## HELLENIC REPUBLIC

HELLENIC STATISTICAL AUTHORITY

## PRESS RELEASE

## SURVEY ON AQUACULTURE, 2011

The Hellenic Statistical Authority (ELSTAT) announces the results of the Survey on Aquaculture for the year 2011.
For comparability reasons, data for the years 2009 and 2010 are also made available.

## A. QUANTITY AND VALUE OF REARED OR CULTIVATED SPECIES, GREECE TOTAL

The changes in the amount and value of the cultivated species, by main group, are as follows:

- Fish: the quantity of fish recorded an increase of $4.34 \%$ and its value increased by $13.1 \%$ in 2010 compared with 2009 , while in 2011 the quantity of fish decreased by $9.6 \%$ and the corresponding value increased by $7.2 \%$ in comparison with 2010. More specifically, in 2009 the cultivated fish amounted to $99,581.7$ tonnes and its value to $385,745.6$ thousand euros, in 2010 the cultivated fish amounted to 104,008.3 tonnes and its value to $436,405.2$ thousand euros and in 2011 to $94,002.0$ tonnes and 467,682.0 thousand euros, respectively (Table 1, Graph 1a, 1b).
- Crustaceans: the quantity of crustaceans recorded a decrease of $23.4 \%$ and its value decreased by $18.4 \%$ in 2010 compared with 2009, while in 2011 the quantity of crustaceans slightly increased by $0.3 \%$ and the corresponding value decreased by 18.6 . \% in comparison with 2010 . More specifically, in 2009 the cultivated crustaceans amounted to $22,389.8$ tonnes and their value to $10,190.4$ thousand euros, in 2010 the cultivated crustaceans amounted to $17,147.2$ tonnes and their value to $8,319.0$ thousand euros and in 2011 to 17,194.9 tonnes and 6,773.4 thousand euros, respectively (Table 1, Graph 1a, 1b).

Table 1. Quantity and value of reared or cultivated species, Greece total, 2009-2011
Quantity in tonnes, value in thousand euros

| Reared/Cultivated species | 2009 |  | 2010 |  | 2011 |  | Change (\%) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | $\begin{aligned} & \text { /09 } \\ & \text { Value } \end{aligned}$ | $\begin{array}{r} 2011 \\ \text { Quantity } \\ \hline \end{array}$ | Value |
| Grand total | 121,971.5 | 395,935.9 | 121,155.4 | 444,724.2 | 111,196.9 | 474,455.4 | -0.7 | 12.3 | -8.2 | 6.7 |
| Fish | 99,581.7 | 385,745.6 | 104,008.3 | 436,405.2 | 94,002.0 | 467,682.0 | 4.4 | 13.1 | -9.6 | 7.2 |
| Flathead grey mullet | 276.4 | 1,257.3 | 350.8 | 1,106.8 | 390.2 | 1,043.8 | 26.9 | -12.0 | 11.2 | -5.7 |
| Common carp | 113.6 | 501.0 | 123.0 | 490.7 | 48.7 | 172.6 | 8.3 | -2.1 | -60.4 | -64.8 |
| European sea bass | 33,631.2 | 145,166.8 | 39,884.5 | 174,822.6 | 37,089.0 | 189,843.8 | 18.6 | 20.4 | -7.0 | 8.6 |
| Trout | 2,588.1 | 7,275.3 | 2,712.1 | 7,568.9 | 2,388.9 | 6,437.8 | 4.8 | 4.0 | -11.9 | -14.9 |
| White sea bream Gilthead sea | 84.7 | 435.5 | 153.2 | 772.4 | 23.8 | 132.5 | 80.9 | 77.3 | -84.4 | -82.8 |
| bream | 60,488.0 | 217,424.7 | 57,204.2 | 233,059.1 | 51,308.6 | 253,304.5 | -5.4 | 7.2 | -10.3 | 8.7 |
| Eel | 428.2 | 3,697.7 | 372.0 | 3,820.8 | 304.3 | 3,761.0 | -13.1 | 3.3 | -18.2 | -1.6 |
| Other fish | 1,971.5 | 9,987.4 | 3,208.5 | 14,764.0 | 2,448.6 | 12,986.0 | 62.7 | 47.8 | -23.7 | -12.0 |
| Crustaceans | 22,389.8 | 10,190.4 | 17,147.2 | 8,319.0 | 17,194.9 | 6,773.4 | -23.4 | -18.4 | 0.3 | -18.6 |
| Mussels | 22,382.7 | 10,156.7 | 17,063.6 | 7,927.3 | 17,193.1 | 6,766.3 | -23.8 | -22.0 | 0.8 | -14.6 |
| Other ${ }^{1}$ | 7.1 | 33.7 | 83.6 | 391.7 | 1.8 | 7.1 | 1,073.6 | 1,062.5 | -97.9 | -98.2 |
| Aquatic plants Seaweeds ${ }^{2}$ | - | - | - | - | 19.8 | 782.0 | - | - | - | - |
| Spirulina | - | - | - | - | 19.8 | 782.0 | - | - | - | - |
| Fish eggs ${ }^{2}$ | - | - | - | - | 5.3 | 187.3 | - | - | - | - |
| Flathead grey mullet | - | - | - | - | 3.2 | 172.3 | - | - | - | - |
| Common sturgeon | - | - | - | - | 2.1 | 15.0 | - | - | - | - |

