Intelligence

GOAL 2019: Global finfish production review and forecast

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Annual survey data shows farmed fish production increased 73% over past decade

Houseboat rafts with cages under for rearing fish near Mỹ Tho, Vietnam. Photo by Billbeee at English Wikipedia.
https://commons.wikimedia.org/w/index.php?curid=56504135

The Global Aquaculture Alliance's annual production survey for key finfish species was presented at the GOAL 2019 conference in Chennai, India in late October. The estimates are based on a global survey of many informants undertaken by GAA, with additional estimates derived from Kontali Analyse AS.

Production figures until 2017 are based much on the Fishstat database operated by the Food and Agriculture Organization of the United Nations (FAO). The Norwegian Seafood Council and the U.S. National Marine Fisheries Service (NMFS) provided data on prices for several species. Table 1 provides a summary of finfish production volumes, with analysis of individual species and trends to follow.

Tveteras, GOAL19 survey, Table 1

	2017	2018	2019	2020	2017-18	2018-19	2019-20	Avg. 2010 to 2019
Atlantic salmon	2,290	2,423	2,599	2,689	5.8	7.3	3.5	6.1
Coho salmon	171	187	203	208	9.6	8.6	2.4	7.7
Large rainbow trout	261	265	300	302	1.6	13.1	0.7	0.0
Small rainbow trout	582	596	610	623	2.5	2.4	2.0	3.9
Milkfish, selected countries	857	783	793	804	-8.6	1.3	1.4	1.8
Barramundi, selected countries	96	90	108	115	-6.6	19.6	6.3	10.3
Carps, China	19,131	19,469	20,090	21,747	1.8	3.2	8.2	3.2
Tilapia	5,881	6,276	6,513	6,800	6.7	3.8	4.4	7.7
Catfishes, selected countries	4,553	4,879	5,003	5,193	7.2	2.5	3.8	5.9
Pangasius, Vietnam	1,249	1,422	1,468	1,506	13.8	3.3	2.6	3.5
Sea bass & Sea bream, Mediterranean	403	419	412	387	4.0	-1.7	-6.1	3.5
Bluefin tuna	59	63	72	78	6.9	15.4	7.9	10.1
Cobia, selected countries	52	51	53	55	-0.5	2.9	4.7	5.5
Grouper, selected countries	161	166	174	185	2.7	5.1	6.3	10.9
Corvina, Mediterranean	25	26	25	24	5.0	-4.0	-4.0	34.2

Table 1. Summary of finfish production, volumes, and individual species and trends.
2017 to 2020: production in 1,000 metric tons (MT).
2017-18 to Avg. 2010-19: Percent growth.

Tilapia

Production of tilapia – the most diversified fish species sector geographically – continues to grow. Production in 2019 is expected to reach 6.5 million metric tons, a 4 percent growth compared to 2018, despite significant disease losses (around 300,000 metric tons, or MT, significantly due to *Streptococcus* spp. infections) reported for Asia and costing perhaps as much as $500 million in lost value.

Next year, the global production of farmed tilapia is expected to grow by around 4 percent again to 6.8 million MT. This is still significantly lower than the average growth rate over the 10-year period from 2010 to 2019 period, which has been 7.7 percent.

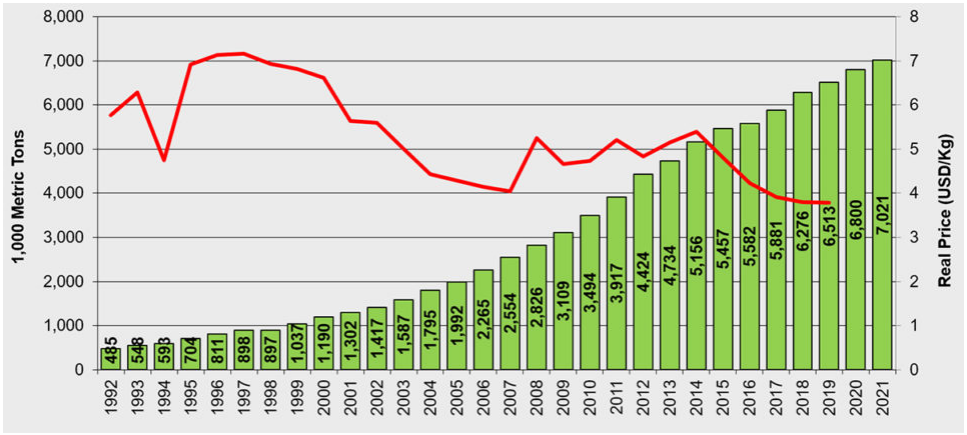

Fig. 1: Global production of farmed tilapia, with representative U.S. import prices for frozen fillets (red line), 1992 to 2021e.

