

**NATIONAL STATISTICAL  
SERVICE OF GREECE**

**POPULATION AND HOUSING  
CENSUS 2001**

Athens, February 2003

## **Greek Population, housing and buildings Censuses**

### **Introduction**

The last population census in Greece was conducted, as also in previous censuses, in one day, on Sunday the 18<sup>th</sup> of March 2001, in the whole country. Simultaneously with the Population Census, the Housing Census was conducted, while the Buildings' Census had preceded, in the time interval December 2000-February 2001.

The Population Census of 18<sup>th</sup> March 2001 was the 29<sup>th</sup> in a row. The first census was conducted in the year 1828.

The Population Census was done following the decentralized system, with basic organizational unit the prefectures of the state. The Census was directed by the staff, the Director of the Division in charge, as well as other co-responsible Directors of the NSSG, which consisted of a working group, in all the phases of pre-census, census and post-census works.

### **Stages of Work**

In every prefecture of the country, with the exception of the prefectures of Attica and Thessaloniki, a census supervisor who was a higher executive of our Service and who also has the responsibility for all works in the prefecture.

Prefectures of Attica and Thessaloniki, due to their high percentage (almost 40%) in the country's population, constituted 37 and 4 supervisions, respectively. Each supervision was divided –based on the number of houses they include- in proportional number of sectors, also sub-divided in 14 to 18 sections. Each section included 30 to 35 inhabited residences, so that the enumerators would be able to complete, within a day on 18 March 2001, all residences' questionnaires, as well as the questionnaires of all persons residing in them.

Totally 10.900 persons in charge of sectors and 165.000 enumerators –regular, reserves and specials for collective households of 50 or more persons- were used in the last census. Also 1.420 interpreters accompanied enumerators in the cases of foreigners not speaking the Greek language. For the best conduction of the census and in order to properly divide the sectors into sections, during the preparatory works, pre-measurement of houses took place, in towns with population 1000 inhabitants and over. During this stage of work the blocks were defined in a way that the censuses' data, as well as the data of all other surveys, are easily presented on the map. The preparatory works of the census, also included the definition of the independent settlements (areas), that is the revision of all settlements/areas,

according to the conditions, a group of houses/dwellings should meet in order to be considered as independent settlement. Additionally, the denomination of streets and squares was done, as well as the enumeration of buildings and the definition of the administrative borders of municipalities and communes. Also the updating of maps with the latest changes, which are afterwards transferred to the digital charting base.

With the population census, all persons found within the Greek territory boundaries on Saturday night at 24.00 a.m. to Sunday 18<sup>th</sup> March 2001, were recorded, independently of their nationality and citizenship, their being permanent residents of Greece, or living temporarily in the country, as visitors, members of diplomatic or other missions. This population consists the *de facto Population* of the country. Apart from the *de facto* population arising from the Census' data, *Permanent* and *de jure Population* will result.

*Permanent Population* is the population based on the area of permanent or usual residence. *De jure Population* is the population according to the persons registered in the municipality registers. The distribution of Parliament seats is based on the *de jure* population.

### Questionnaires

The questionnaires used in the Population Census were translated in 5 different languages, English, French, German, Russian and Albanian. Different questionnaires were prepared for private households and collective ones, as well as for diplomatic and military missions in Greece. The translated questionnaires used by the enumerators were sent, before the census' conduction, for information, to migrants' societies, clubs or associations. In the two questionnaires of the Census, for the first time, were included questions concerning migrants, due to the fact that Greece, has lately been an attraction pole for such population groups.

### Communicational Policy

The communicational policy for the Censuses was based on :

- Television spots (some of them addressed only to foreigners)
- Broadcasting radio spots
- Posters, placed in Public Services, Organizations, Banks, Hospitals etc., as well as on the means of public transportation.
- Relative indications on Automatic Transaction Machines of Banks
- Informational letters sent to all Embassies
- NSSG's site also contributed in informing citizens on the impending census

The official announcement for the start of general censuses, was done by the National Economy Minister, in an official ceremony.

