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«08» 06 2023г. №5620-ВС/V03

To: Julian Bordaçahar,
Senior Legal Counsel
Permanent Court of Arbitration,
The Netherlands

E-MAIL: JBORDACAHAR@PCA-CPA.ORG

Re: PCA CASE N° 2023-33 Review Panel Established Under Article 17 and Annex II of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean

Dear Mr.Bordaçahar,

Please find attached Written Memorandum and Documentation submitted to the Review Panel by the Russian Federation in support of its Objection in respect of established shares in the catch limit of *Trachurus murphyi* in 2023, presented by the Russian Federation to the Executive Secretary of the South Pacific Regional Fisheries Management Organisation in accordance with the Convention.

With best regards,

Vasily Sokolov,
Deputy Head
of the Federal Agency for Fisheries

Written Memorandum and Documentation submitted to the Review Panel by the Russian Federation in support of its Objection in respect of established shares in the catch limit of *Trachurus murphyi* in 2023, presented by the Russian Federation to the Executive Secretary of the South Pacific Regional Fisheries Management Organisation in accordance with the Convention

The Russian Federation basing on provisions of Article 17 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean of 14 November 2009 (" the **Convention**"), presented an objection **to the Executive Secretary of the South Pacific Regional Fisheries Management Organisation** to the decision on its share in the total catch of *Trachurus murphyi* in 2023, specified in paragraphs 4 and 9 and Tables 1 and 2 of the Conservation and Management Measure for *Trachurus murphyi* ("**CMM 01-2023**") as set out in its letter dated 10 April 2023 ("**Russian Federation's Objection**).

As noted in the Russian Federation's Objection the decision with respect to CMM 01-2023, to which the Russian Federation has objected, is inconsistent with the provisions of the Convention – in particular Article 21.

In accordance with Article 5 of the Convention this Convention applies to waters of the Pacific Ocean beyond areas of the national jurisdiction in accordance with international law.

As per Article 8 of the Convention, the Commission shall, in accordance with the objective, principles and approaches, and specific provisions of this Convention, exercise *inter alia* the following functions:

adopt conservation and management measures to achieve the objective of this Convention including, as appropriate, conservation and management measures for particular fish stock (Article 8 a);

promote compatibility of conservation and management measures in the Convention Area, adjacent areas under national jurisdiction and adjacent areas of high seas (Article 8 f).

In accordance with paragraph 4a (i) of Article 20 of the Convention, for a fishery resource that straddles the Convention Area and an area under the national jurisdiction of a coastal State Contracting Party or Parties the Commission shall establish a total allowable catch or total allowable fishing effort and other conservation and management measures, as appropriate, for the Convention Area. The Commission and the coastal State Contracting Party or Parties concerned shall cooperate in the coordination of their respective conservation and management measures in accordance with Article 4 of this Convention.

According to paragraph 1 of CMM 01-2023 and the superseded versions of this CMM, CMM 01-2023 applies to fisheries for *Trachurus murphyi* undertaken by vessels flagged to Members and Cooperating Non-Contracting Parties (CNCPs) included on the Commission Record of Vessels (CMM 05-2021) in the Convention Area and, in accordance with Article 20(4)(a)(iii) of the Convention and with the express consent of Chile and Ecuador, to fisheries for *Trachurus murphyi* undertaken by Chile and Ecuador in areas under their national jurisdiction.

By 31 December each year a Member or CNCP may transfer to another Member or CNCP all or part of its entitlement to catch up to the limit set out in Table 1, without prejudice to future agreements on the allocation of fishing opportunities, subject to the approval of the receiving Member or CNCP. When receiving fishing entitlement by transfer, a Member or CNCP may either allocate it domestically or endorse arrangements between owners participating in the transfer. Members and CNCPs receiving fishing entitlements by transfer who have consented to a total allowable catch that will apply throughout the range of the fishery resource under Art 20(4)(a)(iii) may pursue those entitlements in the Convention Area and in their areas under their national jurisdiction (paragraph 8 of CMM 01-2023 and superseded versions).

However, Article 20(4)(a)(iii) of the Convention does not create such rights, limiting itself to stating that in the case where one or more of the coastal State Contracting Parties does not consent to a total allowable catch or total allowable fishing effort that will apply throughout the range of the fishery resource, the Commission may establish, as appropriate, a total allowable catch or total allowable fishing effort that will apply in the areas of national jurisdiction of the consenting coastal State Contracting Party or Parties and the Convention Area. Annex III will apply, mutatis mutandis, to the establishment of this total allowable catch or total allowable fishing effort by the Commission.

In accordance with the provisions set out in Article 20 (4) (a) (iii) and Article 21 (2), as well as in Annex III of the Convention, the costal State Contracting Party could give its consent for the Conservation and Management Measure to extend its effects onto its Exclusive Economic Zone.

At the same time, such consent does not create the right of a non-coastal Contracting Party to fish its quota of *Trachurus murphyi* in the waters under national jurisdiction of a coastal Contracting Party.

At the 5th SPRFMO Commission meeting held in Adelaide in 2017, the Commission members agreed on the participation percentages in the fishery for *Trachurus murphyi*, intended to last for five years.

At the 10th SPRFMO Commission meeting the Commission members agreed to roll over the allocation percentages in the fishery for *Trachurus murphyi* for one year.

It should be noted, that only Republic of Korea introduced its proposal (COMM11-Prop21) to amend CMM 01 (*Trachurus murphyi*) in advance of 11th SPRFMO Commission meeting. This proposal included a requirement for Members and CNCPs without gross tonnage limits to submit an effort management plan. The proposal also suggested that in cases where there is overcatch, then that amount is deducted from the total allowable catch (TAC) advised by the Scientific Committee. Finally, the proposal suggested extending the application of the percentages in the current CMM 01 (*Trachurus murphyi*) for one year, and to commence a process to develop an allocation framework.

Paragraph 5 Regulation 4 of the Rules of Procedures requires that proposals or amendments to be discussed at meetings shall be submitted to the Executive Secretary no later than 50 days before the start of the Commission meeting. The Executive Secretary shall make proposals and amendments available no later than 45 days before the start of the meeting by posting them on the public access area of the SPRFMO website.

According to the information available, no other proposals, except for the above-mentioned proposal of the Republic of Korea, have been submitted before the start of the 11th meeting of the SPRFMO Commission.

Following the decision taken at COMM10 a discussion followed on the revision of the allocation criteria, where the Commission members expressed their views on issues related to the duration, scope, and criteria to be considered in the allocations decision. A jack mackerel working group (WG) was established to facilitate discussions on the jack mackerel quota and allocation during 11th SPRFMO Commission meeting.

According to paragraph 2 of Article 9 of the Convention in establishing such additional subsidiary bodies the Commission shall provide specific terms of reference and methods of work, provided always that such specific terms of reference are consistent with the objective and the conservation and management principles and approaches of this Convention and with the 1982 Convention and the 1995 Agreement. Such terms of reference and methods of work may be reviewed and amended as appropriate by the Commission from time to time.

As per paragraph 6 of Article 9 of the Convention all subsidiary bodies shall operate under the rules of procedure of the Commission unless otherwise decided by the Commission.

However, the process of establishing, order of business and decision making, including preparing the draft recommendations of this working group did not meet the requirements of Article 9 of the Convention. The Commission didn't provide specific terms of reference and methods of work for working group, referred to the previous practice.

As per the information available at 11th SPRFMO Commission meeting the chair of the working group reported back to the Commission on progress made in the working group. The Chairperson of the Commission, basing on this report, integrated the allocation table into a Chair's Proposal (COMM11- WP24_rev1).

This approach is based on the fact that the *Trachurus murphyi* catches obtained as a result of the transfer of quotas between the Commission members, which, according to paragraph 9 of the CMM 01 -2022, could not be the basis for future agreements on the allocation of fishing opportunities. At the same time, the reduction in the *Trachurus murphyi* national quota affects the Commission members that were actively fishing since 2017 until current time and, taking into account the majority of the criteria stated in Article 21 of the Convention, could have increased their catch share in percentage.

