

# Demo report



November • 2018

## Monthly pelagic report

## Introduction

The Peruvian Anchoveta quota was announced at 2,1 mill tones in mid-November, and the season has proceeded well so far with total landings just above 1,1 mill tones by the end of first week in December. The prospects for a successful season is good and Peruvian production industry will get a boost after several years with low anchoveta landings followed by declining production. Fishing in 2018 will be the highest since 2011.

The announcement of the quota and the promising start of the season put a slight pressure on prices with most Peruvian prices slipping by USD 20/ tons or so. Reports says that around half of the production is presold, but as the market seems quite slow now, maybe buyers are waiting for a larger price drop before they rush into the markets for the second half of this seasons production. It doesn't seem to be any reason to expect that prices will move higher the coming weeks but if China and other Asian buyers rush into the markets for a big batch, we might see higher prices again.

Import volumes by China has been strong also this year following last years near record volumes. Fishmeal consumption in China increased to 193 000 tones in November, a notable increase from the 72 000 tones one year ago. Inventories in China is around 60 000 tones as we enter December, a halving from the same month one year ago. The increased consumption last month followed by a decrease in fishmeal inventories might bring Chinese buyers back in the market soon.

We estimate Peruvian fishmeal production to reach at least 1,4 mill tones and fishoil production to reach 250 000 tons this year. The supply situation will therefore be good seen from buyers view throughout the next months. This should point to continued stable price level the coming months.



Gunn Strandheim

# Content

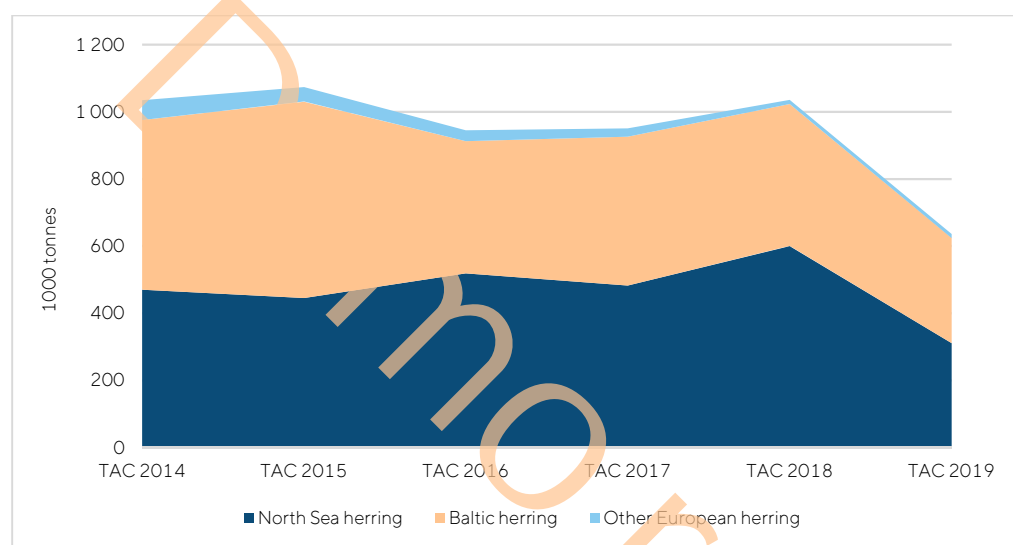
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# 1 Atlantic herring

## 1.1 North Sea herring & Baltic herring

The North Sea herring quota is set to 311 000 tonnes in 2019 which is nearly a 50% decrease from last year's 600 000 tonnes. Even in the herring industry this is considered as a dramatic decrease. The decrease is explained on behalf of many bad year classes which again affects the mature stock. The supply situation for the Baltic herring is will also be dramatically reduced in 2019. ICES has recommended that catches cannot exceed 192 000 tonnes in 2019, a 26% decrease from total Baltic herring quotas this year.

Figure 1 QUOTA DEVELOPMENT NORTH SEA HERRING & BALTIC HERRING STOCKS



Source: ICES

The majority of the North Sea herring and almost 100% of the Baltic herring is fished by EU vessels. Total EU catches in January through October this year was 712 000 tonnes, a 20% increase from last year. There was a weak decline in the Finish catches but except from that catches in all main nations increased. It is still 250 000 tonnes left of the EU quotas to be fished this year.

Table 1 EU LANDINGS OF ATLANTIC HERRING BY COUNTRY (tonnes round weight)

Jan - Oct	2017	2018	18/17
Denmark	118.477	139.736	18 %
Finland	112.098	108.431	-3 %
Sweden	88.225	104.491	18 %
Netherland	78.254	96.918	24 %
UK	64.101	98.271	53 %
Germany	17.289	54.654	216 %
Poland	32.227	37.333	16 %
France	19.724	23.134	17 %
Others	62.886	49.393	-21 %
<b>Total</b>	<b>593.281</b>	<b>712.361</b>	<b>20 %</b>
<b>Quota</b>	<b>924.749</b>	<b>964.086</b>	<b>4 %</b>
<b>Remaining</b>	<b>331.468</b>	<b>251.725</b>	<b>-24 %</b>

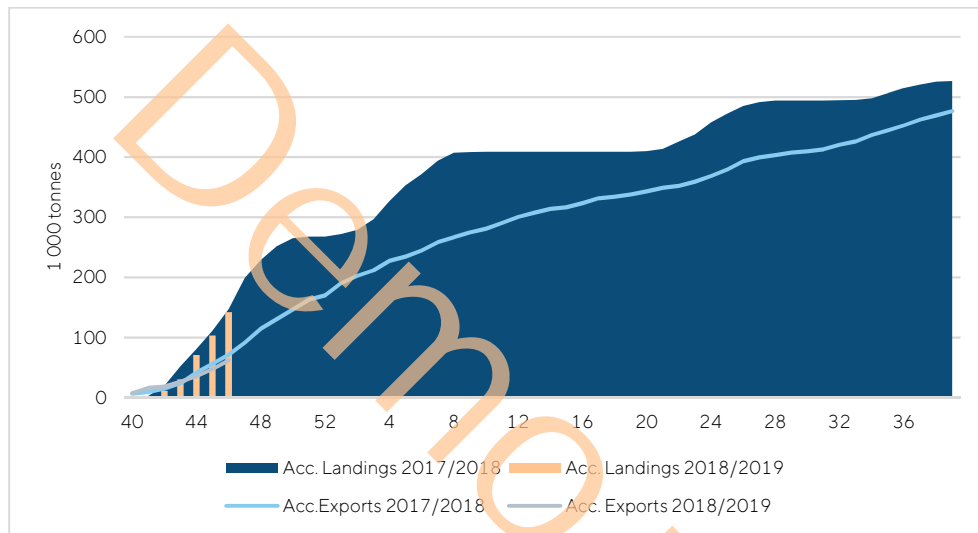
Source: www.gov.uk

### 1.1.1 Norwegian herring inventory

By the end of November, there was landed approx. 330 000 tonnes of NSS herring and 190 000 tonnes North Sea herring by Norwegian and foreign vessels. This is about 15 000 tonnes higher than volumes last year by this time.

Average landings price for NSS herring was NOK 4,55/kg compared to NOK 4,66/ kg in 2017. Average landings price for North Sea herring was NOK 3,97/kg compared to 4,07/ kg by that time last year.

Figure 2 WEEKLY NORWEGIAN LANDINGS AND EXPORTS OF ATLANTIC HERRING (accumulated per season)



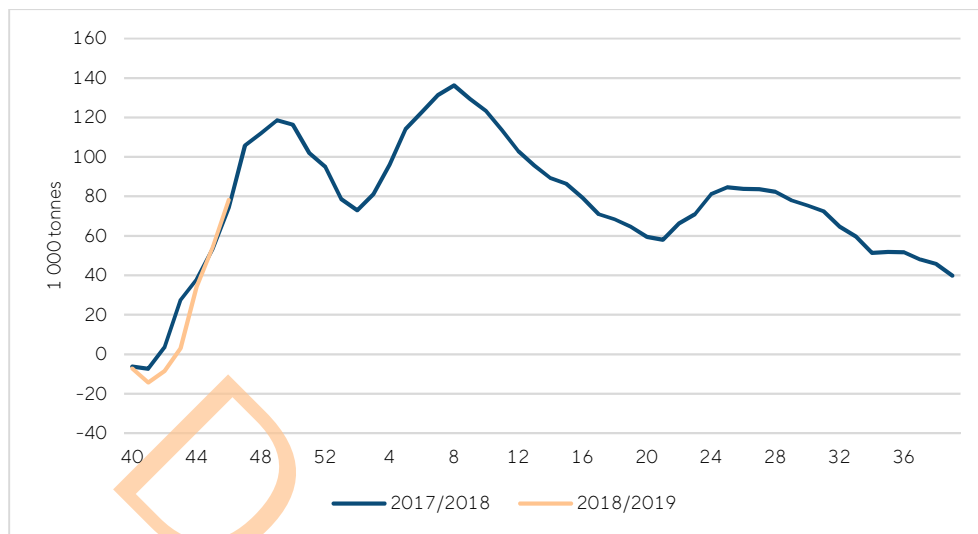
Source: NSSL; SSB, Norges Sjømatråd, Kontali Analyse

The table above shows the relationship between accumulated landings for consumption and export of Atlantic herring starting at zero in week 40.

Landings at the end of week 47 in the 2016/2017 season were approx. 412 000 tonnes, accumulated landings at the same time the current season was approx.506 000 tonnes.

Export in the current season account to 432 000 tonnes, export during the same period the season before was 356 000 tonnes.

Figure 3 WEEKLY CHANGE IN NORWEGIAN HERRING INVENTORY (per season)



Source: NSSL; SSB, Norges Sjømatråd, Kontali Analyse

The inventory of Herring is estimated by comparing landings and exports. Products like fillets are converted to whole fish in order to make them comparable to landings. We start a new season in week 40 every year.

The graph shows the difference between accumulated landings and export starting at zero in week 40. An increasing line will show that more was landed than exported (increase in inventory).

We do not claim that this graph fully reflects the present situation, but we believe that the figures give us an indication of the situation.

## 1.2 Catch and landings

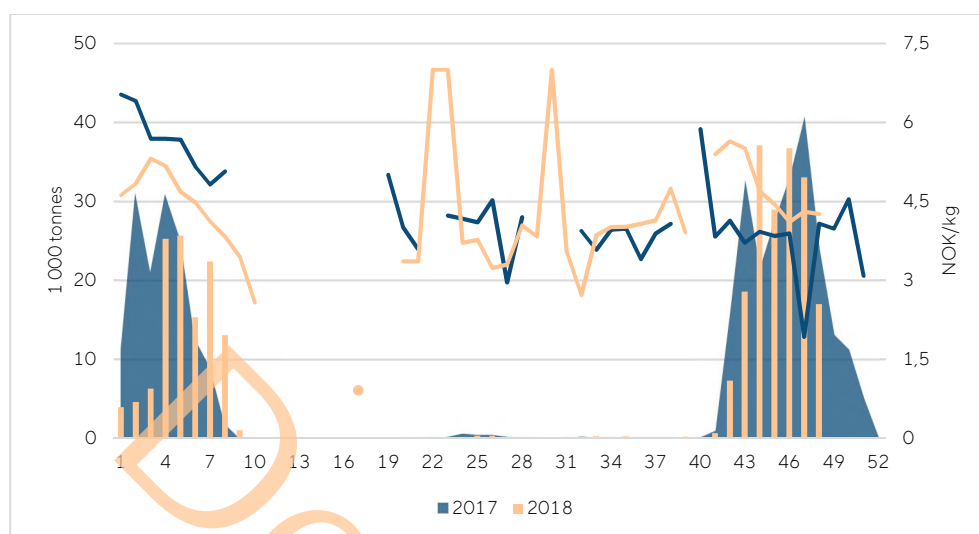
### 1.2.1 Europe

Table 2 NORWEGIAN CATCH OF ATLANTIC HERRING (tonnes round weight)

	2017	2018	18/17
January	108.934	62.494	-43 %
February	37.378	62.100	66 %
March	115	130	13 %
April	5	19	274 %
May	12.607	10.892	-14 %
June	70.923	73.313	3 %
July	5.692	21.629	280 %
August	4.397	17.486	298 %
September	2.821	12.850	356 %
October	60.899	51.913	-15 %
November	163.649		
December	59.205		
<b>Year total</b>	<b>526.625</b>		
<b>YTD</b>	<b>303.771</b>	<b>312.827</b>	<b>3 %</b>
<b>Quota</b>	<b>578.152</b>	<b>483.891</b>	<b>-16 %</b>
<b>Remaining</b>	<b>274.381</b>	<b>171.064</b>	<b>-38 %</b>

Source: Directorate of Fisheries Norway.

Figure 4 WEEKLY NORWEGIAN LANDINGS (bars) AND AVERAGE PRICE (lines) OF NSS HERRING



Source: NSSL

Table 3 DANISH CATCH OF ATLANTIC HERRING (tonnes round weight)

	2017	2018	18/17
January	17.104	21.966	28 %
February	12.416	8.360	-33 %
March	3.026	2.044	-32 %
April	388	2.018	420 %
May	125	554	343 %
June	2.092	1.571	-25 %
July	7.893	14.258	81 %
August	32.481	37.544	16 %
September	28.335	26.340	-7 %
October	11.698	17.277	48 %
November	17.288		
December	7.364		
<b>Year total</b>	<b>140.210</b>		
<b>YTD</b>	<b>115.558</b>	<b>131.932</b>	<b>14 %</b>
<b>Quota</b>	<b>168.000</b>	<b>129.286</b>	<b>-23 %</b>
<b>Remaining</b>	<b>52.442</b>	<b>-2.646</b>	<b>-105 %</b>

Source: Directorate of Fisheries Denmark.

Table 4 ICELANDIC CATCH OF ATLANTIC HERRING (tonnes round weight)

	17/18	18/19	Chg. (%)
September	18.248	13.424	-26 %
October	59.284	59.112	0 %
November	23.888		
December	5.186		
January	1.164		
February			
March			
April			
May			
June	3		
July	3.278		
August	12.176		
<b>Year total</b>	<b>123.227</b>		
<b>YTD</b>	<b>77.532</b>	<b>72.536</b>	<b>-6 %</b>
<b>Quota</b>	<b>162.000</b>	<b>122.800</b>	<b>-24 %</b>
<b>Remaining</b>	<b>84.468</b>	<b>50.264</b>	<b>-40 %</b>

Source: Statistics Iceland.

Table 5 FAROEOSE CATCH OF ATLANTIC HERRING (tonnes round weight)

	2017	2018	18/17
January	128	40	-69 %
February	42		-100 %
March			
April			
May	183		-100 %
June	863		-100 %
July	618	290	-53 %
August	1.437	642	-55 %
September	2.833	3.129	10 %
October	54.930	42.640	-22 %
November	41.037		
December	6.147		
<b>YTD</b>	<b>61.034</b>	<b>46.740</b>	<b>-23 %</b>
<b>Year total</b>	<b>108.218</b>		

Source: fvo.fo.



Table 6 BRITISH CATCH OF ATLANTIC HERRING (tonnes round weight)

	2017	2018	18/17
January	206	2.207	970%
February	2.117	2.835	34%
March	395	34	-91%
April	9	15	64%
May	187	367	96%
June	797	5.986	651%
July	15.075	18.322	22%
August	27.105	34.676	28%
September	19.210	28.735	50%
October	1.084		-100%
November	3.555		
December	2.386		
<b>YTD</b>	<b>66.186</b>	<b>93.177</b>	<b>41%</b>
<b>Year total</b>	<b>72.127</b>		

Source: [www.gov.uk](http://www.gov.uk)

Table 7 EU LANDINGS OF ATLANTIC HERRING BY COUNTRY (tonnes round weight)

Jan - Oct	2017	2018	18/17
Denmark	118 477	139 736	18%
Finland	112 098	108 431	-3%
Sweden	88 225	104 491	18%
Netherland	78 254	96 918	24%
UK	64 101	98 271	53%
Germany	17 289	54 654	216%
Poland	32 227	37 333	16%
France	19 724	23 134	17%
Others	62 886	49 393	-21%
<b>Total</b>	<b>593 281</b>	<b>712 361</b>	<b>20%</b>
<b>Quota</b>	<b>924 749</b>	<b>964 086</b>	<b>4%</b>
<b>Remaining</b>	<b>331 468</b>	<b>251 725</b>	<b>-24%</b>

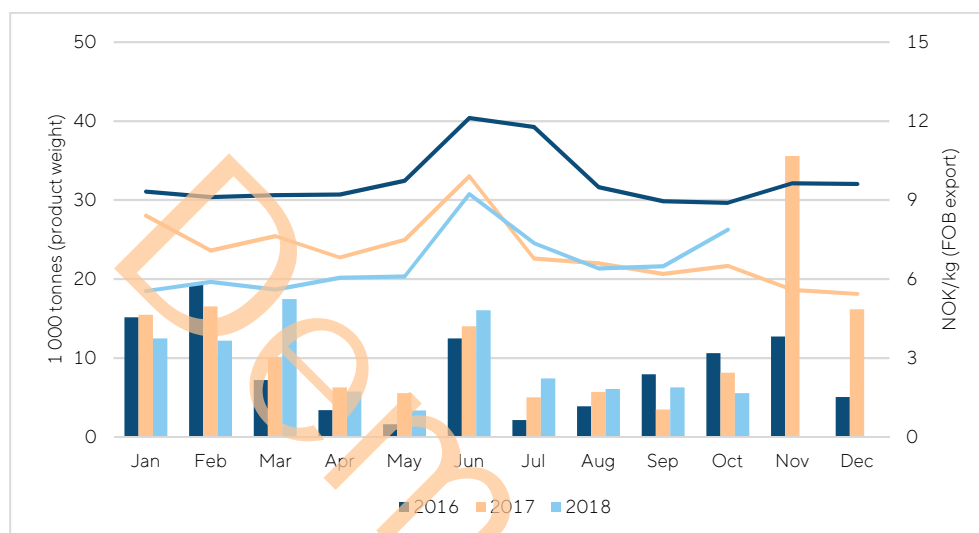
Source: [www.gov.uk](http://www.gov.uk)

## 1.3 Export

### 1.3.1 Norway

#### 1.3.1.1 Frozen Atlantic herring

Figure 5 MONTHLY NORWEGIAN EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC HERRING



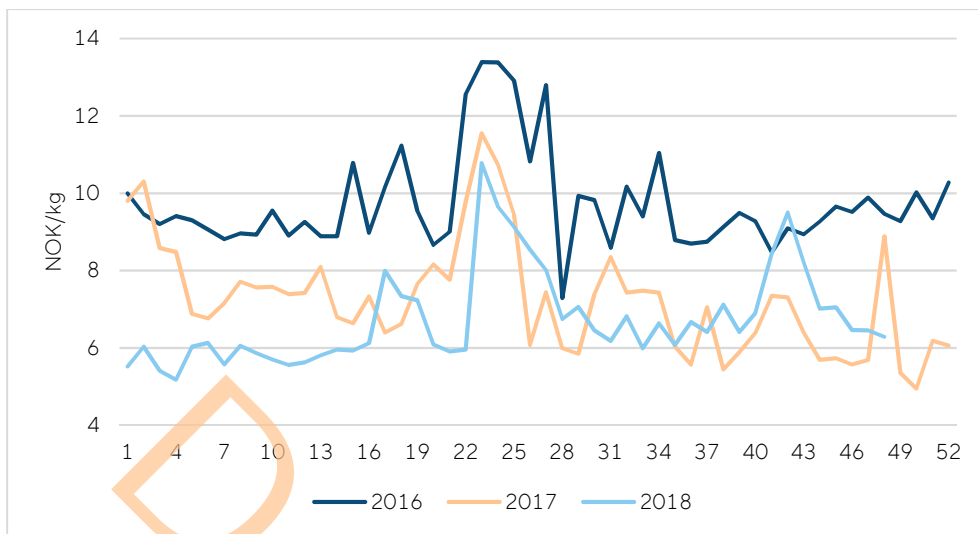
Source: Statistics Norway

Table 8 NORWEGIAN EXPORT OF FROZEN ATLANTIC HERRING TO MAIN MARKETS

Jan - Oct	Tonnes (product weight)			Price (NOK/kg FOB export)		
	2017	2018	18/17	2017	2018	18/17
EU	36 052	41 012	14 %	8,67	7,83	-10 %
Africa	18 285	21 269	16 %	5,68	5,17	-9 %
Ukraine	21 311	14 924	-30 %	7,76	6,34	-18 %
Belarus	4 649	3 395	-27 %	7,60	6,17	-19 %
Japan	1 166	1 523	31 %	10,67	8,84	-17 %
Other	8 573	10 249	20 %	7,24	5,64	-22 %
<b>Total</b>	<b>90 035</b>	<b>92 373</b>	<b>3 %</b>	<b>7,68</b>	<b>6,69</b>	<b>-13 %</b>

Source: Statistics Norway

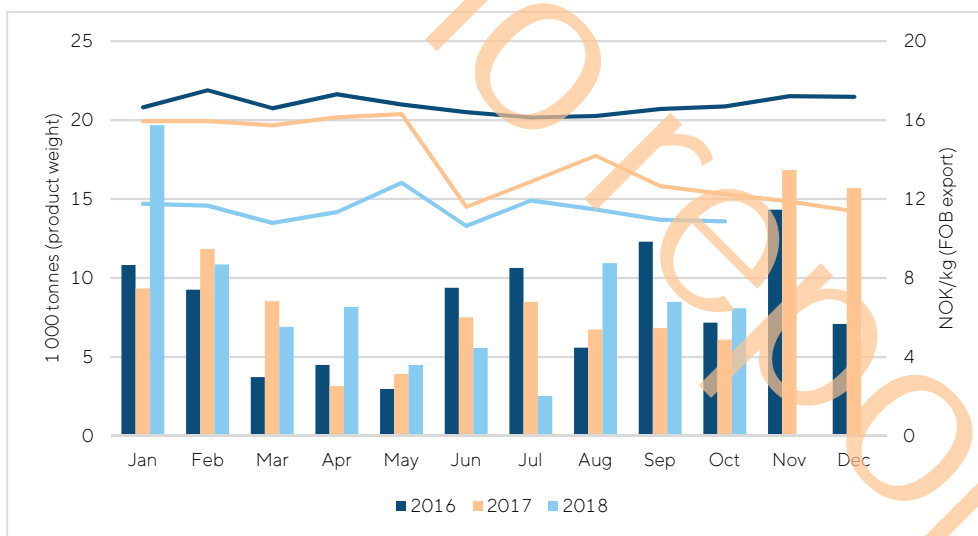
Figure 6 WEEKLY NORWEGIAN EXPORT PRICE OF FROZEN ATLANTIC HERRING