## **DEFINITIONS - CONCEPTS**

### Dwelling

As dwelling is considered a separate and independent structure which has been built or converted to cover the habitation needs of a family (household).

Besides, as dwelling is also considered every space neither constructed nor converted for purpose of habitation, used, however, as a dwelling during the reference period.

As dwelling *is not considered* the space which although fulfilling the above definition is used for other purposes (i.e. office, warehouse, collective household, laboratory etc.)

### Household

Household is defined as either one person living alone or a group of persons, not necessarily related, living at the same address with common housekeeping –i.e. sharing a meal on most days or sharing a living or sitting room etc. More specifically:

#### *One – person household*

- One person living alone in one dwelling or in one room of the latter and does his own housekeeping
- Two or more persons living at the same address, related or not, without common housekeeping and each one of them has the exclusive use of at least one room.

#### *Multi-person household*

- One couple or parents with their children or one parent with children
- One couple with or without children, parents of the couple and the resident servant, if any
- Two or more persons, not necessarily related, living at the same address with common housekeeping
- One or less than 5 boarders residing within a private household.

### Person responsible for the household, present members, members temporarily away of the household

*Person responsible for the household* is the member, taking all significant decisions concerning it. From this person, when present, or any other person aged 18 and over, we ask information concerning data on the rest members of the household.

*Present member* is considered every person who stayed overnight (Saturday 17/3/01 night) in the household. Even if a person, during the visit of the enumerator, is away from home, being at work, in church, at the café or visiting relatives/friends, is considered as present. Also, present members are considered, the members of the household who overnight were working as night guards, workers etc., or maybe were entertained themselves or were at their farms in the country yard. Also, persons

traveling within the country, who haven't been enumerated anywhere else and intend to return to their household. Finally, as present member of the household is considered any guest (member of another household), who stayed overnight in the household.

*Person temporarily away from the household* is considered the member of the household, who stayed overnight on 17<sup>th</sup> to 18<sup>th</sup> March, elsewhere and is absent during the enumeration. The absence is due to being in vacation, hospitalized, working in another place or in jail. As an exception, sailors and fishermen, as always, independently of time of absence, considered as being *temporarily away*, but cannot be considered as *responsible* for the household. As temporarily away are not considered prisoners, hospitalized for a long time, or persons studying abroad or in another city within Greece.

### Immigrants

Immigrants are considered the persons who have foreign citizenship, or foreign and Greek citizenship and declare as place of usual residence, Greece.

### Working person

Working is any person that was working during the week prior to the census (12-17 March 2001) even for one hour only, for money or without payment in the family business. The same applies also to persons who were absent from work because of illness, leave etc. Persons that started work recently are considered as working, but not those who stopped working recently and have no intention of working in the future.

### Local Unit

Local unit of an enterprise is the building or buildings located in one particular place. If the respondent is working in more than one location or at home, as local unit is considered the Administrative Department of the establishment.

### Professional Status

Employee : is defined the person who works for a public or private employer and who receives compensation in the form of wages, salaries, fees, gratuities, payment by results, "per piece" or payment in kind. Employees are also considered certain categories of working "per contract" provided they do not avail of their own materials and machinery or employ other persons, such as : agricultural workers who undertake to cultivate a vineyard, dress-makers working in houses etc.

Self employed (with or without workers) : is defined the person who works for the purpose of earning or profit and meets the following requirements:

- a) he/she owns, totally or in a partnership, a business, professional practice or farm and employs one or more employees (*employer*)
- b) he/she owns, totally or in a partnership, a business, professional practice or farm and does not employ any other person. He/she may, however, employ family members or apprentices without remuneration.

Unpaid family worker : is a person who helps another member of the family to run the family business without receiving any kind of payment except that he/she lives on this business income and possibly receives small “pocket money”.