Moreover, the reduction of the percentage related to quota of *Trachurus murphyi* of one member of the Commission without taking into consideration provisions of Article 21 of the Convention and without confirmation of its consent in favor of another member of the Commission, demonstrates unjustifiable discrimination in form and in fact against that Commission member, and is inconsistent with the provisions of the Convention.

As a result, the share of the Russian Federation in the total *Trachurus murphyi* quota has been reduced twice: in 2017 from 3.6829% to 3.2825% and in 2023 from 3.2825% to 3.0230%, which was the most significant reduction for one Commission member during the period from 2017 to 2023.

Between 2017 and 2022, five out of ten SPRFMO members with *Trachurus murphyi* quota have operated and caught the whole or part of their annual allocation. At the same time, Chile caught almost total of its entire quota of *Trachurus murphyi* in waters under national jurisdiction. Other members that were given quota allocations have not reported catches of *Trachurus murphyi* at the High Seas in the Convention Area.

In accordance with Catch Data submitted to the SPRFMO Secretariat (COMM 11 – Inf 01_rev2) only the European Union and the Russian Federation fished the whole or part of their annual allocation of *Trachurus murphyi* at the High Seas in 2022 (attached).

However, a proportionate quota reduction has been implemented at the 11th SPRFMO Commission meeting regardless of each Commission member's historical catch and other relevant provisions of Article 21.

With expressed concerns above, we believe that as a general principle, the reduction of the share should have been made on the basis of the consent of the Commission Member concerned, and it is also the member's good will to consent to the reduction of the share.

In this regard the Russian Federation adopted alternative measures that are equivalent in effect to the decision to which it has objected and have the same date of application.

The Russian Federation is guided by a percentage on its *Trachurus murphyi* quota of 3.2825% related to the catches referred to in paragraph 9 of the CM 01-2023 which is equivalent to the limits set in the *Trachurus murphyi* Conservation Measure for the period from 2017 to 2023.

Following the principle of shares distribution of *Trachurus murphyi catches* the Russian Federation establishes the *Trachurus murphyi* catch limit in the Convention area in respect of the Russian fisheries for 2023, which equals to 35 452 tonnes.

In assessing the impact of the alternative measures, the recommendations of the Scientific Committee have been taken into account.

As stated in paragraph 4.3.(90) of the 10th SPRFMO Scientific Committee Meeting Report, the Scientific Committee noted the estimated biomass of jack mackerel increased from 2021 to 2022 and is estimated to be well above the *Bmsy*. Therefore, the Scientific Committee noted that the stock is estimated to be in the third tier of the harvest control rule. Within the third tier of the harvest control rule, catches should be limited to a fishing mortality of *Fmsy* which would be expected to result in catches in 2023 of 3,120 kt. However, according to the directive of the Commission to the Scientific Committee (COMM3, Annex C), a maximum change in the catch limit of 15% should be applied relative to the TAC of the current year.

At the same time, the Russian Federation will adhere to the conservation and management principles and approaches set forth in the Convention, and will continue to monitor compliance with the provisions of all the relevant conservation measures in relation to the *Trachurus murphyi* fishery in the Convention Area.

SPRFMO
South Pacific Regional Fisheries Management Organisation

11TH MEETING OF THE SPRFMO COMMISSION

Manta, Ecuador 7 to 17 February 2023

COMM 11 – Inf 01_rev2

(rev2 - 01 Feb 2023)

Catch Data Submitted to the SPRFMO Secretariat

Secretariat

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Contents

1. Introduction

This paper summarises Annual Catch Totals (for key species) received by the South Pacific Regional Fisheries Organisation (SPRFMO) Secretariat as of 04 January 2023 and for the last 40+ years[1] and updates COMM10-Inf01.

1.1 Annual catches by fishery

The SPRFMO Convention applies to the high seas of the South Pacific, covering about a fourth of the Earth's high seas areas. Currently, the main commercial resources fished in the SPRFMO Area are jack mackerel and jumbo flying squid in the Southeast Pacific and, to a much lesser degree, various deep-water species often associated with seamounts in the Southwest Pacific.

It should be noted that during the 10th Scientific Committee meeting (2022), there were discussions around the need to clearly define what is meant by 'fisheries' within SPRFMO. Two papers were presented related to this topic: one to evaluate catch composition while targeting jack mackerel, alfonsino, and redbait (SC10-Doc13) and the second to explore the characteristics of fishing activities within SPRFMO, relative to extant CMMs (SC10-Doc12_rev1). For this paper, catches are grouped by 'fishery' in Figure 1.1, which is a general classification based on flag, gear type, and species encountered. For example, the catches of alfonsinos and redbait, which have been the focus of much discussion over the past year, are grouped under the jack mackerel fishery in this figure.

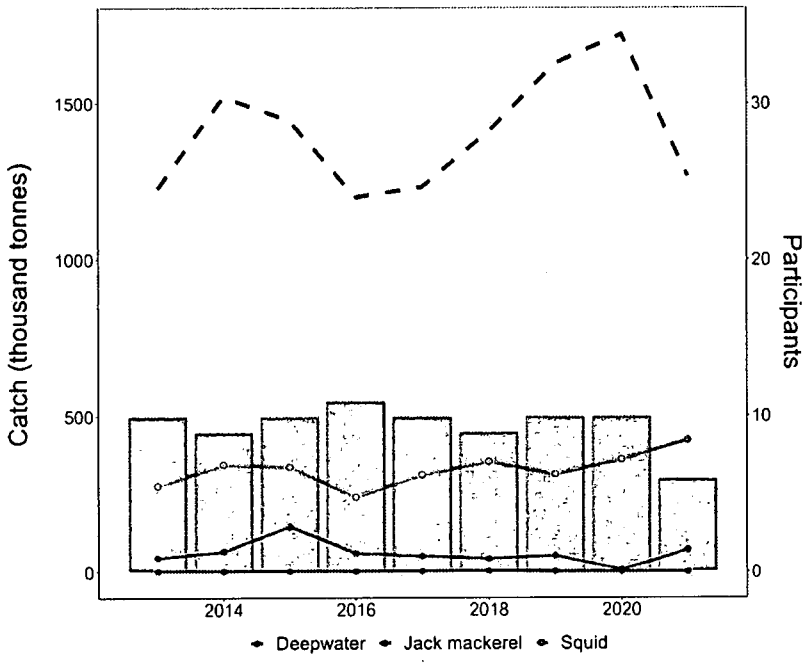

Figure 1.1: Annual catches (thousand t) reported by SPRFMO Members and CNCPs (2013-2021) and active participants (secondary y-axis; bars). The annual catch figures for the SPRFMO Area by 'fishery', including deepwater, jack mackerel, and squid are represented by the coloured lines, while the total reported annual catch (including catches in areas of national jurisdiction) of all species and fisheries is represented by the dashed black line.

Figure 1.1 above shows the total catch record held by the Secretariat for the three main fisheries in the region: jack mackerel (green), jumbo flying squid (yellow), and deepwater (blue). Fisheries are broadly defined by area

[1] The annual catch records held by the SPRFMO Secretariat begin in 1939 (one Member). However, most the records for most Member participants begin in the late 1970's.

fished, fishing method, and species caught. Catch data from these three fisheries are illustrated for the SPRFMO Area only, excluding catches from exclusive economic zones (EEZs) and areas of national jurisdiction (ANJs). The black dashed line represents all catches reported to SPRFMO (e.g., including jack mackerel/squid catches from neighbouring ANJs), combined across all fishery categories. The secondary y-axis is associated with the number of participants (i.e., Member/CNCP) in each year, across all fisheries combined, and is represented by the grey bars.

