منظمة الأغذية والزراعة للأمم المتحدة
联合国粮食及农业组织
Food and Agriculture Organization of the United Nations
Organisation des Nations Unies pour l'alimentation et l'agriculture
Продовольственная и сельскохозяйственная организация Объединенных Наций
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COMMISSION OF SMALL SCALE, ARTISANAL FISHERIES AND AQUACULTURE OF LATIN AMERICA AND THE CARIBBEAN

XVII SESSION

Lima - Peru, 27-29 October 2021

OVERVIEW OF INLAND FISHERIES IN LATIN AMERICA AND THE CARIBBEAN

Introduction

This document provides a synthesis of the current situation of inland fisheries in Latin America and the Caribbean (LAC), as part of the background information for the sector analysis in the framework of the Seventeenth Session of COPPESAALC. The main sources of information used for the elaboration of this document were The State of World Fisheries and Aquaculture 2020[1] (SOFIA), other recent FAO publications and the FishstadJ database[2.]

Inland fisheries catch

In 2019, world inland fisheries production was estimated at 12.1 million tons. In LAC this value reached 0.51 million tons, a similar production volume to previous years. In 2019, inland fisheries contributed with a 4.168 percent of the total catch in the region (Table 1).

Table 1: Inland fisheries production in LAC (millions of tons) in the period 1974-2019 [3]

Inland fisheries	1974	1980	1990	2000	2010	2015	2018	2019
Global	4.3	4.4	6.4	8.6	10.8	11.1	12.0	12.1
LAC	0.25	0.31	0.44	0.49	0.51	0.53	0.57	0.51
LAC Contribution (%)	5.9	7.1	6.9	5.7	4.7	5.7	4.8	4.16

Source: FAO-Fishstat, 2021.

[1]FAO. 2020. The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome https://doi.org/10.4060/ca9229es http://www.fao.org/fishery/sofia/es)

[2]FAO. 2021. Fishery and Aquaculture Statistics. Global production by production source 1950-2019 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2021. www.fao.org/fishery/statistics/software/fishstatj/en

[3]FAO. 2021. Fishery and Aquaculture Statistics. Global production by production source 1950-2019 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2021. www.fao.org/fishery/statistics/software/fishstatj/en

From 1974 to 2010, the inland fisheries in LAC showed an upward trend that has stabilized in recent years at around 500 thousand tons (Figure 2). It is important to note that there is a high probability that the catch volume increase is associated with an improvement in landings records, as it is assumed that the volume is underestimated due to difficulties in data collection, particularly in remote populations, so that the quality of data has historically been poor and reflects time lags. Many indigenous communities in remote areas catch fish for family consumption, which is not recorded and might be significant given the number of people engaged in this subsistence activity.

