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ABOUT THE VIETNAM'S 1999 POPULATION AND HOUSING CENSUS

by

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In Vietnam, census is the best way to provide a comprehensive collection of information on characteristics and living conditions of the population. It forms base for evaluating the performance of the socio-economic renovation program of the country, especially the strategy on population and family planning. For this reason on 9 June 1998 the Prime Minister of Vietnam issued Decision No. 106/1998/QĐ-TTg for the conduct of a national population and housing census at 0 hours on 1 April 1999. This is the third national census in Vietnam following a 10-year cycle since 1979. This paper provides an outline of the 1999 population and housing census in Vietnam.

### Coverage of the census

A census is characterised by its attempt to cover all persons. As in previous censuses, the 1999 census enumerated all persons defined as usual residents in Vietnam at the time of the census, which was determined to be at midnight between 31 March and 1 April 1999. In detail, these included:

- All Vietnamese and foreigners (excluding those working at foreign embassies, diplomatic corps and their dependants) usually residing in Vietnam by the time of the census;
- Vietnamese who were authorised to go abroad for a certain period of time, and by the time of the census they were still in overseas;
- Inhabited dwellings throughout Vietnam's territory.

As in the 1999 census, household was used as enumeration unit, the way of conducting the census was to assign each person to a household according to usual resident rules. In most cases it was straightforward to determine a person's household of usual residence. But an elaborate set of rules was prepared to ensure that even in the most complex cases, a person who was determined to be resident in Vietnam was properly assigned to a household and included in the census. Essentially the rules were framed with reference to a 6-month period.

### Scope of the census

The 1999 census consists of three integrated data collection components: the core population census covering the entire population; the census of housing covering dwellings; and a sample survey covering births and deaths with a size of approximately three percent of the population. Below is a summary of the key information covered by

each of these components:

- Contents of the core population census
  1. Size and distribution of the population;
  2. Ethnicity and religion of the population;
  3. Internal migration levels and trends;
  4. Educational levels, technical and professional qualifications, and literacy;
  5. Marital status of the population;
  6. Economic characteristics of the population;
- Sample survey
  7. Birth, death and population growth rates;
- Housing census
  8. Housing situation;
  9. Household facilities and amenities;

Compared to the 1989 population census, the 1999 census collected more comprehensive socio-economic information. Beside the information that is similar to earlier censuses including gender, age, ethnicity, education level, marital status, demographic characteristics and economic activity, the 1999 census collected information on a few more indicators in order to get a more comprehensive picture of religion, housing, migration, household amenities such as use of electricity, clean water and ownership of a TV or radio. Of particular interest is the information collected on means of production especially in rural areas to facilitate research on the process of industrialisation and modernisation of agriculture and rural areas as well as the level of cultural consumption and household environmental conditions in rural areas.

Two questionnaires were used in the 1999 census, similar to the 1989 population census, but with a few changes in the design of contents and format. The first is the short form used to interview 97 percent of the population. The second is the long form used to interview the remaining three percent of the population. Questions in the long form are the same as in the short form, but additional questions are asked on births and deaths.

### Sampling design

The sample for the survey component was randomly selected to be representative of the country and provincial level, and of the urban and rural areas. For the core population and housing components, census data, once processed, could be generated for each administrative area (down to the lowest administrative level: commune/wards), as well as for small sub-groups of the population, such as minority groups or specific religions.

Based on estimates of expected sampling errors and experience gathered from the 1989 population census, a sample size of approximately three percent of the total population was selected for the population and housing census 1 April, 1999. This sample size allowed precise estimation at the national and regional levels, and tolerably good results for each province and municipality.

Sample size was determined on the basis of representation of each of the 61 provinces and municipalities, cross-classified into urban and rural areas. To ensure this representation a stratified cluster sample design was used. Sixty-one provinces and municipalities constituted the main clusters with two sub-clusters within each representing rural and urban areas. Thus, the sample size involved the formation of 122 area sub-samples (61 provinces x 2 areas). To guarantee reliability of data for all sub-samples in the estimation of demographic, labour force and housing characteristics, a minimum sample of at least 20,000 per sub-cluster was set to provide sufficient reliability at the lowest level of disaggregation.

### Pretest and pilot census

These are major field tests, which were conducted during the census preparation. The first pre-test was held in December 1997 in three provinces, which generally represented the geographic and economic regions in Vietnam. Most of the issues related to the questionnaires and topics were tested. Results of the pre-test reviewed and evaluated and provided basis for improving the census questionnaires and manuals.