Source: Norges Sjømatråd

### 1.3.1.2 Frozen Atlantic herring fillets

Figure 7 MONTHLY NORWEGIAN EXPORT VOLUME (bars) AND PRICE (lines) OF ATLANTIC HERRING FILLET



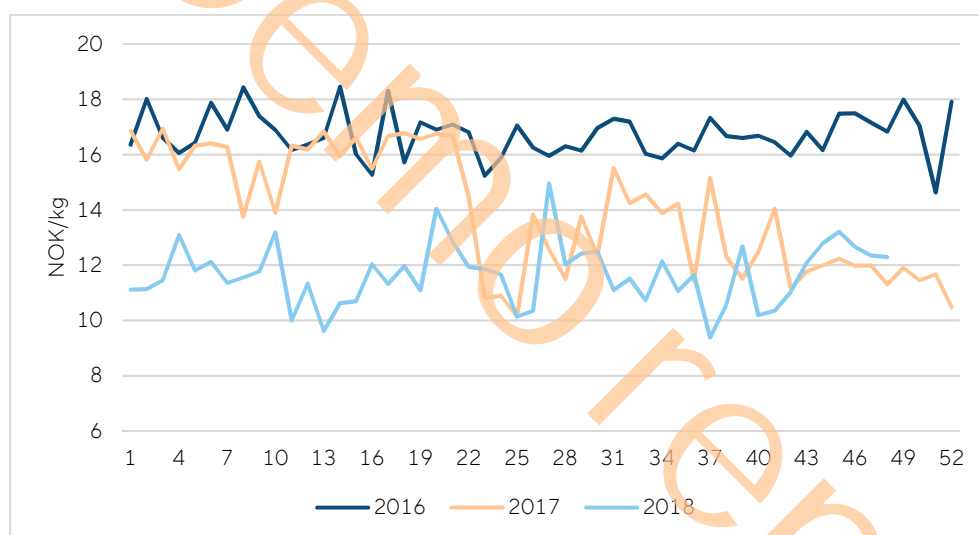
Source: Statistics Norway

Table 9 EXPORT OF FROZEN ATLANTIC HERRING FILLETS TO MAIN MARKETS

Jan - Oct	Tonnes (product weight)			Price (NOK/kg FOB export)		
	2017	2018	18/17	2017	2018	18/17
Germany	18 300	25 986	42 %	12,63	10,89	-14 %
Poland	14 461	17 875	24 %	14,62	12,14	-17 %
Lithuania	8 486	9 639	14 %	15,45	10,97	-29 %
Belarus	10 017	7 439	-26 %	15,82	10,66	-33 %
Netherlands	5 633	5 875	4 %	15,19	13,17	-13 %
Israel	967	1 036	7 %	17,51	13,16	-25 %
Czech Republic	943	703	-25 %	15,12	11,17	-26 %
France	3 007	3 689	23 %	16,05	12,16	-24 %
Other	4 425	5 302	20 %	15,02	11,42	-24 %
<b>Total</b>	<b>66 238</b>	<b>77 544</b>	<b>17 %</b>	<b>14,5</b>	<b>11,5</b>	<b>-21 %</b>

Source: Statistics Norway

Figure 8 WEEKLY NORWEGIAN EXPORT PRICE OF FROZEN ATLANTIC HERRING FILLET



Source: Norges Sjømatråd

## 1.3.1.3 Total sales

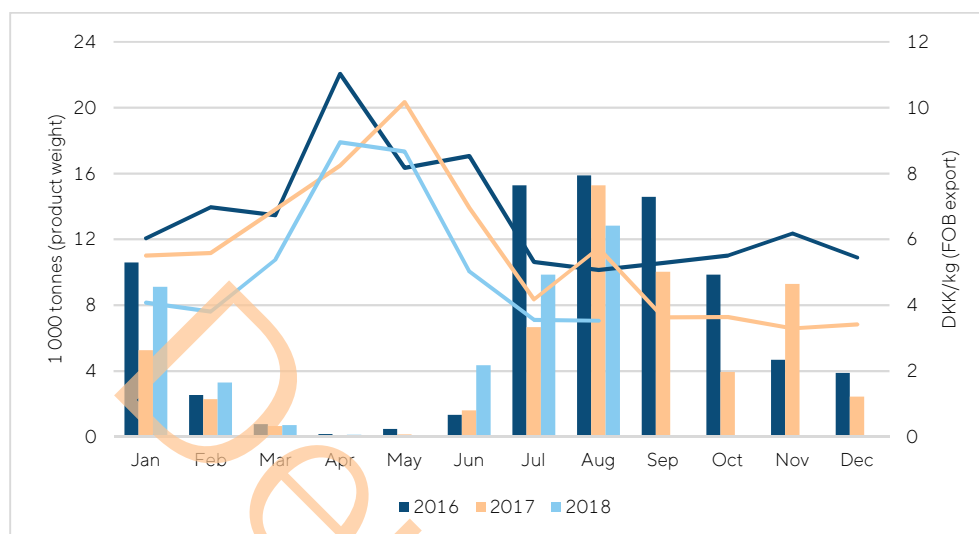
Table 10 TOTAL NORWEGIAN SALES OF FROZEN HERRING PRODUCTS (1 000 NOK)

	Jan - Oct 2017			Jan - Oct 2018			18/17
	NOK	Product	Total	NOK	Product	Total	%
<b>Frozen herring fillets with skin</b>							
EU	7.445	44 %	0 %	6.742	41 %	0 %	-9 %
Japan	9.356	56 %	0 %	9.207	55 %	0 %	-2 %
Other	54	0 %	0 %	664	4 %	0 %	1139 %
<b>Total</b>	<b>16.854</b>	<b>100 %</b>	<b>1 %</b>	<b>16.612</b>	<b>100 %</b>	<b>1 %</b>	<b>-1 %</b>
<b>Frozen herring fillets without skin</b>							
EU	367.160	98 %	18 %	409.331	98 %	21 %	11 %
Israel	3.818	1 %	0 %	4.328	1 %	0 %	13 %
Other	1.905	1 %	0 %	2.820	1 %	0 %	48 %
<b>Total</b>	<b>372.884</b>	<b>100 %</b>	<b>18 %</b>	<b>416.479</b>	<b>100 %</b>	<b>22 %</b>	<b>12 %</b>
<b>Frozen herring flaps</b>							
EU	431.232	67 %	21 %	429.042	79 %	22 %	-1 %
Belarus	170.963	26 %	8 %	88.219	16 %	5 %	-48 %
Israel	14.548	2 %	1 %	10.598	2 %	1 %	-27 %
Other	31.492	5 %	2 %	16.259	3 %	1 %	-48 %
<b>Total</b>	<b>648.235</b>	<b>100 %</b>	<b>32 %</b>	<b>544.118</b>	<b>100 %</b>	<b>28 %</b>	<b>-16 %</b>
<b>Frozen North Sea herring</b>							
EU	162.496	87 %	8 %	189.290	82 %	10 %	16 %
Ukraine	9.048	5 %	0 %	8.025	3 %	0 %	-11 %
Africa	9.659	5 %	0 %	21.008	9 %	1 %	117 %
Other	6.526	3 %	0 %	11.549	5 %	1 %	77 %
<b>Total</b>	<b>187.729</b>	<b>100 %</b>	<b>9 %</b>	<b>229.872</b>	<b>100 %</b>	<b>12 %</b>	<b>22 %</b>
<b>Frozen winter herring</b>							
EU	150.015	30 %	7 %	132.027	34 %	7 %	-12 %
Belarus	35.109	7 %	2 %	20.873	5 %	1 %	-41 %
Ukraine	156.207	31 %	8 %	86.630	22 %	4 %	-45 %
Africa	94.130	19 %	5 %	88.950	23 %	5 %	-6 %
Other	68.217	14 %	3 %	59.835	15 %	3 %	-12 %
<b>Total</b>	<b>503.679</b>	<b>100 %</b>	<b>25 %</b>	<b>388.315</b>	<b>100 %</b>	<b>20 %</b>	<b>-23 %</b>
<b>Other herring</b>	<b>315.168</b>		<b>15 %</b>	<b>339.741</b>		<b>18 %</b>	<b>8 %</b>
<b>Total value</b>	<b>2.044.548</b>		<b>100 %</b>	<b>1.935.137</b>		<b>100 %</b>	<b>-5 %</b>

Source: Statistics Norway

### 1.3.2 Denmark

Figure 9 MONTHLY DANISH EXPORT VOLUME (bars) AND PRICE (lines) OF FRESH ATLANTIC HERRING



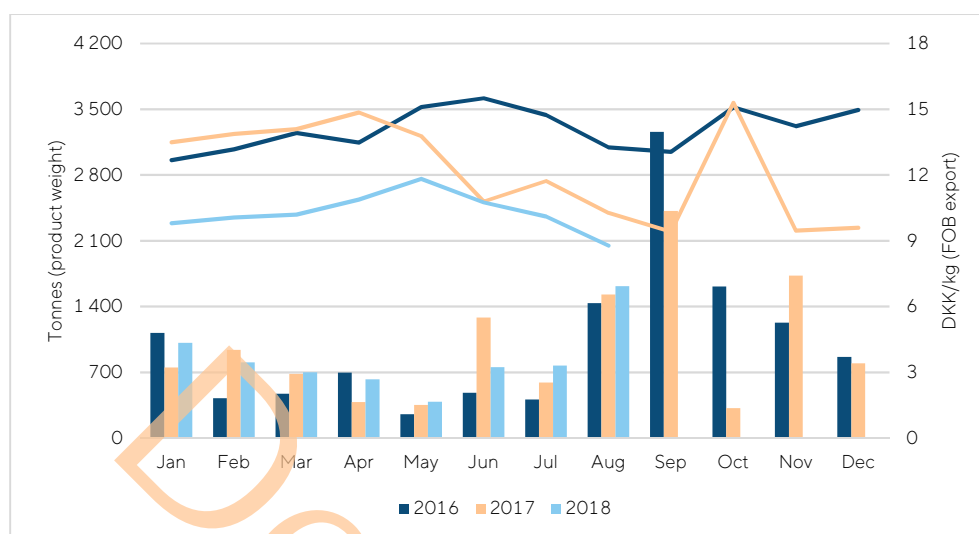
Source: Statistics Denmark

Table 11 DANISH EXPORT OF FRESH ATLANTIC HERRING BY COUNTRY

Jan - Aug	Tonnes (product weight)			DKK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Germany	22.179	21.118	-5%	5,65	3,69	-35%
Norway	4.221	9.791	132%	4,95	3,83	-23%
Netherlands	1.539	2.794	82%	6,79	6,05	-11%
Sweden	1.651	4.269	159%	3,92	3,18	-19%
United Kingdom	1.752	1.927	10%	3,49	3,45	-1%
Other	597	441	-26%	9,27	10,86	17%
<b>Total</b>	<b>31.939</b>	<b>40.339</b>	<b>26%</b>	<b>5,47</b>	<b>3,90</b>	<b>-29%</b>

Source: Statistics Denmark

Figure 10 MONTHLY DANISH EXPORT VOLUME (bars) AND PRICE (lines) OF ATLANTIC HERRING FILLET (fresh and frozen)



Source: Statistics Denmark

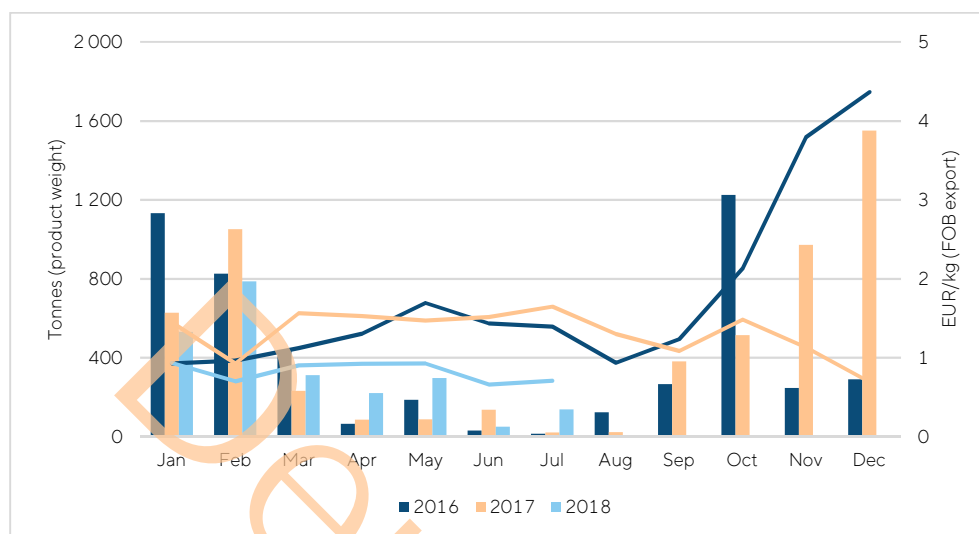
Table 12 DANISH EXPORT OF ATLANTIC HERRING FILLET (fresh and frozen) BY COUNTRY

Jan - Aug	Tonnes (product weight)			DKK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Germany	2.825	3.710	31 %	11,13	9,27	-17 %
Poland	1.301	1.458	12 %	12,22	9,14	-25 %
Czech Republic	566	720	27 %	14,16	10,97	-23 %
Russia	1.024	0	-100 %	11,96	0,00	-100 %
Sweden	282	218	-23 %	16,68	15,85	-5 %
Other	509	565	11 %	14,64	13,40	-8 %
<b>Total</b>	<b>6.506</b>	<b>6.671</b>	<b>3 %</b>	<b>12,3</b>	<b>10,0</b>	<b>-18 %</b>

Source: Statistics Denmark

### 1.3.3 Ireland

Figure 11 MONTHLY IRISH EXPORT VOLUME (bars) AND PRICE (lines) OF ATLANTIC HERRING FILLET (fresh and frozen)



Source: Central Statistics Office

Table 13 IRISH EXPORT OF ATLANTIC HERRING FILLET (fresh and frozen) BY MARKET

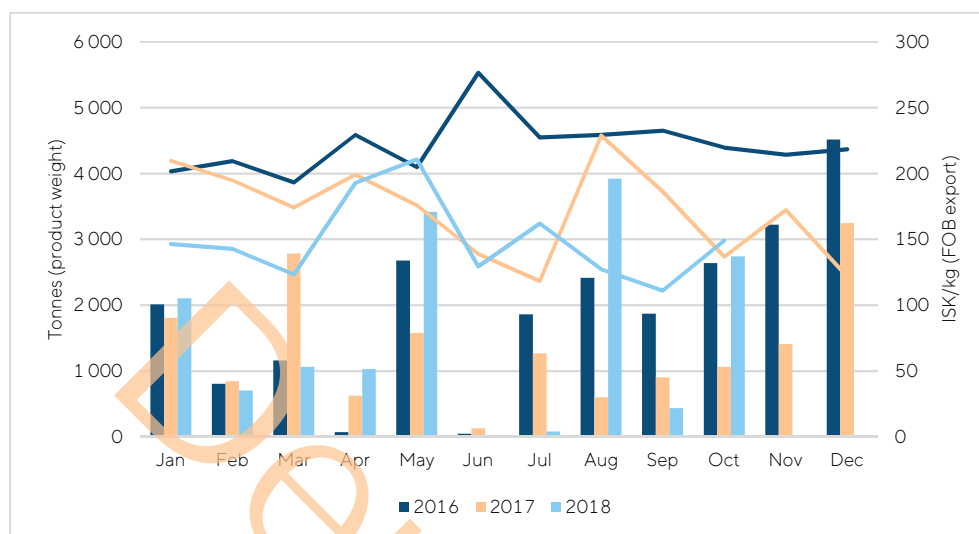
Jan - Jul	Tonnes (product weight)			Price (EUR/kg FOB export)		
	2017	2018	18/17	2017	2018	18/17
EU	1 861	1 400	-25 %	1,22	0,94	-23 %
Africa	126	823	555 %	1,04	0,62	-40 %
Japan	67	11	-84 %	1,83	1,21	-34 %
Other	188	100	-47 %	1,23	0,99	-20 %
<b>Total</b>	<b>2 242</b>	<b>2 334</b>	<b>4 %</b>	<b>1,23</b>	<b>0,83</b>	<b>-32 %</b>

Source: Central Statistics Office



### 1.3.4 Iceland

Table 14 MONTHLY ICELANDIC EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC HERRING FILLET



Source: Statistics Iceland

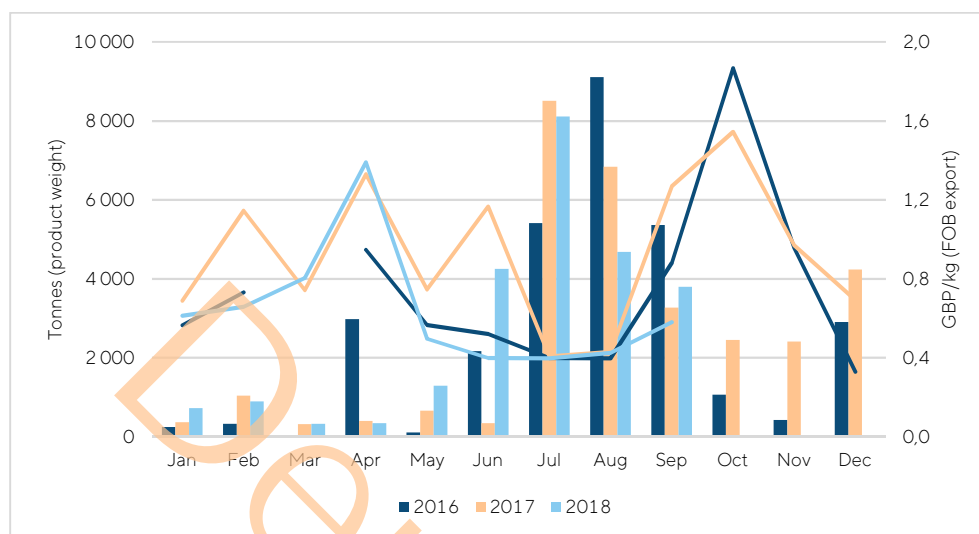
Table 15 ICELANDIC EXPORT OF FROZEN ATLANTIC HERRING FILLET BY MARKET

Jan - Oct	Tonnes (product weight)			ISK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
EU	8.141	10.818	33%	179,25	162,36	-9%
Ukraine	361	2.625	626%	160,03	138,60	-13%
Belarus	2.814	1.425	-49%	166,11	150,59	-9%
Other	270	638	136%	231,72	146,97	-37%
<b>Total</b>	<b>11.586</b>	<b>15.506</b>	<b>34%</b>	<b>176,68</b>	<b>156,62</b>	<b>-11%</b>

Source: Statistics Iceland

### 1.3.5 United Kingdom

Table 16 MONTHLY BRITISH EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC HERRING



Source: Business & Trade Statistics Ltd

Table 17 BRITISH EXPORT OF FROZEN ATLANTIC HERRING BY COUNTRY

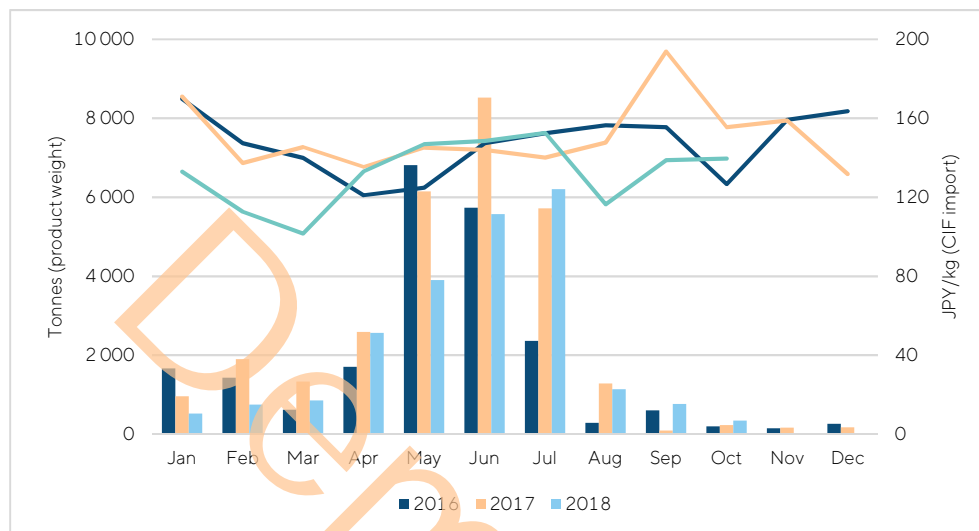
Jan - Sep	Tonnes (product weight)			GBP/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Netherlands	12.299	14.542	18 %	0,37	0,36	-3 %
Malta	2.731	3.419	25 %	0,57	0,58	1 %
Nigeria	1.948	2.000	3 %	0,44	0,41	-6 %
Spain	1.404	1.870	33 %	0,60	0,56	-7 %
Other	3.343	2.583	-23 %	1,74	0,93	-46 %
<b>Total</b>	<b>21.724</b>	<b>24.414</b>	<b>12 %</b>	<b>0,63</b>	<b>0,47</b>	<b>-25 %</b>

Source: Business & Trade Statistics Ltd

## 1.4 Import

### 1.4.1 Japan

Figure 12 MONTHLY JAPANESE IMPORT VOLUME (bars) AND PRICE (lines) OF FROZEN HERRING



Source: Japan Customs

Table 18 JAPANESE IMPORT OF FROZEN HERRING BY COUNTRY OF ORIGIN

Jan - Oct	Tonnes (product weight)			JPY/kg (CIF import)		
	2017	2018	18/17	2017	2018	18/17
Norway	1 814	2 190	21 %	165	139	-15 %
Russia	6 574	5 801	-12 %	142	130	-9 %
USA	14 825	11 158	-25 %	145	147	1 %
Canada	5 181	3 311	-36 %	136	151	11 %
Other	356	116	-67 %	130	125	-4 %
<b>Total</b>	<b>28 751</b>	<b>22 576</b>	<b>-21 %</b>	<b>144</b>	<b>142</b>	<b>-1 %</b>