There was a steep decline in the jack mackerel fishery until 2012 in the area managed by SPRFMO (and also across the total area including jack mackerel inside Chile's EEZ; i.e., included in the black line trend) after which a recovery occurred and since 2015 catches for this fishery have been relatively stable (noting reduced effort, largely during 2020 due to the COVID-19 pandemic). The high seas South-east Pacific squid fishery has experienced rapid growth and catches in the SPRFMO Area have been increasing over the last 5 years. The catches for the deepwater demersal fishery are virtually imperceptible on this scale. Figure 1.1 also shows that participation in SPRFMO fisheries by Members (and CNCPs) has remained relatively constant throughout this period, but with a notable decrease in 2021; however, the number of vessels operating in each fishery varies considerably (Figure 1.2).

1.2 Fishery characteristics

Figure 1.2 shows the different characteristics of each of the SPRFMO fisheries during 2021. The demersal fishery was the smallest by catch volume (~198 tonnes), had the highest species diversity (~127 species caught in 2021; secondary axis), and was carried out by 8 vessels. The jack mackerel fishery catches in the SPRFMO Area totalled approximately 73,895 tonnes, with 15 species encountered and participation from four vessels. The monospecific squid fishery continues to expand, producing an estimated 422,640 tonnes from the SPRFMO Area in 2021 with participation from 519 vessels (including carrier vessels).

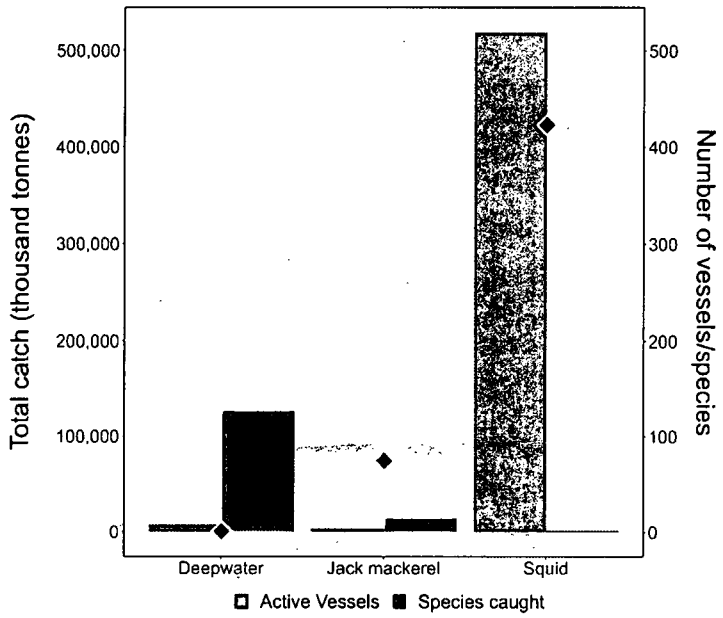

Figure 1.2: Annual catches (thousand t; black diamonds), number of active fishing vessels (green bars), and number of species reported (purple bars) for SPRFMO fisheries in 2021.

There are over 339 individual species which have been recorded as being caught in the SPRFMO Area during the most recent 10 years and this paper provides a summary for 26 major species or groups. Species have generally been grouped in order to:

a) accommodate the use of similar (but different) species codes by different participants; and

b) to highlight important taxonomic groups which otherwise might be lost due to numerous small catches of individual species[2].

Annex 1 lists the major species (groups) and contains details about the specific species that make up each grouping. Note that the SPRFMO Scientific Committee is working on an assessment framework for deepwater species and the Secretariat's intention is to align the lists of major species with the SC identified Tier 1 and Tier 2 species as the work progresses (refer to SC7-Report, paragraph 69).

[2] For the purposes of this paper the major species groups were the same as previously defined in COMM10-Inf01.

2. Annual reported catches in the South Pacific for *Trachurus* spp (Jack/Horse mackerels)

Table 2.1: Annual catch data – *Trachurus* spp (t)

Participant	Australia	Belize	Chile[3]		China	Cook Islands	Cuba	Ecuador
FAO Area	Unknown	87	87	87	87	87	87	87
High seas vs In-zone	EEZ (AUS)	HS	EEZ (CHL)	HS	HS	HS	HS	EEZ (ECU)
Species	*Trachurus* spp.	*T. murphyi*	*T. murphyi*	*T. murphyi*	*T. murphyi*	*Trachurus* spp.	*T. murphyi*	*T. murphyi*
2021			626 391	0				
2020			556 497	0	0	0	0	0
2019			442 038	2 283	22 699			0
2018			425 426	975	24 366			23
2017			341 572	3 173	16 802			54
2016			313 403	3 159	20 208			0
2015			228 409	56 805	29 180			289
2014			267 615	3 983	21 155			9
2013			226 006	5 917	8 329	0		3 563
2012			223 322	4 138	13 012	0	0	77
2011		0	193 722	53 573	32 862	0	8	69 373
2010		2 240	355 510	109 298	63 606	0		4 613
2009		5 681	491 792	343 135	117 963	0		1 934
2008		15 245	376 370	519 738	143 182	0		0
2007	680	12 585	1 040 167	262 617	140 582	7		927
2006		481	1 251 499	128 442	160 000			0
2005		867	1 158 272	272 162	143 000			0
2004			1 154 890	296 709	131 020			0
2003			975 186	446 110	94 690			0
2002			1 465 912	53 081	76 261			604
2001			1 649 933	0	20 090			133 969
2000			1 233 938	361	2 318			7 122
1999			1 202 512	17 177				19 072
1998			1 594 144	18 768				25 900
1997			2 905 830	11 234				30 302
1996			3 883 326	0				56 782
1995			4 404 193	0				174 393
1994			4 041 447	0				36 575
1993			3 236 244	0				2 673
1992			3 212 060	0			3 196	15 022
1991			3 020 512	0			30 828	45 313
1990			2 471 875	0			41 197	4 144

[3] Chile has submitted annual catch data for *T. murphyi* dating back to 1960.

Table 2.1: Continued

Participant	European Union[4]				Faroe Islands	Japan	Korea
FAO Area	71/77/81	87	87	87	87	87	87
High seas vs In-zone	HS + EEZ	EEZ (PER)	HS	Unknown	HS	HS + EEZ	HS
Species	*Trachurus* spp.	*T. murphyi*	*T. murphyi*	*T. murphyi*	*T. murphyi*	*T. murphyi*	*T. murphyi*
2021			43 167				
2020	0	0	0	0	0	0	0
2019			11 870		0		7 444
2018			9 691		0		3 717
2017			27 887		0		1 235
2016			11 962		0		6 430
2015			27 955		0		5 749
2014			20 539		0		4 078
2013			10 101		0		5 267
2012			0		0	0	5 492
2011			2 248		0		9 253
2010			67 497		11 643	0	8 183
2009			111 921		20 213	0	13 759
2008			108 174		22 919		12 600
2007			123 523		38 700[5]		10 940
2006			62 137				10 474
2005			6 187				9 126
2004							7 438
2003							2 010
2002							
2001							
2000							
1999						7	
1998							
1997							
1996							
1995							
1994							
1993							
1992				7 842			
1991	12 752			109 292			
1990	6 160			80 874		157	

[4] Lithuania catches are included within both European Union and Russian Federation annual catch data for years prior to the dissolution of the former Soviet Union.

[5] The Faroe Islands 2007 Figure includes small quantities of unspecified mackerel.