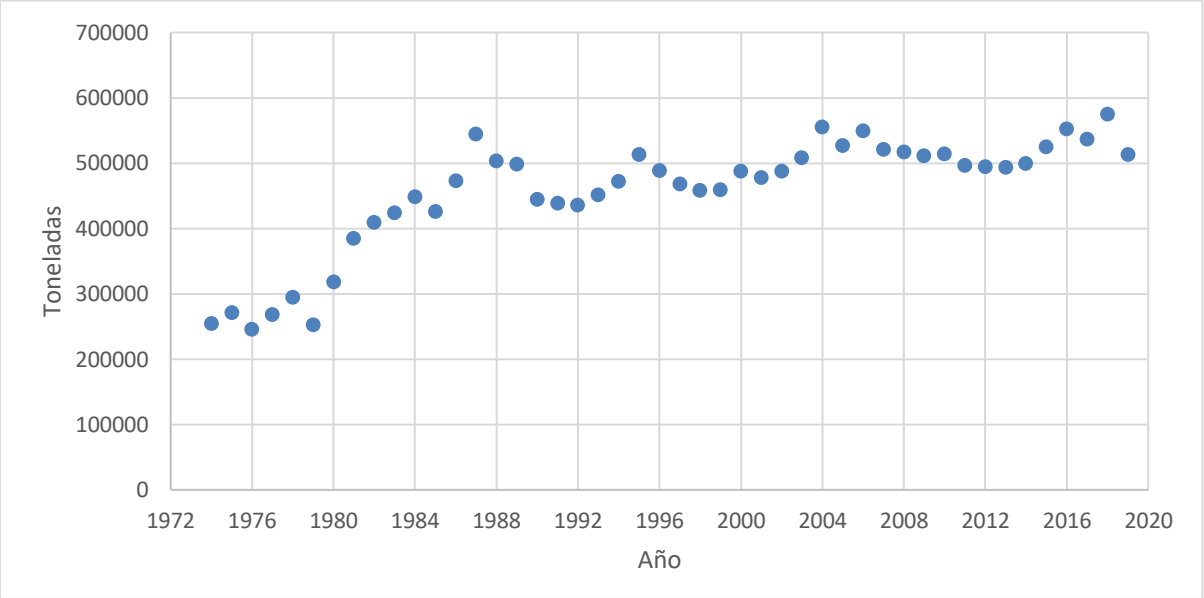

Figure 2. Inland catch volume in LAC between 1974 and 2019 [14]

Table 2 shows estimates of inland water catch volumes per country for the years 2018 and 2019. The relative contribution of inland fisheries to the region's total catch for 2019 decreased by 12.1 percent compared to the previous year.

[4] FAO. 2021. Fishery and Aquaculture Statistics. Global production by production source 1950-2019 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2021. www.fao.org/fishery/statistics/software/fishstatj/en

Table 2. Contribution of inland fisheries to total national and LAC catch and Compound Annual Growth Rate (CAGR) 2015-2019[5]

Country	2015	2018	2019	Contribution of inland fisheries to total catch per country (%) for 2019	Contribution per country to total inland catch in LAC for 2019	Growth rate period 2015-2019	Growth rate period 2018-2019
Brazil	217 220	224 910	224 910	31.7	43.9	3.4	0.0
Mexico	97 842	223 625	155 714	9.8	30.4	37.2	-43.6
Argentina	18 885	20 200	25 484	3.1	5.0	25.9	20.7
Colombia	20 474	21 757	22 495	22.2	4.4	9.0	3.3
Boliv. Rep of Venezuela	6602	22 000	22 000	8.0	4.3	70.0	0.0
Peru	37 526	19 465	18 781	0.4	3.7	-99.8	-3.6
Paraguay	1323	17 111	16 940	100.0	3.3	92.2	-1.0
Plurinat State of Bolivia	11 730	7 400	7 900	100.0	1.5	-48.5	6.3
Uruguay	21 695	5 229	5 400	7.9	1.1	-301.8	3.2
Guatemala	6 889	2 360	2 360	14.1	0.5	-191.9	0.0
Cuba	679	1 950	1 799	9.7	0.4	62.3	-8.4
Dominican Republic	213	1 523	1 370	9.7	0.3	84.5	-11.2
Jamaica	40 595	1 213	1 146	8.5	0.2	-3442.3	-5.8
Suriname	0	850	850	2.3	0.2	100.0	0.0
El Salvador	2 408	750	750	1.5	0.1	-221.1	0.0
Honduras	5 959	100	600	5.0	0.1	-893.2	83.3
Nicaragua	6 000	374	352	0.7	0.1	-1604.5	-6.3
Ecuador	459	123	142	0.0	0.0	-223.2	13.4
Panama	7 700	128	125	0.1	0.0	-6060.0	-2.4
Costa Rica	0	50	50	0.4	0.0	0.0	0.0
Chile	0	0	0	0.0	0.0	0.0	0.0
Rest of LAC countries	0	1 341	1 331	0.8	0.7	0.0	-0.8
Total LAC	**634 629**	**574 476**	**512 517**	**4.16**	**100**	-24.3	-12.1

Inland fisheries account for the total fishery catches for the States of Bolivia (7 400 tons) and Paraguay (17 110 tons). In other countries, its relative contribution to total catch is highly significant, for example, in 2019 it contributed 32 percent to Brazil's total fish catch and 22.4 percent to Colombia's total fish catch.

In 2019, the two main inland catch producers in the region were Brazil (42.7%) and Mexico (30.4%) of the regional total. Mexico recorded a decrease of 67 911 tons in inland catch compared to the previous

[5]FAO. 2021. Fishery and Aquaculture Statistics. Global production by production source 1950-2019 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2021. www.fao.org/fishery/statistics/software/fishstatj/en

year. Together, the two countries accounted for 74.3 percent of the regional total inland fishery production. (Table 2).