Graph 1a: Quantity of reared species, Greece total, 2009-2011
in tonnes


Graph 1b : Value of reared species, Greece total, 2009-2011
in thousand euros


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## B. PRODUCTION OF FISH LARVA IN HATCHERIES AND NURSERIES, BY SPECIES, GREECE TOTAL

The changes in the produced quantity of fish larva are as follows:

- Overall production of fish larva: the quantity of fish larva increased by $11.9 \%$ in 2010 compared with 2009 and by $3.5 \%$ in 2011 compared with 2010. More specifically, in 2009 the fish larva amounted to $1,270.9$ thousand juveniles, in 2010 to $1,089.5$ thousand juveniles and in 2011 and to 1,135.4 thousand juveniles (Table 2, Graphs 2, 2a,2b,2c).

More specifically, as regards the main species:

- European sea bass: the quantity of European sea bass larva recorded a decrease of $11.2 \%$ in 2010 compared with 2009, while in 2011 it increased by $12.8 \%$ in comparison with 2010. More specifically, in 2009 the number of juveniles amounted to 160,865 thousand, in 2010 to 142,905 thousand juveniles and in 2011 to 161,231 thousand juveniles.
- Gilthead sea bream: the quantity of gilthead sea bream larva recorded an increase of $34.2 \%$ in 2010 compared with 2009, while in 2011 it decreased by $1.3 \%$ in comparison with 2010. More specifically, in 2009 the number of juveniles amounted to 186,266 thousand, in 2010 to 249,928 thousand juveniles and in 2011 to 246,697 thousand juveniles.

Table 2. Production of fish larva in hatcheries and nurseries, by species, Greece total, 2009-2011

In thousand juveniles

| Species | 2009 | 2010 | 2011 | Change (\%) |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  | $2011 / 2010$ |  |
| Total | $\mathbf{3 6 1 , 9 5 4}$ | $\mathbf{4 0 5 , 1 0 3}$ | $\mathbf{4 1 9 , 2 2 9}$ | $\mathbf{1 1 . 9}$ | $\mathbf{3 . 5}$ |
| European sea bass | 160,865 | 142,905 | 161,231 | -11.2 | 12.8 |
| Gilthead sea bream | 186,266 | 249,928 | 246,697 | 34.2 | -1.3 |
| Trout | 8,824 | 5,651 | 5,438 | -36.0 | -3.8 |
| Other fish | 5,999 | 6,619 | 5,863 | 10.3 | -11.4 |

Graph 2. Production of fish larva in hatcheries, 2009-2011
In thousand juveniles


Graph 2a. Percentage distribution of fish larva, by main groups of species, 2009


Graph 2b. Percentage distribution of fish larva, by main groups of species, 2010

Graph 2c. Percentage distribution of fish larva, by main groups of species, 2011



## C. EMPLOYED PERSONS, BY TYPE OF EMPLOYMENT RELATIONSHIP, GREECE TOTAL

The changes in employment data are as follows:

## Permanent staff

- A decrease of 7.4\% was recorded in 2010 compared with 2009.
- A decrease of 4.2\% was recorded in 2011 compared with 2010.

More specifically, in 2009 the number of permanent employees amounted to 4,130, in 2010 to 3,825 and in 2011 to 3,663 (Table 3, Graph 3a).

## Temporary staff

- A decrease of 2.5\% was recorded in 2010 compared with 2009.
- An increase of 50.7\% was recorded in 2011 compared with 2010.

More specifically, in 2009 the number of temporary employees amounted to 439, in 2010 to 428 and in 2011 to 645 (Table 3, Graph 3b).