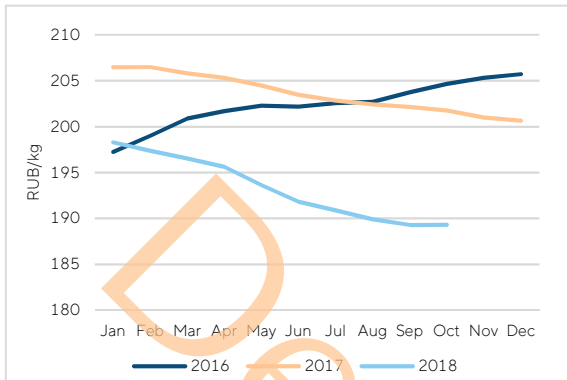
Source: Japan Customs

## 1.5 Consumer prices

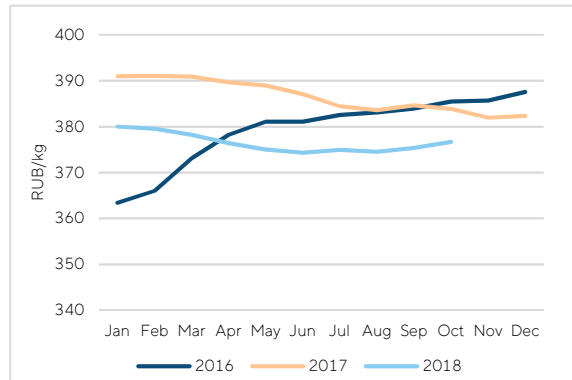
### 1.5.1 Russia

Figure 13 MONTHLY AVERAGE CONSUMER PRICES

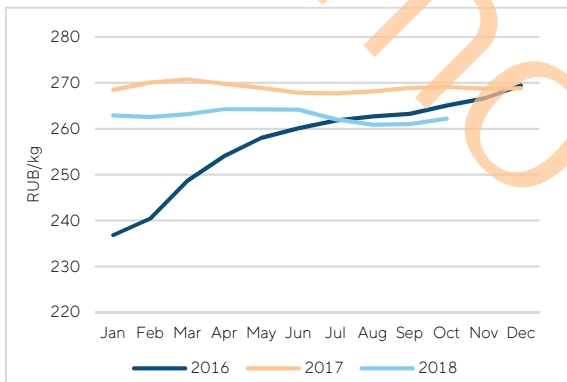
SALTED HERRING - RUSSIA



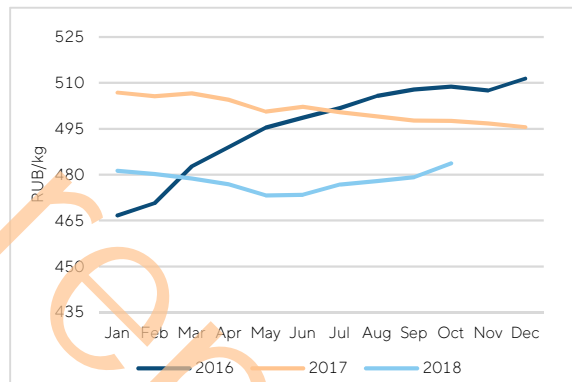
SALTED HERRING FILLETS - RUSSIA



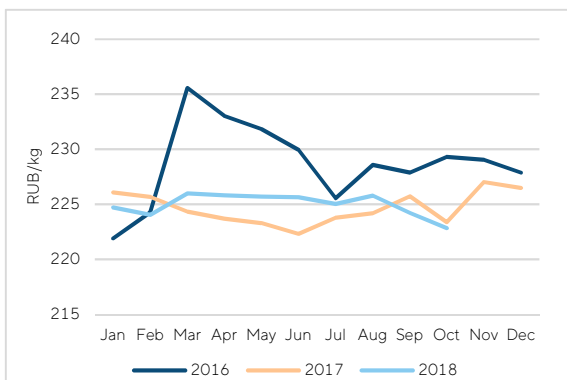
SALTED HERRING - MOSCOW



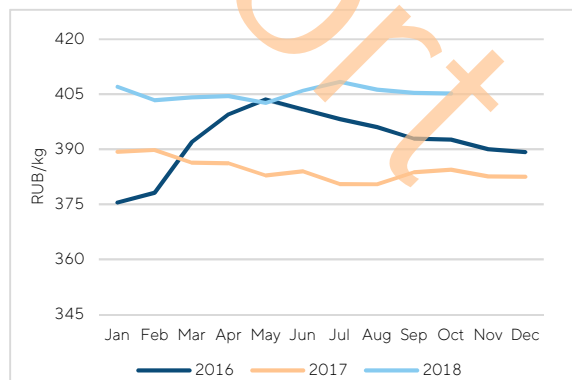
SALTED HERRING FILLETS - MOSCOW



SALTED HERRING - ST. PETERSBURG



SALTED HERRING FILLETS - ST. PETERSBURG



Source: Russian Federation Statistics Service

## 1.6 Quotas

Table 19 ATLANTIC HERRING QUOTAS BY COUNTRY

	2014	2015	2016	2017	2018E	18/17
Spain	31	7	23	38	30	-21 %
Belgium	9 303	4 814	9 639	4 764	9 020	89 %
Germany	67 395	76 525	73 690	74 471	65 348	-12 %
France	38 933	41 669	40 681	39 617	37 750	-5 %
Ireland	30 690	30 384	16 366	20 251	29 758	47 %
Netherlands	90 385	105 676	92 591	113 274	87 639	-23 %
Portugal	31	7	0	11	30	173 %
Finland	137 844	125 434	138 136	156 847	133 657	-15 %
Sweden	96 370	99 664	118 025	136 179	93 443	-31 %
United Kingdom	97 533	105 868	84 520	89 829	94 570	5 %
Denmark	133 336	196 360	147 115	168 079	129 286	-23 %
Poland	31 127	29 789	48 001	49 579	30 181	-39 %
Estonia	26 850	25 191	36 066	35 674	26 034	-27 %
Latvia	19 659	23 263	23 712	23 463	19 062	-19 %
Lithuania	3 291	2 663	5 182	5 671	3 191	-44 %
<b>Total EU</b>	<b>782 778</b>	<b>867 314</b>	<b>833 747</b>	<b>917 747</b>	<b>759 000</b>	<b>-17 %</b>
Norway	395 000	306 087	349 213	578 152	483 891	-16 %
Iceland <sup>1)</sup>	150 000	124 000	123 500	162 000	122 800	-24 %
Faroe Islands	40 000	30 000	40 000	125 597	88 350	-30 %
Russia	53 650	50 000	74 000	82 700	70 000	-15 %
Canada	95 000	100 000	100 000	0	0	
USA	104 000	104 566	100 000	104 000	100 843	-3 %
<b>Total</b>	<b>1 620 428</b>	<b>1 581 967</b>	<b>1 620 460</b>	<b>1 970 196</b>	<b>1 624 884</b>	<b>-18 %</b>

1) Quota year from September to August

Source: Directorate of Fisheries Norway, EU Statistics Iceland, ICES

## 2 Atlantic Mackerel

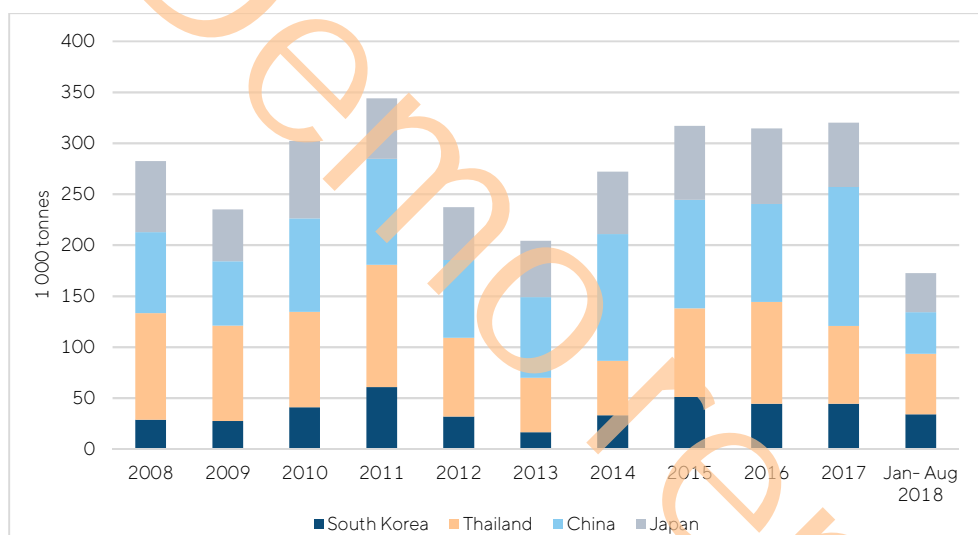
### 2.1 Asian markets - import

Asia is a key market for Atlantic mackerel from Norway but also in large degree from other European suppliers. Economies there are growing more rapidly than many other continents and Asian food is also growing in popularity in many countries. This is all positive for mackerel demand. The most known Asian mackerel markets are Japan and China, but markets like South Korea and Thailand are also important mackerel consuming markets.

The mackerel exported to the Chinese market is often filleted and re-exported to Japan but also here the domestic consumption is growing, and the potential is huge.

In 2017, imports to the four markets China, Japan, South Korea and Thailand exceeded 320 000 tonnes whereof China constituted 43% of direct imports.

Figure 14 IMPORT FROZEN MACKEREL TO MAIN ASIAN MARKETS

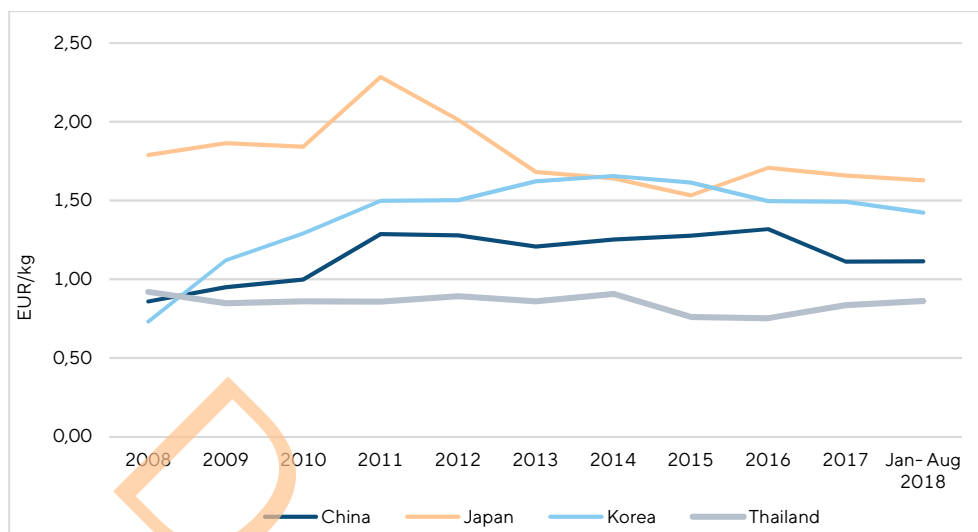


Source: EUMOFA

Historically, high priced mackerel has gone to Japan either directly or via China after being prepared/filleted in China. In recent years South Korea has also become a market with high payment capacity. The price differences seen between Japan and South Korea lately is a result of different size categories where Japan takes the biggest sized mackerel. Average import price to China reflects that that a large share of this still is prepared and re-exported to the Japanese market.

Average import price to Thailand compared to import price to the other markets illustrate in a large degree the price difference in these markets between Atlantic mackerel and the lower prices Pacific mackerels.

Figure 15 YEARLY IMPORT PRICE - ASIAN MARKETS



Source: EUMOFA

In 2017, imports to China exceeded 136 000 tonnes, a 42% increase from 2016. Imports from Norway increased 26% and constituted 56% of total imports in 2017. Russia came up as the second largest supplier in 2017 with nearly 24 700 tonnes, a huge growth from the 26 tonnes in 2016. Iceland was the third largest supplier with 11 832 tonnes.

Table 20 IMPORT TO CHINA

	2010	2011	2012	2013	2014	2015	2016	2017	Jan- Mar 2018
Norway	65 326	68 829	51 150	60 894	91 152	67 809	60 362	76 240	24 371
Russia	124	607	0	347	156	22	26	24 685	4 426
Iceland	457	10 476	4 397	4 667	8 622	8 097	12 614	11 832	1 870
Ireland	623	750	2 700	1 348	3 986	7 339	4 265	4 206	4 350
UK	870	1 752	2 352	760	7 225	7 663	5 198	4 168	2 421
Other	24 203	21 634	15 824	11 068	13 057	15 619	13 641	14 904	3 531
<b>Total</b>	<b>91 603</b>	<b>104 048</b>	<b>76 422</b>	<b>79 085</b>	<b>124 198</b>	<b>106 548</b>	<b>96 106</b>	<b>136 035</b>	<b>40 970</b>

Source: EUMOFA

The Atlantic mackerel from Norway has a strong position in the Japanese market. In 2017 frozen mackerel imports was 63 188 tonnes whereof 89% (56 264) tonnes came from Norwegian suppliers. The rest came mainly from other European suppliers like Ireland (4 562 tonnes), Iceland (1 191 tonnes) and UK (578 tonnes). During Jan -Aug imports reached 38 222 tonnes, increase by 12 000 tonnes from the same period in 2017.

Figure 16 IMPORT TO JAPAN

	2010	2011	2012	2013	2014	2015	2016	2017	Jan-Aug 2018
Norway	73 830	55 687	45 059	50 664	56 091	69 748	67 239	56 264	31 633
Ireland	603	935	1 363	642	1 269	582	3 547	4 562	4 014
Iceland	72	458	933	1 469	721	488	1 860	1 191	851
UK	98	0	272	254	2 248	1 160	398	578	1 336
Korea.rep	5	178	901	66	53	1	538	369	96
Other	1 571	2 140	3 119	2 006	874	344	412	224	292
<b>Total</b>	<b>76 179</b>	<b>59 398</b>	<b>51 646</b>	<b>55 102</b>	<b>61 256</b>	<b>72 324</b>	<b>73 993</b>	<b>63 188</b>	<b>38 222</b>

Source: EUMOFA

South Korea has established as one of the most important markets for high quality Atlantic mackerel from Norway. In 2017 imports was 44 515 tonnes whereof 82% was of Norwegian origin. Imports in Jan – Aug this year was 34 137 tonnes. Above 90% of this came from Norway.

Figure 17 IMPORT TO SOUTH KOREA

	2010	2011	2012	2013	2014	2015	2016	2017	Jan- Aug 2018
Norway	12 339	20 235	18 750	11 847	26 341	36 160	38 765	36 518	30 977
Peru	0	0	0	0	0	0	1 740	4 688	26
China	17 673	23 159	8 818	3 325	4 525	9 240	2 678	1 981	1 910
UK	89	917	668	381	406	1 460	687	629	240
Netherlands	268	481	267	0	0	192	203	218	290
Other	10 652	15 815	3 263	794	1 759	3 834	195	482	696
<b>Total</b>	<b>41 021</b>	<b>60 606</b>	<b>31 766</b>	<b>16 346</b>	<b>33 031</b>	<b>50 886</b>	<b>44 268</b>	<b>44 515</b>	<b>34 137</b>

Source: EUMOFA

Imports of frozen mackerel consist mainly of chub mackerel and blue mackerel from the big catching nations Japan and China. Total mackerel imports in 2017 was 76 297 tonnes whereof nearly 62 000 (81%) tonnes came from Japan and China. Imports from European suppliers amounted to around 8 000 tonnes Atlantic mackerel.

Figure 18 IMPORT TO THAILAND

	2010	2011	2012	2013	2014	2015	2016	2017	Jan- Aug 2018
Japan	13 555	24 596	26 620	25 806	24 911	54 760	44 339	31 455	34 683
China	11 423	24 370	30 152	14 217	11 534	15 936	39 740	30 365	10 239
Norway	3 156	4 183	7 385	8 386	9 236	10 327	10 328	7 701	6 748
Taiwan	2 137	1 608	662	1 368	2 658	4 869	4 039	5 295	4 448
UK	264	212	288	672	568	474	796	972	348
Other	62 891	64 932	12 073	3 162	4 594	738	736	509	2 699
<b>Total</b>	<b>93 425</b>	<b>119 902</b>	<b>77 181</b>	<b>53 611</b>	<b>53 501</b>	<b>87 103</b>	<b>99 979</b>	<b>76 297</b>	<b>59 164</b>

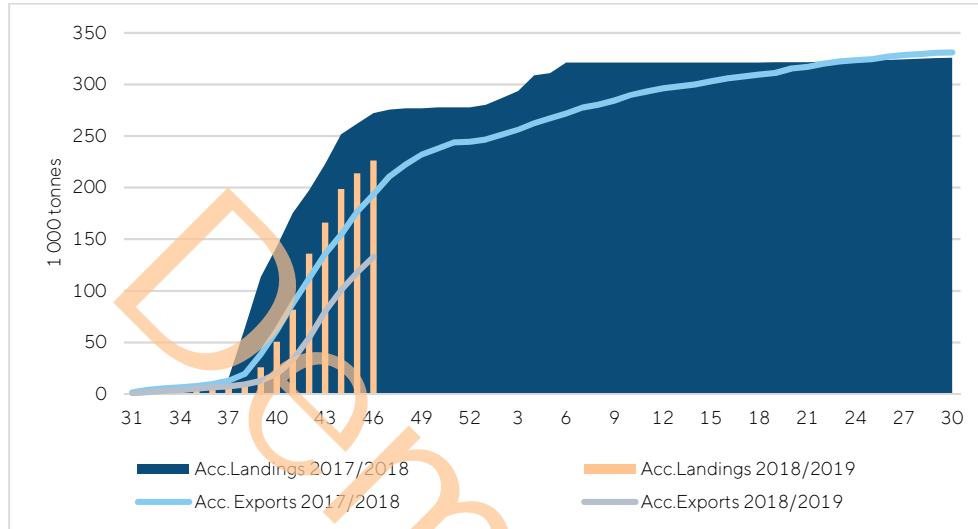
Source: EUMOFA



### 2.1.1 Mackerel inventory in Norway

During the Jan – Nov period this year there was landed approx. 282 000 tonnes of mackerel in Norway by Norwegian and foreign vessels. This was approx. 65 000 tonnes beneath landings last year by this time. Average first-hand price was NOK 12, 82/kg compared to NOK 9, 55/kg by that time in 2017.

Figure 19 LANDINGS AND EXPORT OF ATLANTIC MACKEREL IN NORWAY (accumulated)

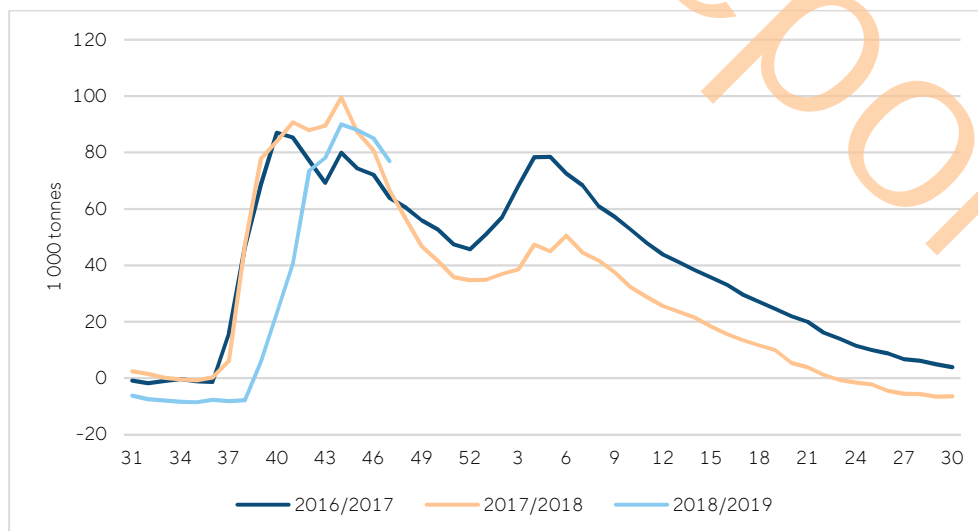


Source: Kontali Analyse model

We started a new season in August and accumulated landings as of week 47 in the 2016/2017 season totalled approx. 275 500 tonnes. In the current season, the landings constituted 233 000 tonnes the same week.

Accumulated export in week 47 was approx. 148 000 tonnes. Accumulated export the comparable week last year was 222 000 tonnes.

Figure 20 ESTIMATED INVENTORY OF ATLANTIC MACKEREL IN NORWAY



The inventory of mackerel is estimated by comparing landings and exports. Products like fillets are converted to whole fish in order to make them comparable to landings. We start a new season in week 31 every year.

Source: Kontali Analyse model

In week 47 the current season, mackerel inventories were estimated to approx. 75 000 tonnes.

## 2.2 Catch and landings

### 2.2.1 Atlantic mackerel in Europe

Table 21 MONTHLY NORWEGIAN CATCH OF ATLANTIC MACKEREL (tonnes live weight)

	2017	2018	18/17
January	2.654	4.641	75 %
February	4	6	43 %
March	151	0	-100 %
April	31	22	-29 %
May	429	559	30 %
June	1.007	1.700	69 %
July	770	2.652	244 %
August	2.750	3.390	23 %
September	106.256	21.765	-80 %
October	92.529	140.237	52 %
November	14.848		
December	1.118		
<b>Year total</b>	<b>222.547</b>		
<b>YTD</b>	<b>206.581</b>	<b>174.972</b>	<b>-15 %</b>
<b>Quota</b>	<b>234.472</b>	<b>190.000</b>	<b>-19 %</b>
<b>Remaining</b>	<b>27.891</b>	<b>15.028</b>	

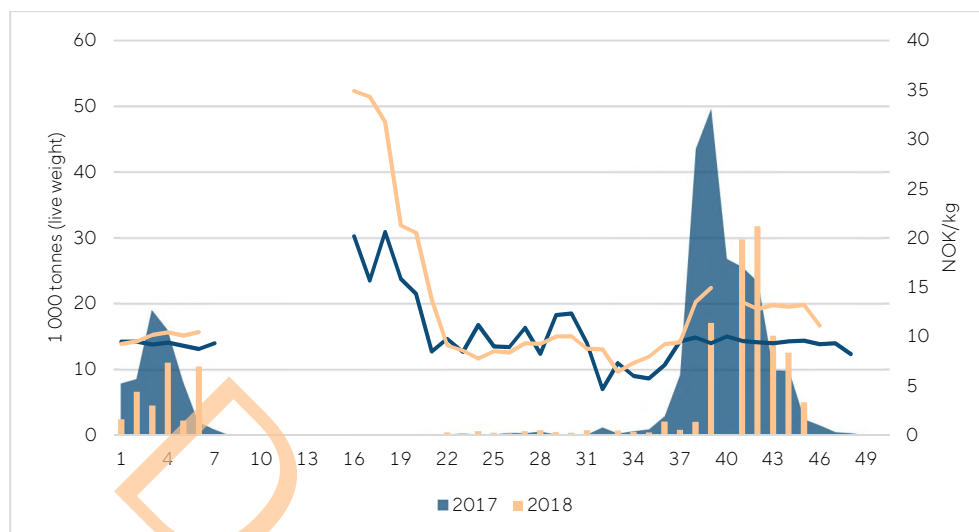
Source: Directorate of Fisheries Norway.

Table 22 MONTHLY NORWEGIAN LANDINGS OF ATLANTIC MACKEREL BY FOREIGN VESSELS (tonnes live weight)

	2017	2018	18/17
January	59.054	26.292	-55 %
February	5.550	14.986	170 %
March			
April			
May	2		-100 %
June			
July	364		-100 %
August	651	2	-100 %
September	578	30	-95 %
October	28.799	15.863	-45 %
November	30.218		
December			
<b>YTD</b>	<b>94.998</b>	<b>57.173</b>	<b>-40 %</b>
<b>Year total</b>	<b>125.216</b>		

Source: Directorate of Fisheries Norway.

Figure 21 WEEKLY NORWEGIAN LANDINGS AND AVERAGE PRICE OF ATLANTIC MACKEREL



Source: Norges Sildesalgslag

Table 23 MONTHLY DANISH CATCH OF ATLANTIC MACKEREL (tonnes)

	2017	2018	18/17
January	9.891	4.413	-55 %
February	2.718	3.815	40 %
March	32	30	-6 %
April	1	1	
May	13	68	423 %
June	36	53	47 %
July	71	63	-11 %
August	192	184	-4 %
September	195	132	-32 %
October	11.855	12.757	8 %
November	12.875		
December	19		
<b>Year total</b>	<b>37.898</b>		
<b>YTD</b>	<b>25.004</b>	<b>21.516</b>	<b>-14 %</b>
<b>Quota</b>	<b>37.843</b>		
<b>Remaining</b>	<b>12.839</b>		

Source: Directorate of Fisheries Denmark.