The pilot census was undertaken in August and September 1998 in Binh Dinh, a province in the South Central Coast. Fifty-two enumeration areas with a total population of about 25.000 inhabitants were chosen for the pilot census. The pilot census provided an opportunity to review all management and logistical plans (especially the control of field procedures such as mapping, household listing, enumeration and the recruitment and training of field staff), and the subsequent control over the flows of documents during checking and processing.. At a later date the results of the pilot census were processed to draw problems in data entry, editing and to initiate the design of the full

census processing system.

### Mapping and household listing

A successful census requires that each enumerator should have complete information about the area to be covered and the location of each household to be interviewed. In the 1999 census, the main mapping field work was started in 1 October 1998 and continued until March 1999. The country was divided into enumeration areas, each of which was then assigned to an enumerator for data collection. Two types of maps, base maps and enumeration area maps, were created. Base maps were prepared of every commune/ward – lowest administrative unit in Vietnam, and each base map showed the location of all enumeration areas in that commune/ward. Each enumeration area map showed the EA boundaries, streets/roads, lanes, canals, ponds, landmarks, location of every house to be visited by enumerators and other physical features. Together with this map, each enumeration area had to prepare a list of households locating within boundaries of the EA. Unlike previous censuses, all these maps and lists were sent to GSO, where they have been maintaining for further uses.

### Census publicity

In the 1999 census, an extensive and intensive census publicity campaign was designed and undertaken to:

(i) obtain the support and collaboration of all government institutions, mass media and mass organisations by creating understanding with regard to the importance and objectives of the census; and

(ii) make the people throughout Vietnam aware of the population census, its purposes and operations, further to encourage hospitality to, and close co-operation with census takers.

This campaign consisted of three phases: production of census communication materials, distribution of these materials throughout the country, and intensive communication campaign. All available media channels were mobilised to support the 1999 census communication campaign.

### Fieldwork and quality control

In the 1999 census, the canvassing method was adopted. The enumeration started on 1 April 1999 and lasted until 7 April in enumeration areas with complete

enumeration, and until 9 April in areas with sample enumeration.

For carrying out the task of census data collection and supervision, about 250,000 field workers were recruited and trained. The recruitment of fieldworkers was based on the basis of their education, age and health. In fact this was subject to actual condition in each of the localities.

Training was conducted in a three-stage programme. In the first stage, the Central Census Committee held courses to train master trainers for provincial level. Later on, these trainers organised courses to train trainers for district level. The training of field workers (enumerators, supervisors) mainly conducted by district trainers was the third stage of this programme.

### Data processing

Data processing was begun in mid-May 1999, immediately after the field work, and continued until the end of 2000. In the initial stage of data processing the three percent sample questionnaires were checked and coded before mid-June 1999, the manual tabulation of the preliminary count was completed and results released in late July 1999. By late July 1999, data entry and data tabulation of the three percent sample questionnaires was completed and results released in late 1999; by December 1999, the remaining 97 percent of questionnaires were checked and coded; during 2000 data processing was completed and tabulations performed on these remaining questionnaires (97 percent) and the complete Census results were released by the end of 2000.

Data entry for the census was decentralised to nine regional computer centres (compared with three for the 1989 census). These centres are almost equally distributed among the major regions in Vietnam: North, Central and South. Among these nine regional centres that at the GSO (Central Data Processing Centre - CDPC) has played the leading role. In addition to carrying out data entry, this Centre was assigned the following important tasks: (i) develop software packages used for census data entry, data processing and data tabulation; (ii) prepare manuals used for data entry and correction, and the monitoring, supervision and management of data entry; and (iii) monitor and supervise census data entry at the other eight regional centres.

Each centre established a computer network for census data processing with a HP LH3 server and 12 to 53 PCs. For the entire country, 240 PCs were used for processing and 10 servers (two in the CDPC). A total of 450 data entry operators were engaged to work in two shifts. The network in each regional computer centres is connected to the CDPC network through a telephone dial-up system. Thus, as data entry was completed in each province, data files were transferred to the CDPC server. All editing and tabulation

operations were undertaken at the CDPC.

### Data dissemination and utilisation

In the 1999 census, efforts were made to provide census products and services to the public as much and easy as possible. Thanks to the rapid development in computer technology, apart from the traditional mode of census data dissemination through printed publications, electronic media such as CD-ROM, data bases, were being used to release the 1999 census results. Following is a list of main products, which were produced using the 1999 census results.

