

Metadata in Euro-SDMX format (ESMS)

Country: Greece

Compiling agency: ELSTAT

Domain name: SPECIAL SURVEY ON LIVESTOCK

ELSTAT metadata

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1. Contact Top		
1.1	Contact organisation	Hellenic Statistical Authority (ELSTAT)
1.2	Contact organisation unit	Primary Sector Statistics Division / Section of Livestock and Crop Capital Statistics
1.3	Contact name	Efrosini Karagianni (Mrs), Panagiotis Katsiris (Mr)
1.4	Contact person function	The aforementioned employees of the Section of Livestock and Crop Capital Statistics are involved in all the statistical works of the Section
1.5	Contact mail address	Pireos 46 & Eponiton Str. 18510 - Piraeus
1.6	Contact email address	fkarag@statistics.gr , katsirisp@statistics.gr

1.7 Contact phone number	(+30) 213 135 2542, (+30) 213 135 2467
1.8 Contact fax number	(+30) 213 135 2474

2. Metadata update Top	
2.1 Metadata last certified	24/10/2012
2.2 Metadata last posted	24/10/2012
2.3 Metadata last update	24/10/2012

3. Statistical presentation Top	
3.1 Data description	
<p>The special survey on livestock contributes to the compilation of data on the total number of bovine animals, pigs, sheep, goats, as well as on the total domestic production of meat, milk and dairy products of Greece at the level of Region (NUTS 2) and on an annual basis, thus providing a platform for decision-making concerning Common Agriculture Policy.</p> <p>The livestock survey encompasses the following surveys:</p> <ul style="list-style-type: none"> • Annual sample survey on pig livestock • Annual sample survey on bovine livestock • Annual sample survey on sheep livestock • Annual sample survey on goat livestock <p>The unit of the survey is the livestock holding.</p> <p>The survey is conducted by all Member States implementing fully harmonized methodology.</p> <p>The characteristics are laid down in Community legislation and refer to:</p> <ul style="list-style-type: none"> • General characteristics of the holding • Number of animals by age and by live weight • Production of animal products (dairy products, meat) <p>The aggregated results are tabulated and released at NUTS level and follow the changes of NUTS 2 level.</p>	
3.2 Classification system	
Classification by animal species, size classes of the holdings and Region (NUTS 2).	
3.3 Sector coverage	
The survey compiles statistics on the number of bovine animals, pigs, sheep, goats which are bred in livestock or agricultural-livestock holdings, as well as on the number and net weight of carcasses of cattle, pigs, sheep, goats which are slaughtered in or out of the domestic slaughterhouses.	
3.4 Statistical concepts and definitions	
<ol style="list-style-type: none"> 1) "Sample survey", with sampling unit the agricultural-livestock holding. The survey is a "sample survey" as this is defined in Article 2,c of Regulation (EC) 1166/2008 of the European Parliament and of the Council. 2) "Bovine animals": bovine domestic animals of the species <i>Bos Taurus</i> and <i>Bubalus bubalus</i>, including hybrids like Beefalo. 3) "Pigs": domestic animals of the species <i>Sus scrofa domesticus</i>. 4) "Sheep": domestic animals of the species <i>Ovis aries</i>. 5) "Goats": domestic animals of the subspecies <i>Capra aegagrus hircus</i>. 6) "Slaughterhouse": an officially registered establishment used for slaughtering and dressing animals, the meat of which is intended for human consumption. 	

3.5 Statistical unit
The statistical unit is the livestock or mixed holding (i.e., a single unit, in both technical and economic terms, operating under a single management, which produces livestock products.) which holds animals within its territory.
3.6 Statistical population
Sample surveys cover an adequate number of livestock or mixed holdings, amounting at least at 95% of the total population. This percentage is specified according to the updated register of livestock or mixed holdings compiled by ELSTAT.
3.7 Reference area
The survey covers the whole of the country (Greece) and the survey results are published at the level of the Region (NUTS 2) and Greece total.
3.8 Time coverage
From 1998 to 2011
3.9 Base period

4. Unit of measure	Top
Number of holdings and number of animals.	

5. Reference period	Top
The 1 st November of the year when the survey is conducted. Livestock surveys are annual, sample surveys.	

