

**Estimating poached West Coast Rock Lobster exports from South Africa to international destinations (2000 – 2021)**

A document prepared for the West Coast Rock Lobster Scientific Working Group

TRAFFIC Southern Africa

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*Disclaimer:* This analysis relates only to international trade and does not in any way reflect what is poached and subsequently traded within South Africa.

**Background**

This paper provides an analysis of the international trade in lobsters from South Africa and reported West Coast Rock Lobster (WCRL) landings in South Africa. Comparisons are made between:

- the declared customs data for World reported imports of lobsters from South Africa (UN Comtrade);
- the annual export permits issued for WCRL and sourced from Department of Forestry, Fisheries, and the Environment (DFFE);
- export volumes for South Coast Rock Lobster (SCRL) sourced from Industry; and
- the annual catch of lobsters sourced from FAO (FishStatJ) and confirmed by DFFE.

These sources of information are evaluated to ensure the annual poaching estimate is specific to WCRL and can distinguish between the different forms in which lobsters are traded (whole frozen, frozen tails, and fresh lobsters).

The approach of using the difference between world imports of lobster and West Coast Rock Lobster (WCRL) landings as a measure of illegal catches of lobster follows the preference indicated by the International Panel in the report of the 2017 Workshop (Cox et al., 2017).

**Which lobster species are caught and traded in South Africa?**

FAO FishStat<sup>1</sup> provides an overview of all the lobster species caught in South Africa each year (Figure 1). Note that the TAC is seasonal, and the catch data is provided on an annual basis.

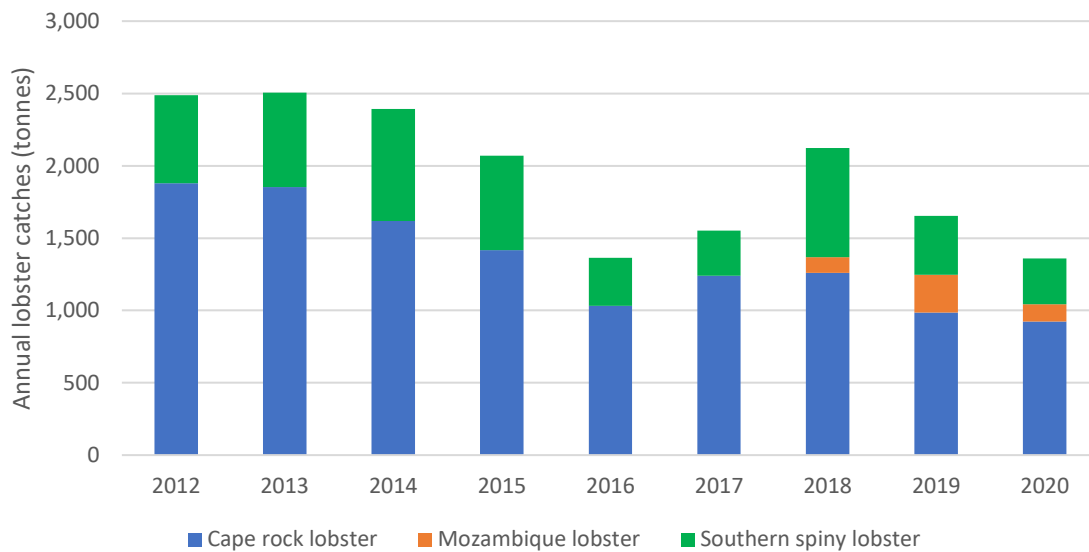
According to FishStat, Cape rock lobster, otherwise known as West Coast rock lobster, are the dominant lobster species caught in South Africa. Only catches of this species are included in the analysis, but all species data are presented here for an overview. The other species recorded as caught in South Africa are: Southern spiny lobster (South Coast Rock Lobster, SCRL) with lower but consistent catch volumes (average 525 tonnes/year); and for the first, time in 2018 onwards, FAO has reported catches of Mozambique lobsters in South Africa ranging from 100 – 250 tonnes for the years 2018, 2019 and 2020 (average 162 tonnes/year for those three years). Additionally, there are