Table 2.1: Continued

Participant	New Zealand[6]			Peru[7]		Russian Federation [6,8,9,10]		
FAO Area	81	81	81	87	87	81	87	87
High seas vs In-zone	EEZ (NZL)	EEZ (NZL)	EEZ (NZL)	EEZ (PER)	HS	unknown	EEZ (PER)	HS
Species	*T. murphyi*	*T. declivis*	*T. novaezelandia*	*T. murphyi*	*T. murphyi*	*T. declivis*	*T. murphyi*	*T. murphyi*
2021				123 628	0			12 151
2020	0	0	0	158 880	0	0	0	5 245
2019				139 811	0			9 423
2018				58 356 ~~57 140~~[8]	0			4 685
2017				10 094 ~~8 813~~[8]	0			3 188
2016				15 121 ~~15 087~~[8]	0			0
2015				23 036 ~~22 158~~[8]	0			2 561
2014				79 191 ~~74 528~~[8]	2 557			
2013				79 441 ~~77 022~~[8]	2 670			0
2012				187 292[8]	5 346			0
2011				256 566 ~~257 241~~[8]	674			8 229
2010	3 303	22 591	14 984	17 559	40 516			[9]
2009	3 964	21 820	14 390	74 694	13 326			9 113[10]
2008	6 500	26 231	14 664	169 537				4 800
2007	4 186	25 923	16 265	254 426		0		0
2006	5 253	16 873	14 226	277 568		0		0
2005	6 730	15 564	23 442	80 663		0		7 040
2004	6 184	21 335	15 650	187 369		0		62 300
2003	6 538	17 548	13 663	217 734		0		7 540
2002	7 486	14 831	9 986	154 219		0		0
2001	7 916	9 805	11 768	723 733		0		0
2000	8 677	10 033	3 844	296 579		0		0
1999	18 058	13 412	2 889	184 679		223		0
1998	20 993	6 229	8 796	386 946		52		0
1997	21 543	5 119	8 374	649 751		886		0
1996	26 386	6 212	10 133	438 736		2 280		0
1995	19 678	7 775	8 898	376 600		1 602		0
1994	22 434	14 917	4 934	196 771		1 804		0
1993	22 046	13 901	13 336	130 681		4 260		0
1992	12 664	12 447	12 576	96 660		2 892		32 000
1991	8 674	12 174	12 880	136 337		127 000	47 172	544 628

[6] Catches of *Trachurus* spp made by Ukrainian vessels operating within the New Zealand EEZ are included within New Zealand, Russian Federation (years < 1992) and Ukrainian annual catch data.

[7] Peru has submitted annual catch data for *T. murphyi* dating back to 1939, and in recent years, has not voluntarily submitted their catch data from their Area of National Jurisdiction. However, catch figures are obtained from Peru's national reports and from the monthly catch reports for the most recent year. In 2022, Peru provided corrections to the Secretariat-held catch records (2020 and earlier) for accuracy.

[8] ~~Preliminary figure derived from monthly catch returns; to be updated based on national catch reports after a minor database modification to enable these edits. The anticipated changes are not expected to deviate substantially from the figures reported here~~

[9] 2010 Annual catch data was provided for a single vessel (the *Lafayette*) but not included here, pending receipt of operational fishing information.

[10] The Russian Federation 2009 figure was taken by 5 of the 6 vessels that were present in the Area.

1990	4 698	11 650	10 859	191 139		67 518	116 052	1 006 245

Table 2.1: Continued

Participant	Ukraine[6]			Vanuatu
FAO Area	81	81	87	87
High seas vs In-zone	EEZ (NZL)	HS	unknown	HS
Species	*Trachurus* spp.	*T. murphyi*	*T. murphyi*	*T. murphyi*
2021				
2020				0
2019				0
2018				0
2017				0
2016				15 563
2015				21 227
2014				15 324
2013				14 809
2012				16 068
2011				7 617
2010				45 908
2009				79 942
2008				100 066
2007	22 067			112 501
2006				129 535
2005				77 356
2004	22 600			94 685
2003	25 016			53 959
2002	5 667			
2001	7 577			
2000	12 213			
1999	15 306			
1998	9 309			
1997	9 740			
1996	13 093			
1995	8 990			
1994	4 192			
1993	7 937			
1992	2 878		2 736	
1991	319	7 838	65 126	
1990	214	3 574	115 049	

Table 2.2: Preliminary catches (tonnes) in the South- East Pacific for *Trachurus murphyi* (Monthly and 15-day catch returns; Jan – 15 Dec 2022)

Participant	FAO Area	High seas vs In-zone	2022
Chile	87	ANJ	689 158
Ecuador	87	ANJ	5
Peru	87	ANJ	156 558
Chile	87	HS	0
China	87	HS	0
Ecuador	87	HS	0
European Union	87	HS	44 425
Faroe Islands	87	HS	0
Korea	87	HS	0
Peru	87	HS	0
Russian Federation	87	HS	27 043
Vanuatu	87	HS	0
Total (t)			**917 189**

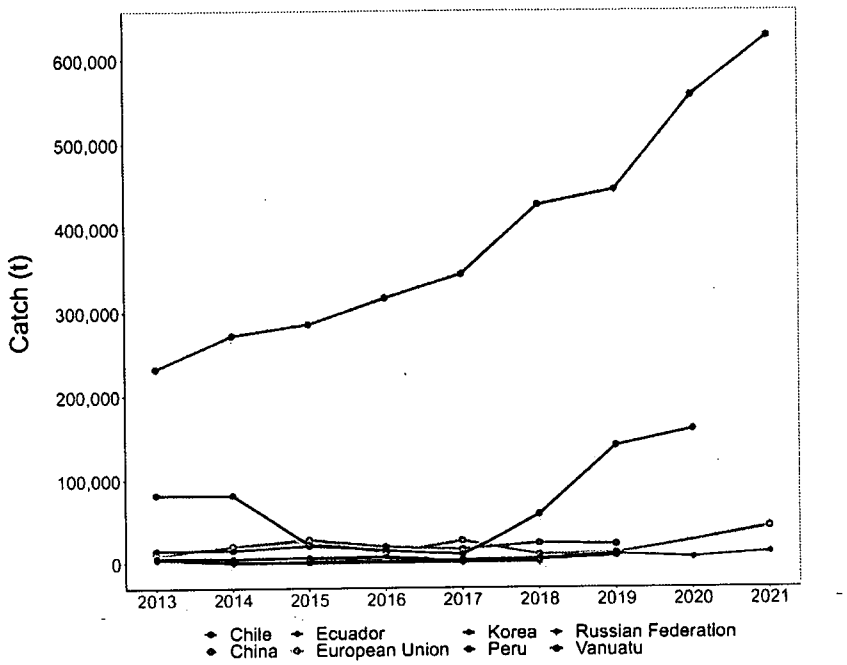

Figure 2.1: Annual reported jack mackerel catches in the South-East Pacific (total range)[11]

[11] Figure 2.1 includes catches from Areas under National Jurisdiction (which were excluded from Figure 1.1)

3. Annual reported catches in the South Pacific for *Scomber* spp (Mackerels)

Table 3.1: Annual catch data – *Scomber* spp (t)

Participant	Belize	Chile			China	Ecuador	Faroe Islands	Japan
FAO Area	87	87	87	87	87	87	87	87
High seas vs In-zone	HS	EEZ (CHL)	HS	HS + EEZ	HS	EEZ (ECU)	HS	HS
Species	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*
2021		86 287						
2020		86 045	0					
2019		87 887	250		135			
2018		59 774	61		311			
2017		64 705	251		604			
2016		88 900	790		1 615			
2015		43 835	1 820		705			
2014		24 135	31		608			
2013		31 193	431		173			
2012		24 120	199		226			
2011		23 077	2 979		666[12]			
2010	21	94 723	936		2 583[12]	52 751	104	
2009	295	136 516	21 936			36 679	906	
2008	1 104	87 316	45 702			21 758	3 036	
2007	966	233 697	63 492			43 171		
2006		345 491	23 295			37 664		
2005				280 756		115 406		
2004				577 336		51 806		
2003				572 052		33 272		
2002				343 371		17 074		
2001				365 031		85 248		
2000				95 789		83 923		
1999				120 123		28 307		1
1998				71 769		44 716		
1997				211 649		192 181		
1996				146 649		79 484		
1995				110 210		63 577		
1994				27 171		38 991		
1993				96 023		50 980		
1992				72 364		25 651		
1991				191 723		55 023		
1990				192 948		78 639		

[12] Preliminary figures derived from monthly catch returns only.