6. Institutional mandate	Top
6.1 Legal acts and other agreements	
National level	
The legal framework concerning the organization and operation of ELSTAT is as follows:	
<ul style="list-style-type: none">• Law 3832/2010 (Government Gazette No 38, Issue A): “<i>Hellenic Statistical System Establishment of the Hellenic Statistical Authority (ELSTAT) as an Independent Authority</i>”, as amended by article 90 paragraphs 8 and 9 of the Law 3842/2010 (Government Gazette No 58, Issue A): “<i>Restoration of fiscal justice, confrontation of tax evasion and other provisions</i>”, by article 10 of the Law 3899/2010 (Government Gazette No 212, Issue A): “<i>Urgent measures for the implementation of the assistance program of the Greek Economy</i>”, by article 45 of the Law 3943/2011 (Government Gazette No 66, Issue A): “<i>Combating tax evasion, staffing of auditing services and other provisions falling within the competence of the Ministry of Finance</i>”, by article 22 paragraph 1 of the Law 3965/2011 (Government Gazette No 113, Issue A): “<i>Operations Reform of the Consignment and Loan Fund, Public Debt Management Agency, Public Enterprises and Government bodies, the establishment of the General Secretary of Public Property and other provisions</i>” and by article 51 of the Law 4021/2011 (Government Gazette No 218, Issue A): “<i>Enhanced measures for the supervision and restructuring of Credit Institutions – Regulation of issues of financial nature – Ratification of the European Financial Stability Facility (EFSF) Framework-Agreement and its amendments and other provisions.</i>”• Regulation (EC) No 223/2009 of the European Parliament and of the Council, on the European statistics (Official Journal of the European Union L 87/164).	

- Article 14 of the Law 3470/2006 (Government Gazette No 132, Issue A): “*National Export Council, tax regulations and other provisions*”.
- Article 3, paragraph 1c, of the Law 3448/2006 (Government Gazette No 57, Issue A): “*For the further use of information coming from the public sector and the settlement of matters falling within the responsibility of the Ministry of Interior, Public Administration and Decentralization*”.
- European Statistics Code of Practice adopted by the Statistical Programme Committee on 24 February 2005 and promulgated in the Commission Recommendation of 25 May 2005 on the independence, integrity and accountability of the national and Community statistical Authorities, after its revision, which was adopted on 28 September 2011 by the European Statistical System Committee.
- Presidential Decree 226/2000 (Government Gazette No 195, Issue A): “*Organization of the General Secretariat of the National Statistical Service of Greece*”.
- Articles 4, 8, 9, 10, 12, 13, 14, 15 and 16 of the Law 2392/1996 (Government Gazette No 60, Issue A): “*Access of the General Secretariat of the National Statistical Service of Greece to administrative sources and administrative files, Statistical Confidentiality Committee, settlement of matters concerning the conduct of censuses and statistical works, as well as of matters of the General Secretariat of the National Statistical Service of Greece*”.

European level

- Regulation (EC) No 1165/2008 of the European Parliament and of the Council of 19 November 2008 concerning livestock and meat statistics and repealing Council Directives 93/23/EEC, 93/24/EEC and 93/25/EEC.

6.2 Data sharing

None

7. Confidentiality

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7.1 Confidentiality policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 6, 7 and 8 of the Law 3832/2010, as amended by article 90 paragraph 8 of Law 3842/2010 and by article 10 of Law 3899/2010, as well as by article 8 of Law 2392/1996, which was brought back into force, in accordance with article 90 paragraph 8 of Law 3842/2010.

Furthermore, ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

7.2 Confidentiality – data treatment

- ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:
 - a) These data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or
 - b) the statistical unit has given its consent, without any reservations, for the disclosure of data.
- The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in

this task and appointed by an act of the President of ELSTAT.

- The Statistical Confidentiality Committee (SCC) operating in ELSTAT, examines issues referring to the observance of statistical confidentiality. Within its competence is to recommend on:
 - the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
 - the anonymization criteria for the microdata provided to users;
 - the granting to researchers access to confidential data for scientific purposes.

8. Release policy

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8.1 Release calendar

At the end of the calendar year, ELSTAT publishes its 12-month statistical work programme, which outlines all the statistical works that are planned for next year. This programme is available on the website of ELSTAT: <http://www.statistics.gr>

8.2 Release calendar access

8.3 User access

Users can have access mostly to certified statistical data compiled by ELSTAT (<http://www.statistics.gr>), as well as by Eurostat (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>).

9. Frequency of dissemination

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The surveys results are disseminated on an annual basis.