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<sup>1</sup> FishStat (2022). <https://www.fao.org/fishery/en/statistics/software/fishstatj/> FAO. 2022. Fishery and Aquaculture Statistics. Global capture production 1950-2020 (FishStatJ). In: FAO Fisheries and Aquaculture Division [online]. Rome. Updated 2022. [www.fao.org/fishery/statistics/software/fishstatj/en](http://www.fao.org/fishery/statistics/software/fishstatj/en)

Note: common names only - scientific names not provided in the FAO database.

small quantities of Natal Spiny lobster caught, although not depicted in this graph, as the volumes are negligible (average 10 tonnes/year).



Source: FAO

Figure 1: FAO-reported annual catches of all lobster species caught in South Africa, 2012-2020

FAO-reported catches of WCRL have been steadily declining since 2012 until 2016 (Figure 1). There was an increase in catches of approximately 200 tonnes in 2017 and 2018. The catch volumes for 2019 and 2020 saw the lowest WCRL catches, reducing to less than 1,000 tonnes for the first time since the fishery opened.

WCRL is traded in both frozen and ‘live’ form (non-frozen products described by the HS codes<sup>2</sup> as live, fresh and chilled), with live lobsters consisting of the majority of imports for WCRL. Imports of both products from South Africa have declined. SCRL is traded as both live lobsters and as frozen tails – these trade figures obtained from industry is excluded from the analyses. ECRL is normally traded in very small quantities<sup>3</sup> and there were no exports recorded in 2020 and 2021 (DFFE pers. comm, 2022).

<sup>2</sup> Harmonised System codes used to classify commodities in trade. More information: <https://www.trade.gov/harmonized-system-hs-codes>

<sup>3</sup> According to DFFE permits, ECRL were exported from South Africa in 2017, 2018 and 2019 with most of the exports consisting of **cultured** lobsters (average volumes include 135 tonnes of live ECRL and 290 tonnes of whole frozen ECRL). There were no exports of ECRL in 2020 and 2021.

## Who is importing lobsters from South Africa?



Source: UN Comtrade (made in TradeMapper)

Figure 2: Top 10 countries importing frozen lobsters from South Africa, 2012-2021

Table 1: Top 10 countries importing frozen lobsters from South Africa (HS codes: 030611; 030612)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>USA</b>	203253	362588	362742	286171	268781	270692	300037	290013	329038	303385
<b>Japan</b>	253675	189859	210802	108052	122970	133602	84570	83276	21220	37469
<b>Australia</b>	55677	86414	46722	54769	42733	21660	5800	7850		
<b>Taiwan</b>	1440	5884	95235	41183	19654	54060	11310	23840	32000	
<b>Switzerland</b>	18369	37106	33014	9199	3257	9848	10924	7402	3227	9157
<b>Hong Kong</b>		16335	35687	19890	26059	19377	3900	671	2274	5487
<b>China</b>	857		13339	13100	671	6913	40380		5920	34872
<b>Botswana</b>	660	1180	598	238	1784	8403	16978	4873	41095	
<b>Italy</b>	1040	690	11425	1200	9912	860				13220
<b>Namibia</b>	3687	9623	8830	4546	960	1092	692	194	183	



Source: UN Comtrade (made in TradeMapper)

Figure 3: Top 10 countries importing fresh lobsters from South Africa, 2012-2021

Table 2: Top 10 countries importing fresh lobsters from South Africa (HS codes: 030621; 030622; 030631; 030632)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>China</b>	542510	730010	579760	136115	251107	473876	919292	762752	646104	645518
<b>Hong Kong</b>	758676	628997	319940	361786	416316	384094	326637	130695	16235	4440
<b>Japan</b>	105850	114877	89340	68040	55850	67396	49530	43030	24900	13850
<b>Italy</b>	80922	71033	50912	50707	42248	47547	44203	37944	9327	15781
<b>Taiwan</b>	24790	39579	49442	53611	41645	34743	37424	24949	16645	15506
<b>France</b>	43703	49111	29562	30985	27138	23598	20336	16773	9547	4667
<b>USA</b>	49062	191060					2408			
<b>Singapore</b>	150	8630	10500	7300	2180			330	1310	
<b>Zambia</b>		11934	4963							
<b>Macao</b>	3440				3451		156	1244	646	

