

AQUACULTURE SURVEY: 2024

The Hellenic Statistical Authority (ELSTAT) announces the results of the Aquaculture Survey for reference year 2024.

A. QUANTITY AND VALUE OF REARED OR CULTIVATED SPECIES

Total production of aquaculture reared – cultivated species in Greece decreased by 10.2% and the corresponding value decreased by 0.2%, in 2024 compared with 2023. More specifically, 127,495.1 tonnes with a total value of 689,461.0 thousand euros were farmed in 2024, while 141,909.2 tonnes with a total value of 691,160.2 thousand euro were farmed in 2023 (Table 1).

Table 1. Quantity and value of reared - cultivated species, 2023 – 2024

Quantity in tonnes, value in thousand euros

| Cultivated / Reared species | 202 | 3 | 2024 | 1 | Change (%) 2024/2023 | | |
|------------------------------|-----------|-----------|-----------|-----------|----------------------|-------|--|
| | Quantity | Value | Quantity | Value | Quantity | Value | |
| General total | 141,909.2 | 691,160.2 | 127,495.1 | 689,461.0 | -10.2 | -0.2 | |
| Fish | 123,800.9 | 678,590.4 | 114,805.3 | 679,585.3 | -7.3 | 0.1 | |
| Common sole | 2.6 | 12.2 | 0.7 | 4.1 | -72.3 | -66.1 | |
| Meagre | 4,449.1 | 21,677.5 | 1,135.2 | 6,311.8 | -74.5 | -70.9 | |
| European seabass | 44,200.8 | 284,971.3 | 48,042.7 | 304,992.4 | 8.7 | 7.0 | |
| Gilthead seabream | 65,474.0 | 319,843.8 | 57,919.7 | 326,711.3 | -11.5 | 2.1 | |
| Red porgy | 6,454.7 | 37,598.6 | 5,165.1 | 30,379.3 | -20.0 | -19.2 | |
| Other fish | 3,219.6 | 14,486.9 | 2,541.9 | 11,186.3 | -21.0 | -22.8 | |
| Crustaceans | 77.0 | 101.5 | 81.6 | 153.9 | 6.0 | 51.6 | |
| Mediterranean shore crab | 73.4 | 75.8 | 79.2 | 124.9 | 8.0 | 64.8 | |
| Shellfish (bivalve molluscs) | 18,010.4 | 11,911.1 | 12,576.9 | 9,109.7 | -30.2 | -23.5 | |
| Aquatic plants-algae | 17.6 | 408.3 | 29.0 | 509.3 | 64.4 | 24.7 | |
| Spiroulina | 17.6 | 408.3 | 29.0 | 509.3 | 64.4 | 24.7 | |
| Fish eggs | 3.2 | 148.8 | 2.3 | 102.7 | -29.8 | -31.0 | |

Notes: 1. Any discrepancies between sums and totals as well as percentages are due to rounding.

2. Data regarding the fish species "Flathead grey mullet", "Common carp", "Common pandora", "Greater amberjack", "Shi drum", "Sharpsnout seabream", "Sturgeons nei", "Rainbow trout", "Coho(=Silver) salmon", "Common dentex" and "Eels", the data regarding the Crustaceans species "Kuruma prawn" and "Marine crustaceans nei", the data regarding the Shellfish (bivalve molluscs) species "Striped venus", "European flat oyster", "Mediterranean mussels" and " Marine molluscs nei" and the eggs of the fish species "Flathead grey mullet" and "Coho(=Silver) salmon" were confidential in the year 2024 or/and 2023 and therefore are not published. For reasons related to compliance with the European Statistics Code of Practice, and in particular with regard to the obligations concerning the completeness, coherence, and comparability of the statistics produced, all species of the classification group 'Fish' that were confidential were included in the variable 'Other Fish's.

Information on methodological issues:

Agriculture, Livestock, Fishery and Environment Statistics Division Agriculture, Livestock and Fishery Statistics Section S. Spyroulis

 Information for data provision:

& +30 213 135 2022, 2308

data.dissem@statistics.gr

The changes in the quantity and value of the reared - cultivated species, **by main taxonomic group**, as presented in Table 1, are as follows:

Fish: in 2024 compared with 2023, the quantity and the corresponding value decreased by 7.3% and increased by 0.1% respectively. More specifically, 114,805.3 tonnes of fish with a total value of 679,585.3 thousand euro were farmed in 2024, while 123,800.9 tonnes of fish with a total value of 678,590.4 thousand euro were farmed in 2023.