10. Dissemination format

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10.1 News release

No

10.2 Publications

1. “Statistical Yearbook of Greece”,
2. “Concise statistical yearbook of Greece”,
3. Special publications published in the framework of Thessaloniki International Fair.

10.3 On-line database

<http://www.statistics.gr/portal/page/portal/ESYE>

10.4 Micro-data access

Users can have access to micro-data, upon request, after submitting an application and following the approval of the Statistical Confidentiality Committee.

10.5 Other

Users can be given data or other statistical analysis, through fax or e-mail, upon request, after submitting an application to the Statistical Information Dissemination Section of ELSTAT:

ELSTAT, 46, Pireos & Eponiton str. 18510 Piraeus,

Tel.: +30 213 1352311,

Fax: +30 2131352312

<http://dlib.statistics.gr/portal/page/portal/ESYE>

11. Accessibility of documentation

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11.1 Documentation on methodology

Documentation on the survey methodology is available in the publication *“Statistical Works – 2007”*.

11.2 Quality documentation

The assessment on National Methodology can be made available to users upon request.

12. Quality management

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12.1 Quality assurance

Quality is ensured by means of: calculating the coefficients of variation; calculating the basic variables of the survey in order to estimate sampling errors; conducting logical checks in order to identify and correct any non-sampling errors (errors due to coverage, counting errors and data entry errors). Quality controls and validation of data are carried out during the whole process of the compilation of the data: from the data collection stage to the final estimation of the survey characteristics.

12.2 Quality assessment

The quality of the survey is satisfactory, since the percentage of sampling errors, expressed as variation coefficients for the basic variables for Greece total, does not exceed 2%. In addition, logical checks are carried out in order to identify and correct any non-sampling errors.

13. Relevance

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13.1 User needs

Users are construed all those who use and study statistical data concerning Agriculture and the Common Agricultural Policy, i.e., political researchers, analysts and professionals (mass media, cooperatives).

Main users of livestock surveys data are: National Accounts Division of ELSTAT, Ministry of Rural Development and Food, universities, research centres, European and international organisations (e.g., Eurostat).

The data are used for drawing agricultural policy at national level and the Common Agricultural Policy in the framework of the Community organisation of markets and agricultural products.

In addition, the data cover national needs pertaining to the elaboration of development programmes in the livestock sector, as well as international obligations of Greece.

13.2 User satisfaction

ELSTAT carries out a users survey in order to identify users' needs for statistical data. The data from this survey are posted on the portal of ELSTAT:

http://www.statistics.gr/portal/page/portal/ESYE/BUCKET/General/library_news_letter.pdf

13.3 Completeness

Since 1998, ELSTAT has been compiling all the necessary data, which are provided electronically, fully observing

EU legislation.

14. Accuracy and reliability

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14.1 Overall accuracy

The results of the survey are characterised by high accuracy, since the number of sampling errors for the main variables falls within the limits, fully meeting the requirements of EU Regulations.

14.2 Sampling error

The number of sampling errors, which are expressed by means of coefficients of variation, falls within the limits specified in relevant Regulations. More specifically, for the livestock surveys sampling errors for the results at the level of a Member State do not exceed (confidence interval at 68%):

- a) 1% of the total number of bovine animals (5% when the number of bovine animals is less than 1,000,000),
- b) 1,5% of the total number of dairy cows (5% when the number of cows is less than 500,000),
- c) 2% of the total number of pigs (5% when the number of pigs is less than 1,000,000),
- d) 2% of the total number of sheep-goats (5% when the number of sheep-goats is less than 1,000,000).

14.3 Non-sampling error

Non-response errors are due to the non-response of some holdings owners. For 2008, 2009 and 2010 the response rates for the units of the sample are as follows:

- Bovine animals: 98,57%, 75%, 89,7%, respectively
- Pigs: 95,26%, 60,36%, 83,69%, respectively
- Sheep: 98,70 %, 70,4%, 85,34%, respectively
- Goats: 98,47%, 65,8%, 88,40%, respectively

In 2009, the low response rate was due to the agricultural-livestock census, which was conducted in the same year.

More generally, after comparing the results of the livestock surveys with other sources of statistical information (e.g. the Ministry of Agricultural Development) the non-response errors in livestock surveys are not considered statistically significant.

Apart from non-response errors, other non-sampling errors are due to counting, codification and errors during data entry. These errors are identified and fully corrected.