Unemployed : is considered the person who seeks work, takes specific steps to find a job and is available to start immediately the work he/she will find. More specifically:

- a) His/her main activity was not work.
- b) Was seeking employment during the week preceding the survey.

A person is considered that seeks employment when :

- Has taken active steps, during the past 4 weeks, towards finding a job (e.g. has been registered to a public or private employment office, awaits for the results from a competition he participated for a post in the public sector, inserted or answered in an advertisement, applied to employees, relatives friend, labour associations, tries to find funds, site, shop etc. to start his own business).
- Is available to undertake the work offered within two weeks. Unemployed also includes persons suspended or those who have already found a job but not yet started.

## Computer Processing of Questionnaires

### General outline

Computer processing of the census questionnaires has been carried out with RDBMS Oracle 8i, version 8.1.3, using Oracle Developer version 6.0 (Forms 6.0, Reports 6.0) as management tool. Optical Mark Reading technology (OMR) was used for data capture; the census questionnaires were specially designed to comply with this technology.

The processing stages, planned and having been currently implemented, are the following:

#### 1. Collection of Questionnaires

After their first integrity check, performed sequentially by the Enumerators, the Sector Leaders and the Assistant Supervisors, the questionnaires were stored, by Sector order, in the NSSG warehouses.

#### 2. Manual Processing of Questionnaires

All census questionnaires were distributed to NSSG personnel, for manual processing, by Sector.

Administrative information for this phase of work (e.g. supervision, municipality or commune, sector, number of sections, number of dwellings, inhabited or empty, receive date, return date) was kept on a specially designed data base.

Manual processing included:

##### a. Assortment of Questionnaires per Sector

- Verification of sections per sector
- Verification of dwellings per section
- Verification of questionnaires per dwelling

##### b. Coding:

All questions, referring to geographical situation, citizenship, higher educational institutions, economic activity and profession, have been coded respectively, according to the relevant registers and nomenclatures. Coding has been carried out partly manually, directly on the relevant fields of the questionnaire, and partly automatically, during the computer process, via the

usage of thesaurus. Respective percentages for automatic and manual coding are 40% and 60%.

The success percentages for the software of automatic coding are approximately 100%, as far as the geographical codes, the citizenship, the educational institutes and respective sections, are concerned. As far as ISCO 88 and NACE Rev.1 coding is concerned success percentages reach approximately 80%.

All numbers in a questionnaire have been transformed manually from their usual “Arabic” format to optical marks in their relevant check boxes.

Finally, questionnaires were trimmed (on their perforation) and unused pages were sorted out.

### 3. Optical Reading of Questionnaires

After the questionnaires of a sector were manually processed, as described above, they were scanned through the OMR scanners (by ten operational scanners, plus three stand-by). Each section formed a scanning package, which gave an ASCII file. The so formed files, within a day, were merged into one file per scanner, thus, at the end of the day, there were ten ASCII files created, which were transferred into an Oracle table, called the “daily table”.

### 4. Data Validation (Phases)

All data of the “daily table” remained intact. For further process, they were copied onto a new Oracle table, where all sorts of questionnaires, for the total of scanning days, were merged.

a. First validation phase: In this phase, integrity controls per record were carried out, namely:

- Dwelling → s/n of questionnaire
- Person → s/n of questionnaire, s/n of household, s/n of person
- Immigrant → s/n of questionnaire, s/n of household, s/n of person

All the above controls were performed on a daily basis. After their completion, the daily captured data were copied onto four new Oracle tables (Dwellings Table, Dwellings Table back-up, Persons Table, Persons Table back-up). All immigrant’s data were merged to the Persons Table.

b. Second validation phase: This phase included the following checks:

- Dwellings Identity (Geographical Code, Sector, Section, s/n of Dwelling)
- Number of Block and s/n of Building within the Block
- Codes Validation
- Automatic checks and corrections of correlated fields of a record or a questionnaire

This phase insured, that all records were unique, as regards to geographical code, sector, section and s/n of dwelling within the section.