Table 24 MONTHLY ICELANDIC CATCH OF ATLANTIC MACKEREL (tonnes)

	2017	2018	18/17
January			
February			
March		0	
April	518	40	-92 %
May	164	135	-18 %
June	565		-100%
July	28.376	24.807	-13 %
August	62.884	108.448	72 %
September	70.153	54.367	-23 %
October	3.835	2.051	-47 %
November			
December			
<b>Year total</b>	<b>166.494</b>		
<b>YTD</b>	<b>166.494</b>	<b>189.849</b>	<b>14 %</b>
<b>Quota</b>	<b>168.468</b>	<b>113.631</b>	<b>-33 %</b>
<b>Remaining</b>	<b>1.974</b>	<b>-76.218</b>	

Source: Statistics Iceland.

Table 25 MONTHLY FAROEOSE CATCH OF ATLANTIC MACKEREL (tonnes)

	2017	2018	18/17
January	26.691	13.258	-50 %
February	4.162		-100 %
March	6		-100 %
April	191	146	-24 %
May	201	169	-16 %
June	182	0	-100 %
July	1.896	560	-70 %
August	13.188	5.906	-55 %
September	41.061	35.151	-14 %
October	3.670	6.754	84 %
November	1.990		
December	5.389		
<b>YTD</b>	<b>91.248</b>	<b>61.942</b>	<b>-32 %</b>
<b>Year total</b>	<b>98.628</b>		

Source: fvo.fo.

Table 26 LANDINGS OF ATLANTIC MACKEREL BY BRITISH VESSELS

	2017			2018			18/17
	Domestic	Abroad	Total	Domestic	Abroad	Total	Total
January	40 123	50 183	90 306	40 430	35 472	75 902	-16 %
February	4 634	7 601	12 235	4 389	8 340	12 729	4 %
March	572	6 533	7 105	21	2 620	2 640	-63 %
April	241	3	244	17	1 212	1 229	403 %
May	31	0	31	24	6	30	-3 %
June	32	0	33	83	89	171	421 %
July	366	85	451	416	145	561	25 %
August	391	192	583	437	51	487	-16 %
September	296	12	308	526	22	548	78 %
October	25 455	25 210	50 666				
November	18 010	28 815	46 825				
December	95	3 404	3 500				
<b>YTD</b>	<b>46 687</b>	<b>64 610</b>	<b>111 297</b>	<b>46 342</b>	<b>47 957</b>	<b>94 299</b>	<b>-15 %</b>
<b>Year total</b>	<b>90 248</b>	<b>122 040</b>	<b>212 287</b>				

Source: Department for Environment, Food and Rural Affairs

Table 27 EU LANDINGS OF ATLANTIC MACKEREL BY COUNTRY (tonnes)

Jan - Oct	2017	2018	18/17
UK	143.661	130.494	91 %
Ireland	69.182	41.580	60 %
Germany	9.860	15.565	158 %
Netherlands	33.494	14.246	43 %
France	16.885	18.442	109 %
Spain	31.554	29.674	94 %
Denmark	25.185	21.852	87 %
Others	8.174	8.690	106 %
<b>Total</b>	<b>337.995</b>	<b>280.543</b>	<b>83 %</b>
<b>Quota</b>	<b>503.000</b>	<b>402.000</b>	<b>80 %</b>
<b>Remaining</b>	<b>165.005</b>	<b>121.457</b>	

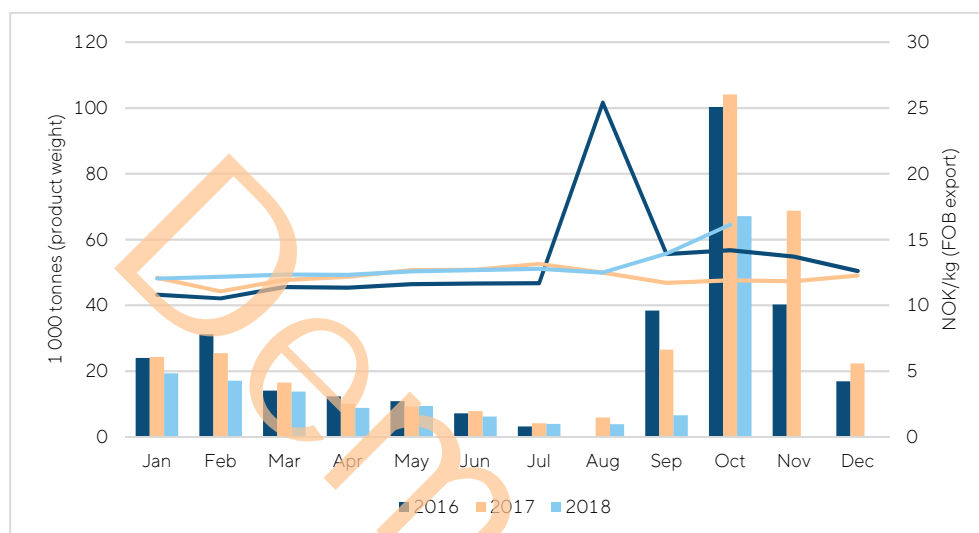
Source: www.gov.uk

## 2.3 Export

### 2.3.1 Norway

#### 2.3.1.1 Frozen Atlantic mackerel

Figure 22 MONTHLY NORWEGIAN EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: Statistics Norway

Table 28 NORWEGIAN EXPORT OF FROZEN ATLANTIC MACKEREL TO MAIN MARKETS

Jan - Oct	Tonnes (product weight)			NOK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
EU	37 557	21 194	-44 %	11,22	13,10	17 %
Japan	46 008	42 514	-8 %	12,40	15,43	24 %
China	52 896	23 468	-56 %	11,81	14,34	22 %
Turkey	17 367	10 874	-37 %	10,40	11,56	11 %
South Korea	18 594	12 354	-34 %	12,67	13,71	8 %
Vietnam	10 194	10 968	8 %	12,17	12,70	4 %
Thailand	5 214	7 799	50 %	13,83	13,99	1 %
Belarus	6 876	3 160	-54 %	12,28	12,48	2 %
Other	38 886	23 248	-40 %	12,10	14,16	17 %
<b>Total</b>	<b>233 591</b>	<b>155 580</b>	<b>-33 %</b>	<b>11,92</b>	<b>14,03</b>	<b>18 %</b>

Source: Statistics Norway

### 2.3.1.2 Total sales

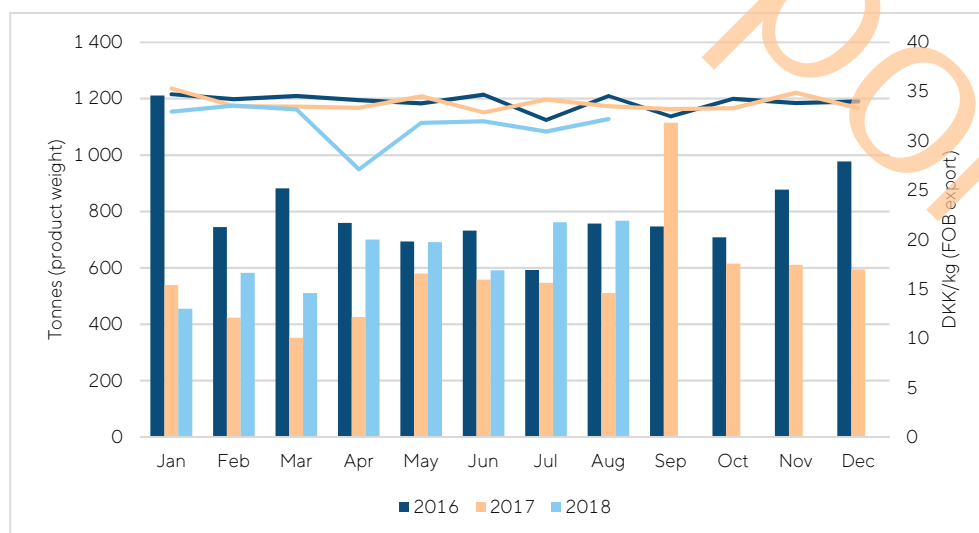
Table 29 TOTAL NORWEGIAN SALES OF FROZEN ATLANTIC MACKEREL

	Jan - Oct 2017			Jan - Oct 2018			18/17
	NOK	Product	Total	NOK	Product	Total	
<b>Frozen mackerel 600g and over</b>							
USA	7.110	12%	0%	64.088	7%	3%	801%
South Korea	9	0%	0%	98.595	11%	4%	1159158%
Japan	26.556	47%	1%	347.084	40%	14%	1207%
EU	6.868	12%	0%	90.893	10%	4%	1223%
Other	16.445	29%	1%	269.119	31%	11%	1537%
<b>Total</b>	<b>56.986</b>	<b>100%</b>	<b>2%</b>	<b>869.779</b>	<b>100%</b>	<b>35%</b>	<b>1426%</b>
<b>Frozen mackerel under 600g</b>							
Japan	544.155	20%	18%	308.954	24%	12%	-43%
China	624.423	23%	21%	242.410	18%	10%	-61%
Belarus	84.430	3%	3%	27.881	2%	1%	-67%
EU	414.415	15%	14%	186.834	14%	8%	-55%
Africa	147.230	5%	5%	33.151	3%	1%	-77%
Turkey	180.546	7%	6%	123.742	9%	5%	-31%
South Korea	235.577	9%	8%	70.720	5%	3%	-70%
Other	496.131	18%	17%	318.875	24%	13%	-36%
<b>Total</b>	<b>2.726.907</b>	<b>100%</b>	<b>92%</b>	<b>1.312.568</b>	<b>100%</b>	<b>53%</b>	<b>-52%</b>
<b>Other mackerel</b>	<b>193.448</b>		<b>6%</b>	<b>291.162</b>		<b>12%</b>	<b>51%</b>
<b>Total value</b>	<b>2.977.341</b>		<b>100%</b>	<b>2.473.509</b>		<b>100%</b>	<b>-17%</b>

Source: Statistics Norway

### 2.3.2 Denmark

Figure 23 MONTHLY DANISH EXPORT VOLUME (bars) AND PRICE (lines) OF PREPARED OR PRESERVED MACKEREL FILLET



Source: Statistics Denmark

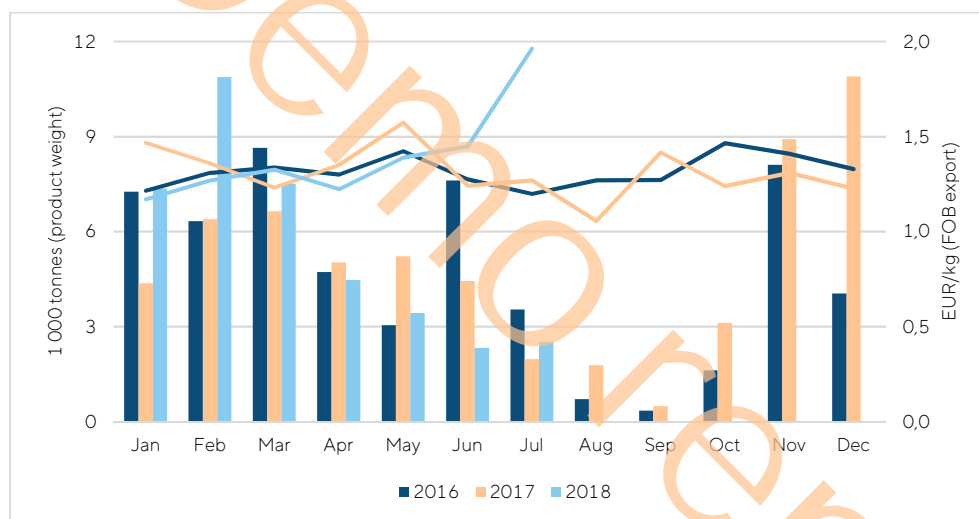
Table 30 DANISH EXPORT OF PREPARED OR PRESERVED MACKEREL FILLET BY COUNTRY

Jan - Aug	Tonnes (product weight)			DKK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
United Kingdom	1.434	1.914	33 %	36,37	33,34	-8 %
Germany	1.008	1.692	68 %	31,58	27,67	-12 %
Netherlands	188	306	63 %	32,91	34,32	4 %
Sweden	337	276	-18 %	28,29	27,62	-2 %
Belgium	380	258	-32 %	35,93	35,40	-1 %
Other	584	610	4 %	34,09	35,61	4 %
<b>Total</b>	<b>3.931</b>	<b>5.056</b>	<b>29 %</b>	<b>33,90</b>	<b>31,57</b>	<b>-7 %</b>

Source: Statistics Denmark

### 2.3.3 Ireland

Figure 24 MONTHLY IRISH EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: Central Statistics Office

Table 31 IRISH EXPORT OF FROZEN ATLANTIC MACKEREL BY COUNTRY

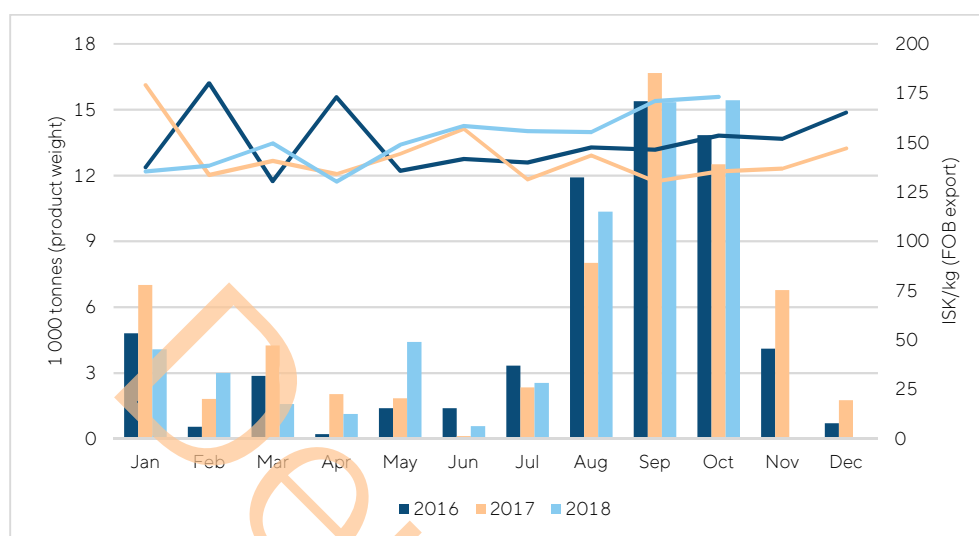
Jan - Jul	Tonnes (product weight)			EUR/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Ghana	7 396	6 856	-7 %	1,45	1,24	-15 %
Nigeria	2 848	5 667	99 %	1,00	1,14	14 %
Egypt	2 064	2 759	34 %	1,09	1,09	0 %
China	2 266	2 746	21 %	1,40	1,30	-7 %
Japan	4 470	2 829	-37 %	1,41	1,32	-6 %
Netherlands	1 724	2 008	16 %	1,32	1,30	-1 %
Belgium	794	1 468	85 %	1,27	1,26	0 %
France	2 927	1 728	-41 %	1,71	1,81	6 %
Other	9 545	12 415	30 %	1,33	1,45	9 %
<b>Total</b>	<b>34 033</b>	<b>38 475</b>	<b>13 %</b>	<b>1,36</b>	<b>1,32</b>	<b>-3 %</b>

Source: Central Statistics Office



## 2.3.4 Iceland

Figure 25 MONTHLY ICELANDIC EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: Statistics Iceland

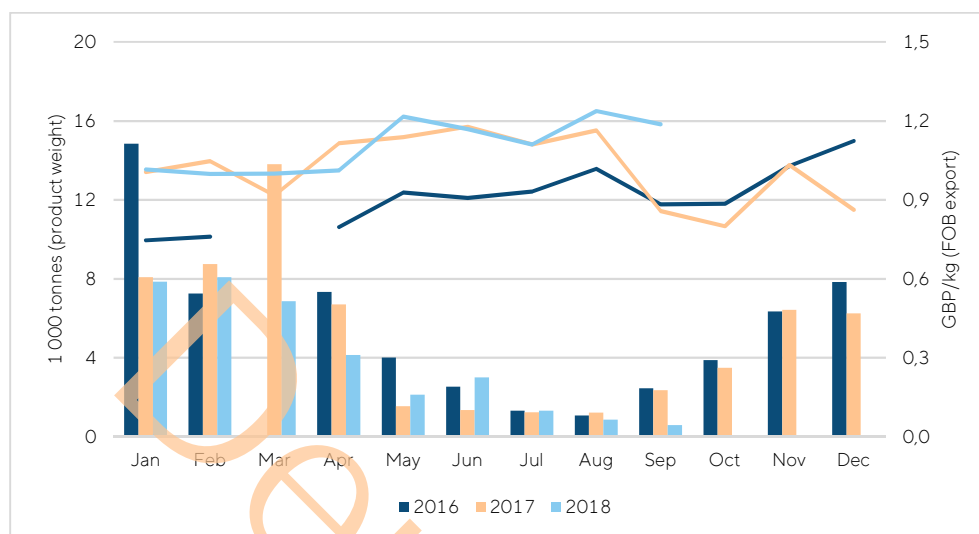
Table 32 ICELANDIC EXPORT OF FROZEN ATLANTIC MACKEREL BY COUNTRY

Jan - Oct	Tonnes (product weight)			ISK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Lithuania	5 516	7 575	37 %	142,01	147,33	4 %
Netherlands	11 707	6 458	-45 %	154,54	153,02	-1 %
Egypt	6 509	5 263	-19 %	128,33	154,68	21 %
China	3 834	4 788	25 %	137,94	153,29	11 %
Ukraine	3 419	4 597	34 %	133,89	149,03	11 %
Portugal	1 213	2 745	126 %	142,20	180,62	27 %
Japan	547	2 054	275 %	144,70	153,99	6 %
Other	11 324	9 519	-16 %	142,68	165,67	16 %
<b>Total</b>	<b>44 069</b>	<b>42 999</b>	<b>-2 %</b>	<b>142,55</b>	<b>156,43</b>	<b>10 %</b>

Source: Statistics Iceland

## 2.3.5 United Kingdom

Figure 26 MONTHLY BRITISH EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: Business & Trade Statistics Ltd.

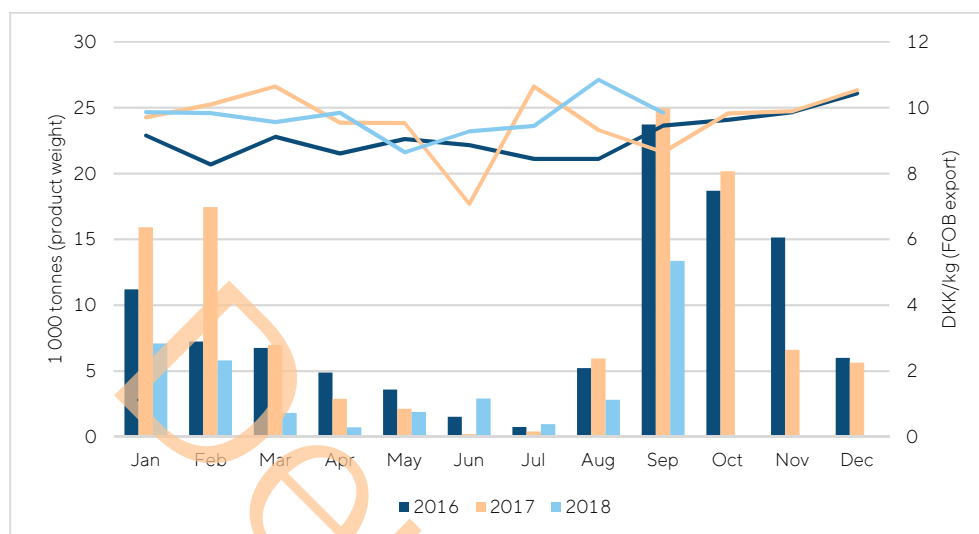
Table 33 BRITISH EXPORT OF FROZEN ATLANTIC MACKEREL BY MARKET

Jan - Sep	Tonnes (product weight)			GBP/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
EU	36 964	30 011	-19%	0,99	1,01	2%
Africa	4 914	1 327	-73%	0,98	1,20	22%
China	963	906	-6%	1,25	1,15	-8%
Ukraine	905	856	-5%	1,19	1,21	1%
Other	1 264	1 702	35%	1,54	1,46	-5%
<b>Total</b>	<b>45 010</b>	<b>34 803</b>	<b>-23%</b>	<b>1,01</b>	<b>1,05</b>	<b>3%</b>

Source: Business & Trade Statistics Ltd.

### 2.3.6 The Faroe Islands

Figure 27 MONTHLY FAROESE EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: Statistics Faroe Islands

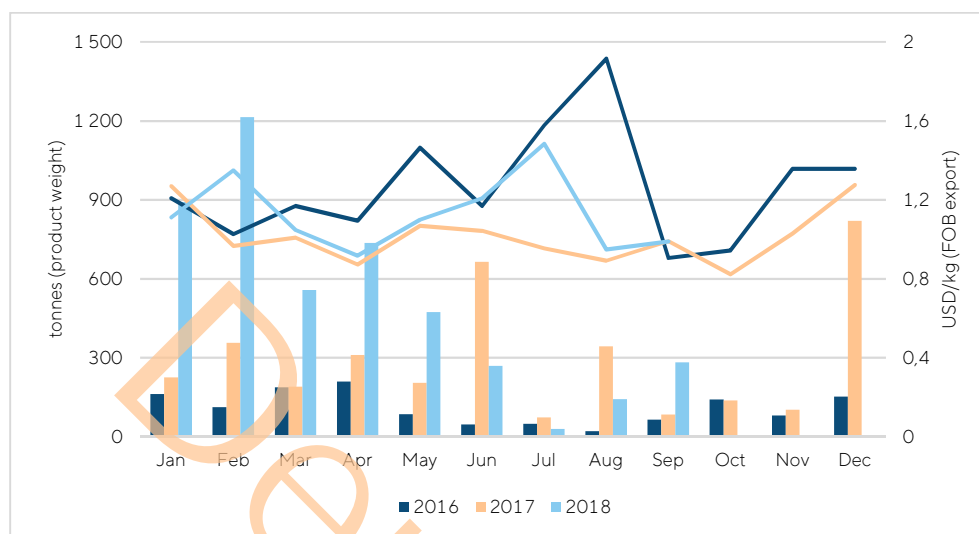
Table 34 FAROESE EXPORT OF FROZEN ATLANTIC MACKEREL BY MARKETS

Jan - Sep	Tonnes (product weight)			DKK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Russia	40.940	21.835	-47 %	10,14	9,85	-3 %
EU	28.747	9.396	-67 %	8,92	10,45	17 %
Africa	3.937	4.126	5 %	6,44	8,43	31 %
Other	3.187	1.891	-41 %	10,31	8,94	-13 %
<b>Total</b>	<b>76.811</b>	<b>37.249</b>	<b>-52 %</b>	<b>9,50</b>	<b>9,80</b>	<b>3 %</b>

Source: Statistics Faroe Islands

### 2.3.7 USA

Figure 28 MONTHLY USA EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



Source: US Census Bureau.