### Estimating the illegal catch of lobsters exported from South Africa

The estimated illegal catch of lobster for 2020 was updated based on the actual catch data that is now available. The previous estimate for 2020 was based on the TAC as we didn't have consolidated catch data at that time. The 2020 consolidated catch data showed that more lobster was caught than was allocated in the TAC. This affects the 2020 poaching estimate.

- WCRL catches increased from 837 (TAC) to 924 tonnes (actual, consolidated catch)
- As a result of the increased catches, the number of poached lobsters showed a slight decrease from approximately 200 tonnes to 137 tonnes in 2020.
- The TAC for 2021/2022 season was further reduced to 700 tonnes. This figure is used as the 2021 catch data in the 2021 poaching estimate.
- Based on the calculations and agreed methodology, the poaching estimate for 2021 is 50 tonnes.

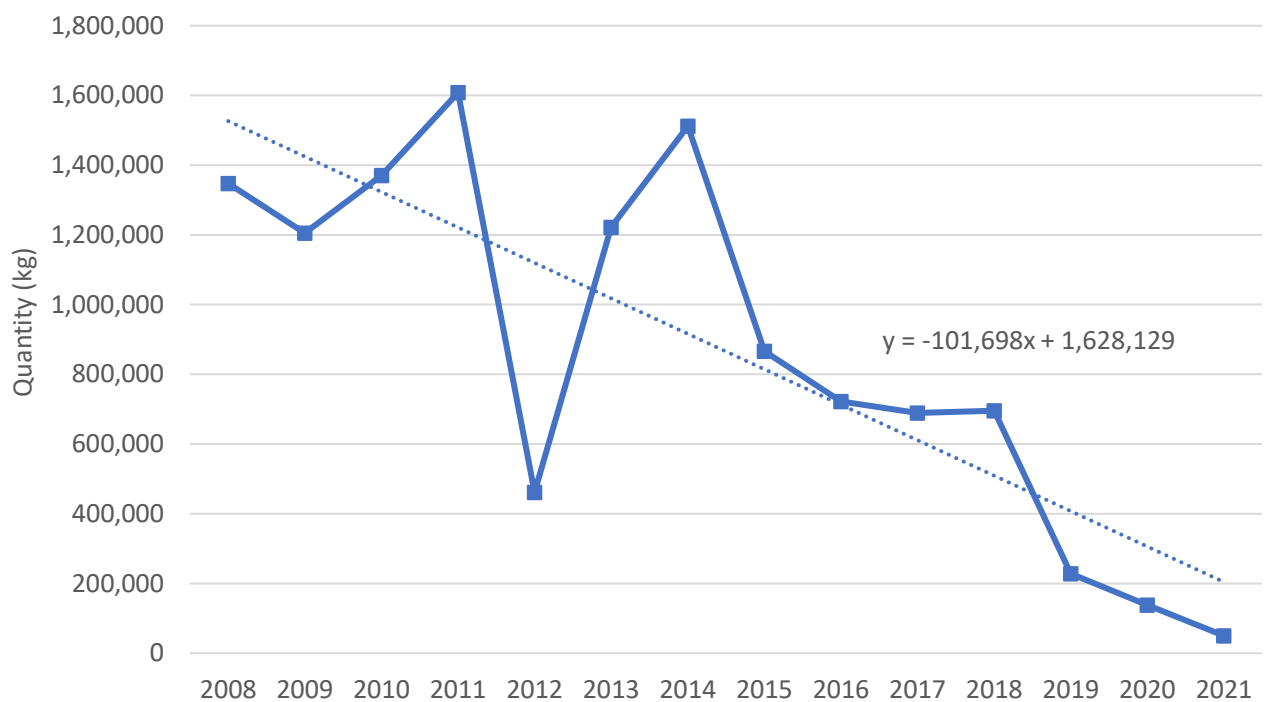
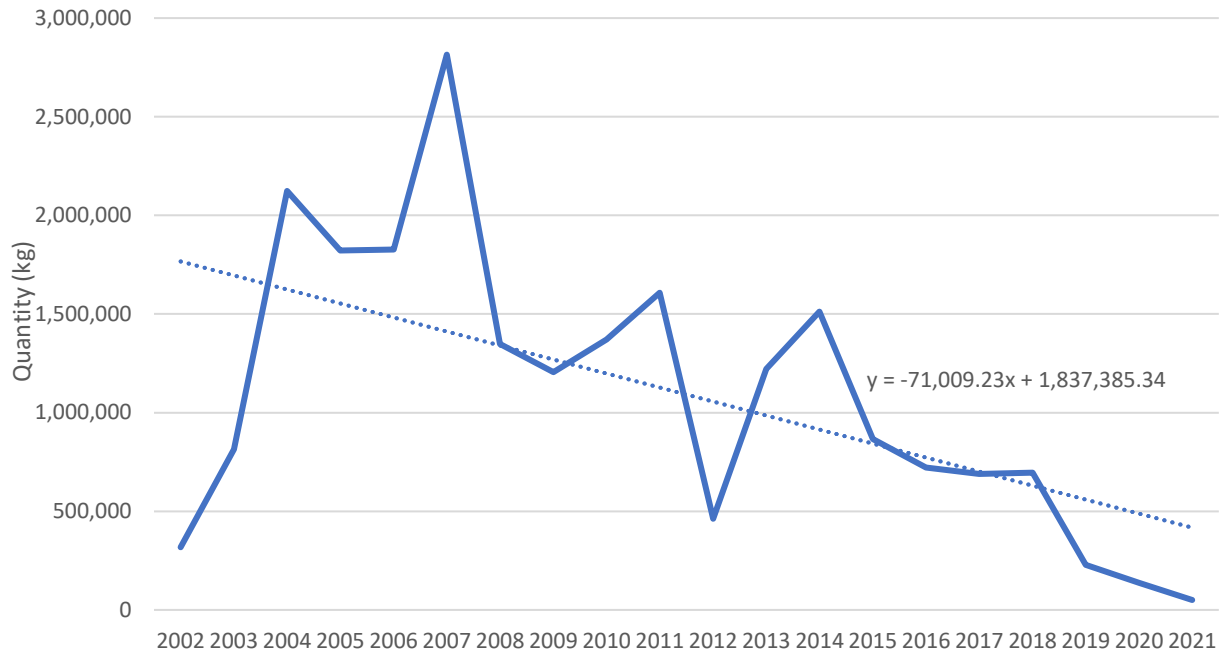


Figure 4: Estimate of poached lobsters (WCRL reported imports from SA – WCRL landings) 2008-2021