Tables 3. Employed persons, by type of employment relationship, Greece total,2009-2011

| Rearing water | Permanent staff |  |  | Temporary staff |  |  | Change (\%) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | Permanent staff |  | Temporary staff |  |
|  | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2010/09 2011/10 |  | 2010/09 2011/10 |  |
| Total | 4,130 | 3,825 | 3,663 | 439 | 428 | 645 | -7.4 | -4.2 | -2.5 | 50.7 |
| Freshwater | 307 | 299 | 260 | 24 | 23 | 29 | -2.6 | -13.0 | -4.2 | 26.1 |
| Brackish water | 538 | 510 | 454 | 10 | 2 | 18 | -5.2 | -11.0 | -80.0 | 800.0 |
| Seawater | 3,285 | 3,016 | 2,949 | 405 | 403 | 598 | -8.2 | -2.2 | -0.5 | 48.4 |

Graph 3a. Permanent staff, by type of water, 2009-2011
Graph 3b. Temporary staff, by type of water, 2009-2011



## D. STRUCTURE OF AQUACULTURE UNDERTAKINGS, BY CULTIVATION METHOD AND TYPE OF WATER

The following table presents the structure of aquaculture undertakings by year. In 2011 the distribution of aquaculture undertakings changed in compliance with the new Regulation.

Table 4. Structure of aquaculture undertakings, by cultivation method and type of water, 2009-2011

| Undertakings by type of cultivation method |  | Freshwater |  |  | Brackish water |  |  | Seawater |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| Fish | Artificial ponds and pools | 383 | 356 | 182 | 21 | 21 | 284 | 17 | 17 | 8 |
|  | Enclosures and pens | - | - | - | 5 | 5 | - | $\ldots$ | $\ldots$ | - |
|  | Cages | 59 | 59 | - | 4 | 4 | 4 | 8,131 | 7,733 | 7,102 |
|  | Circular tanks or raceways | 1,321 | 1,373 | 1,334 | - | - | - | 1,797 | 2,150 | 2,100 |
|  | Recirculation systems ${ }^{3}$ | - | - | 121 | - | - | - | - | - | - |
|  | Other methods(barriers, etc. ${ }^{3}$ | 12 | 3 | 3 | 258 | 258 | 3 | 7 | 7 | - |
| Crustaceans | On bottom | - | $\cdot$ | - | - | - | - | . |  |  |
|  | Midwater |  |  |  |  |  |  | 645 | 642 | 599 |
|  | Other methods |  |  |  | . |  |  | 23 | 20 | - |

## Symbols:

. = not applicable.
...= not available.
$-=$ null or less than half of the unit used.

[^1]
## EXPLANATORY NOTES

Survey on The Hellenic Statistical Authority is being conducting since 1995 a Aquaculture statistical survey on Aquaculture.

Purpose The main purpose of the Survey on Aquaculture is to compile data on the cultivation methods, production and value of the cultivated species, by cultivation method, production of fish larva in hatcheries and nurseries, as well as on the number of employed persons.

Legal basis At European level, the legal framework of the survey is governed by EU Regulation 788/96, as amended by Regulation 762/2008 of the European Parliament.

Reference period The survey data refer to the year 2011. For comparison reasons data for the year 2009 and 2010 are also made available.

Methodology and geographical

1. The statistical unit of the Survey on Aquaculture is the enterprise activated in the rearing or cultivation of aquatic organisms (fish, molluscs, crustaceans and aquatic plants) under controlled breeding and rearing environment, aiming at achieving the biggest production at the most economical manner.
2. Rearing/culture is every form of intervention in the growing procedure aiming at reinforcing production (e.g. renewal of stock, food, protection from natural enemies, etc.).
3. The cultivation methods in freshwater, brackish water and seawater are distinguished into the following categories:
a) Artificial ponds and pools.
b) Enclosures and pens.
c) Cages.
d) Circular tanks or raceways.
e) Barriers.
f) Other methods.

From 2011 onwards, pursuant to the new Regulation, the cultivation methods are as follows:
a) Ponds (natural of artificial).
b) Enclosures and pens.
c) Cages.
d) Artificial tanks (raceways of circular tanks).
e) Recirculation systems.
f) Other (barriers, etc.).

The survey is a census survey and it covers all the aquaculture units operating in Greece.

References More information, such as tables, samples of questionnaires, etc., on Survey on Aquaculture are available on the portal of ELSTAT www.statistics.gr and at the following link: Statistical Themes >Fisheries > Aquaculture.


[^0]:    ${ }^{1}$ The wide increase and decrease in the amount is the result of the destruction of oyster spat due to diseases.
    ${ }^{2}$ These species are being surveyed from 2011 onwards.

[^1]:    ${ }^{3}$ In 2011, the survey questionnaire was revised in accordance with the requirements of the new Regulation (EC) 762/2008.