Table 35 USA EXPORT OF FROZEN ATLANTIC MACKEREL BY MAIN MARKETS

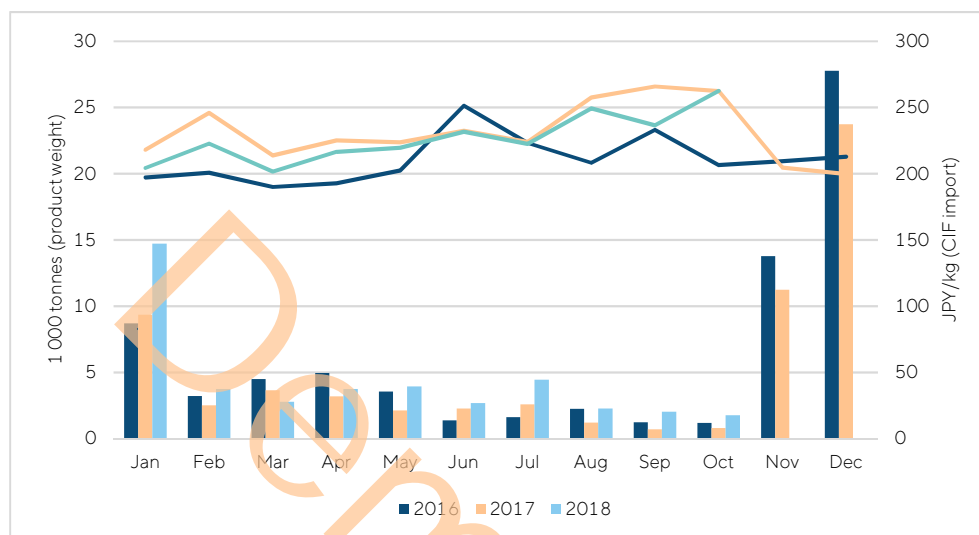
Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Egypt	170	1,283	655%	0,82	1,12	36%
Nigeria	50	1,024	1948%	0,93	1,35	45%
EU	831	712	-14%	1,05	1,01	-3%
South Korea	15	360	2296%	2,16	0,85	-60%
Other	1,386	1,216	-12%	0,99	1,11	12%
<b>Total</b>	<b>2,452</b>	<b>4,596</b>	<b>87%</b>	<b>1,01</b>	<b>1,13</b>	<b>12%</b>

Source: US Census Bureau

## 2.4 Import

### 2.4.1 Japan

Figure 29 MONTHLY JAPANESE IMPORT VOLUME (bars) AND PRICE (lines) OF FROZEN ATLANTIC MACKEREL



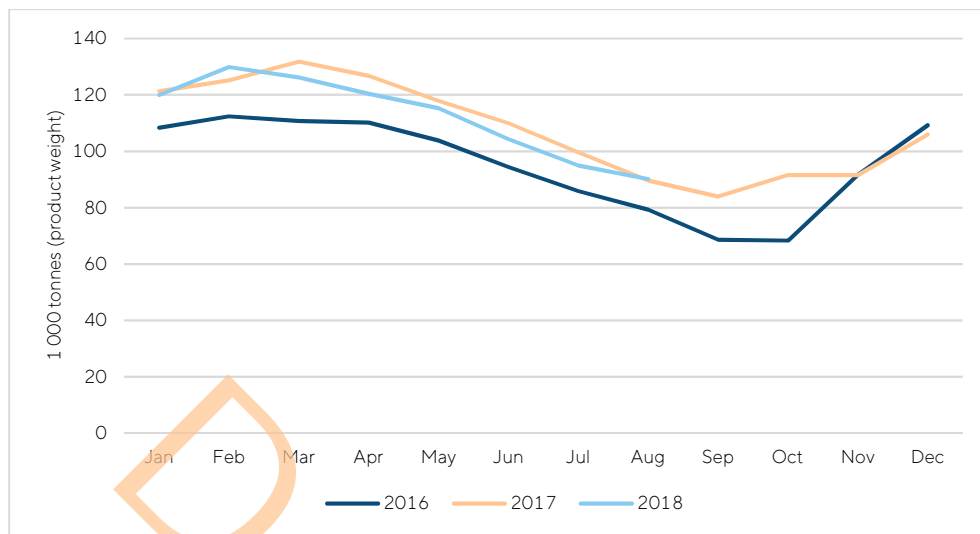
Source: Japan Customs.

Table 36 JAPANESE IMPORT OF FROZEN MACKEREL BY COUNTRY OF ORIGIN

Jan - Oct	Tonnes (product weight)			JPY/kg (CIF import)		
	2017	2018	18/17	2017	2018	18/17
Norway	22 450	33 761	50%	230	223	-3%
Ireland	4 113	4 569	11%	132	184	1%
United Kingdom	578	2 153	272%	204	187	-8%
Iceland	586	1 056	80%	336	251	-25%
Other	514	453	-12%	350	300	-14%
<b>Total</b>	<b>28 240</b>	<b>41 991</b>	<b>49%</b>	<b>227</b>	<b>218</b>	<b>-4%</b>

Source: Japan Customs

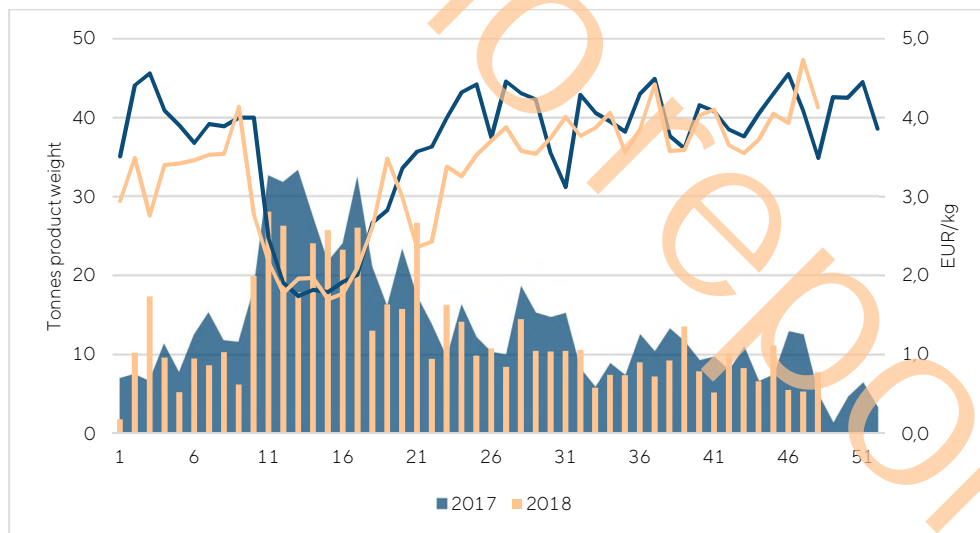
Figure 30 JAPANESE COLD STORAGE INVENTORY OF ATLANTIC MACKEREL



Source: NOAA

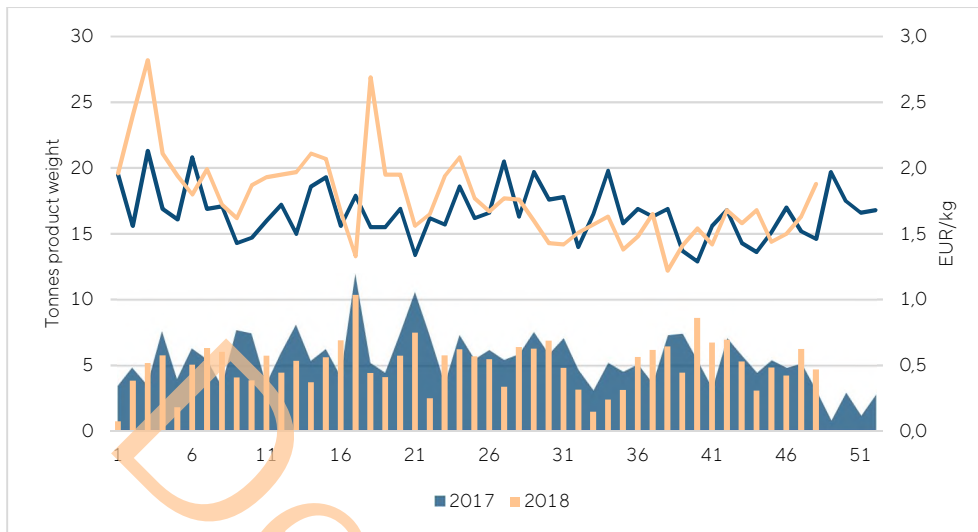
## 2.5 Wholesale

Table 37 WHOLESALE VOLUME (bars) AND PRICE (lines) OF FRESH ATLANTIC MACKEREL AT THE MERCABARNA MARKET



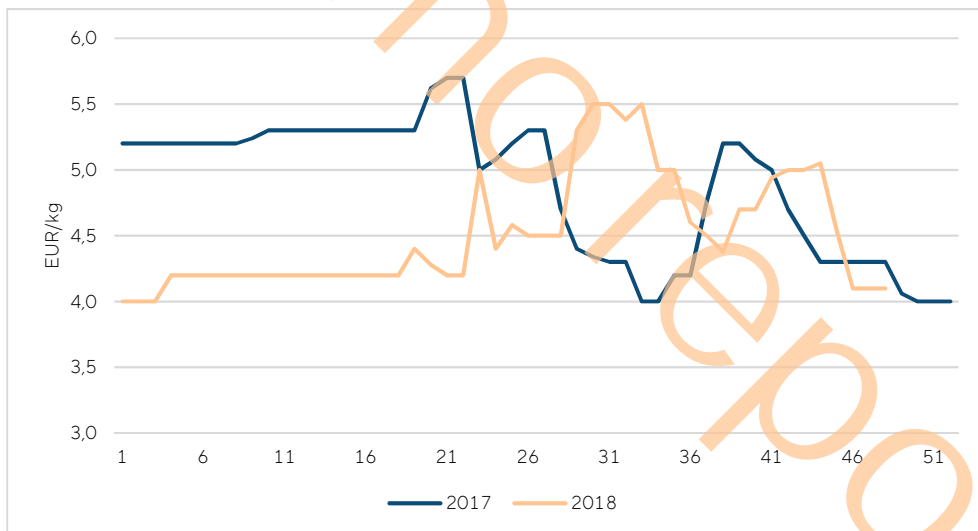
Source: Mercabarna

Table 38 WHOLESALE VOLUME (bars) AND PRICE (lines) OF FRESH ATLANTIC MACKEREL AT THE MERCAMADRID MARKET



Source: Mercamadrid

Table 39 RUNGIS MARKET PRICE OF LINE-CAUGHT FRESH MACKEREL



Source: FranceAgriMer - Rungis

## 2.6 Quotas

Table 40 ATLANTIC MACKEREL QUOTAS BY COUNTRY

	2014	2015	2016	2017	2018E	18/17
Belgium	768	658	566	635	508	-20%
Sweden	7.101	6.191	5.389	5.972	4.777	-20%
Portugal	9.648	8.201	6.971	7.911	6.328	-20%
France	23.723	20.182	17.174	19.468	15.574	-20%
Germany	32.290	27.452	23.341	26.481	21.184	-20%
Denmark	45.967	39.230	33.504	37.843	30.272	-20%
Spain	46.710	39.702	33.747	38.298	30.637	-20%
Netherlands	48.356	41.121	34.971	39.667	31.732	-20%
Ireland	104.967	89.220	75.837	86.066	68.848	-20%
United Kingdom	290.920	247.296	210.218	238.553	190.830	-20%
Poland	2.217	1.885	1.800	1.818	1.455	-20%
Estonia	262	223	200	215	172	-20%
Latvia	194	164	164	158	127	-20%
Lithuania	194	164	140	158	127	-20%
<b>Total EU</b>	<b>613.317</b>	<b>521.689</b>	<b>444.022</b>	<b>503.245</b>	<b>402.569</b>	<b>-20%</b>
Norway	279.000	242.078	205.694	229.821	183.857	-20%
Faroe Islands	156.000	133.000	112.829	128.655	102.924	-20%
Iceland	146.000	145.000	170.000	168.464	124.000	-26%
Russia	75.000	100.000	100.000	148.069	151.413	2%
Canada	36.000	15.000	10.000	5.000	5.000	
USA	33.700	30.000	30.000	10.000	10.000	
Greenland	100.000	80.000	80.000	80.000	45.000	-44%
<b>Total</b>	<b>1.439.017</b>	<b>1.266.767</b>	<b>1.152.545</b>	<b>1.273.254</b>	<b>1.024.763</b>	<b>-20%</b>

Source: EU, Directorate of Fishery, Russian Fish report, Statistics Canada, ICES



## 3 Other species

### 3.1 Catch and landings

#### 3.1.1 Blue Whiting

Table 41 MONTHLY NORWEGIAN CATCH OF BLUE WHITING

	2017	2018	18/17
January	70	3.924	5506 %
February	21.283	27.266	28 %
March	228.588	179.798	-21 %
April	116.328	203.257	75 %
May	2.653	5.347	102 %
June	4.126	2.907	-30 %
July	6.340	3.712	-41 %
August	8.830	5.344	-39 %
September	6.377	3.439	-46 %
October	2.533	2.233	-12 %
November	451		
December	2.223		
<b>Year total</b>	<b>399.802</b>		
<b>YTD</b>	<b>397.128</b>	<b>437.227</b>	<b>10 %</b>
<b>Quota</b>	<b>410.892</b>	<b>421.100</b>	<b>2 %</b>
<b>Remaining</b>	<b>13.764</b>	<b>-16.127</b>	

Source: Directorate of Fisheries Norway.

Table 42 MONTHLY ICELANDIC CATCH OF BLUE WHITING

	17/18	18/19	Chg. (%)
September	1.396	1.481	6 %
October	5.652	3.242	-43 %
November	7.741		
December	31.416		
January			
February	9.875		
March	19.271		
April	93.784		
May	90.355		
June	10.766		
July	25.514		
August	3.074		
<b>Year total</b>	<b>298.844</b>		
<b>YTD</b>	<b>1.396</b>	<b>1.481</b>	<b>6 %</b>
<b>Quota</b>	<b>291.500</b>		
<b>Remaining</b>	<b>290.104</b>		

Source: Statistics Iceland.

Table 43 MONTHLY FAROESE CATCH OF BLUE WHITING

	2017	2018	18/17
January	24.625	39.976	62 %
February	43.598	27.717	-36 %
March	40.712	59.961	47 %
April	51.670	71.344	38 %
May	61.437	82.554	34 %
June	47.511	24.674	-48 %
July	5.616	5.151	-8 %
August	3.729	144	-96 %
September	1.076	1.420	32 %
October	2.979	2.689	-10 %
November	12.491		
December	33.295		
<b>YTD</b>	<b>282.952</b>	<b>315.631</b>	<b>12 %</b>
<b>Year total</b>	<b>323.738</b>		

Source: Directorate of Fisheries Norway.

### 3.1.2 Pacific herring

Table 44 MONTHLY RUSSIAN CATCH OF PACIFIC HERRING

	2017	2018	18/17
January	55.900	42.800	-23 %
February	14.800	24.700	67 %
March	10.700	8.100	-24 %
April	79.500	37.500	-53 %
May	10.600	15.100	42 %
June	4.000	7.100	78 %
July	17.100	13.900	-19 %
August	17.400	16.000	-8 %
September	29.100	17.600	-40 %
October	88.300		
November	92.800		
December	85.100		
<b>YTD</b>	<b>239.100</b>	<b>182.800</b>	<b>-24 %</b>
<b>Year total</b>	<b>505.300</b>		<b>-100 %</b>

Source:

### 3.1.3 Capelin

Table 45 MONTHLY NORWEGIAN CATCH OF CAPELIN

	2017	2018	18/17
January		1.817	
February	59.375	98.818	66 %
March		96.905	
April			
May			
June			
July			
August			
September			
October			
November			
December			
<b>Year total</b>	<b>59.375</b>		
<b>YTD</b>	<b>59.375</b>	<b>197.540</b>	<b>233 %</b>
<b>Quota</b>	<b>73.842</b>	<b>160.500</b>	<b>117 %</b>
<b>Remaining</b>	<b>14.467</b>	<b>-37.040</b>	

Source: Directorate of Fisheries Norway.

Table 46 MONTHLY ICELANDIC CATCH OF CAPELIN

	16/17	17/18	18/19	Chg. (%)
June				
July				
August				
September				
October				
November				
December				
January		68.084		
February	65.290	36.551		-44 %
March	131.523	81.698		-38 %
April				
May				
<b>Year total</b>	<b>196.813</b>	<b>186.333</b>		<b>-5 %</b>
<b>YTD</b>	<b>196.813</b>	<b>186.333</b>		<b>-5 %</b>
<b>Quota</b>	<b>185.000</b>	<b>182.474</b>		
<b>Remaining</b>	<b>-11.813</b>	<b>-3.859</b>		

Source: Statistics Iceland

### 3.1.4 Sandeel

Table 47 MONTHLY NORWEGIAN CATCH OF SANDEEL

	2017	2018	18/17
January			
February			
March			
April	14.333	4.167	-71 %
May	75.043	57.469	-23 %
June	30.829	7.895	-74 %
July			
August			
September			
October			
November	1		
December			
<b>YTD</b>	<b>120.205</b>	<b>69.531</b>	<b>-42 %</b>
<b>Year total</b>	<b>120.206</b>		

Source: Directorate of Fisheries Norway.

Table 48 MONTHLY DANISH CATCH OF SANDEEL

	2017	2018	18/17
January			
February			
March			
April	93.720	19.945	-79 %
May	161.612	103.590	-36 %
June	92.427	46.900	-49 %
July	11.721	7.170	-39 %
August	118	2	-98 %
September	49		-100 %
October			
November			
December			
<b>Year total</b>	<b>359.647</b>		
<b>YTD</b>	<b>359.647</b>	<b>177.607</b>	<b>-51 %</b>
<b>Quota</b>	<b>458.500</b>	<b>230.000</b>	<b>-50 %</b>
<b>Remaining</b>	<b>98.853</b>	<b>52.393</b>	

Source: Directorate of fisheries Denmark

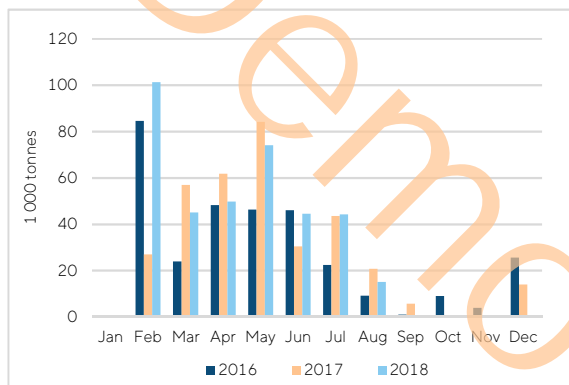
### 3.1.5 Chile and Peru

Table 49 CHILEAN CATCH OF SELECTED SPECIES

Jan - Aug	2017	2018	18/17
Anchoveta	478.300	608.400	27 %
Jurel	324.600	374.000	15 %
Sardina común	281.100	277.800	-1 %
Jibia	142.200	145.100	2 %
Caballa	61.900	56.400	-9 %
Sardina Espanola	100	1.600	1765 %
<b>Year total</b>	<b>1.288.200</b>	<b>1.463.300</b>	<b>14 %</b>

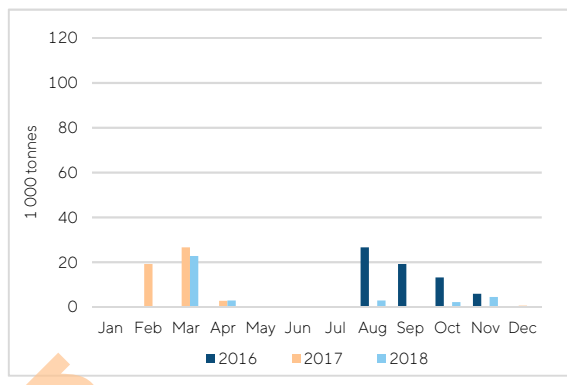
Source: SUBPESCA

Figure 31 MONTHLY CHILEAN CATCH OF JUREL



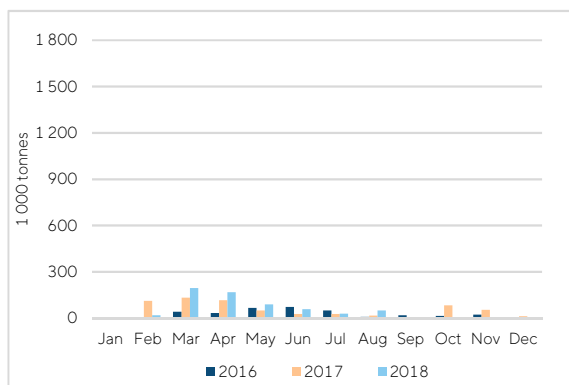
Source: SUBPESCA

Figure 32 MONTHLY PERUVIAN CATCH OF CABALLA



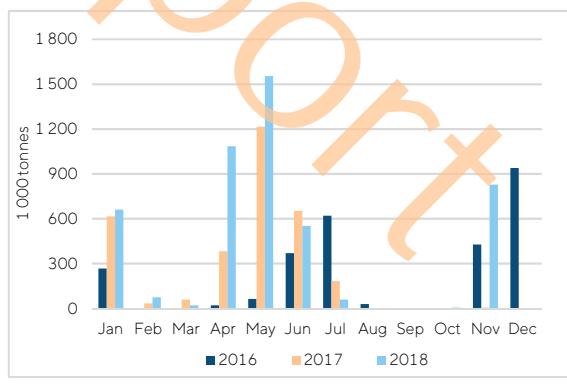
Source: Instituto del Mar del Perú (IMARPE)

Figure 33 MONTHLY CHILEAN CATCH OF ANCHOVETA



Source: SUBPESCA

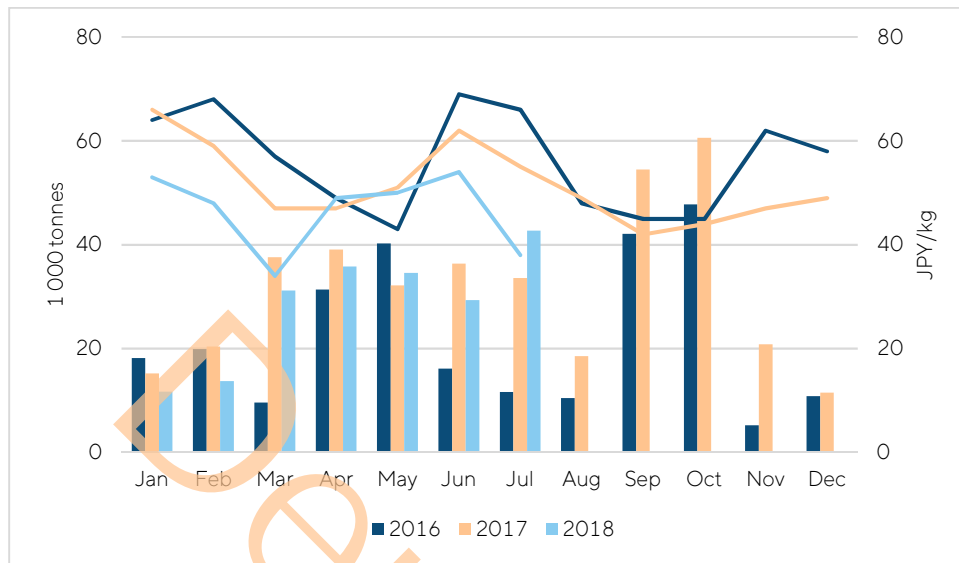
Figure 34 MONTHLY PERUVIAN CATCH OF ANCHOVETA