In recent decades, Brazil, the main producer in the region, has stabilized at approximately 225 000 tons. It is possible that the volume is underestimated, as a significant portion is destined for self-consumption, especially in villages that are difficult to access, with under-recording of catch and utilization. Between 2015 and 2019, there was a 24.3 percent reduction in inland catch in LAC, as well as for the period between 2018 and 2019, with a decrease in regional production of 12.1 percent. These contractions may reflect weak statistical systems or, more worryingly, may indicate a reduction in the abundance of target species, which is difficult to ascertain in the absence of reliable scientific information.

With regard to the main species caught in the biennium 2018-2019, Table 3 highlights the 31 percent reduction in the catch of tilapia (nei). On the other hand, common carp recorded a 20 percent decrease in catch 2019 compared to the previous year.

Table 3. Main species caught in LAC inland waters[6]

Species	Volume caught 2018	Volume caught 2019
Tilapia nep	146 697	100 137
South American shad nep	58 359	56 943
Fresh water fish nep	42 731	36 328
Common carp	44 226	35 040
Fresh water siluroid nep	25 314	26 785
Characin nep	24 173	25 571
Laulao catfish	22 795	23 635
Curbinata	18 323	18 346
[Semaprochilodus insignis]	14 903	14 992
Yellow catfish	13 425	13 720
Cichilds nep	13 178	13 368
Surubies nep	8 210	10 758
[Hoplias aimara]	8 880	8 880
Fresh water shrimp nep	9 682	8 667
[Hypophthalmus spp]	8 660	8 660
Coporo	7 905	7 066
Fres water charal nep	8 062	5 800
Netted prochilod	4 851	5 545
Ciprínidos nep	7 511	5 091
[Schizodon fasciatus]	4 731	4 742
[Curimata cyprinoides]	4 730	4 730
Catfish nep	6 054	4 664
Sabalo rayado	4 234	4 370
Cachama	4 111	4 104
Other species	59 298	62 552
Total	**574 476**	**512 517**

[6] FAO. 2021. Fishery and Aquaculture Statistics. Global production by production source 1950-2019 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2021. www.fao.org/fishery/statistics/software/fishstatj/en

Although inland fisheries production is significantly lower than marine fisheries, its social importance is highly significant because it represents the pillar of food security for many coastal communities, many of them indigenous, located in the vast watersheds of the region. They also provide self-employment for thousands of inhabitants of these communities, allowing them to barter fish for other foodstuffs and supplies and to make money from the sale of surpluses.

The main problems affecting the sustainability of inland fisheries, in addition to the effects of climate change on aquatic ecosystems and biodiversity, are water pollution by agrochemicals, sewage from human settlements, industrial waste and metals from mining, as well as the over-exploitation of aquifers, the indiscriminate catch of juvenile fish for aquarium and the deliberate introduction of ecologically aggressive species. In South American countries where river fishing is culturally important, habitat destruction and the blockage of waterways with dams have become serious threats, particularly for migratory species.

Conclusions

- It is estimated that inland fisheries production in LAC has stabilized at around 500 000 tons per year. Despite the efforts made by countries to estimate the volume of regional inland catch, there is a need for efficient registration and monitoring mechanisms, which would facilitate the sustainable management of inland fishery resources.
- One of the main limitations for the registration and inclusion of fluvial-lagoon fishers in official programmes is their wide geographical distribution; in addition to this, fishery products are generally traded in local markets, which often prevents the registration of their activity, due to the lack of human resources or mechanisms to gather information on a regular basis.
- Among the main challenges facing inland fisheries are the effects of pollution of water bodies due to different anthropic activities; climate change, which alters rainfall patterns and thus the migratory processes for the reproduction of many species; and the changes in watercourses, which have the same effect.
- The weakness of the collection, analysis and use of biological-fisheries information systems for decision-making in terms of sector management is perhaps the main intrinsic weakness of the governing bodies of fisheries in the region, particularly when the economic dimension of marine fisheries monopolises the limited resources available to them.