuan | Hakcipta Terpelihara. © 2010 Bahagian Pengurusan Maklumat, Jabatan Perangkaan Malaysia | www.statistic.gov.my |'.

STRENGTH

- concerns of privacy & confidentiality of personal information was safe guarded
- online (internet) offers respondents more flexibility in terms of not having to complete the census form at one sitting.

4. Period

- **LENGTHENED FROM 2 (2000) TO 6 WEEKS (2010) CENSUS.**
 - The budget for the 2010 Census was RM 202.2 mil.
 - For complete coverage (ie. 74,756 EB's) there was the need to increase the length of census taking.
 - Each enumerator given 3 EBs (6 weeks)
 - Each supervisor – 7 enumerators (21 EBs)

2010 CENSUS COVERED

POPULATION :	27.8 million
HOUSEHOLDS :	6.3 million
LIVING QUARTERS:	7.3 million

5. Publicity

- Much more aggressive measures were taken when compared to previous census.
- Need to increase the awareness of census taking
- Implemented through various print & electronic media
- Social network facebook, census portal , sms
- Utilities bills (maxis, water & electricity bills)
- Set up of call centre with free toll lines
- Census logo & a song competition was launched (internal)

STRENGTH

- The extensive publicity managed to gauge the cooperation of the population to respond well during the census.
- Cooperation from agency in terms of logistic & publicity.

6. Monitoring Field Operations

- The adoption of new methods & technology witnessed for the first time on-line monitoring process in field enumeration activity known as e-RKL was developed in-house census approaches.

STRENGTH

- Able to view the progress as well as bottleneck areas.
- Allows census officers to strategically plan, make assignments, identify problem areas and implement remedial actions .
- It was cost efficient which is in line to the concept of Green ICT and also enabled in the preparation of the preliminary count report (Administrative district & State level).

7. Inter Agency Collaboration

- **Standard codes & classification – states; marital status, ethnicity & religion among inter agency technical committee headed by DOSM.**
- **Questionnaire –inter agency needs- eg. Type of housing units, income, agriculture etc.**

STRENGTH

Strengthening the sharing of information between inter agency.

8. DATA DISSEMINATION

- Preliminary count report – includes information on count of Living Quarters, Households and Population released in December 2010.
- Hardcopy & softcopy (Cd rom)
- Publication uploaded in Census Portal Website
- Specified area request made available upon request.

STRENGTH

Able to fulfill the increasing demand of user's need.

9. DEVELOPMENT OF CENTRAL REPOSITORY POPULATION DATA BASE

- DOSM strategic plan , census metadata , census data and GIS will be integrated in the national enterprise wide statistical system (NEWSS).
- NEWSS a platform for collection, processing and dissemination of statistics.
- 1991,2000 & 2010 census data is kept under NEWSS repository which will harness future data request

STRENGTH

A one stop centre has been created to cater for all user's need.

1V. PRODUCTS

Three reports have been published for the census 2010 and is currently made available:

- a. Preliminary Count Report
- b. Population Distribution & Basic Demography Characteristics
- c. Population distribution by Local Authority Areas and Mukim

To be published in 2013

- d. Population Profile by Parliament and State Legislative Assembly Areas
- e. Characteristics of Living Quarters
- f. Education and Social Characteristics of the Population
- g. Economic characteristics of the Population

OTHERS

Detailed report by various topics (monograph series) will be subsequently scheduled to be released to the public in stages from 2013 till 2014.

V. CHALLENGES & WAY FORWARD

- Leveraging on the success and lessons learned from 2010 census, DOSM need to look into strategic plans for the next 2020 census. Some areas where attention need to be focused are the approach in census taking, the type & number of questions to be asked.
- Extend the use of e-census coverage .
- Strengthening the GIS Portal to meet the ever growing demands of user needs, provide support and continuous upgrading of GIS software, human capital training in latest GIS & ICT development tools.
- As the main provider of statistics in the country , DOSM need to adopt, adapt & take measures in making census easier & results more useful while upholding the integrity and reputation to produce detailed , quality & timely statistics.

**Thank you
for
your attention.**