All types of controls in this phase were performed on a daily basis. After their completion, all records of each day were copied onto two new Oracle tables (dwellings and persons), under a unique rule, regarding the uniqueness of records on a dwelling or person level, respectively.

Where needed, this validation phase is still performed, in relation to economic activity, profession and educational level.

c. Third validation phase: This phase included auto corrections and treatment of missing values, using imputation methods. This sort of checks were performed on section level.

## 5. Creation of a Transformed Data Base

All data, residing in the primary data base were transformed to another data base, where the Block is the lowest reference level. All data necessary for the creation of the final reports were aggregated at this level. In this phase a special software has been used for the creation of “values” on Block level.

## 6. Production of Results

All results, covering Eurostat or National demands, are being produced from this aggregated database. Lowest level of information is the municipal/communal department. All results produced are being confirmed by experienced personel. If any errors or inconsistencies were found, a new chain of checks and corrections was performed on the primary database, which then lead to a new derived reference base. Once the quality of the results was confirmed, then we produced results, either in the form of printed reports, or on a CD, or as web pages in NSSG’s Internet site.

The results concerning *de facto* population were produced one year after the Census conduction.

Up to now, final tables have been prepared for Permanent Population, de jure Population and the de facto Population. Provisional tables have been prepared for the structure of the households, for quinquennial age ranges, marital status, for the whole country for de facto and permanent population.

## 7. User Access

Based on the previous, the final outcome will be an Internet based information system, where any interested user will have the possibility to derive information. This information cannot be broken down in lower than municipal/communal department, or, in the case of big urban agglomerations, lower than a group of blocks.

## 8. Outcome

The 2001 population census has been conducted according to its planning, without big organizational problems, or other administrative or methodological problems, for such an extensive and complex project.

The data processing was done within a short time period, in relation to previous censuses, due to the combination of manual and automatic methods used.

The use of new technologies in designing the questionnaires and in processing the results, besides new for the NSSG, finally proved to be successful, giving possibility for quick publication of the results as well as for more complete checks in the whole data.

All comparative checks with vital statistics and other surveys conducted by the NSSG do not present significant incompatibilities or inconsistencies. For instance, the results concerning occupation and profession, did not exceed more than 20% the corresponding figures derived from the Labour Force Survey.

As regards the total cost, it mounted to €49.646.557,81.

In conclusion we report that the 2001 Census has been successful due to:

- The existence of clear definitions and instructions for the completion of the questionnaire, contributing to the minimization of the non-sampling errors censuses are liable to (non-response rates, errors of the enumerator etc.)
- The selection, organization and training, in every level, of the whole workforce necessary for the Census, together with the needed reserves.
- Focused communicational program having been performed, which contributed in informing and sensitizing population as well as “difficult” groups like immigrants.

- The continuous informing and supporting both in material and advice in the workforce.
- The conduction of the pre-scheduled survey of coverage.
- The realization, during the phase of data processing, of all planned checks (for completeness, reasoning, etc.) as well as of all aggregated and comparative checks.

## 9. Comparative checks

After studying the results of the *de facto population* from the 2001 Census, the following conclusions come out.

During the decade 1991-2001, the development of population took place in the country. More specifically, total population increased by 704180 persons, that is increase by 6,9%, while in the preceding decade relative increase was 5,3%.

The most significant increase is presented in the Prefecture of Eastern Attica, which is 36,34% and the follow the Prefectures of Evritania (31,87%), Cephalonia (21,78%), Zakynthos (19,84%), Cyclades (19,80%) and Dodekanisos (16,27%). The most significant increase in the Prefecture of Eastern Attica (36,34%) and Western Attica (21,12%) are due to the permanent and the provisional movements in these areas.

It is noted that areas of the country, mainly islands, present an expected increase, due to their touristic development and the permanent residing of persons that seasonally work there.