**Figure 5: Estimate of poached lobsters (WCRL reported imports from SA – WCRL landings) 2002 - 2021**

**Table 3.** Raw trade and catch data used in the equation are presented here with their sources.

	World reported imports of frozen product (all lobster species; $A_{frozen}$ ). Source: UN Comtrade	World reported imports of fresh product (all lobster species; $A_{fresh}$ ). Source: UN Comtrade	SA reported imports of frozen product from Mozambique (all lobster species; $C_{frozen}$ ). Source: UN Comtrade	SA reported imports of fresh product from Mozambique (all lobster species; $C_{fresh}$ ). Source: UN Comtrade	SCRL traded mass (frozen tails; $SCRL_{tails}$ ). Source: SCRL Industry.	SCRL traded mass (live and whole raw; $SCRL_{live}$ ). Source: SCRL Industry.	WCRL Landings ( $B_{wcrl}$ ). Source: FAO and DAFF.
2000	1 235 374	1 216 479	27 539	1048			1 693 000
2001	814 786	1 219 169	12 537	0	195 719	0	1 611 000
2002	937 530	1 154 631	35 420	4 889	256 714	116 132	2 671 000
2003	1 031 493	1 453 895	46 740	6 971	296 076	125 144	2 594 000
2004	1 239 389	2 081 451	39 268	1 212	210 887	66 164	2 888 000
2005	1 200 886	1 973 119	64 358	9 476	213 934	0	2 937 000
2006	1 161 581	1 605 306	39 097	11 381	289 901	127 220	2 162 000
2007	1 670 392	1 786 697	49 653	7 314	282 856	122 576	2 896 000
2008	860 045	1 670 196	6 315	8 387	275 818	118 994	1 946 000
2009	878 353	1 751 115	10 251	4 961	311 203	126 772	2 102 000
2010	742 966	2 168 586	25 293	3 265	285 085	110 885	1 995 000
2011	735 790	2 037 541	25 516	1 110	233 306	116 700	1 757 000
2012	561 142	1 613 142	52 347	15 660	246 100	105 755	1 879 000
2013	732 773	1 849 149	145 893	48 009	278 406	96 712	1 854 000
2014	829 797	1 136 752	102 892	7 237	273 076	92 965	1 656 000
2015	551 712	709 359	26 446	3 139	250 495	102 956	1 418 000
2016	508 192	776 068	40 901	0	251 169	85 185	1 034 000
2017	542 282	1 032 134	49 943	0	312 482	97 017	1 238 000
2018	488 665	1 403 820	17 659	0	276 985	74 796	1 259 000
2019	428 071	1 021 042	39 030	0	276 048	36 285	986 000
2020	443 893	730 276	8 179	0	280 709	64 098	924 000
2021	413 122	699 862	31 142*	0	279 171*	71 476*	700 000*

\*2021 data not yet reported by South Africa: Average of the last five years used to determine re-exports of lobsters imported from Mozambique

\*2021 data not yet available: Average of the last five years used to determine SCRL frozen tails and live lobster exports

\*2021 data not yet available: Seasonal TAC 2021/2022 used for WCRL landings.

**Table 4.** Table showing results from calculations in the equation.

Year	WCRL frozen product; whole mass. $[A_{frozen} - (SCRL_{tails} + C_{frozen}) * 3.03]$	Viet Nam estimate	WCRL fresh product; whole mass. $[A_{fresh} - (SCRL_{live} + C_{fresh})]$	Total World reported imports [WCRL frozen + VN estimate + WCRL fresh]	WCRL Landings ( $B_{wcrl}$ ). Source: FAO and DAFF.	Estimated illegal catch (whole mass). $[World\ imports - B_{wcrl}]$ <i>Final result of equation (a).</i>
2001	1 837 785		1 219 169	3 056 954	1 611 000	1 445 954
2002	1 955 549		1 033 610	2 989 159	2 671 000	318 159
2003	2 086 691		1 321 780	3 408 471	2 594 000	814 471
2004	2 997 379		2 014 075	5 011 454	2 888 000	2 123 454
2005	2 795 459		1 963 643	4 759 102	2 937 000	1 822 102
2006	2 522 726		1 466 705	3 989 431	2 162 000	1 827 431
2007	4 053 787		1 656 807	5 710 594	2 896 000	2 814 594
2008	1 751 075		1 542 815	3 293 890	1 946 000	1 347 890
2009	1 687 403		1 619 382	3 306 785	2 102 000	1 204 785
2010	1 310 742		2 054 436	3 365 178	1 995 000	1 370 178
2011	1 445 213		1 919 731	3 364 944	1 757 000	1 607 944
2012	795 967	52 903	1 491 727	2 340 596	1 879 000	461 596
2013	934 675	436 423	1 704 428	3 075 526	1 854 000	1 221 526
2014	1 375 100	755 970	1 036 550	3 167 621	1 656 000	1 511 621
2015	832 558	848 853	603 264	2 284 675	1 418 000	866 675
2016	654 851	410 286	690 883	1 756 020	1 034 000	722 020
2017	548 975	442 750	935 117	1 926 842	1 238 000	688 842
2018	592 126	33 807	1 329 024	1 954 957	1 259 000	695 957
2019	174 125	0	1 040 283	1 214 408	986 000	228 408
2020	359 167	0	702 646	1 061 813	924 000	137 813
2021	28 523	0	721 781	750 304	700 000*	50 304

