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Annual Report of the Cook Islands to the SC

Cook Islands

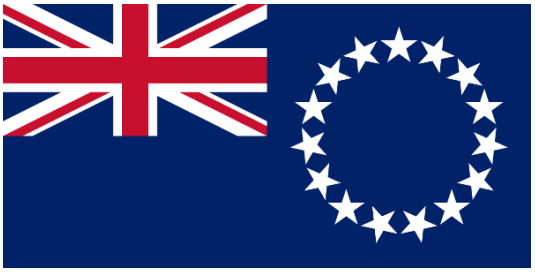
Ministry *of* Marine Resources

GOVERNMENT OF THE COOK ISLANDS

SOUTH PACIFIC REGIONAL FISHERIES MANAGEMENT ORGANISATION

Cook Islands Annual Report in the SPRFMO Convention Area for 2023

September 2024



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Cook Islands

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1 Description of Fisheries

In early 2023, only one Cook Islands vessel actively participated in fishing activities (as shown in Table 1). The fishing vessel Akanui successfully completed its third fishing trip. However, after this trip, the vessel docked in Papeete, Tahiti where it has remained. Consequently, no fishing activities have been conducted since April.

Several factors led to this suspension of operations. Firstly, economic considerations made fishing unfeasible at that time. This was largely due to the low lobster catch. The resulting revenue was insufficient to cover operational costs.

Regulatory constraints also played a crucial role. The Kopernik CPUE limit, regulated in Conservation Management Measure (CMM) 14b-2023, was reached. As such the CMM required the vessel to postpone further fishing activities.

To mitigate this the Cook Islands is now diversifying the fishery by allowing hapuka (*Polyprion oxygeneios*) drop line and jigging fishing simultaneously with the trap fishery. These methods are seen as promising additions allowing for a more economically sustainable fishery.

To enact this the Cook Islands have worked closely with SPRFMO and our industry stakeholders to develop a comprehensive Fisheries Operation Plan (FOP) for *P. oxygeneios* fishing. This collaborative effort aims to ensure that new fishing methods are sustainable, economically viable, and compliant with existing regulations. The plan includes detailed guidelines, operational protocols, and conservation measures to protect marine ecosystems while enabling the industry to explore new fisheries.

By diversifying into *P. oxygeneios* drop line and jigging, the Cook Islands fishing industry hopes to overcome the economic challenges that currently hinder the fishing operation. This strategic shift marks a new chapter for the Cook Islands, focused on a sustainable, innovative, and economically resilient fishery.

Table 1. Fleet composition of Cook Islands flagged vessels operating in the SPRFMO area for the most recent 5 years.

Vessel GRT	2019	2020	2021	2022	2023
0-200	-	-	-	-	-
201-500	-	-	-	1	1
500+	1	1	-	-	-
Total	1	1	-	1	1

2 Catch, Effort and CPUE Summaries

In 2023, the total catch was 25.89 t, a notable decline from the previous years (Table 2).

Jasus caveorum showed a considerable decline, contributing only 3.95 t to the annual catch. This decline was largely a result in a switch to targeting crabs (*Chaceon sp*). Concurrently, *Chaceon sp.* experienced with a large increase to 21.94 t, the highest in the five-year period. This notable upsurge highlighted the impact of deliberate targeting of this species.

The total catch of 25.89 t for 2023 is the second lowest catch, but the fishery deliberately avoided lobsters and ceased early pending a Commission decision on the *P. oxygeneios* fishery.

Table 2. Catch by species in tonnes (t) for potting fishery for most recent 5 years.

Year	J. caveorum (t)	Chaceon sp. (t)	Others (t)	Total (t)
2019	145.21	7.7	1.11	154.02
2020	1.46	13.95	0.37	15.73
2021	-	-	-	-
2022	43.78	4.44	0	48.22
2023	3.95	21.94	0	25.89
Total	194.4	48.03	1.48	246.86

3 Fisheries Data Collection and Research Activities

In 2023, the Cook Islands continued to implement our comprehensive data collection and sampling strategy. Following CMM 2022-02 protocols, data from the exploratory trap fishing operations were gathered daily. Daily effort, catch, and production logs provided set-by-set operational information. In addition, observers recorded retained and discarded catch, waste management, other species interactions, and mitigation measures used. Additionally, areas suspected of being VMEs, like the Kopernik Valley, remained closed to fishing.

These data allow the Cook Islands to monitor catch, biological information and evaluate trends in biomass.

4 Biological Sampling and Length/Age Composition of Catches

Size frequency data as well as sex, maturity and shell state data are collected from all *J. caveorum* and *Chaceon* sp. Every 10th trap was sampled for both *J. caveorum* and *Chaceon* sp.

In addition, the Cook Islands has purchased genetic sampling kits and developed protocols to collect genetic samples from *J. caveorum* and *P. oxygeneios* as well as otoliths for *P. oxygeneios* for future stock structure and age and growth analyses.

5 Ecosystem Approach considerations

As per the previous report, the same mitigation measures were applied by the Cook Islands flagged vessel in 2023, in line with CMM14b-2022. We also intend to undertake additional sampling of *P. oxygeneios* gut contents to begin a long-term data set to help inform changes to fish diet that could elucidate changes to the ecosystem that occur as climate change progresses.

6 Observer Implementation Reports (refer CMM 02 and CMM 16)

The Cook Islands National Observer Programme, authorized for the SPRFMO Convention Area since 2018, has steadily grown, training more observers and enhancing their skills. Despite logistical challenges in 2021 due to COVID-19, the program ensured coverage by collaborating with Capricorn Marine Observers. In 2023, two observers were successfully deployed on a trip, showcasing the program's commitment to reliable data collection and sustainable fishing practices. The program continues to improve training and maintain observer coverage, deploying two observers per trip. The observers have also been provided with sampling manuals for fish and lobster biological sampling, which will be used on all future trips.