Table 3.1: Continued

Participant	European Union						Korea	Vanuatu
FAO Area	71/77	87	87	87	87	Unknown	87	87
High seas vs In-zone	HS + EEZ	HS + EEZ	HS	HS	Unknown	HS	HS	HS
Species	*Scomber* spp	*S. japonicus*	*Scomber* spp	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*
2021				7 988				
2020								
2019				129			82	0
2018				112			246	0
2017				462			191	0
2016						680	486	1 145
2015				801			82	604
2014				718			21	484
2013				226			111	296
2012							0	193
2011						1	24	24
2010						679	84	676
2009						5 168	716	4 901
2008						5 879	968	8 945
2007						9 067	1 240	7 705
2006						5 989	1 460	3 352
2005						211	381	1 819
2004							708	3 137
2003							39	1 553
2002								
2001								
2000								
1999								
1998								
1997								
1996								
1995								
1994								
1993								
1992					36			
1991					1 644			
1990					1 938			

Table 3.1: Continued

Participant	Peru		Russian Federation			Ukraine		
FAO Area	87	87	81	87	87	81	81	87
High seas vs In-zone	EEZ (PER)	HS	Unknown	HS	Unknown	EEZ (NZL)	HS	Unknown
Species	*S. japonicus*	*S. japonicus*	*S. australasicus*	*S. japonicus*	*S. japonicus*	*S. australasicus*	*S. australasicus*	*S. japonicus*
2021				1 905				
2020				396				
2019		0		44				
2018		0		52				
2017		0		37				
2016		1 122		0				
2015				463				
2014								
2013		19						
2012								
2011								
2010								
2009				535				
2008	92 989			387				
2007	62 387		0		0			
2006	102 322		0		0			
2005	52 895		0		0			
2004	62 255		0		0	2 165		
2003	93 384		0		0	2 843		
2002	32 698		0		0	1 849		
2001	176 202		0		0	2 040		
2000	73 263		0		0	1 677		
1999	527 729		0		0	3 457		
1998	401 903		0		0	214		
1997	206 183		0		0	9		
1996	49 221		0		0	156		
1995	44 259		75		0			
1994	44 115		204		0	133		
1993	29 504		326		0	94		
1992	17 939		0		970	213		17
1991	17 304		828		18 257	224		1 063
1990	60 776		0		74 168	2		2 085

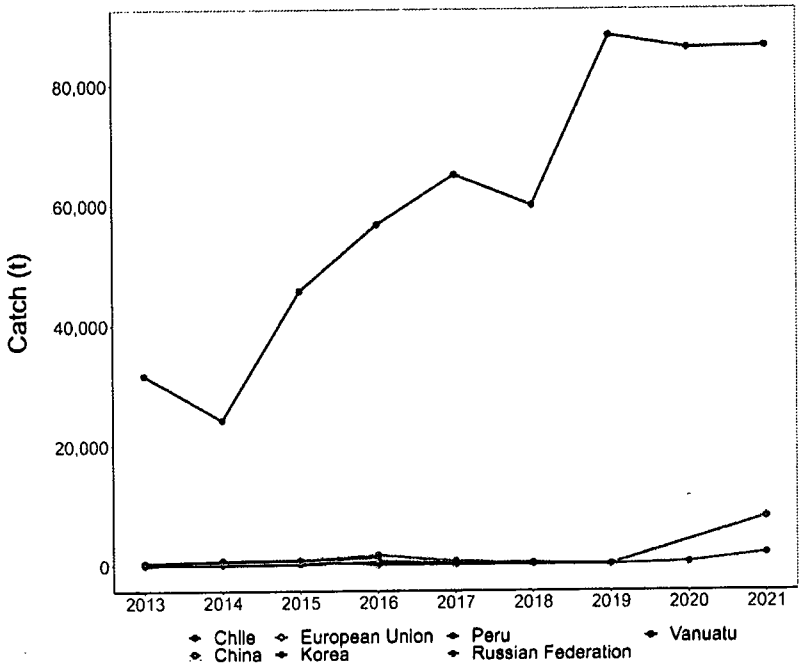

Figure 3.1: Annual reported chub mackerel catches in the South-East Pacific

4. Annual reported catches in the South-East Pacific for *Dosidicus gigas* (Jumbo flying squid)

Table 4.1: Annual catch data for *Dosidicus gigas* (t)

Participant	Peru		Chile			China	Ecuador
FAO Area	87	87	87	87	87	87	87
High seas vs In-zone	EEZ (PER)	HS	EEZ (CHL)	HS + EEZ	HS	HS	EEZ (ECU)
Species	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*
2021			55 330			421 971	
2020	492 363	0	56 432		0	358 038	157
2019	526 902	0	58 042		0	305 670	1 750
2018	317 000	288	145 927		0	346 200	
2017	290 933	5 068	155 389		0	296 100	
2016	322 338	999	183 123		17	223 300	
2015	513 492	304	143 716		0	323 636	1 500
2014	554 882	1 274	176 569		0	332 523	
2013	451 061		105 905		22	264 000	
2012	497 462		144 956		9	261 000	
2011	404 730		163 450		45	250 000	
2010	369 822		200 428			142 000	
2009	411 805		56 337			70 000	
2008	533 414		145 171			79 064	
2007	427 591		124 389			46 400	
2006	434 261			219 800		62 000	
2005	291 140			296 953		86 000	
2004	270 368			175 134		205 600	
2003	153 727			15 191		81 000	
2002	146 390			5 589		50 483	
2001	71 834			3 476		17 770	
2000	53 795			9			
1999	54 652			6			
1998	547			5			
1997	16 061						
1996	8 138			2			
1995	7 769						
1994	26 676			205			
1993	42 838			7 442			
1992	12 695			9 400			
1991	20 657			445			
1990	7 441						

Table 4.1: Continued

Participant	Japan			Korea			Panama	Chinese Taipei
FAO Area	87	87	87	87	87	87	87	87
High seas vs In-zone	HS	HS + EEZ	EEZ~~HS~~	EEZ (PER)	HS	HS + EEZ	HS	HS
Species	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*	*D. gigas*	Unspecified	*D. gigas*	*D. gigas*
2021								665
2020					1 003			2 087
2019					5 578			2 085
2018					3 651			3 848
2017			~~289~~		3 460		289	7 338
2016			~~841~~		4 388		841	12 989
2015					4 263			10 072
2014					7 203			4 795
2013					6 034			7 759
2012					8 310			14 177
2011					7 410			35 418
2010	498			7 764	6 742			29 206
2009				7 221	0			12 319
2008				5 971	804			31 161
2007				0	0			14 750
2006	323			2 048	437			18 349
2005	1 633			2 519	0			15 976
2004	4 615		22 385	2 026	8 761			39 450
2003	4 510		22 549	1 681	3 041			23 009
2002	33 978		26 268	13 130	8 629			12 064
2001	1 132		71 069	5 797	0			0
2000	1 704		32 174			20 822		0
1999	40		6			19 728		0
1998	0	0	0					0
1997	297		12 924			3 359		0
1996	644		557			12 896		0
1995	37		36 478			35 719		0
1994	2 698		81 507			69 664		0
1993	3 579		52 221			62 887		0
1992	1 874		49 313			43 022		1 698
1991	50		2 173			24 015		
1990	1 605		0			3 465		

Table 4.1: Continued

Participant	Belize	European Union	Russian Federation	Ukraine
FAO Area	87	87	87	87
High seas vs In-zone	HS	Unknown	Unknown	Unknown
Species	Unspecified	Unspecified	Unspecified	*D. gigas*
2021		4		
2020				
2019				
2018				
2017				
2016		0.13		
2015				
2014				
2013				
2012				
2011				
2010				
2009				
2008				
2007				
2006				
2005				
2004				
2003	479			
2002	353			
2001	453			
2000				
1999				
1998				
1997				
1996				
1995				
1994				
1993				
1992				1
1991		1 075[13]	23 240[13]	398
1990			7 860	142

[13] Lithuanian catches are included within both European Union and Russian Federation annual catch data for years prior to the dissolution of the former Soviet Union.