The most significant decrease is presented in the Prefectures of Arcadia (- 3,06%), Viotia (-2,20%) and Etolia & Akarnania (-1,51%).

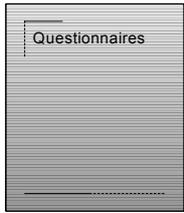
After studying the results of the *de jure population* from the 2001 Census, the following conclusions come out.

The *de jure* population (10.206.595) is less than the *de facto* population (10.964.020) by 757.425 persons, that is by 6,9%, while the *de jure* population from the census 1991 (10.134.534) was less than the *de facto* (10.259.900) by 125.366 persons, that is by 1,2%.

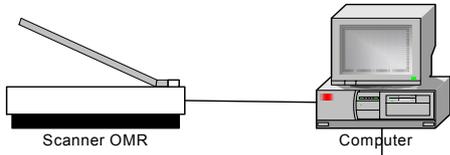
The pre-mentioned difference presented in the *de jure* population of 2001 census, is due to the fact that during the 2001 census 797.093 persons with foreign citizenship or with no citizenship, at all were registered, while in the previous census only 176.276 persons of the same category had been registered.

The most significant increase in the *de jure* population is presented in the Prefectures of Thessaloniki (12,7%), Dodekanisos (8,7%), Xanthi (6,7%), Pieria (4,5%) and Rothopi (3,0%).

The largest decrease in the *de jure* population is presented in the Prefectures of Arcadia (-10,8%), Evritania (-10,8%), Grevena (-9,7%), Arta (-8,2%) and Karditsa (-8,1%) mainly due to the predominance of deaths over births (Arcadia 4.453, Evritania 1.026, Grevena 1.371, Arta 2.161, Karditsa 3.173), as well as due to internal movements.

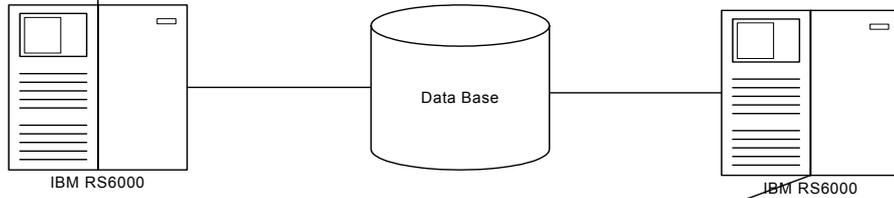


Questionnaires are scanned through OMR Scanners to create an Ascii file in the computer



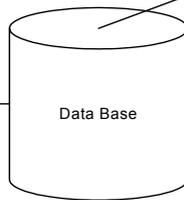
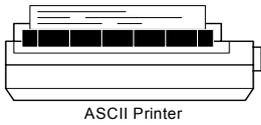
Captured data are to the server where they are stored in an Oracle Data Base