15. Timeliness and punctuality

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15.1 Timeliness

The provisional data are transmitted within 3 months from the reference date of the survey and the final results are transmitted within 6 months from the reference period.

15.2 Punctuality

Normally, the data are produced within the deadlines set out in EU Regulations.

16. Comparability

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16.1 Comparability – geographical

The definitions of variables are common throughout EU Member States, thus the survey produces fully

comparable results.

16.2 Comparability over time

The comparability of results for the years from 1998 to 2009 is ensured by means of using same methodology and common definition of variables.

17. Coherence

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17.1 Coherence cross-domain

The data are longitudinally coherent with other surveys, such as the survey on the structure of agricultural-livestock holdings and the annual survey on agriculture-livestock.

17.2 Coherence – internal

All correlating variables are coherent with each other.

18. Cost and burden

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The cost of the survey is approximately 38,000 euro.

The cost mostly pertains to the remuneration of external survey workers and to the movement of ELSTAT staff.

No burden on respondents.

19. Data revision

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19.1 Revision policy

The data, which are released, have undergone several checks and are not subject to revision.

19.2 Revision practice

20. Statistical processing

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20.1 Source data

Pig livestock survey

The pig livestock survey is a sample survey and the sampling method used is the single stratified random sampling. The pig livestock holdings covered by the survey are stratified as follows:

- By region - NUTS 2
- By size class of the holdings. In each geographical region, the holdings are stratified into L = 12 size classes, according to their size, which is determined by the number of pigs, according to the updated register of livestock holdings as follows:

Size Class	Number of pigs
Class 1	1 - 2
Class 2	3 - 9
Class 3	10 - 19
Class 4	20 - 29
Class 5	30 - 49
Class 6	50 - 99
Class 7	100 - 199

Class 7	100 - 199
Class 8	200 - 399
Class 9	400 - 999
Class 10	1000 - 1999
Class 11	2000 - 4999
Class 12	5000 +

Pig livestock holdings belonging to classes 9 - 12 are surveyed exhaustively.

The use of the selected sample ensures that sampling errors concerning the estimation of the number of pigs is less than 2% for Greece total.

Bovine livestock survey

The bovine livestock survey is a sample survey and the sampling method used is the single stratified random sampling. The livestock holdings with bovine animals covered by the survey are stratified as follows:

- By region - NUTS 2
- By size class of the holdings. In each geographical region, the holdings are stratified into L = 11 size classes, according to their size, which is determined by the number of bovine animals, according to the updated register of livestock holdings, as follows:

Size Class	Number of pigs
Class 1	1 - 2
Class 2	3 - 5
Class 3	6 - 9
Class 4	10 - 19
Class 5	20 - 29
Class 6	30 - 49
Class 7	50 - 99
Class 8	100 - 199
Class 9	200 - 299
Class 10	300 - 499
Class 11	500+

Livestock holdings belonging to classes 10 and 11 are surveyed exhaustively.

The sampling fraction for livestock holdings with bovine animals is approximately 8.9 %.

The use of the selected sample ensures that the sampling error concerning the estimation of the number of cattle is less than 1% and the sampling error concerning the estimation of the number of dairy cows is less than 1.5% for Greece total.

Sheep livestock survey

The sheep livestock survey is a sample survey and the sampling method used is the single stratified random sampling. The sheep livestock holdings covered by the survey are stratified as follows:

- By region - NUTS 2
- By size class of the holdings.

In each geographical region, the holdings are stratified into L = 10 size classes, according to their size, which is determined by the number of sheep, according to the updated register of livestock holdings, as follows.

Size Class	Number of pigs
Class 1	1 - 4
Class 2	5 - 9
Class 3	10 - 19
Class 4	20 - 29
Class 5	30 - 49
Class 6	50 - 99
Class 7	100 - 199
Class 8	200 - 499

Class 9	500 - 999
Class 10	1000 +

Sheep livestock holdings belonging to class 10 are surveyed exhaustively.

The sampling fraction for sheep livestock holdings is approximately 1.3%.

The use of the selected sample ensures that the sampling error concerning the estimation of the number of sheep is less than 2% for Greece total.