Source: www.produce.gob.pe & Instituto del Mar del Perú (IMARPE)

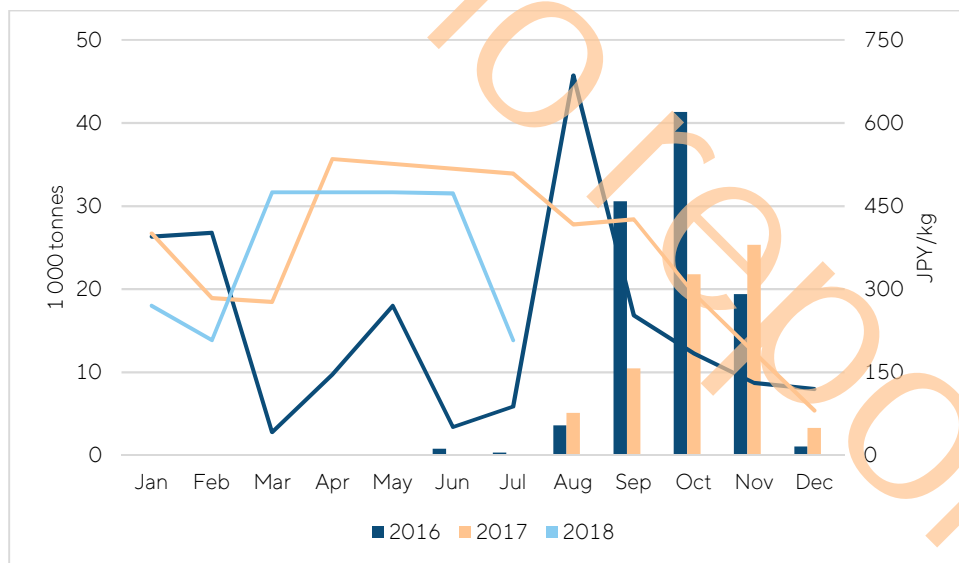
### 3.1.6 Japan

Figure 35 MONTHLY JAPANESE LANDING VOLUMES (bars) AND PRICES (lines) OF SARDINES



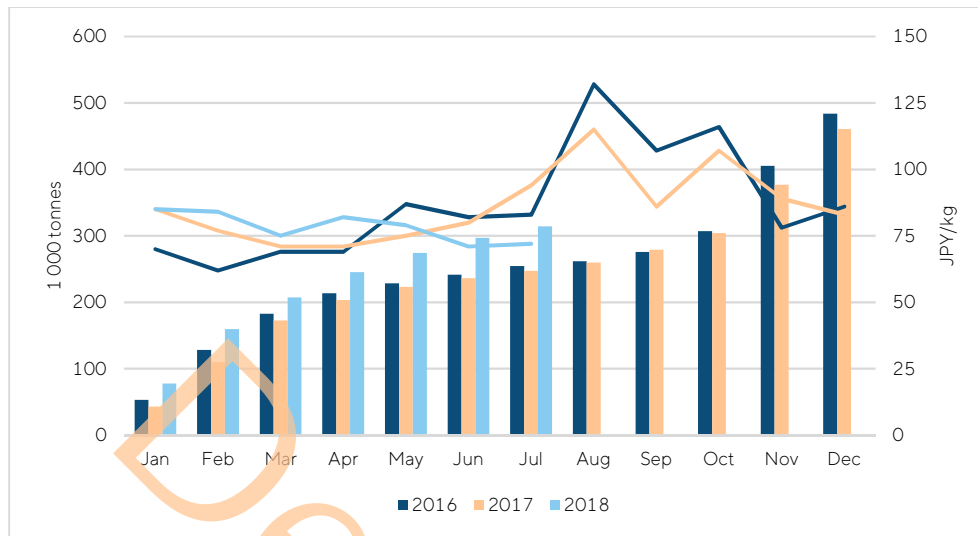
Source: NOAA

Figure 36 MONTHLY JAPANESE LANDING VOLUMES (bars) AND PRICES (lines) OF SAURY



Source: NOAA

Figure 37 ACCUMULATED JAPANESE LANDING VOLUMES (bars) AND MONTHLY PRICES (lines) OF PACIFIC MACKEREL



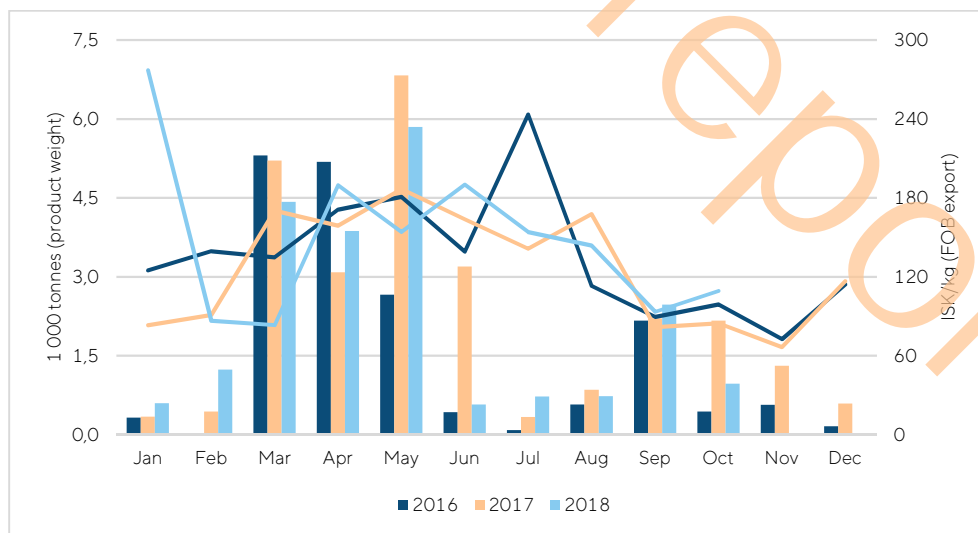
Source: NOAA

## 3.2 Export

### 3.2.1 Capelin

#### 3.2.1.1 Iceland

Figure 38 MONTHLY ICELANDIC EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN CAPELIN



Source: Statistics Iceland.

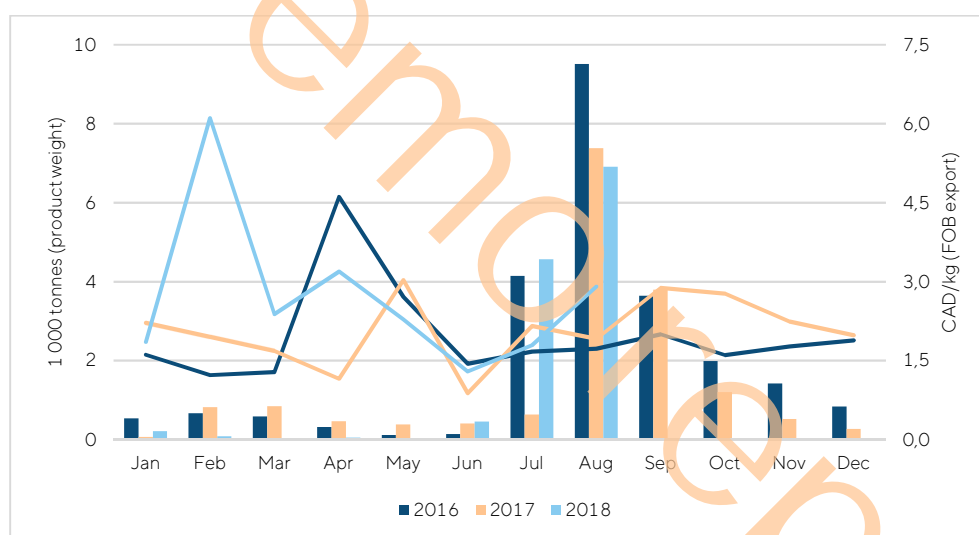
Table 50 ICELANDIC EXPORT OF FROZEN CAPELIN BY COUNTRY

Jan - Oct	Tonnes (product weight)			ISK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Ukraine	3.279	5.584	70 %	57,05	85,06	49 %
Japan	5.236	4.598	-12 %	214,00	187,54	-12 %
China	6.317	4.615	-27 %	168,66	168,48	0 %
Belarus	695	3.836	452 %	95,30	90,54	-5 %
Netherlands	6.138	725	-88 %	162,89	299,54	84 %
Lithuania	1.592	477	-70 %	86,30	82,34	-5 %
Other	1.394	1.594	14 %	157,70	135,67	-14 %
<b>Total</b>	<b>24.652</b>	<b>21.430</b>	<b>-13 %</b>	<b>154,00</b>	<b>136,96</b>	<b>-11 %</b>

Source: Statistics Iceland.

### 3.2.1.2 Canada

Figure 39 MONTHLY CANADIAN EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN CAPELIN



Source: Global Trade Atlas

Table 51 CANADIAN EXPORT OF FROZEN CAPELIN BY COUNTRY

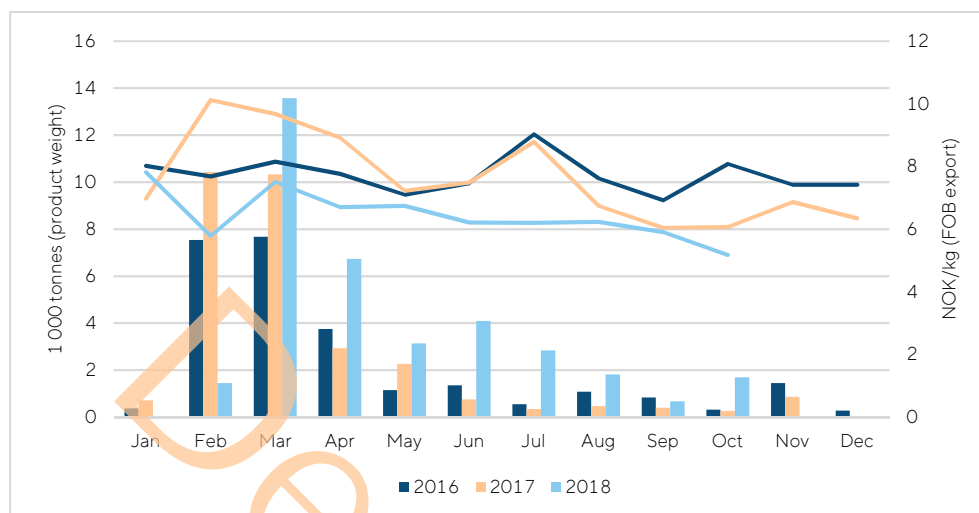
Jan - Aug	Tonnes (product weight)			CAD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
USA	4.468	4.940	11 %	1,07	1,29	20 %
China	4.194	3.135	-25 %	2,64	3,50	32 %
Taiwan	105	1.809	1620 %	2,34	3,45	47 %
Japan	422	1.125	167 %	2,81	3,01	7 %
Other	1.805	1.287	-29 %	1,91	2,37	24 %
<b>Total</b>	<b>10.994</b>	<b>12.295</b>	<b>12 %</b>	<b>1,89</b>	<b>2,44</b>	<b>29 %</b>

Source: Global Trade Atlas



### 3.2.1.3 Norway

Figure 40 MONTHLY NORWEGIAN EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN CAPELIN



Source: Statistics Norway

Table 52 NORWEGIAN EXPORT OF FROZEN CAPELIN BY COUNTRY

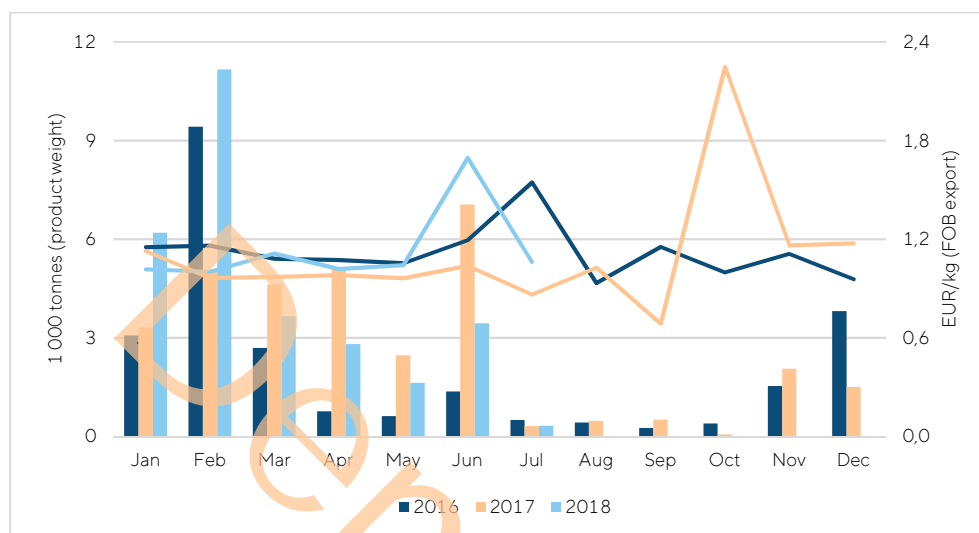
Jan - Oct	Tonnes (product weight)			NOK/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
China	13.581	14.539	7%	10,02	6,96	-31%
Netherlands	4.569	3.810	-17%	10,93	8,08	-26%
Belarus	2.523	2.469	-2%	6,08	5,30	-13%
Vietnam	720	3.060	325%	8,58	7,03	-18%
Lithuania	724	2.328	221%	6,14	5,23	-15%
Japan	1.237	1.426	15%	11,49	8,40	-27%
Taiwan	828	1.478	79%	10,41	8,30	-20%
Other	4.683	6.885	47%	7,20	5,91	-18%
<b>Total</b>	<b>28.864</b>	<b>35.995</b>	<b>25%</b>	<b>9,30</b>	<b>6,77</b>	<b>-27%</b>

Source: Statistics Norway

## 3.2.2 Horse mackerel

### 3.2.2.1 Ireland

Figure 41 MONTHLY IRISH EXPORT VOLUME (bars) AND PRICE (lines) OF FROZEN HORSE MACKEREL



Source: Eurostat

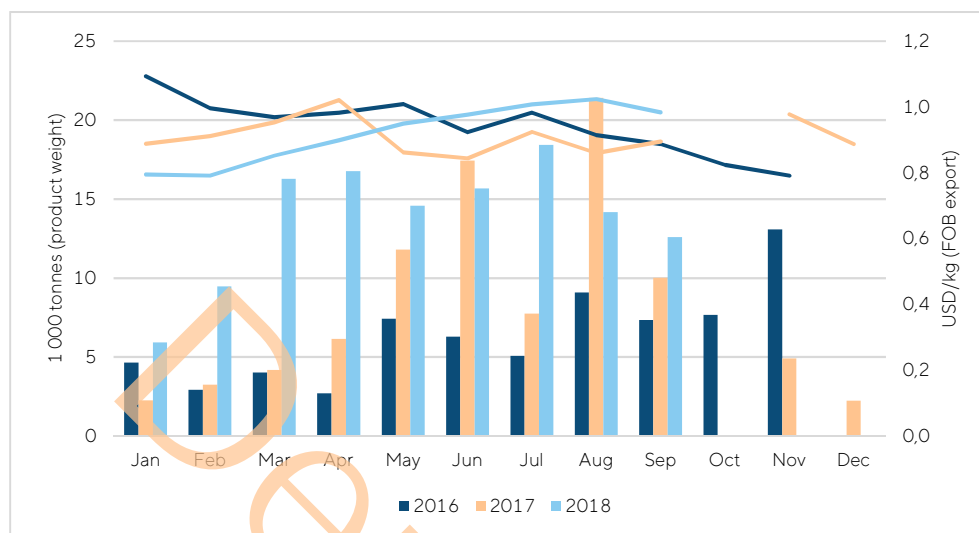
Table 53 IRISH EXPORT OF HORSE MACKEREL BY COUNTRY

Jan - Jul	Tonnes (product weight)			EUR/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Cameroon	12.300	11.859	-4%	0,98	1,21	23%
Japan	1.909	3.573	87%	1,33	1,26	-5%
Nigeria	3.250	3.432	6%	0,86	0,88	2%
Egypt	3.351	3.337	0%	0,90	0,91	1%
China	1.922	1.835	-5%	1,39	1,27	-9%
Ghana	632	1.144	81%	0,78	0,99	27%
Other	4.555	4.026	-12%	0,97	0,95	-1%
<b>Total</b>	<b>27.919</b>	<b>29.206</b>	<b>5%</b>	<b>1,00</b>	<b>1,10</b>	<b>10%</b>

Source: Eurostat

### 3.2.2.2 Chile

Figure 42 MONTHLY CHILEAN EXPORT VOLUME (bars) AND PRICE (lines) OF JACK MACKEREL (JUREL)



Source: Chilean customs.

Table 54 CHILEAN EXPORT OF JACK MACKEREL (JUREL) BY COUNTRY

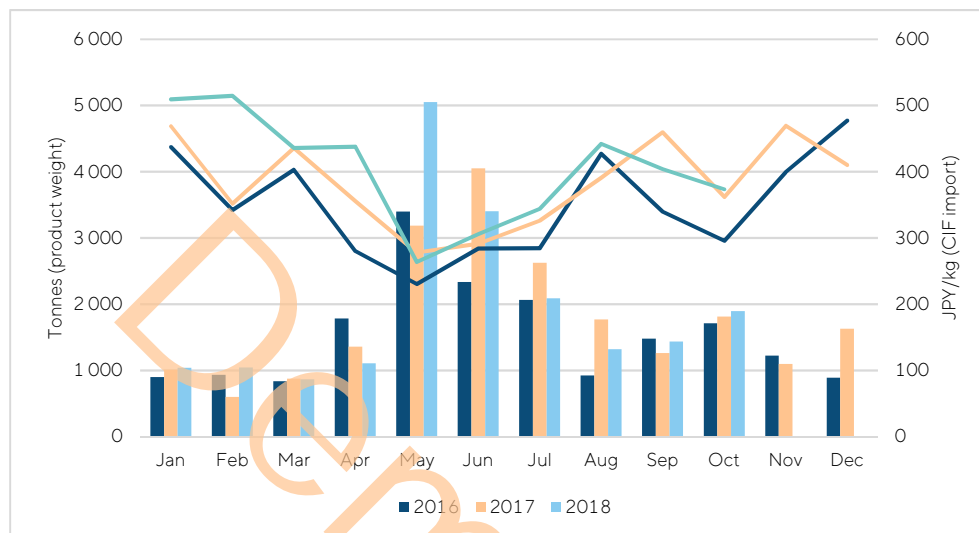
Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Nigeria	36.792	65.001	77 %	0,79	0,93	17 %
Peru	33.901	20.343	-40 %	0,99	1,05	5 %
Ghana	3.582	17.320	384 %	0,76	0,82	9 %
Ivory Coast	1.465	8.957	511 %	0,89	0,91	3 %
Cuba	2.286	2.836	24 %	1,06	0,99	-7 %
Other	6.147	9.376	53 %	0,87	0,94	8 %
<b>Total</b>	<b>84.172</b>	<b>123.833</b>	<b>47 %</b>	<b>0,89</b>	<b>0,93</b>	<b>5 %</b>

Source: Chilean customs.

### 3.3 Import

#### 3.3.1 Capelin

Figure 43 MONTHLY JAPANESE IMPORT VOLUME (bars) AND PRICES (lines) OF FROZEN CAPELIN



Source: Japan Customs.

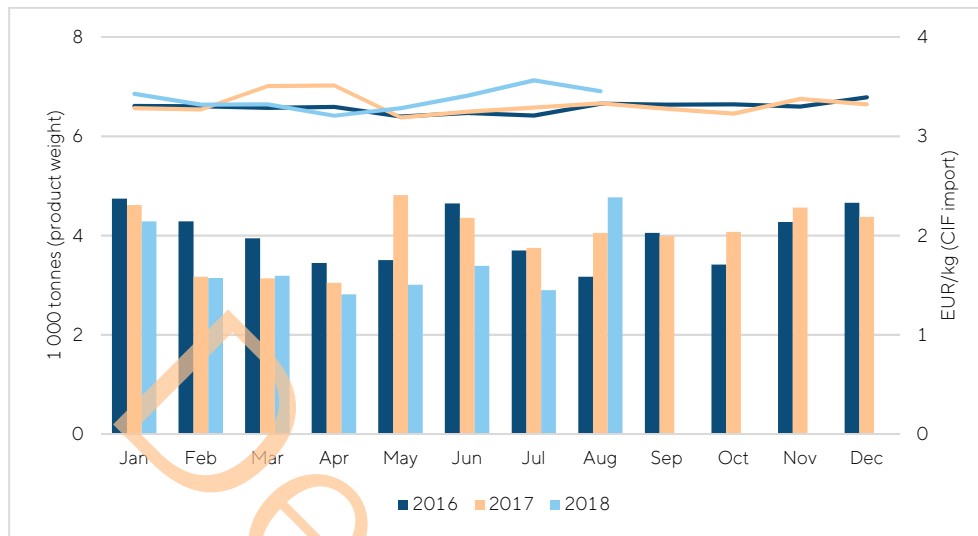
Table 55 JAPANESE IMPORT OF FROZEN CAPELIN BY COUNTRY

Jan - Oct	Tonnes (product weight)			JPY/kg (CIF import)		
	2017	2018	18/17	2017	2018	18/17
Iceland	10 489	11 211	7 %	331	349	5 %
Norway	5 728	6 041	5 %	345	383	11 %
Canada	1 678	1 612	-4 %	449	337	-25 %
Other	630	363	-42 %	290	309	7 %
<b>Total</b>	<b>18 525</b>	<b>19 226</b>	<b>4 %</b>	<b>345</b>	<b>358</b>	<b>4 %</b>

Source: Japan Customs

### 3.3.2 Sardines

Figure 44 MONTHLY EU IMPORT VOLUME (bars) AND PRICES (lines) OF CANNED SARDINES



Source: Eurostat.

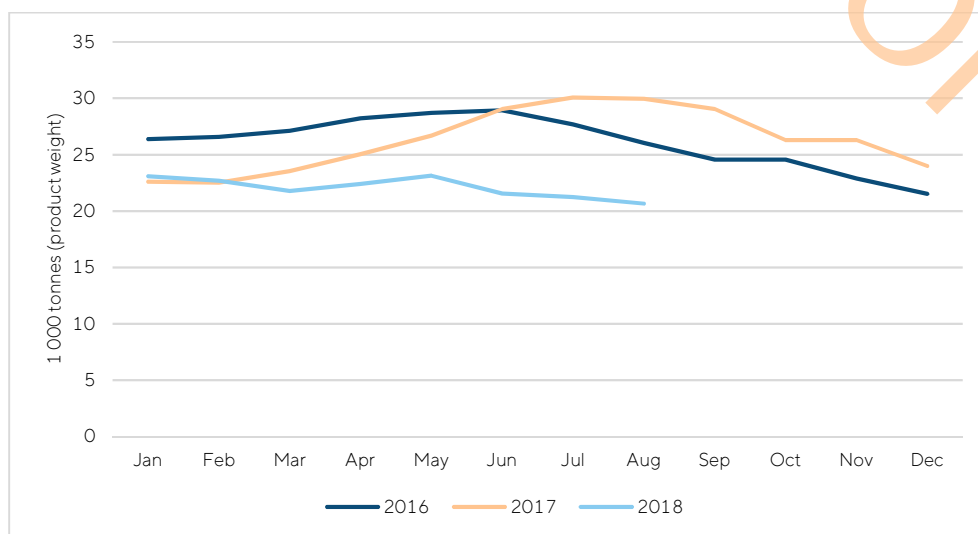
Table 56 EU IMPORT OF CANNED SARDINES BY COUNTRY

Jan - Aug	Tonnes (product weight)			EUR/kg (CIF import)		
	2017	2018	18/17	2017	2018	18/17
Morocco	28 458	25 715	-10%	3,42	3,47	1%
Thailand	1 214	1 518	25%	2,02	2,00	-1%
Tunisia	85	108	27%	5,42	3,17	-42%
Other	1 175	152	-87%	2,04	3,04	49%
<b>Total</b>	<b>30 932</b>	<b>27 493</b>	<b>-11%</b>	<b>3,31</b>	<b>3,38</b>	<b>2%</b>

Source: Eurostat.