Check and Correction of errors procedure



Production of Publications and reports from the transformed Data Base

Data transformation procedure



Provision of data by NSSG users for further processing



## ANNEX I

### UNITS OF ENUMERATION

1. PERSONS
2. PRIVATE HOUSEHOLDS
3. INSTITUTIONAL HOUSEHOLDS
4. FAMILY NUCLEI
5. LIVING QUARTERS
6. BUILDINGS

### TOPICS OF THE 2001 POPULATION AND HOUSING CENSUS

#### CORE TOPICS

1. PLACE OF USUAL RESIDENCE
2. PLACE OF USUAL RESIDENCE ONE YEAR PRIOR TO THE CENSUS
3. SEX
4. AGE
5. LEGAL MARITAL STATUS
6. COUNTRY/PLACE OF BIRTH
7. COUNTRY OF CITIZENSHIP
8. CURRENT ACTIVITY STATUS
9. TIME USUALLY WORKED
10. OCCUPATION
11. INDUSTRY (BRANCH OF ECONOMIC ACTIVITY)
12. STATUS IN EMPLOYMENT
13. PLACE OF WORK
14. EDUCATIONAL ATTAINMENT
15. RELATIONSHIP TO REFERENCE PERSON OF PRIVATE HOUSEHOLD
16. TENURE STATUS OF HOUSEHOLD
17. TYPE OF LIVING QUARTERS
18. TYPE OF OWNERSHIP
19. LOCATION OF LIVING QUARTERS
20. OCCUPANCY STATUS
21. NUMBER OF OCCUPANTS
22. NUMBER OF ROOMS
23. KITCHEN
24. WATER SUPPLY SYSTEM
25. TOILET FACILITIES
26. BATHING FACILITIES
27. TYPE OF HEATING
28. TYPE OF BUILDING
29. PERIOD OF CONSTRUCTION

#### DERIVED CORE TOPICS

1. TOTAL POPULATION
2. LOCALITY
3. TYPE OF PRIVATE HOUSEHOLD
4. SIZE OF PRIVATE HOUSEHOLD
5. NUMBER OF ECONOMICALLY ACTIVE PERSONS

6. NUMBER OF CHILDREN UNDER SPECIFIED AGE
7. NUMBER OF MEMBERS OF RETIREMENT AGE

NON-CORE TOPICS

1. PLACE WHERE FOUND AT TIME OF CENSUS
2. YEAR (OR PERIOD) OF IMMIGRATION INTO THE COUNTRY
3. DE FACTO MARITAL STATUS
4. TOTAL NUMBER OF CHILDREN BORN ALIVE
5. DATE OF FIRST MARRIAGE OF EVER-MARRIED WOMEN
6. USUAL ACTIVITY STATUS
7. NUMBER OF PERSONS WORKING IN THE LOCAL UNIT OF THE ESTABLISHMENT (LESS THAN OR OVER 10 PERSONS)
8. EDUCATIONAL QUALIFICATIONS
9. FIELD OF STUDY
10. LITERACY
11. SINGLE OR SHARED OCCUPANCY
12. TYPE OF VACANCY
13. OCCUPANCY BY ONE OR MORE HOUSEHOLDS
14. USEFUL AND/OR LIVING FLOOR SPACE
15. TYPE OF SEWAGE DISPOSAL SYSTEM
16. ELECTRICITY

NON-CORE DERIVED TOPICS

1. URBAN AND RURAL AREAS

## ANNEX II

**Table 1**  
**The censuses in Greece**

<b>Year</b>	<b>Population</b>	<b>Comments</b>
1828	753.400	
1838	752.077	
1839	823.773	
1840	850.246	
1841	861.019	
1842	853.005	
1843	915.059	
1844	930.295	
1845	960.236	
1848	986.731	
1853	1.035.527	
1856	1.062.627	
1861	1.096.810	
1870	1.457.894	After Ionian Islands annexation on 1864
1879	1.679.470	
1889	2.187.208	After Thessalias' and Artas' annexation on 1881
1896	2.433.806	
1907	2.631.952	After the concession of a small part of earth of Thessalia on 1897
1920	5.016.889	Within ambits of Lozani's treaty (1923). Eastern Thraki, Imvros and tenedos are not included
1928	6.204.684	
1940	7.344.860	
1951	7.632.801	After Dodekanisos' annexation on 1947
1961	8.388.553	
1971	8.768.641	Not complete elaboration
1981	9.740.417	Not complete elaboration
1991	10.259.900	Complete elaboration
2001	10.939.506	Temporary data

**Table 2**  
**The censuses in Greece**

<b>Year</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Comments</b>
2001	5.426.660	5.513.111	10.939.506	Temporary data
1991	5.055.408	5.204.492	10.259.900	Complete elaboration
1981	4.779.571	4.960.018	9.739.589	Not complete elaboration
1971	4.280.060	4.488.580	8.768.640	Not complete elaboration