Crustaceans: in 2024 compared with 2023, the quantity and the corresponding value increased by 6.0% and 51.6% respectively. More specifically, 81.6 tonnes of crustaceans with a total value of 153.9 thousand euro were farmed in 2024 and 77.0 tonnes with a total value of 101.5 thousand euro were farmed in 2023.

Shellfish (bivalve molluscs): in 2024 compared with 2023, the quantity and the corresponding value decreased by 30.2% and 23.5% respectively. More specifically, 12,576.9 tonnes of shellfish with a total value of 9,109.7 thousand euro were farmed in 2024 and 18,010.4 tonnes with a total value of 11,911.1 thousand euro were farmed in 2023.

Aquatic Plants-Algae: in 2024 compared with 2023, the quantity and the corresponding value increased by 64.4% and 24.7% respectively. More specifically, 29.0 tonnes of aquatic plants-algae with a total value of 509.3 thousand euro were farmed in 2024 and 17.6 tonnes with a total value of 408.3 thousand euro were farmed in 2023.

Fish eggs: in 2024 compared with 2023, the quantity and the corresponding value decreased by 29.8% and 31.0% respectively. More specifically, 2.3 tonnes of fish eggs with a total value of 102.7 thousand euro were farmed in 2024 and 3.2 tonnes with a total value of 148.8 thousand euro were farmed in 2023.

The changes in the quantity and value of the farmed or cultivated aquaculture species, **by type of water** at Country level, as presented in Table 2, are as follows:

Fresh water: in 2024 compared with 2023, the quantity and the corresponding value decreased by 6.4% and 3.0% respectively. More specifically, 2,328.4 tonnes with a total value of 10,901.7 thousand euro were farmed in 2024 and 2,487.8 tonnes with a total value of 11,233.1 thousand euro were farmed in 2023.

Brackish water: in 2024 compared with 2023, quantity and the corresponding value decreased by 21.5% and 10.0% respectively. More specifically, 462.2 tonnes with a total value of 1,910.7 thousand euro were farmed in 2024 and 588.9 tonnes with a total value of 2,123.3 thousand euro were farmed in 2023.

Sea water: in 2024 compared with 2023, quantity and the corresponding value decreased by 10.2% and 0.2% respectively. More specifically, 124,704.5 tonnes with a total value of 676,648.7 thousand euro were farmed in 2024 and 138,832.5 tonnes with a total value of 677,803.8 thousand euro were farmed in 2023.

Table 2. Quantity and value of aquaculture production, by type of water, 2023 – 2024

Quantity in tonnes, value in thousand euros

| Water Type | 202 | 3 | 20 | 24 | Change (%) 2024/2023 | | |
|------------|-----------|-----------|-----------|-----------|----------------------|-------|--|
| | Quantity | Value | Quantity | Value | Quantity | Value | |
| Fresh | 2,487.8 | 11,233.1 | 2,328.4 | 10,901.7 | -6.4 | -3.0 | |
| Brackish | 588.9 | 2,123.3 | 462.2 | 1,910.7 | -21.5 | -10.0 | |
| Sea | 138,832.5 | 677,803.8 | 124,704.5 | 676,648.7 | -10.2 | -0.2 | |

Note: Any discrepancies between sums and totals as well as percentages are due to rounding

B. PRODUCTION OF FISH FRY IN HATCHERIES AND NURSERIES

The changes in the quantity of fish fry produced by species, as presented in Table 3, are as follows:

European seabass: the quantity of fry decreased by 4.3% in 2024 compared with 2023. More specifically, european seabass fry amounted to 123,970 thousand juveniles in 2024 and 129,542 thousand juveniles in 2023.

Gilthead seabream: the quantity of fry increased by 1.4% in 2024 compared with 2023. More specifically, gilthead sea bream fry amounted to 179,597 thousand juveniles in 2024 and 176,871 thousand juveniles in 2023.