#### *Publications:*

1. Population and Housing Census Vietnam 1999. Preliminary Results. Hanoi, 9 – 1999
2. Population and Housing Census Vietnam 1999. Sample Results. Hanoi, 2000
3. Population and Housing Census Vietnam 1999. Completed Census Results. Hanoi, 2001
4. General Statistical Office. Report on Results of Population Projections, Vietnam, 1999-2024. Hanoi, 2000 (*using 3% sample results*)
5. General Statistical Office. Results of Population Projections for Whole Country, Geographic Regions and 61 Provinces/Cities, Vietnam, 1999-2024. Hanoi, 2001 (*using completed census data*)
6. Population and Housing Census Vietnam 1999. Monograph on Marriage, Fertility and Mortality in Vietnam: Levels, Trends and Differentials. Hanoi, 2001
7. Population and Housing Census Vietnam 1999. Monograph on Internal Migration and Urbanisation in Vietnam. Hanoi, 2001
8. Population and Housing Census Vietnam 1999. Monograph on Labour Force and Employment in Vietnam. Hanoi, 2002 (*not printed yet*)

#### *Computer media:*

9. Population and Housing Census Vietnam 1999. The CD-ROM Data & Results from the 3% Sample of the Population & Housing Census 1.4.1999. Hanoi, 8 – 2000
10. Population and Housing Census Vietnam 1999. The CD-ROM Completed Results from the Population & Housing Census 1.4.1999. Hanoi, 8 – 2001 (*Macro data*)

11. Population and Housing Census Vietnam 1999. The CD-ROM Data & Results from the Population & Housing Census 1.4.1999. Province: (name of province). Hanoi, 8 - 2001 (*both Macro and Micro data*)

12. Population and Housing Census Vietnam 1999. The CD-ROM PopMap Application of the Population & Housing Census 1.4.1999. Hanoi, 2001

The GSO also established two data bases of the census results, one on 3% sample data and results and the other on completed census results. While the former contains both micro and macro data files of the 3% sample results, the latter is a macro data file of the completed census results. However, by now these data bases are just operating within the GSONet – a local area network (LAN).

Except the computer media no. 11, all other publications and products are widely circulated for public use. It appears that all publications and products once circulated were widely welcome by data users within and outside Vietnam. This partly reflects the usefulness of the census data. Within the statistic system, we would like to emphasise the following:

- The system of maps and lists described above are being used as main frame for drawing up samples for various kinds of surveys. Notably among these samples are those which were designed and drawn for the National Health Survey 2001-2002 (funded by the World Bank), Survey on Labour Force and Employment 2001 (conducted by the Ministry of Labour, Invalid and Social Affairs), and the Household Survey on Living Standard 2002 (conducted by GSO).

- In this census, questions on the number of children ever-born and surviving were asked to women in reproductive age on a 3% sample. A question on any children born during the last one year was also asked to those women in the same sample. Such data were used to derive reliable estimates of fertility and mortality indicators which formed base for evaluating the success of the national programme on population and family planning. As you may know Vietnam awarded UN medal in 2000 because of this very successful population and family planning programme.

- Analyses presented in the above-mentioned publications provided us with information on trends in population growth, changes in the age and sex structure of the population, the course of fertility, mortality, migration and urbanisation, etc. They also helped us to understand the changes in the Vietnam's occupational and industrial composition, in its levels of living and other cultural characteristics such as ethnicity, and religions over the intercensal period 1989-1999.

- The 1999 census data were used as main source of information for UNDP

Hanoi to write the Report on Human Development in Vietnam in 2001. The census data were also used to make population projections, which were presented in publication no. 4 and 5. One of the first main uses of these results was to serve the National Assembly in estimating the number of voters for the National Assembly Election of 19 May 2002.

### Concluding remarks

The success of the 1999 population and housing census is to provide data users with a reliable data source on size, distribution, and characteristics of the population of Vietnam. Furthermore, in this census the computer technology was applied to make the release of the 1999 census results more diverse. Thus, it becomes a potential source of population data required for administrative purposes and for many aspects of social and economic planning and research. Efforts were made in promoting the utilisation and analysis of the 1999 census data, there still exit a large room for in-depth analysis and studies. The GSO is happy in receiving any assistance, co-operation and collaboration from other countries/research institutions in further exploiting and utilising this valuable data source.

Hanoi, 31 May 2002