*The Global Aquaculture Alliance's annual global production and forecast surveys for shrimp and finfish are sent to more than 150 sources around the world – to individual industry veterans and to country- and region-wide organizations such as CAPPMA (China Aquatic Products Processing and Marketing Alliance), the Seafood Exporters Association of India, the Norwegian Seafood Council and many others. Some sources provide data for more than one production region, country or species. The data is collected and analyzed by the Global Aquaculture Alliance and its partners and shared each year at GAA's GOAL (**Global Outlook for Aquaculture Leadership** (https://www.aquaculturealliance.org/goal/?__hstc=236403678.4354a7bd8d189b9d5da459dd554f0e0e.1683248900639.1683248900639.1683248900639.1&__hssc=236403678.1.1683248900647&__hs conference.*

When we look at a representative price – the U.S. import price for frozen fillets – we find that real prices have fluctuated at levels around $5 per kg since 2008, but started a downward trend in 2014. The price decreased last year to $3.80 per kg, where it remained during the first half of this 2019.

China is the leading global tilapia producer, followed by Egypt and Indonesia. As before, our sources do not agree completely on the production levels of the major producing countries. This year the average estimate from our sources is 1.7 million MT for China, 1.1 million MT for Indonesia and around 900,000 MT for Egypt. For China and Indonesia, production is expected to increase slightly next year, while Egypt's production is expected to increase by around 10 percent.

Catfishes, including pangasius

China, Vietnam, Indonesia, Bangladesh and India are the largest producers of catfish species. Total production in those countries we cover in our annual survey reached 5 million MT in 2018, 3 percent higher than the previous year. Production is expected to increase by 4 percent to around 5.2 million MT next year.

Fig. 2: Total production of catfish species, 2005 to 2020e, with real U.S. import prices (USD/kg) for frozen catfish fillets. Sources: Kontali, et al.

Vietnam is estimated to increase pangasius production by 3 percent from 2018 to 2019, from 1.4 million to 1.5 million MT, and an additional 3 percent in 2020.

Import prices for tilapia products to the United States and the EU had been on a downward trend since 2007, but have recently moved upwards. In the first half of this year, frozen fillet prices averaged $4.30 per kg in the United States and around $3.30 per kg in the European Union.

Carps

Carps are primarily produced for domestic markets, and their production is difficult to estimate. The total estimated production of the various carp species included in our survey is around 28 million MT in 2019, up by around 6 percent from the previous year. Next year production is expected to increase by 7 percent to around 31 million MT. China is by far the dominant producer, with 2019 production expected to increase by 3 percent to 20 million MT. India also produces significant amounts of various carp species.

Atlantic salmon

Atlantic salmon is expected to reach a production of 2.6 million MT in 2019, up by 7 percent from 2017. Prices have remained at high levels for the first half of the year, at $11.90 per kg for fresh fillets into the United States and around $7.30 per kg for whole gutted salmon into the EU market (Fig. 3). But we have seen significant downward movement in prices over the last quarter. Next year, production is expected to increase by 3.5 percent to 2.7 million MT.

The main producer of farmed Atlantic salmon, Norway, is estimated to have a production of 1.3 million MT in 2019, while the second-largest producer, Chile, is forecasted to produce 714,000 MT this year.

Fig. 3: Atlantic salmon production, 1998 to 2021e, with real EU27 import prices for fresh whole gutted fish, and for real U.S. import prices for fresh fillets. Sources: FAO, Kontali, NSC/Eurostat (prices). Note: Prices until 2018

are annual averages. Prices in 2019 are January-July average.

Trout

Production of large rainbow trout in marine waters is expected to recover to 300,000 MT this year, 13 percent higher than in 2018, but still below the peak levels of around 2012. Prices have been stable or declining the first half of this year, but the long-run trend has been upwards.

Fig. 4: Total marine production of large rainbow trout, 2000 to 2021e, with real U.S. import prices for fresh (blue) product, and real EU import prices for fresh product in USD/kg (red). Sources: FAO, Kontali and miscellaneous, NSC. Note: prices until 2018 are annual averages. Price in 2019 is January-July average.