### 3.4 Cold storage inventory Japan

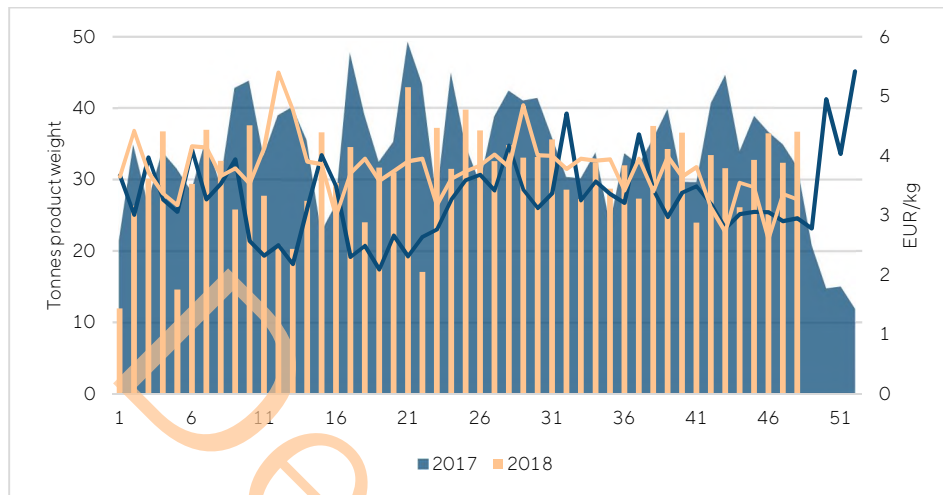
Figure 45 JAPANESE COLD STORAGE INVENTORY OF JACK MACKEREL



Source: NOAA

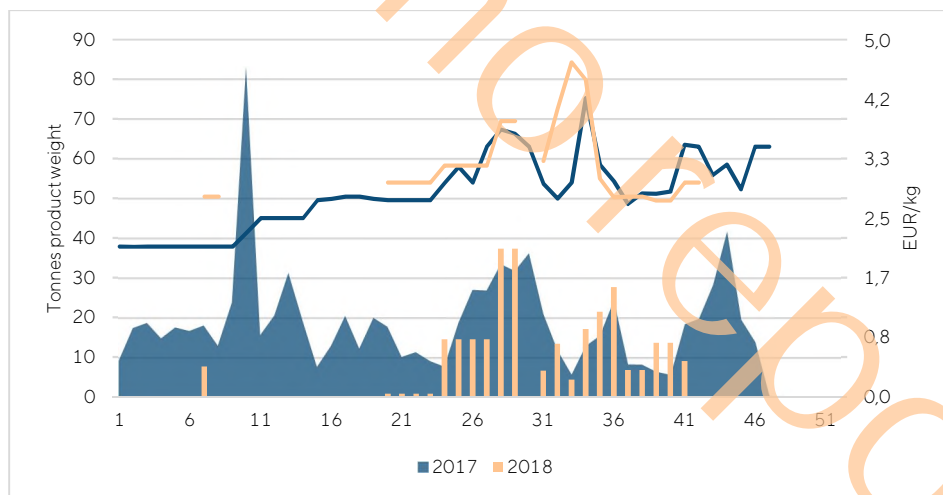
### 3.5 Wholesale

Figure 46 WHOLESALE VOLUME (bars) AND PRICES (lines) OF FRESH SARDINE AT THE MERCABARNA MARKET



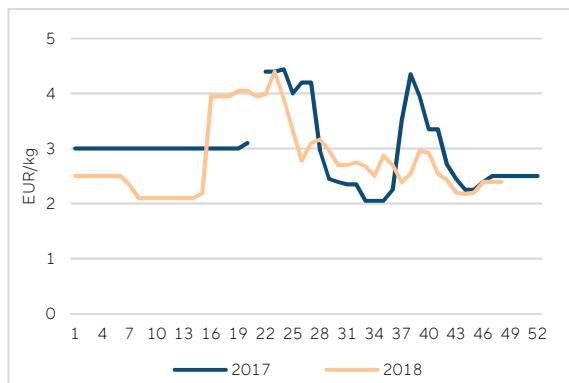
Source: Mercabarna

Figure 47 WHOLESALE VOLUME (bars) AND PRICES (lines) OF FRESH SARDINE AT THE MERCAMADRID MARKET



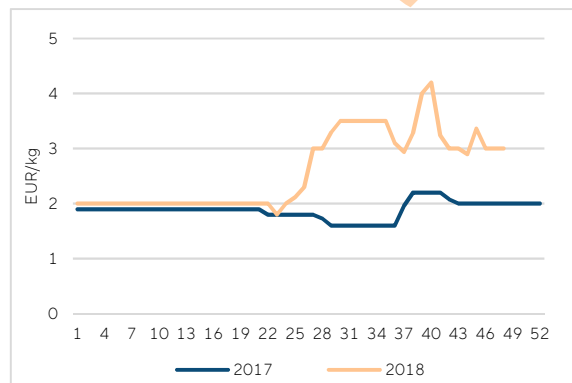
Source: Mercamadrid

Figure 48 RUNGIS MARKET PRICE OF FRESH SARDINE



Source: FranceAgriMer - Rungis

Figure 49 RUNGIS MARKET PRICE OF FRESH HORSE MACKEREL (200 g)



Source: FranceAgriMer - Rungis

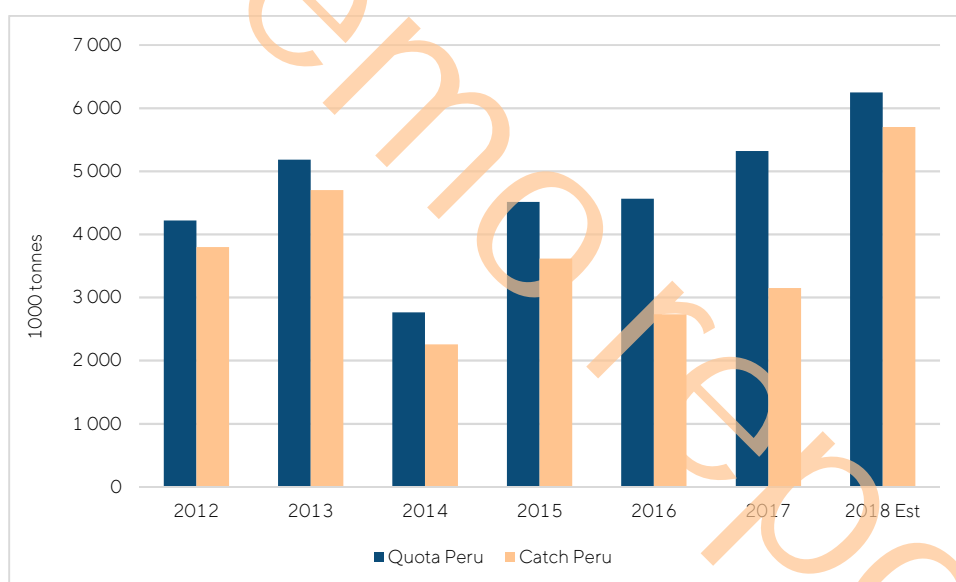
## 4 Fishmeal and fishoil

### 4.1 Peruvian Anchoveta

The outlook for Peruvian fishmeal and fishoil production this year is good as the raw material situation has improved strongly this year. After the announced Peruvian anchoveta quota of 2,1 mill tonnes for the North and centre areas fisheries started November 15<sup>th</sup> and proceed very well so far. For sure the quota needs to be fulfilled, which does not always happen but so far it looks very promising. It seems therefore as if the Peruvian landings of Anchoveta for the first time in many years will exceed 5 mill tonnes.

Fishmeal and fishoil production in Peru is of vital importance to supply the global markets the coming months as more than 90% of the production is available in the export markets. Peruvian producers have suffered from lack of raw material the last years as the quotas has not been fulfilled or they have been very low due to El Nino conditions etc.

Figure 50 PERUVIAN ANCHOVETA - CATCH AND QUOTA DEVELOPMENT



Source: Subpesca, IFFO, IMARPE

#### 4.1.1 Peruvian fishmeal & fishoil production

In the May- July season this year, Peruvian fishmeal and fishoil production recovered strongly from the two previous years. By the end of first half year fishmeal production increased 37% to around 950 000 tonnes. If we assume a fulfilment of the November -January quota, we estimate fishmeal production in the fourth quarter to be around 480 000 tonnes. Total production estimates for the year is above 1,4 mill tonnes which is close to a 100% increase from last year.

Peruvian fishoil production increased 77% during the first half year to nearly 170 000 tonnes. The large volumes produced is a result of high oil yield in the Anchoveta landings which is a sign of a fish stock in good conditions. If we assume a 3,5% oil yield this season, Peruvian fishoil production might reach around 250 000 tonnes this year.

Table 57 Quarterly fishmeal production in Peru (1000 tonnes)

	2016	2017	2018	17/18
1Q	59	167	181	8 %
2Q	110	526	767	46 %
<b>1 half year</b>	<b>168</b>	<b>693</b>	<b>948</b>	<b>37 %</b>
3Q	146	40	14	-65 %
4Q	315	1	480	34186 %
<b>2 half year</b>	<b>460</b>	<b>42</b>	<b>494</b>	<b>1086 %</b>
<b>Total</b>	<b>629</b>	<b>735</b>	<b>1.442</b>	<b>96 %</b>

Source: IFFO & Kontali Analyse estimates

Table 58 Quarterly fishoil production in Peru (1000 tonnes)

	2016	2017	2018	17/18
1Q	7	24	25	5 %
2Q	19	71	143	102 %
<b>1 half year</b>	<b>26</b>	<b>95</b>	<b>169</b>	<b>77 %</b>
3Q	24	5	3	-51 %
4Q	62	1	75	10614 %
<b>2 half year</b>	<b>87</b>	<b>6</b>	<b>78</b>	<b>1219 %</b>
<b>Total</b>	<b>113</b>	<b>101</b>	<b>246</b>	<b>144 %</b>

Source: IFFO & Kontali Analyse estimates

### 4.1.2 Peruvian fishmeal & fish oil prices

There are no large price fluctuations to notice in the markets after the announcement of the second season quota. It seems like the size of the quota was quite perfect to keep prices stable on a level seen since May-June this year. In Peru, fishmeal prices decreased notable in May-June as the first season turned out to be successful. Prices have remained stable the past months but saw a weak correction downwards after the announcement of the quota. Peruvian fishmeal price was noted to USD 1320/tonne in Peru lately a level also seen the two previous years by this time.

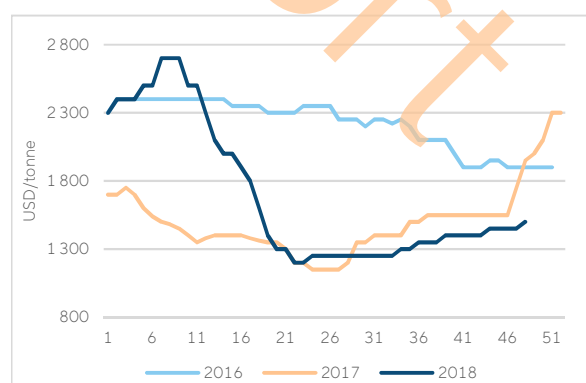
Peruvian fish oil price came down from the enormous peak early this year after the announcement of the first season quota in April. Since June, when fish oil price was beneath USD 1300/tonne, prices increased to USD 1450/tonne and has remained flat the latest weeks.

Figure 51 FISHMEAL PRICE (faq Peru)



Source: Weekly Newsletter OIL WORLD, ISTA

Figure 52 FISH OIL PRICE (fob Peru)



Source: Weekly Newsletter OIL WORLD, ISTA



## 4.2 Production

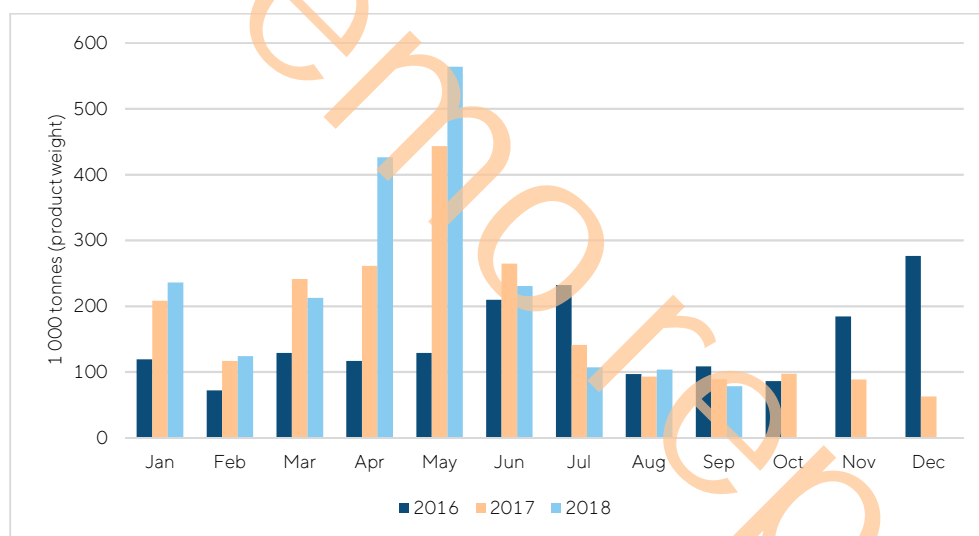
### 4.2.1 Fishmeal

Table 59 FISHMEAL PRODUCTION BY COUNTRY (IFFO-8)

	Jan - Sep			September		
	2017	2018	18/17	2017	2018	18/17
Peru	733	962	31 %	0	0	
Denmark/Norway	296	270	-9 %	20	8	-62 %
Chile	263	269	2 %	5	5	11 %
USA	213	225	5 %	38	29	-24 %
Iceland/NTH Atlantic	194	200	3 %	9	9	-6 %
South Africa	63	62	-1 %	1	3	126 %
<b>Total</b>	<b>1.858</b>	<b>2.081</b>	<b>12 %</b>	<b>89</b>	<b>78</b>	<b>-12 %</b>

Source: IFFO

Figure 53 MONTHLY PRODUCTION OF FISHMEAL (IFFO-8)



Source: IFFO

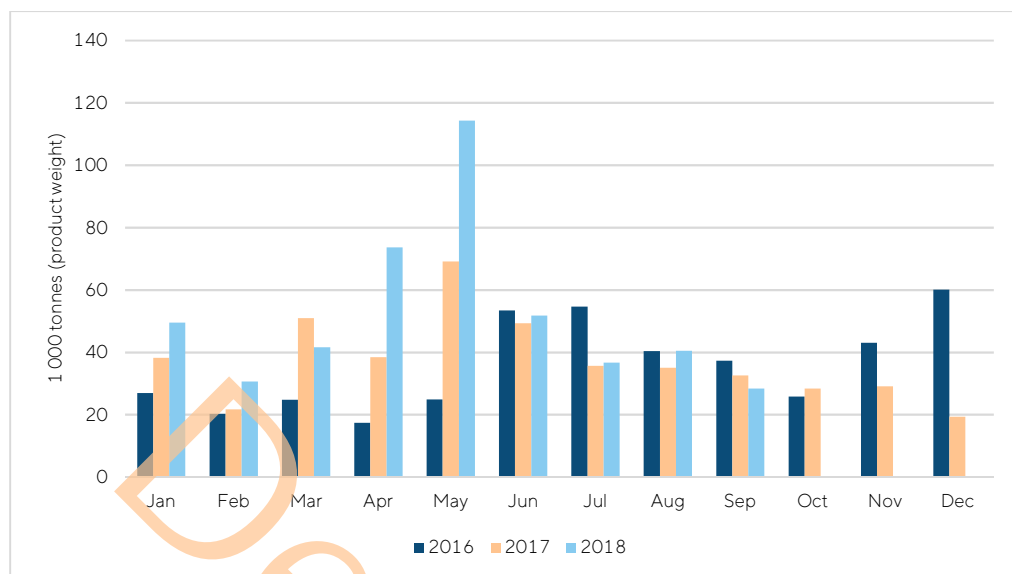
### 4.2.2 Fish oil

Table 60 FISH OIL PRODUCTION BY COUNTRY (IFFO-8)

	Jan - Sep			September		
	2017	2018	18/17	2017	2018	18/17
Peru	100	171	71 %	0	0	
Denmark/Norway	63	62	-2 %	6	3	-58 %
Chile	88	110	24 %	6	8	33 %
USA	67	77	14 %	13	12	-13 %
Iceland/NTH Atlantic	46	43	-8 %	7	6	-11 %
South Africa	6	5	-12 %	0	0	350 %
<b>Total</b>	<b>371</b>	<b>467</b>	<b>26 %</b>	<b>33</b>	<b>28</b>	<b>-13 %</b>

Source: IFFO

Table 61 MONTHLY PRODUCTION OF FISH OIL (IFFO-8)



Source: IFFO

## 4.3 Export

Table 62 FISHMEAL EXPORT FROM IFFO-5

	September			Jan - Sep		
	2017	2018	18/17	2017	2018	18/17
Peru	42	65	56%	971	936	-4%
Denmark	18	15	-18%	161	145	-10%
Chile	14	18	34%	166	171	3%
Iceland	11	9	-21%	100	103	3%
Norway	2	4	59%	37	44	20%
<b>Total</b>	<b>87</b>	<b>111</b>	<b>27%</b>	<b>1,435</b>	<b>1,399</b>	<b>-2%</b>

Source: Statistics NO, PE, CL, DK, IS and Kontali estimates

Table 63 FISH OIL EXPORT FROM IFFO (5 countries)

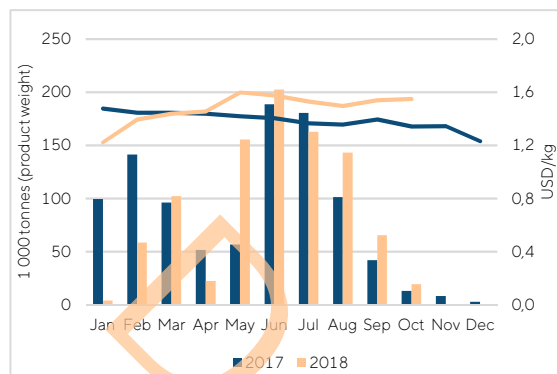
	September			Jan - Sep		
	2017	2018	18/17	2017	2018	18/17
Denmark	31	20	-35%	177	140	-21%
Norway	6	4	-29%	71	79	12%
Peru	16	38	132%	148	177	20%
Chile	8	4	-46%	50	74	47%
Iceland	5	0	-100%	24	17	-27%
<b>Total</b>	<b>66</b>	<b>67</b>	<b>1%</b>	<b>470</b>	<b>488</b>	<b>4%</b>

Source: Statistics NO, PE, CL, DK, IS and Kontali estimates

### 4.3.1 Peru

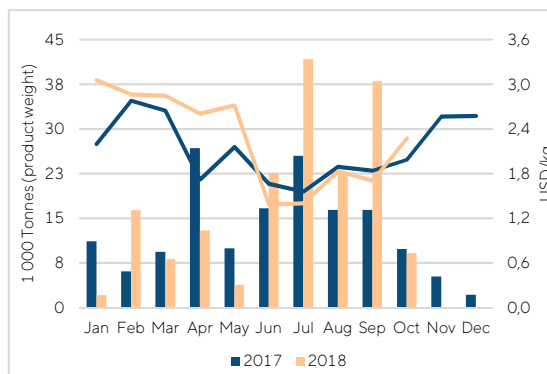
Figure 54 MONTHLY PERUVIAN EXPORT VOLUME (bars) AND PRICE (lines) OF FISHMEAL AND FISH OIL

#### FISHMEAL



Source: SUNAT

#### FISH OIL



Source: SUNAT

Table 64 PERUVIAN EXPORT OF FISHMEAL BY MAIN MARKETS

Jan - Oct	Tonnes (product weight)			USD/kg		
	2017	2018	18/17	2017	2018	18/17
China	774 426	757 410	-2%	1,41	1,52	8%
Vietnam	49 460	35 761	-28%	1,42	1,59	12%
Taiwan	27 300	24 733	-9%	1,44	1,58	9%
Japan	36 535	39 963	9%	1,43	1,55	8%
EU	16 624	23 295	40%	1,31	1,36	3%
Ecuador	11 907	17 983	51%	1,10	1,35	23%
Other	54 416	36 490	-33%	1,45	1,61	11%
<b>Total</b>	<b>970 668</b>	<b>935 635</b>	<b>-4%</b>	<b>1,41</b>	<b>1,53</b>	<b>8%</b>

Source: SUNAT

Table 65 PERUVIAN EXPORT OF FISH OIL BY COUNTRY

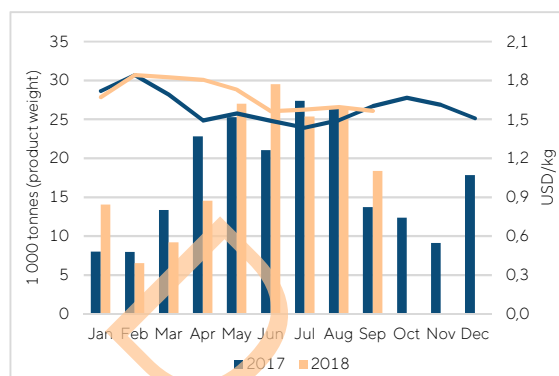
Jan - Oct	Tonnes (product weight)			USD/kg		
	2017	2018	18/17	2017	2018	18/17
Denmark	27 483	39 325	43%	1,40	1,98	42%
Chile	19 768	19 147	-3%	1,40	1,38	-1%
Canada	21 515	17 265	-20%	2,47	2,66	8%
China	26 701	23 404	-12%	1,75	1,81	3%
USA	6 227	4 795	-23%	4,70	4,27	-9%
Australia	5 534	5 706	3%	2,07	2,31	12%
Other	40 663	67 645	66%	1,83	1,63	-11%
<b>Total</b>	<b>147 890</b>	<b>177 287</b>	<b>20%</b>	<b>1,9</b>	<b>1,9</b>	<b>0%</b>