Red porgy: the quantity of fry decreased by 4.1% in 2024 compared with 2023. More specifically, red porgy fry amounted to 9,364 thousand juveniles in 2024 and 9,763 thousand juveniles in 2023.

Table 3. Production of fry in hatcheries and nurseries, by species, 2023 – 2024

In thousand juveniles

| Species | 2023 | 2024 | Change (%) 2024/2023 | | |
|-------------------|---------|---------|----------------------|--|--|
| European seabass | 129,542 | 123,970 | -4.3 | | |
| Gilthead seabream | 176,871 | 179,597 | 1.4 | | |
| Red porgy | 9,763 | 9,364 | -4.1 | | |

Notes: 1. Any discrepancies between sums and totals as well as percentages are due to rounding.

C. EMPLOYED PERSONS BY TYPE OF EMPLOYMENT RELATIONSHIP

The changes in the total annual employment as presented in Table 4 are as follows:

The **total** number of employed persons decreased by 8.7% in 2024 compared with 2023. More specifically, the total number of employees amounted to 3,741 in 2024 and 4,099 in 2023.

More specifically, the changes in employment, by type of employment relationship, are as follows:

Permanent staff decreased by 6.9% in 2024 compared with 2023. More specifically, permanent employees amounted to 3,385 in 2024 and 3,636 in 2023.

Temporary staff decreased by 23.1% in 2024 compared with 2023. More specifically, temporary employees amounted to 356 in 2024 and 463 in 2023.

Table 4. Number of employed persons in aquaculture units, 2023 – 2024

| Employment type | 2023 | 2024 | Change (%) 2024/2023 | |
|-----------------|-------|-------|----------------------|--|
| Total | 4,099 | 3,741 | -8.7 | |
| Permanent staff | 3,636 | 3,385 | -6.9 | |
| Temporary staff | 463 | 356 | -23.1 | |

Note: Any discrepancies between sums and totals as well as percentages are due to rounding.

D. CHARACTERISTICS OF AQUACULTURE ESTABLISHMENTS

The cultivation methods, water volume and area used by the operational aquaculture establishments in 2023 and 2024 are as follows (Table 5):

The **total production methods** used in operational aquaculture facilities decreased by 5.3% in 2024 compared with 2023. More specifically, the total number of facilities amounted to 12,088 in 2024 and 12,766 facilities in 2023.

The **total volume of water** used in aquaculture production decreased by 3.0% in 2024 compared with 2023. More specifically, the volume of water used amounted to 19.1 million cubic meters in 2024 and 19.7 million cubic meters in 2023.

The **total** area of aquaculture facilities used in aquaculture production decreased by 39.4% in 2024 compared with 2023. More specifically, the utilized area amounted to 159.4 thousand stremmas in 2024 and 263.2 thousand stremmas in 2023.

^{2.} Data regarding the fish species "Rainbow trout", "Common carp", "Sharpsnout seabream", "Coho(=Silver) salmon", "Marine fishes nei" and the Shellfish (bivalve molluscs) species "Mediterranean mussel" and "Marine molluscs nei" were confidential in the year 2023 or/and 2024 and therefore are not published.

Table 5. Facilities, water volume and areas used in aquaculture production by cultivation method, Greece total 2023 – 2024

Methods in number, water volume in millions of m³, area in thousands of stremmas (1 stremma=0.1 ha)

| Classification group of cultivated species by cultivation method | 2023 | | | 2024 | | | Change (%) 2024/2023 | | |
|------------------------------------------------------------------|-------------------------|-----------------|-------|-------------------------|-----------------|-------|-------------------------|-----------------|-------|
| | Number of methods | Water volume | Area | Number of methods | Water volume | Area | Number of methods | Water volume | Area |
| General total | 12,766 | 19.7 | 263.2 | 12,088 | 19.1 | 159.4 | -5.3 | -3.0 | -39.4 |
| Fish | 11,483 | 19.7 | 244.4 | 11,046 | 19.1 | 141.0 | -3.8 | -3.0 | -42.3 |
| Cages | 7,739 | 19.3 | _ | 7,599 | 18.8 | _ | -1.8 | -2.6 | _ |
| Tanks | 3,315 | 0.5 | _ | 3,033 | 0.3 | _ | -8.5 | -40.0 | _ |
| Crustaceans | 28 | _ | 15.6 | 19 | _ | 15.1 | -32.1 | _ | -3.2 |
| Shellfish (bivalve molluscs) | 1,222 | _ | 3.2 | 990 | _ | 3.3 | -19.0 | _ | 3.1 |
| Off bottom | 1,213 | _ | 3.0 | 985 | _ | 3.3 | -18.8 | _ | 10.0 |
| Aquatic plants-algae | 33 | _ | 0.03 | 33 | _ | 0.02 | 0.0 | _ | -33.3 |
| All methods | 33 | _ | 0.03 | 33 | _ | 0.02 | 0.0 | _ | -33.3 |