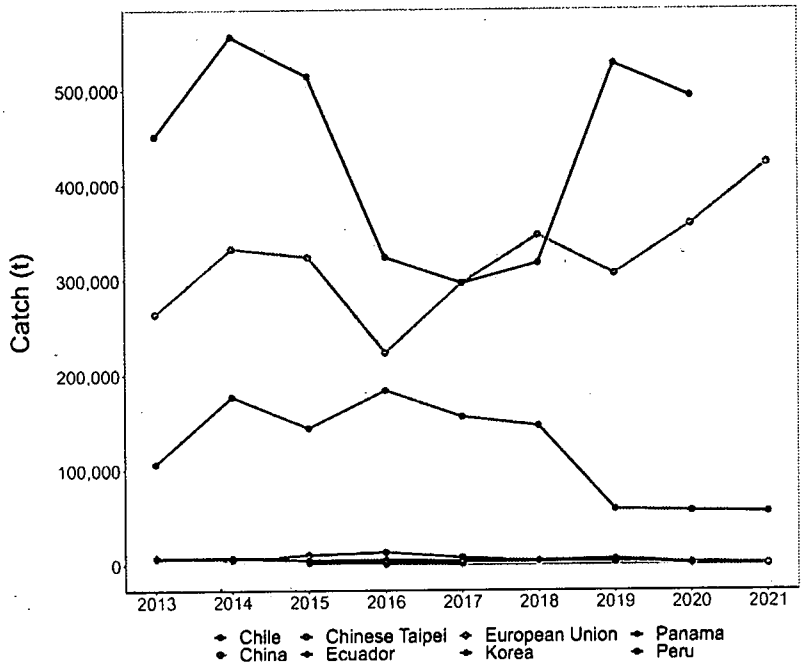

Figure 4.1: Annual reported jumbo flying squid catches in the South-East Pacific[14]

[14] The Secretariat does not hold a catch figure for Peru's jumbo flying squid catches taken within its EEZ in 2021.

5. Annual reported catches for *Hoplostethus atlanticus* in the South Pacific (Orange roughy)

Table 5.1: Annual catch data – Hoplostethus atlanticus (t)

Participant	Australia	Belize		China	Korea	
FAO Area	Unknown	81	71	81	81	81
High seas vs In-zone	HS	HS	HS	Unknown	HS	HS + EEZ
Species	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*
2021						
2020						
2019	44					
2018	0					
2017	93					
2016	83					
2015	20					
2014	102					
2013	49					
2012	56					
2011	2					
2010	0	0	0			
2009	0					
2008	0				0	
2007	148	332[16]		336	44	
2006	166	200		570	77	
2005	207	506		710	0	
2004	369	913	1	592	138	
2003	166	9		562	243	
2002	376			597	208	
2001	751			520	94	
2000	948					288
1999	2 514					7
1998	3 098					
1997	1 458					
1996	11[15]					
1995	11[15]					
1994	192					
1993	122[15]					
1992	122[15]					
1991	122[15]					

[15] Reported catch figures were grouped; these catches have been split equally between years.

[16] This catch was reported by both Belize and China as an annual total from the same vessel fishing in the same period. Therefore, this catch amount is represented twice in this table.

Table 5.1: Continued

Participant	European Union	New Zealand	Russian Federation		Ukraine
FAO Area	81	81	81	87	81
High seas vs In-zone	HS	HS	Unknown	Unknown	HS
Species	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*	*H. atlanticus*
2021		20			
2020		301			
2019		460			
2018		1 164			
2017		969			
2016		832			
2015		1 203			
2014		1 047			
2013		1 243			
2012		721			
2011		1 079			
2010		1 474			
2009	257	928			
2008		837			
2007		866	0	0	
2006		1 415	0	0	
2005		1 597	0	0	
2004		1 697	0	0	49
2003		1 973	0	0	164
2002		2 578	0	0	
2001		2 499	0	0	
2000		1 574	0	0	53
1999		4 948	0	0	
1998		2 329	0	0	
1997		3 862	0	0	
1996		8 002	0	0	
1995		11 195	0	0	
1994		2 195	0	0	
1993		2 566	0	0	
1992		758	0	0	
1991		141	506	0	
1990		559	36	0	

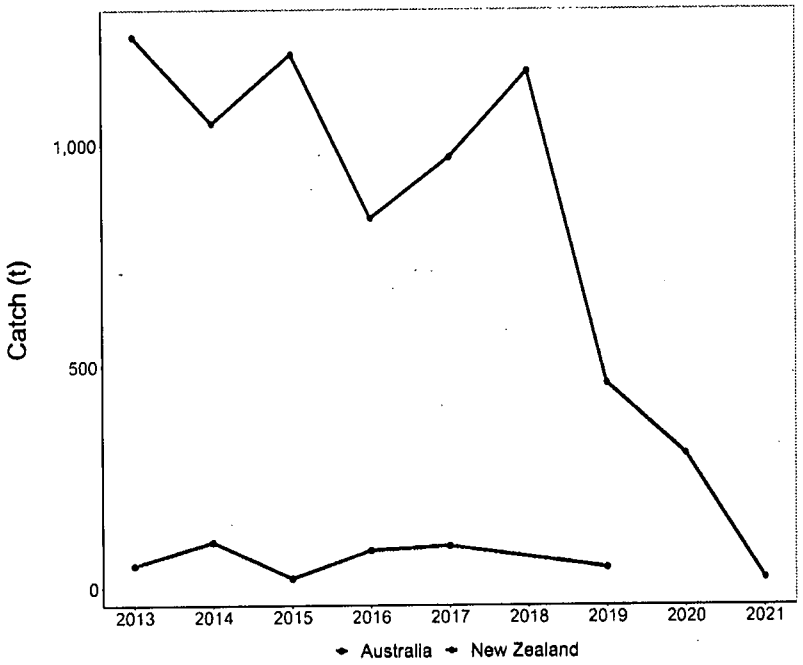

Figure 5.1: Annual reported orange roughy catches in the SPRFMO Area

6. Annual reported catches for other species

The following table summarises annual catch data received by the Secretariat for the remaining major species/species groups. Catches which were known to have been taken entirely within areas of national jurisdiction have been excluded. Redbait was added to the list of major species groups as it was a target species in 2021.

Table 6.1: Annual catch data – other species (t)

Participant	Australia																	
FAO Area	81																	
Zone	HS																	
Species	Amberjacks	Cardinalfish	Alfonsinos	Promfrets	Groupers	Bluenose Warehou	Dogfish sharks	Pelagic armour heads	Emperors	Snake mackerels	Hapuka	Moras	Morwongs	Cusk-eels	Oreo Dories	Scorpion fishes	Sharks, rays	Snappers
2021	11				4				38				10			2	1	9
2020	2		1			3							4			2		
2019	5		14		7	5			51	1		3	9			2	1	23
2018	27				3	2			18				23			2		22
2017	39				6	2			36	1	1	1	27	1	5	3	3	24
2016	33		1		5	5			70	1			14			2	1	21
2015	36		4		10	16			14	2	2	8	47	1	1	6	3	23
2014	26		1		1	21		1		2	5		31	1		9	1	
2013	23	2	74		3	42	1	7		1	5		39			8	2	9
2012	54		167			28		22		1	1		40		1	2		
2011	24		47			28		2		1	2		53			1		
2010	17					6							23					
2009	11					4							13					
2008	25					3							24					
2007	1	2	86			16							7		1			
2006	22		209			8							10					
2005			81			4							1		75			
2004			1			2									34			
2003	1		2			30							16		69			
2002	32		3			27							84		73			
2001	5		1			21							43		44			
2000	14	7	4			6							79		209			
1999	13	1	8			22							29		195			
1998	15	2	1			26							31		1 040			
1997		15	1			6							1		953			
1996		26[17]													11[17]			
1995		26[17]													11[17]			
1994		2													6			
1993															37[17]			
1992															37[17]			
1991															37[17]			
1990																		

[17] Reported catch figures were grouped; these catches have been split equally between years.