The production of smaller trout, primarily farmed in freshwater, is still on a moderate upward trend. Production is increasing by 2 percent to around 610,000 MT this year. In 2020, production is expected to further increase by 2 percent to 620,000 MT.

Fig. 5: Global production of small rainbow trout, 2005 to 2021e, and EU27 real import prices. Sources: Kontali and miscellaneous. Prices: NSC and Eurostat.

Barramundi

Barramundi production for the countries we survey is estimated at 108,000 MT in 2019, up by 20 percent. Next year, the forecast is for an increase of 6 percent to around 115,000 MT.

Sea bass and sea bream

Sea bass and sea bream production in the Mediterranean is estimated to decline this year by 2 percent to around 410,000 MT. Next year, production is expected to decline again, by 6 percent. Sea bass and sea bream do not get much traction from the market. Prices have generally been on a downward trend since 2012, and that has continued this year.

Fig. 6: Mediterranean production of sea bass and sea bream, 2000 to 2020e, and real import prices to Italy.
Sources: Kontali and miscellaneous.

Cobia

Cobia production for the countries we cover – China, Taiwan, Panama and Vietnam – is estimated to be 53,000 MT this year, an increase of 3 percent from the previous year. In 2020, production is expected to increase by 5 percent. Since 2010, production in these countries has fluctuated around levels of 40 to 50,000 MT.

Bluefin tuna

Production of bluefin tuna is expected to reach 72,000 MT this year, up 15 percent from 2018. Next year, production is expected to further grow by 8 percent to 78,000 MT. Prices for U.S. fresh imports continue to stay at levels around $22 per kg.

Fig. 7: Total production of bluefin tuna, 2002 to 2021e, and U.S. real import prices for fresh product. Source:
production, anonymous; prices, U.S. National Marine Fisheries Service.

Groupers

Groupers appear sporadically in our annual survey, depending on our data sources, but species in this group are very important economically in many regions of the world. This year, farmed grouper production in representative countries is reported at 174,000 MT, up by 5 percent from last year. Next year, production is expected to increase by 6 percent to 185,000 MT in these representative countries.

Production of surveyed species, including carps

The total production of species and countries covered by our surveys are shown in Fig. 8. In 2017, our surveyed sectors covered 36 million MT of the total 53 million MT produced, according to FAO.

Production has almost doubled from the 20 million MT we reported in 2006 to an expected level of 38 million MT in 2019. Next year, production is expected to be 41 million MT.

Growth rates for all species/groups are all on the positive side. In 2017, the growth rate was 1.7 percent, then increased to 3.8 percent in 2018, is estimated at 3.5 percent in 2019 and expected to be 6 percent in 2020.

Freshwater fish represents the main bulk of production. In 2019, the freshwater sectors are predicted to produce 33 million MT, the diadromous sectors 4.6 million MT, and the marine sectors 700,000 MT.

Fig. 8: Production of surveyed species including carps in China.

Production of surveyed species excluding carps

Next, we exclude carps. In 2017, our survey of the remaining fish species amounted to 17 million MT of the 53 million MT produced globally. Production of these species has increased from 7.5 million MT in 2006 to 18 million MT in 2019. Since 2013, production growth rates have been in the range 2 to 6 percent. In 2018, production increased by 6 percent. In 2019, it is expected to be 4 percent, with a slightly lower growth rate forecasted for next year.

When we remove carps from consideration, the production of all the other freshwater fish species we consider in our survey drops from 33 million MT to 13 million MT in 2019. However, the freshwater fish sector is still much bigger than the diadromous and marine sectors.

Fig. 9. Production of surveyed species excluding carps.

Percentage growth from 2009 to 2019

Finally, we examined the growth rate of the species groups in our survey over the last decade.

The resulting picture is mixed. Marine species had a growth of 73 percent from 2009 to 2019; diadromous species were lower at 50 percent, while freshwater fish species increased by 86 percent when we exclude carps. If we include carps, then the freshwater sectors increased production by 53 percent. The total growth rate when we include carps is at 53 percent. When we exclude carps, we see a more impressive total development for this time period, with a growth of 75 percent.

Fig. 10: Percentage growth, 2009 to 2019, of the fish species/groups included in the GOAL 2019 survey.

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