Notes: 1. Any discrepancies between sums and totals as well as percentages are due to rounding.

^{2.} Data regarding the methods of production "Ponds (natural and artificial) and lagoons", "Enclosures and pens", Recirculation systems" and "Other methods (dams etc.)" of the classification group "Fish", the methods of production "Ponds" and "Enclosures and pens" of the classification group "Crustaceans" and the methods of production "On bottom" and "Other methods" of the classification group "Shellfish (bivalve molluscs)", were confidential in the year 2022 or/and 2023 and therefore are not published.

EXPLANATORY NOTES

Aquaculture Survey

The Hellenic Statistical Authority has been conducting, since 1995, a statistical Aquaculture Survey on an annual basis.

Purpose

The main purpose of the Aquaculture Survey is to compile data on the production and value of the cultivated species by cultivation method, production of fry in hatcheries/nurseries, the number of employees and the facilities characteristics of the aquaculture units in Greece.

Legal basis

Regulation (EC) 762/2008 of the European Parliament and of the Council of 9 July 2008 on the submission by Member States of statistics on aquaculture and repealing Council Regulation (EC) No 788/96.

Reference period

The survey data refers to the year 2024.

Survey Methodology

The survey is census-based and covers all aquaculture units operating in Greece.

Statistical unit of the survey is the enterprise – production unit engaged in the rearing - cultivation of aquatic organisms (fish, shellfish, crustaceans and aquatic plants), under controlled conditions of reproduction and growth.

Further information on the Aquaculture Survey methodology can be found at: http://www.statistics.gr/en/statistics/-/publication/SPA06/-

Definitions

- 1. Aquaculture: According to Regulation (EC) No 762/2008, aquaculture is defined in Article 3 of Regulation (EC) No 1198/2006, as the rearing or cultivation of aquatic organisms using techniques designed to increase the production of the organisms in question beyond the natural capacity of the environment; the organisms remain the property of a natural or legal person throughout the rearing or culture stage, up to and including harvesting.
- 2. **Rearing cultivation of aquatic organisms**: any form of intervention in the growth process, with the aim of enhancing production (e.g. replenishment of stocks, feeding, protection from natural enemies, etc.).
- 3. Aquaculture facilities: any fixed structure that an enterprise/unit uses for the cultivation rearing of aquatic organisms. Aquaculture facilities are differentiated according to the production method used.
- 4. **Production methods**: For fish and crustaceans the methods are distinguished in "cages", "ponds", "tanks", "enclosures and pens", "recirculation systems", whereas for shellfish (bivalve molluscs) in on bottom, off bottom and other methods.
- 5. **Hatcheries and nurseries**: places for artificial breeding, hatching and rearing through the early life stages of aquatic organisms.
- 6. **Production environment**: aquaculture rearing culture can take place in fresh, brackish and marine waters. In particular:
 - a. Fresh water: means water which has a constantly negligible salinity.
 - b. Salt water: means water where the salinity is appreciable and constant.
 - c. **Brackish water**: means appreciable salinity but not at a constantly high level: the salinity may be subject to periodic variation due to the influx of fresh or sea waters.

7. Production volume:

- a. for fish, crustaceans, molluscs and other aquatic organisms, the live weight equivalent of the product. For molluscs, the live weight includes the weight of the shell. It is measured in kilograms (Kg).
- b. for aquatic plants, the weight of the liquid product. It is measured in kilograms (Kg).
- 8. Unit value of production: the total value of production in euro (\mathfrak{E}).

References

More information on the Aquaculture Survey methodology, analytical tables, and the survey questionnaire can be found at:

http://www.statistics.gr/en/statistics/-/publication/SPA06/-