Table 6.1: Continued

Participant	Belize			Chile	Cook Islands		European Union													
FAO Area	Various	81	81	87	Various		81							Various			57	87		
High seas vs In-zone	HS			HS	HS		HS							HS			HS	HS		
Species	Alfonsinos	Pelagic armour heads	Grenadiers	Alfonsinos	Rock Lobster	Chaceon spp	Cardinal fishes	Bluenose Warehou	Dogfish sharks	Hapuka	Moras	Cusk-eels	Scorpion fishes	Pomfrets	Pelagic Armor heads	Alfonsinos	Tooth fish	Drift fishes	Grena-diers	Redbait
2021														10		2 719	75	52		1 119
2020					1	14														
2019					150	8								138	3			46		
2018														260				196		
2017	-													88				82		
2016														30				154		
2015														140				51		
2014									144	9	4	1	2	69				87		
2013														63						
2012																				
2011														29						
2010									292			17								
2009							4	3	2 283		91	334		478	2					
2008									900			17				1 497				
2007	61	28														743				
2006	101																			
2005	102			5																
2004	229		525																	
2003	73			11																
2002				2																
2001				1																
2000																				
1999																				
1998				144																
1997																				
1996																				
1995																				
1994																				
1993																			10	
1992																				
1991																				
1990																				

Table 6.1: Continued

Participant	Japan				Ukraine[18]				Russian Federation										
FAO Area	87				81, 87				81, 87										
High seas vs In-zone	HS + EEZ				HS + EEZ				HS + EEZ										
Species	Promfrets	Groupers	Morwongs	Sharks, rays	Alfonsinos	Pelagic Armor heads	Cardinal fishes	Oreo Dories	Amberjacks	Alfonsinos	Promfrets	Snake mackerels	Moras	Oreo dories	Grenadiers	Scorpion fishes	Sharks, rays	Pelagic Armor heads	Redbait
2021										1 193									3 555
2020										108									9
2019																			
2018																			
2017																			
2016																			30
2015																			
2014																			
2013																			
2012																			
2011																			
2010																			
2009																			
2008																			
2007																			
2006																			
2005																			
2004				409			4	3											
2003				289															
2002				795															
2001				648															
2000				438															
1999				441					209										
1998				1 167					206										
1997				526										5		5			
1996				857									138						
1995				671								91	130	18					
1994				1 415							2	1 963	34			2			29
1993				996										51	8	1			
1992				1 032								332	265	93					
1991				857										251					
1990	18		8	1 435															

[18] Catches made by Ukrainian vessels operating within the New Zealand EEZ are also included within New Zealand annual catch data.

Table 6.1: Continued

Participant	New Zealand																		
FAO Area	81																		
High seas vs In-zone	HS																		
Species	Amberjacks	Cardinalfishes	Alfonsinos	Groupers	Bluenose Warehou	Dogfish sharks	Pelagic Armorheads	Snake mackerels	Hapuka	Moras	Morwongs	Cusk-eels	Oreo dories	Grenadiers	Scorpion fishes	Redbait	Sharks, rays	Toothfish	Slimeheads
2021			1		20	3			17		1		1	1	1			24	
2020		10	85		24	4	11		32	9	3		43		1		1		1
2019			56	5	61	11	43	3	50	8	3		15		1	1	6		
2018	1	6	272	16	47	19	61	8	30	31	5		62	23	2		14		4
2017		2	229		54	2	12	2	50	42	4		26	35	2		1	28	
2016	1	19	168		29	16	12		50	24	4	1	17	46	2		8	28	5
2015	1	48	49		60	37	1	1	73	12	5	5	26	16	2		10		6
2014	2	1	1		47	10	1		50	4	16		32	2	2		4		
2013	2	4	169		91	12	13	1	45	12	5		42	1	1	1	8		
2012		2	154		44	4	25		40	5	3		17	7					
2011		108	240		23	15	75		25	22	1		32	7					
2010		22	244		15	13			24	15	1		31	6					
2009		16	5		58	9			23	7	1		5		1				
2008	1		2		67	2			43	3	2		2		8				
2007	3		2		144	5		3	31	9	5		173	5	1				
2006	2	21	28		271	21		2	95	33	6		63	27	2				
2005		189	26		102	18		2	31	63	10		343	67	1				
2004	1	42	85		116	8		2	24	46	6		181	34					
2003		226	94		6	57			7	92	1		87	84					
2002		159	17			37				43			171	61					
2001		485	22		46				2				124						
2000		151	29		17				9				154						
1999		325	39		52				8				219						
1998		182	464		115				15				366						
1997		351	31		168				27				211						
1996		265	70		90				23				274						
1995		320	18		167				57				1 000						
1994		1 058	86		127				60				57						
1993		245	43		215				98				60						
1992		10	23		41				16				9						
1991					4				3				29						
1990									1										

Table 6.2: Annual catch data – mixed species (t)

Participant	Australia	Belize	China	Cook Islands	European Union	Japan	Korea	New Zealand	Peru	Russian Federation	Ukraine[21]
FAO Area	81	81	81	Various	Various	81	81, 87	81	87	81, 87	81, 87
High seas vs In-zone	HS + EEZ	HS	HS + EEZ	HS	HS + EEZ	HS + EEZ	HS + EEZ	HS	HS	HS + EEZ	HS + EEZ
Species	Marine fishes nei										
2021	29				~~361~~ ~~155~~			4		~~3 555~~	
2020								2		~~9~~	
2019	19			1	8		6	~~67~~			
2018	17							19			
2017	2							7			
2016	4				1		16	13			
2015	9							14		~~30~~	
2014	2							4			
2013	6							11	8		
2012	1							23			
2011	1						100	79			
2010	49				5			64			
2009	79				548		59				
2008	125				20 852			2			
2007	40		73[20]		13		4	31			
2006	95		312				6	51			
2005	18	825	162				222	106			
2004	9	681	304				6	97			
2003	25	479	314			995	23	326			28
2002	41	588	147			615	17	114			
2001	56	453	60			771	8	115			
2000	20					385	20 822	82			58
1999	30					572	19 728	270		3 123	
1998	37					599		405		2 175	
1997	44					181	3 359	609		11 821	
1996	1[19]					211	12 896	747		17 158	
1995	1[19]					205	35 719	885		28 069	
1994	3					420	69 664	617		53 292	
1993	1[19]					291	62 887	468		42 129	
1992	1[19]					465	43 022	227		82 833	51
1991	1[19]				15 534	294	24 015	199		351 390	395
1990	2[19]				14 208	842	3 465	771		398 111	780

[19] Reported catch figures were grouped; these catches have been split equally between years.

[20] This catch was reported by both Belize and China as an annual total from the same vessel fishing in the same period. Therefore, this catch amount is represented twice in these tables.

[21] Catches made by Ukrainian vessels operating within the New Zealand EEZ are also included within New Zealand annual catch data.

Table 6.2 shows information for "mixed species" indicating that this information was either submitted in this manner (i.e., FAO species code MZZ; Marine fishes nei) or it has been grouped into this category by the Secretariat because the species reported did not fall under one of the major species groups detailed in Annex 1. Catches which were known to have been taken entirely within areas of national jurisdiction have been excluded from Table 6.2.