Source: SUNAT

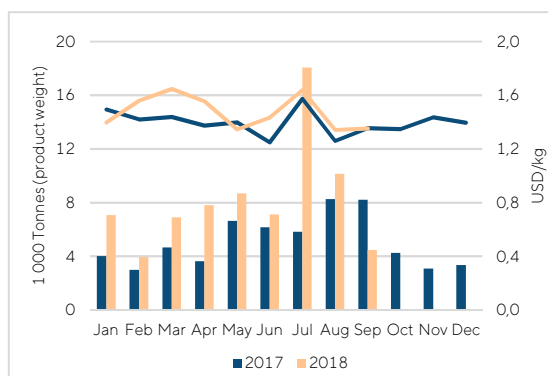
### 4.3.2 Chile

Figure 55 MONTHLY CHILEAN EXPORT VOLUME (bars) AND PRICE (lines) OF FISHMEAL AND FISH OIL

#### FISHMEAL



#### FISH OIL



Source: Chilean Customs

Table 66 CHILEAN EXPORT OF FISHMEAL BY MAIN MARKETS

Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
China	63.253	61.526	-3%	1,36	1,56	15%
South Korea	19.959	19.209	-4%	1,83	1,90	4%
USA	21.280	17.520	-18%	2,06	1,91	-7%
Japan	17.695	18.132	2%	1,65	1,72	5%
Vietnam	6.258	14.996	140%	1,26	1,49	18%
EU	15.838	17.154	8%	1,36	1,54	14%
Other	21.463	22.421	4%	1,43	1,59	12%
<b>Total</b>	<b>165.746</b>	<b>170.957</b>	<b>3%</b>	<b>1,54</b>	<b>1,65</b>	<b>7%</b>

Source: Chilean Customs

Table 67 CHILEAN EXPORT OF FISH OIL BY COUNTRY

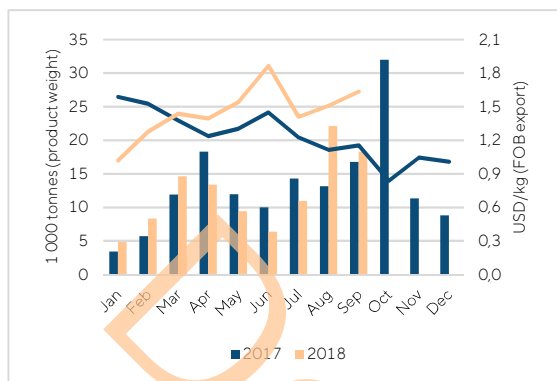
Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Belgium	3.438	9.742	183%	1,85	2,07	11%
Turkey	2.275	10.959	382%	1,03	1,15	11%
Vietnam	10.145	6.916	-32%	1,25	1,24	-1%
Indonesia	4.138	6.070	47%	1,23	1,30	6%
Japan	8.131	6.458	-21%	1,19	1,38	15%
China	3.064	7.789	154%	1,11	1,21	9%
Thailand	1.947	3.943	103%	1,36	1,40	3%
Other	17.205	22.256	29%	1,59	1,69	6%
<b>Total</b>	<b>50.343</b>	<b>74.133</b>	<b>47%</b>	<b>1,4</b>	<b>1,5</b>	<b>8%</b>

Source: Chilean Customs

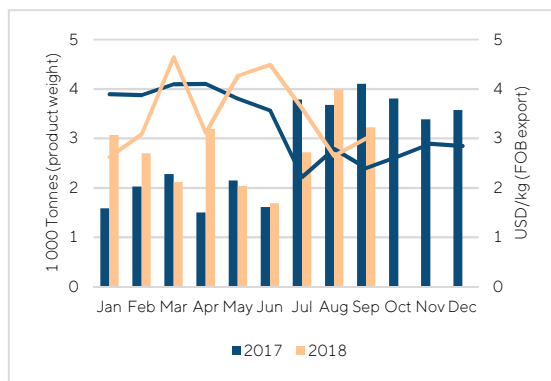
### 4.3.3 USA

Figure 56 MONTHLY USA EXPORT VOLUME (bars) AND PRICE (lines) OF FISHMEAL AND FISH OIL

#### FISHMEAL



#### FISH OIL



Source: US Census Bureau

Table 68 USA EXPORT OF FISHMEAL BY COUNTRY

Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
China	46.328	40.754	-12 %	1,43	1,54	8 %
South Korea	16.147	16.096	0 %	1,54	1,60	4 %
Indonesia	16.130	13.596	-16 %	0,50	0,54	10 %
Canada	12.450	12.766	3 %	1,54	1,47	-4 %
Other	14.199	24.924	76 %	1,15	1,83	59 %
<b>Total</b>	<b>105.254</b>	<b>108.136</b>	<b>3 %</b>	<b>1,28</b>	<b>1,48</b>	<b>16 %</b>

Source: US Census Bureau

Table 69 USA EXPORT OF FISH OIL BY MAIN MARKETS

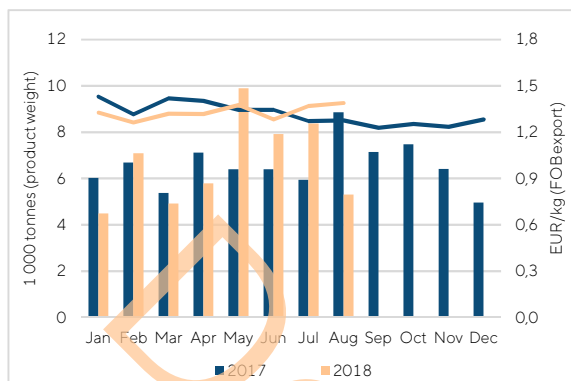
Jan - Sep	Tonnes (product weight)			USD/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Canada	10.099	11.212	11 %	2,28	2,23	-2 %
Chile	1.792	4.339	142 %	1,75	1,61	-8 %
Taiwan	2.158	2.662	23 %	2,26	1,92	-15 %
EU	817	1.545	89 %	10,49	7,47	-29 %
South Korea	3.053	2.356	-23 %	1,68	1,77	5 %
Other	4.768	2.593	-46 %	5,68	11,37	100 %
<b>Total</b>	<b>22.687</b>	<b>24.707</b>	<b>9 %</b>	<b>3,2</b>	<b>3,3</b>	<b>5 %</b>

Source: US Census Bureau

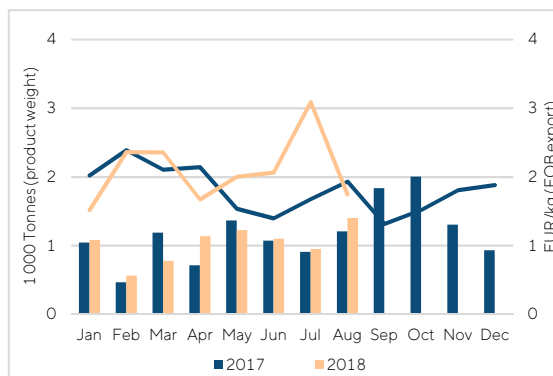
### 4.3.4 Germany

Figure 57 MONTHLY GERMAN EXPORT VOLUME (bars) AND PRICE (lines) OF FISHMEAL AND FISH OIL

#### FISHMEAL



#### FISH OIL



Source: Eurostat

Table 70 GERMAN EXPORT OF FISHMEAL BY COUNTRY

Jan - Aug	Tonnes (product weight)			EUR/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Greece	10.845	16.536	52%	1,27	1,24	-2%
France	9.820	8.418	-14%	1,36	1,38	2%
Italy	6.797	8.773	29%	1,29	1,33	3%
Denmark	4.439	4.597	4%	1,47	1,26	-14%
Netherlands	3.673	3.102	-16%	1,32	1,30	-1%
Czech Republic	4.254	2.846	-33%	1,05	1,40	34%
Other	12.929	9.444	-27%	1,50	1,47	-2%
<b>Total</b>	<b>52.758</b>	<b>53.716</b>	<b>2%</b>	<b>1,35</b>	<b>1,33</b>	<b>-1%</b>

Source: Eurostat

Table 71 GERMAN EXPORT OF FISH OIL BY COUNTRY

Jan - Aug	Tonnes (product weight)			EUR/kg (FOB export)		
	2017	2018	18/17	2017	2018	18/17
Greece	2.020	1.780	-12%	1,08	1,01	-6%
Denmark	2.272	1.708	-25%	1,39	1,44	4%
Spain	628	1.374	119%	1,01	1,04	3%
Netherlands	239	631	165%	1,17	0,95	-19%
Other	2.791	2.740	-2%	3,02	3,84	27%
<b>Total</b>	<b>7.950</b>	<b>8.232</b>	<b>4%</b>	<b>1,85</b>	<b>2,04</b>	<b>11%</b>

Source: Eurostat

## 4.4 Import

Table 72 CHINESE IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Sep			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Peru	537 669	435 668	883 310	811 205	675 698	-17%	54%
USA	124 337	126 166	102 731	71 330	52 029	-27%	4%
Vietnam	74 919	127 176	135 530	104 375	102 735	-2%	8%
Chile	65 821	54 877	70 058	60 512	66 918	11%	5%
Thailand	61 505	72 576	48 717	38 727	44 664	15%	4%
Russia	58 031	58 822	56 755	49 071	54 553	11%	4%
Ecuador	23 675	49 376	60 715	52 119	17 502	-66%	1%
Mexico	22 206	13 213	39 804	34 188	62 937	84%	5%
Denmark	18 164	9 207	28 992	27 534	10 784	-61%	1%
New Zealand	15 043	9 669	10 828	8 284	43 596	426%	3%
Others	83 969	110 361	145 391	107 107	118 302	10%	9%
<b>Total</b>	<b>1 065 339</b>	<b>1 067 111</b>	<b>1 582 831</b>	<b>1 364 452</b>	<b>1 249 718</b>	<b>-8%</b>	<b>100%</b>

Source: Statistics China.

Table 73 JAPANESE IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Oct			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Peru	25.047	23.496	43.056	39.025	41.347	6%	25%
Ecuador	27.111	19.041	15.684	13.275	11.269	-15%	7%
Chile	17.675	16.508	24.485	21.065	18.397	-13%	11%
South Africa	12.612	4.939	6.964	6.283	3.777	-40%	2%
USA	12.491	12.123	11.646	8.601	10.073	17%	6%
Vietnam	26.681	8.432	10.543	8.805	10.952	24%	7%
India	5.399	1.213	2.061	1.421	2.286	61%	1%
Thailand	37.451	21.069	11.420	9.120	14.160	55%	9%
Philippines	7.031	5.019	3.935	3.274	6.457	97%	4%
Others	59.024	45.689	50.224	40.962	45.599	11%	28%
<b>Total</b>	<b>230.522</b>	<b>157.529</b>	<b>180.018</b>	<b>151.831</b>	<b>164.317</b>	<b>8%</b>	<b>100%</b>

Source: Statistics Japan.

Table 74 EU IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Aug			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Peru	45 400	63 687	18 627	13 798	11 032	-20%	8%
Iceland	51 379	20 365	33 656	30 032	25 499	-15%	19%
Chile	18 059	18 427	20 175	10 752	10 871	1%	8%
Norway	67 238	44 589	36 052	25 039	31 924	27%	24%
Faroe Islands	13 984	11 134	16 848	13 376	23 053	72%	17%
Morocco	35 133	50 596	28 185	17 193	23 443	36%	18%
Mauritania	17 183	29 492	10 308	4 525	8 342	84%	6%
Others	30 815	46 636	28 746	17 506	-1 941	-111%	-1%
<b>Total</b>	<b>279 192</b>	<b>284 925</b>	<b>192 595</b>	<b>132 221</b>	<b>132 221</b>	<b>0%</b>	<b>100%</b>

Source: Eurostat

Table 75 GERMAN IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Aug			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Morocco	33 979	41 414	24 441	15 055	20 095	33 %	35 %
Peru	39 540	57 681	14 003	10 969	8 052	-27 %	14 %
Denmark	12 832	6 132	11 290	8 585	7 552	-12 %	13 %
Iceland	16 463	1 205	7 056	5 842	4 320	-26 %	8 %
France	2 253	3 309	3 274	2 497	2 857	14 %	5 %
Panama	4 011	3 229	3 272	2 504	2 120	-15 %	4 %
South Africa	5 341	5 511	3 134	1 782	1 100	-38 %	2 %
Others	30 539	34 446	15 724	9 175	10 713	17 %	19 %
<b>Total</b>	<b>142 709</b>	<b>148 907</b>	<b>79 060</b>	<b>56 408</b>	<b>56 809</b>	<b>1 %</b>	<b>100 %</b>

Source: Eurostat

Table 76 BRITISH IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Aug			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Norway	12 654	14 210	21 043	12 791	16 088	26 %	29 %
Denmark	11 565	11 311	12 786	10 205	4 094	-60 %	7 %
Iceland	8 684	9 456	10 975	8 564	10 275	20 %	19 %
Ireland	10 562	13 161	10 942	6 884	11 851	72 %	22 %
Faroe Islands		2 459	9 783	7 418	5 021	-32 %	9 %
Germany	5 531	9 331	3 109	2 829	1 956	-31 %	4 %
Others	6 925	12 401	18 598	5 070	5 618	11 %	10 %
<b>Total</b>	<b>58 180</b>	<b>71 293</b>	<b>77 452</b>	<b>53 761</b>	<b>54 902</b>	<b>2 %</b>	<b>100 %</b>

Source: Eurostat

Table 77 DANISH IMPORT OF FISHMEAL BY COUNTRY

Supplier	Year total			Jan - Aug			Share of total
	2015	2016	2017	2017	2018	17/18	2018
Iceland	14 886	7 246	15 624	15 623	9 650	-38 %	24 %
Norway	41 992	26 027	9 875	8 369	7 752	-7 %	19 %
Germany	10 794	12 645	5 113	2 612	5 657	117 %	14 %
Mauritania	10 298	11 510	3 307	0	1 000		2 %
Chile		2 571	2 762	1 249	1 510	-21 %	4 %
South Africa	996	8 788	2 295	468	1 605	243 %	4 %
Others	3 174	15 760	10 543	4 101	13 525	230 %	33 %
<b>Total</b>	<b>88 168</b>	<b>82 861</b>	<b>47 248</b>	<b>32 421</b>	<b>40 698</b>	<b>26 %</b>	<b>100 %</b>

Source: Eurostat



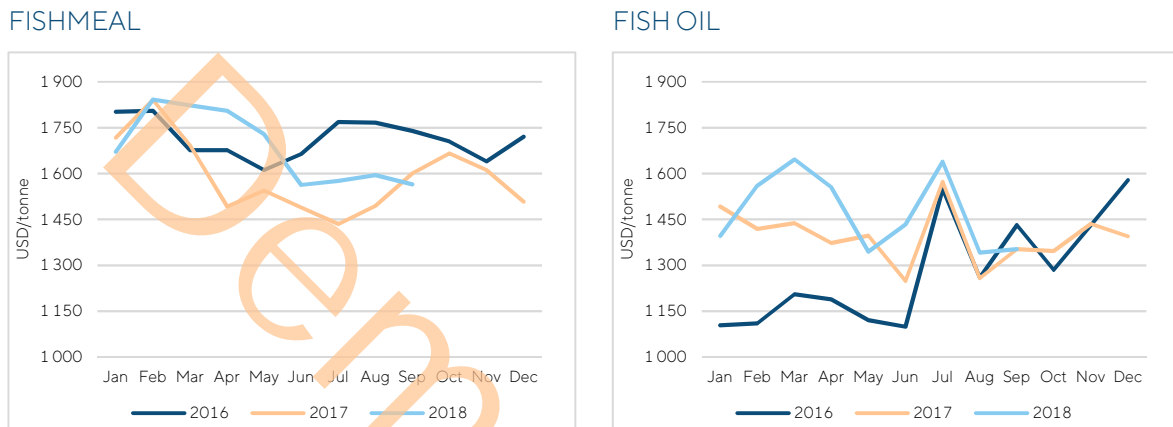
## 4.5 Prices

### 4.5.1 Export price

Average fob export price of fishmeal from Chile was quoted at US-\$ 1 564/tonne in September 2018 who was a decrease from the month before and a 2% decrease from September last year.

Fish oil price in September 2018 was quoted at USD 1 353/tonne, which was an increase from the month before and the same as in September 2017.

Figure 58 MONTHLY FOB EXPORT PRICE OF FISHMEAL AND FISH OIL FROM CHILE

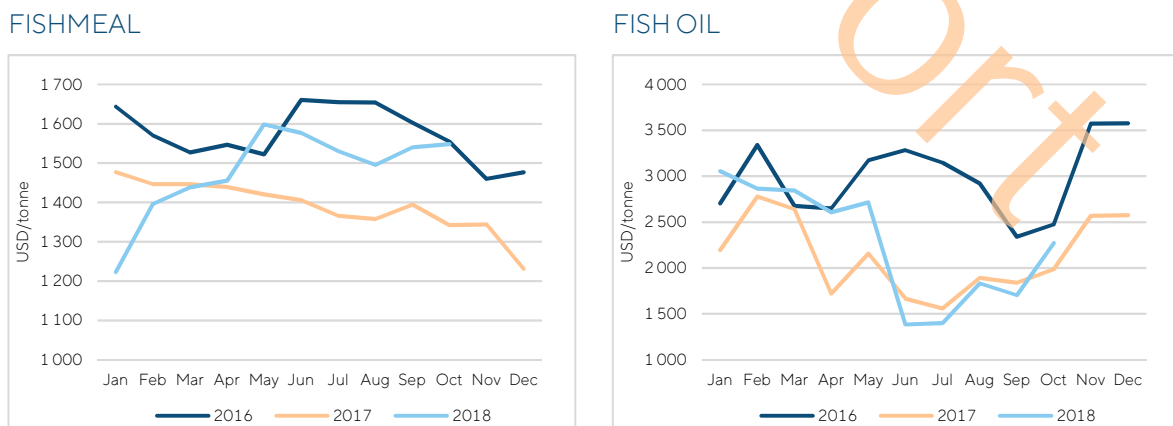


Source: Chilean customs

Average fob export price of fishmeal from Peru was quoted at USD 1 548 /tonne in October 2018 which was a increase from the month before and a 15% increase from the same month one year ago.

Monthly fob export price of fish oil was quoted to USD 2 273/tonne in October 2018, which was a increase from the month before and a 15% increase from the same month the year before.

Figure 59 MONTHLY FOB EXPORT PRICE OF FISHMEAL AND FISH OIL FROM PERU

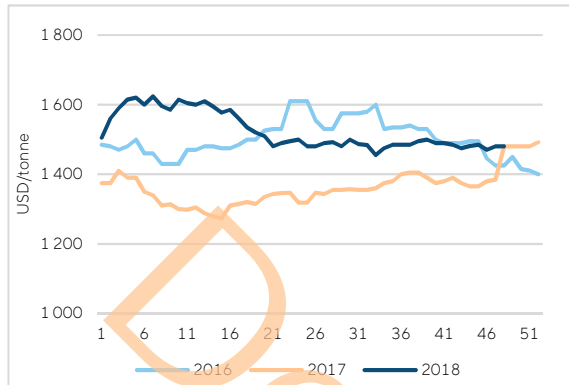


Source: SUNAT

## 4.5.2 Market prices (c&f Hamburg)

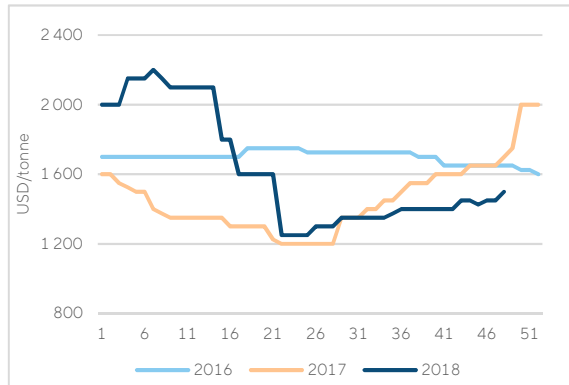
### 4.5.2.1 Weekly

Figure 60 FISHMEAL PRICE  
(64/65% c&f Hamburg)



Source: Weekly Newsletter OIL WORLD, ISTA

Figure 61 FISH OIL PRICE  
(any origin N.W. Europe, c&f Hamburg)



Source: Weekly Newsletter OIL WORLD, ISTA

The fishmeal price in the Hamburg market was quoted at US-\$ 1 485/tonne in week 35 this year. This was an increase from the week before and an 8% increase from the same week last year.

Fish oil price was quoted to US \$ 1 375/tonne in weeks 35 this year. This was an increase from the week before and a 5% decrease from the same week last year.

### 4.5.2.2 Monthly

Figure 62 FISHMEAL

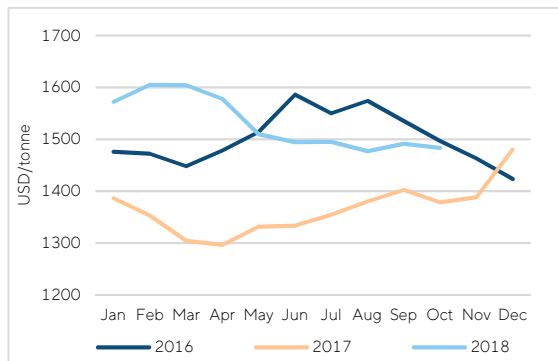


Figure 63 SOYMEAL

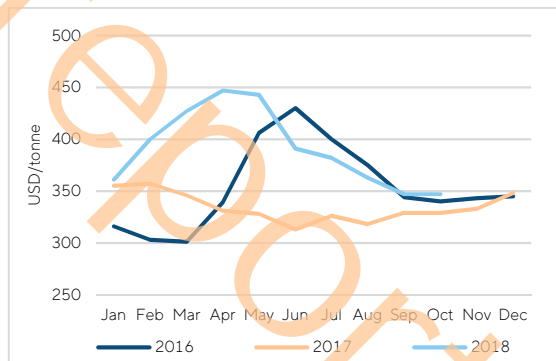


Figure 64 FISH OIL

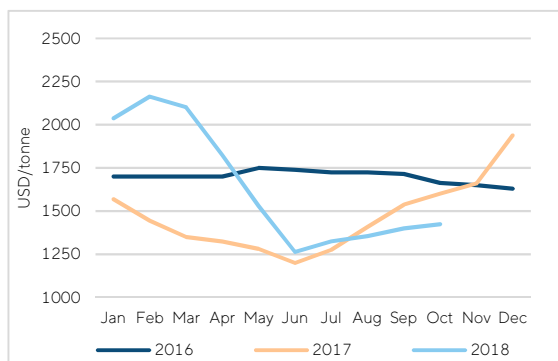
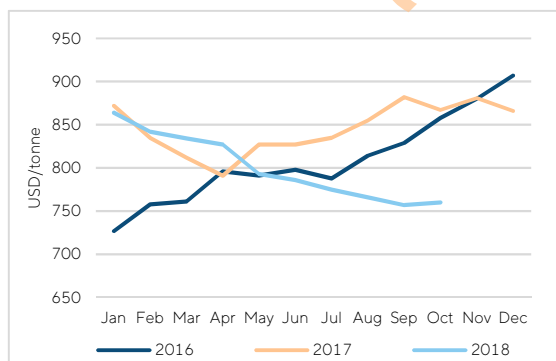


Figure 65 SOYBEAN OIL



Source: Weekly Newsletter OIL WORLD, ISTA