\*2021 data not yet available: TAC used for WCRL landings



### **Methodology:**

The methodology and formula used to determine the illegal lobster catches exported from South Africa (Oaks & Burgener, 2019) is part of an ongoing process with government and industry representatives to improve the poaching estimate:

$$[A_{frozen} - (SCRL_{tails} + C_{frozen})] * 3.03 + [A_{fresh} - (SCRL_{live} + C_{fresh})] - [B_{wcrl}]$$

Using the data as described here:

- A = World reported imports of lobster from South Africa: defined as imports of fresh ( $A_{fresh}$ ) and frozen lobster ( $A_{frozen}$ ) from South Africa reported by the World as per the World Customs Organizations' HS trade codes (Annex 1). Source: UN Comtrade.
- B = Landings: Data on landings of South African West Coast Rock lobster (WCRL). Source: FAO and DFFE.
- C = Imports of lobster into South Africa from Mozambique: defined as imports of fresh ( $C_{fresh}$ ) and frozen lobster ( $C_{frozen}$ ) from Mozambique reported by South Africa as per the World Customs Organizations' HS trade codes (Annex 1). These are assumed to all have been re-exported.

The following decisions regarding the data were agreed upon during the 2019 Task Team and Scientific Working Group Meetings, and remained the same of this analysis:

- South African imports of lobster from Mozambique have been included, as per discussions with industry and in 2019 WCRL task team meetings. Imports for each year were subtracted from the World reported imports.
- All exports of South Coast Rock Lobster (SCRL), as reported by industry, have been removed from World reported imports of lobster from South Africa.
- The landings data used in the equation is WCRL only, sourced from FAO (FishStatJ) and confirmed with DFFE.
- Since SCRL trade records have been excluded from World reported imports of lobster from South Africa, imports of frozen lobster product were converted to whole weight for the final calculation using the WCRL conversion factor (3.03).
- Note: no adjustments were made to account for East Coast Rock Lobster (ECRL) as the amount exported is considered negligible.

### **Changes to the methodology during the 2020 TAC discussions:**

- In previous years, the import data not yet available for China and not reported by Viet Nam were estimated using the formula to estimate illegal catches of lobsters (Oaks & Burgener, 2019).
- However, since 2020, the trade in lobsters with Viet Nam stopped and China started reporting their lobster imports records on time.
- Therefore, estimating Viet Nam and China's lobster imports were not included in the analyses since 2020 and including for this years' analyses.

### **Changes to methodology in 2021 TAC discussions:**

- Concerns raised by Industry that a small amount of Whole frozen lobsters were exported by South Africa – and thus were converted to 3.03, as all frozen imports are assumed to be tails.
- These were confirmed by DFFE export permits and subsequently were excluded from the formula and added onto the live exports for 2019, 2020 and remained the same of these analyses.

### **Notes for 2022 poaching estimate:**

- South Africa has not reported any exports or imports of lobster from Mozambique in 2021, thus re-exports from Mozambique were not reflected in the analyses. Mozambique import data were included in this year's analyses by using the average imports of the last five years.
- The TAC allocation was used as the WCRL catch volume and the catch data was not yet available for 2021.
- The average of the last five years for SCRL frozen tails and live exports were used for data not yet available for 2021.

### **Actions for next international trade poaching estimate, 2023:**

- Incorporate any ECRL trade into the calculation.
- Attempt to re-run the analysis using monthly catch and trade data (if monthly import data is available on UN Comtrade) to compare seasonal catch and trade instead of annual.
- Attempt to incorporate known losses in weight of lobster exports (e.g., 3% mortality and 1.5% over-pack)

### **References**

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