Annex 1. Major species groups

FAO code	FAO common name	Group code	Scientific group	Group name
AMB	Greater amberjack	AMX	*Seriola* spp	Amberjacks
AMX	Amberjacks nei			
RLH	Samson fish			
YTC	Yellowtail amberjack			
APO	Cardinalfishes, etc. nei	APO	Apogonidae	Cardinalfishes, etc.
CDL	Cardinal fishes nei			
EGR	Robust cardinalfish			
EPI	Black cardinal fish			
QLX	*Apogon* spp			
ALF	Alfonsinos nei	BRX	Berycidae	Alfonsinos, etc.
BXD	Alfonsino			
BYS	Splendid alfonsino			
CXF	Redfish			
CXZ	Bight redfish			
BLB	Blue butterfish	BRZ	Bramidae	Pomfrets, ocean breams
BPQ	Pacific pomfret			
BRA	*Brama* spp			
BRU	Southern rays bream			
BRZ	Pomfrets, ocean breams nei			
BUX	Butterfishes, pomfrets nei			
POA	Atlantic pomfret			
TAL	Big-scale pomfret			
BSX	Groupers, seabasses nei	BSX	Serranidae	Groupers, seabasses
MO	Bluespotted hind			
EEA	Blacktip grouper			
EEP	Comet grouper			
EFQ	Longfin grouper			
EFT	Tomato hind			
EIU	Wavy-lined grouper			
EMO	Plectropomus leopardus			
ENI	Orange-spotted grouper			
EPY	Speckled blue grouper			
EWL	Epinephelus tukula			
GPX	Groupers nei			
HHN	Redbanded perch			
IPL	Butterfly perch			
LDP	Orange perch			
PLM	Spotted coralgrouper			
RNL	Pink maomao			
VRA	White-edged lyretail			
VRL	Yellow-edged lyretail			
BWA	Bluenose warehou	BWA	*Hyperoglyphe antarctica*	Bluenose warehou
CJM	Chilean jack mackerel	CJM	*Trachurus murphyi*	Chilean jack mackerel
CEM	Smallfin gulper shark	DGX	Squalidae	Dogfish sharks
CYO	Portuguese dogfish			

FAO code	FAO common name	Group code	Scientific group	Group name
CYP	Longnose velvet dogfish			
CYU	Plunket shark			
CYW	Roughskin dogfish			
CZI	*Centroscymnus* spp			
DCA	Birdbeak dogfish			
DGS	Picked dogfish			
DGX	Dogfish sharks nei			
DGZ	Dogfishes nei			
DOP	Shortnose spurdog			
ETF	Blackbelly lanternshark			
EUP	Pygmy shark			
GUP	Gulper shark			
GUQ	Leafscale gulper shark			
QUK	Shortspine spurdog			
SCK	Kitefin shark			
SDH	Rough longnose dogfish			
SHL	Lanternsharks nei			
YSM	Largespine velvet dogfish			
BOR	Boarfishes nei	EDW	*Pseudopentaceros* spp	Pelagic armourheads
EDR	Pelagic armourhead			
EDW	Pelagic armourheads nei			
EMV	Bigspined boarfish			
SWH	Giant boarfish			
ZAL	Longfin boarfish			
GER	*Chaceon* spp	GER	Geryonidae	Chaceon crabs
JSX	*Jasus* spp	JSX	Palinuridae	Spiny/ rock lobsters
VLO	Spiny lobsters nei			
GMW	Blue-lined large-eye bream	EMP	Lethrinidae	Emperors
LBR	Largeeye breams			
LHB	Spotcheek emperor			
LHI	Trumpet emperor			
LHO	Longface emperor			
WTM	Mozambique large-eye bream			
EMM	Cape bonnetmouth	EMT	Emmelichthyidae	Bonnetmouths, rubyfishes nei (redbait)
EMT	Bonnetmouths, rubyfishes nei			
GEM	Silver gemfish	GEP	Gempylidae	Snake mackerels, escolars
GEP	Snake mackerels, escolars nei			
LEC	Escolar			
OIL	Oilfish			
RXX	*Rexea* spp			
SNK	Snoek			
GIS	Jumbo flying squid	GIS	*Dosidicus gigas*	Jumbo flying squid
HAU	Hapuka	HAU	*Polyprion* spp	Hapuka
WHA	Hapuku wreckfish			
WRF	Wreckfish			
MAS	Chub mackerel	MAS	*Scomber japonicus*	Chub mackerel
ANT	Blue antimora	MOR	Moridae	Moras

FAO code	FAO common name	Group code	Scientific group	Group name
LEV	Lepidion codlings nei			
LMF	Small-headed cod			
MHJ	Slender codling			
MOR	Moras nei			
NEC	Red codling			
PBR	Southern bastard codling			
PBV	Northern bastard codling			
PQO	*Physiculus* spp			
RIB	Common mora			
SAO	Tadpole codling			
CDD	Porae	MOW	*Nemadactylus* spp	Morwongs
HAW	Peruvian morwong			
MOW	Morwongs			
TAK	Tarakihi			
CUS	Pink cusk-eel	OPH	Ophidiidae	Cusk-eels, brotulas
CEX	Cusk-eels nei			
ALL	Warty dory	ORD	Oreosomatidae	Oreo dories
BOE	Black oreo			
ONV	Spiky oreo			
OOT	Ox-eyed oreo			
ORD	Oreo dories nei			
SSO	Smooth oreo dory			
ORY	Orange roughy	ORY	*Hoplostethus atlanticus*	Orange roughy
CKH	Abyssal grenadier	RTX	Macrouridae	Grenadiers, rattails
CKV	Hawknose grenadier			
GRV	Grenadiers nei			
LDE	Thorntooth grenadier			
MCH	Bigeye grenadier			
RTX	Grenadiers, rattails nei			
WGR	Whitson's grenadier			
BRF	Blackbelly rosefish	SCO	Scorpaenidae	Scorpionfishes
HBX	*Hoplichthys* spp			
HFR	Red gurnard perch			
ROK	Rosefishes nei			
SCO	Scorpionfishes nei			
SCS	Scorpionfishes, rockfishes nei			
XTY	Trachyscorpia spp			
ALV	Thresher	SKX	Elasmobranchii	Sharks, rays, skates, etc.
AML	Grey reef shark			
API	Deep-water catsharks			
ASK	Angelsharks, sand devils nei			
ASY	Australian spotted catshark			
BRO	Copper shark			
BSH	Blue shark			
BSK	Basking shark			
BYU	Longnose deep-sea skate			
CCE	Bull shark			

FAO code	FAO common name	Group code	Scientific group	Group name
CPG	Slender smooth-hound			
CPS	Draughtsboard shark			
CPT	Australian swellshark			
CTU	Gummy shark			
CVX	Ground sharks			
CWZ	*Carcharhinus* sharks nei			
DPQ	New Zealand smooth skate			
DWS	Deep-water sharks nei			
GAG	Tope shark			
HAO	New Zealand catshark			
JAT	Rough skate			
JDT	Thorntail stingray			
LMA	Longfin mako			
MTL	Spotted estuary smooth-hound			
NTC	Broadnose sevengill shark			
OXB	Prickly dogfish			
POR	Porbeagle			
PPC	Longnose sawshark			
PPU	Shortnose sawshark			
PTM	False catshark			
RAJ	Rays and skates nei			
RBM	Rhinobatos obtusus			
RJG	Arctic skate			
SHB	Bramble shark			
SKH	Various sharks nei			
SKX	Sharks, rays, skates, etc. nei			
SMA	Shortfin mako			
SPZ	Smooth hammerhead			
STT	Stingrays, butterfly rays nei			
SYX	Catsharks, etc. nei			
THR	Thresher sharks nei			
TIG	Tiger shark			
TRB	Whitetip reef shark			
TTF	New Zealand torpedo			
WSH	Great white shark			
ZRN	New Zealand rough skate			
ARQ	Rusty jobfish	SNX	Lutjanidae	Snappers, jobfishes
AVR	Green jobfish			
ETA	Deep-water red snapper			
ETC	Deepwater longtail red snapper			
LDW	Yellow-banded snapper			
LJB	Two-spot red snapper			
LJG	Humpback red snapper			
LJV	Blacktail snapper			
LRY	Ornate jobfish			
LUV	Blubberlip snapper			
LWZ	Oblique-banded snapper			

FAO code	FAO common name	Group code	Scientific group	Group name
MAL	Malabar blood snapper			
PFM	Crimson jobfish			
RES	Mangrove red snapper			
SNA	Snappers nei			
SNX	Snappers, jobfishes nei			
TOA	Antarctic toothfish	TOT	*Dissostichus* spp	Antarctic toothfishes
TOP	Patagonian toothfish			
HPR	Mediterranean slimehead	TRC	Trachichthyidae	Slimeheads
OVE	Slender roughy			
TPT	Sandpaper fish			
TRC	Slimeheads nei			
CUP	*Cubiceps* spp	VTX	Nomeidae	Driftfishes
UBA	Blue fathead			

Annex 2. FAO Fishing Areas of the world