Goat livestock survey

The goat livestock survey is a sample survey and the sampling method used is the single stratified random sampling. The goat livestock holdings covered by the survey are stratified as follows:

- By region - NUTS 2
- By size class of the holdings. In each geographical region, the holdings are stratified into L = 10 size classes, according to their size, which is determined by the number of goats, according to the updated register of livestock holdings, as follows:

Size Class	Number of pigs
Class 1	1 - 4
Class 2	5 - 9
Class 3	10 - 19
Class 4	20 - 49
Class 5	50 - 99
Class 6	100 - 299
Class 7	300 - 499
Class 8	500 - 699
Class 9	700 - 999
Class 10	1000 +

Goat livestock holdings belonging to classes 9 and 10 are surveyed exhaustively.

The use of the selected sample ensures that the sampling error concerning the estimation of the number of goats is less than 2% for Greece total.

20.2 Frequency of data collection

The survey is conducted on an annual basis for all livestock.

20.3 Data collection

The data for the livestock survey are collected by means of personal interviews with the owners of the holdings, which fall within the survey sample, on the basis of a specially designed questionnaire.

The designing of the questionnaire ensures that it satisfies both national and Community needs for statistical information. It covers all variables stipulated in EU Regulations. In addition, some data are collected for national purposes.

In addition the questionnaire was designed taking into account the needs of main users (Ministry of Agricultural Development and Food) as well as the needs of the other Divisions of ELSTAT (Division of Methodology and Organization, Division of Statistical Information and Publications and National Accounts Division).

Data are collected by well-trained survey workers, thus ensuring efficiency of data collection.

20.4 Data validation

The data are validated by means of logical checks. During data processing any errors are identified and duly corrected. Special emphasis is placed on the errors that may have major impact on the results. After identifying the errors, they are further checked and cross-checked in cooperation with the owner of the holding in order to confirm that it is an error or it is just about an unusual price. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables. Data processing and validation of data are carried out either during or after data entry.

The data are compared with the data of previous years and if major inconsistencies are identified, further checks are carried out.

20.5 Data compilation

After the conduct of automated checks, completeness checks, coherence checks for correlating variables and after cross-checks with the data of previous surveys, and with the use of the appropriate reduction factors, the data of the sample are extrapolated for the total number of holdings. More specifically, the survey characteristics are estimated as follows:

a. Symbols

If index i is the selection order of a livestock holding with pigs, cattle, sheep or goats from the sampling frame in the stratum h (stratum=Region x size class) and if y is one of the survey characteristics, the following can be defined:

y_{hi} : is the value of the survey characteristic y of the livestock holding with pigs, cattle, sheep or goats in the order i and in the stratum h ,

Y_h : the sum of the values of the characteristic y of all livestock holdings with pigs, cattle, sheep or goats covered by the survey and belonging to stratum h ,

Y : the sum of the values of the characteristic y of all livestock holdings with pigs, cattle, sheep or goats covered by the survey. That is:

$$Y = \sum_h Y_h$$

where:

N_h : is the number of all livestock holdings with pigs, cattle, sheep or goats covered by the survey and belonging to stratum h

n_h : is the initial sample size in the stratum h

m_h : is the number of respondent units in the stratum h

r_h : is the response rate for stratum h ($r_h = \frac{m_h}{n_h}$)

W_{hi} : the extrapolation factor of the livestock holding with pigs, cattle, sheep or goats of order i belonging to stratum h . That is: $W_{hi} = 1/(\text{Probability of the unit } i \text{ to be selected in stratum } h)$

$$r_h = \frac{N_h}{n_h} \cdot \frac{n_h}{m_h} = \frac{N_h}{m_h}$$

b. Estimation process

The estimation of magnitudes Y_h and Y is based on the following formulas:

$$\hat{Y}_h = \sum_{i=1}^{m_h} w_{hi} \cdot y_{hi}$$

$$\hat{Y} = \sum_h \hat{Y}_h = \sum_h \sum_i w_{hi} \cdot y_{hi}$$

The variance estimation of \hat{Y}_h and \hat{Y} is based on the formula:

$$V(\hat{Y}_h) = \frac{N_h(N_h - m_h)}{m_h} S_h^2,$$

where:

$$S_h^2 = \frac{1}{m_h - 1} \left[\sum_{i=1}^{m_h} y_{hi}^2 - \frac{\left(\sum_{i=1}^{m_h} y_{hi} \right)^2}{m_h} \right], \quad v(\hat{Y}) = \sum_h v(\hat{Y}_h)$$

The coefficient of variation (%) for total estimation Y is calculated by the formula:

$$CV(\hat{Y}) = \frac{\sqrt{V(\hat{Y})}}{\hat{Y}} * 100$$

20.6 Adjustment

21. Comment

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