SHRIMP PENAEUS

Penaeus vannamei (Whiteleg shrimp)  Penaeus brasiliensis (King prawn)  Penaeus monodon (Giant tiger prawn)

BIOLOGY AND HABITAT

• **Species description (Read more [1] [2] [3])**
  The appellation shrimp covers a wide range of decapod crustaceans. The main commercial species belong to the Penaeidae family. The Penaeidae family includes the most significant farmed crustacean species worldwide.
  The main species caught are whiteleg shrimp, giant tiger prawn, akiami paste shrimp, Southern rough shrimp, fleshy prawn, and banana prawn.

• **Geographical distribution and habitat (Read more [1] [2] [3])**
  Even if most shrimps are marine, they can also be found in freshwater. Shrimps are widespread, they can be found in all marine areas, from tropics to polar regions.

RESOURCE, EXPLOITATION AND MANAGEMENT

• **Stock and resource status/conservation measures (Read more [1] [2] [3])**
  A TAC for *Penaeus* shrimps in French Guiana (Outermost region) waters is established.

• **Production methods and fishing gears (Read more [1] [2] [3])**
  Shrimps are either caught in the wild or farmed. The main fishing gears used are otter trawls, bottom pair trawl, gillnets and similar nets, pots and traps and seines. For shrimp farming, there are three growing culture practices: extensive, semi-intensive and intensive, which represent low, medium and high stocking densities, respectively.

Source: Information system on commercial designations for whiteleg shrimp, king prawn and giant tiger prawn
Shrimp Penaeus

**CATCHES**

**Evolution of world catches**
- Global catches of Penaeus shrimp (all species), amounted to 1.1 million tonnes in 2020. The main species caught were: Fleshy prawn (*Penaeus chinensis*) (34% of the global catches in 2020), Giant tiger prawn (*Penaeus monodon*) (28%), and not identified species reported under the category *Penaeus spp* (16%).
- Over the period 2011-2020, the global production of Penaeus shrimps has increased by 37%, attributable to the increase of the Chinese production which almost doubled over the same period. In 2020, the main producers were China (34%) and India (29%).

![Graph showing world shrimp catches from 2011 to 2020](source: FAO)

**Evolution of EU catches**
- EU catches of Penaeus shrimp species amounted to 2.909 tonnes, i.e. less than 1% of the global catches in 2020. Main caught species by the EU fleet are *Penaeus kerathurus* and non-identified species reported under *Penaeus spp*. Almost all EU catches are made by Spain (43% of the EU catches in 2020), Italy (35%), Greece (13%) and the French Guiana, a French Outermost Region (7%). Catches of the French Guiana have experienced a significant decrease since the mid 2000s.

![Graph showing EU shrimp catches from 2011 to 2020](source: FAO)
**Evolution of world production**

- The world aquaculture of *Penaeus* shrimps amounted to around 6.76 million tonnes in 2020. The main species were whiteleg shrimp (*Penaeus vannamei*) (86% of global production of *Penaeus* shrimps) and giant tiger prawn (*Penaeus monodon*) (11%). Production of whiteleg shrimp has increased globally, over the last decade (2011-2020), by 92%, while catches of giant tiger prawn has been variable over the same period (with an overall increase trend). China is by far the main producer, providing 32% of the global production in 2020, followed by India (14%), Vietnam (13%) and Indonesia (12%). Over the period between 2011 and 2020, the global production has increased by 72%, related to the significant increase of production in Asian countries (India, Vietnam, Indonesia and to lesser extent China).

**Evolution of EU production**

- EU aquaculture production of *Penaeus* shrimps is quite limited, with less than 150 tonnes in 2020. France, Germany and Cyprus provided almost all the EU production. Three species are produced in the EU: *kuruma prawn* (61 tonnes), whiteleg shrimp (30 tonnes) and giant tiger prawn (22 tonnes).
Shrimp Penaeus

PROCESSING

- Penaeus shrimps caught by the EU fleet are mostly marketed fresh, while whole frozen shrimps are imported for processing purposes. Shrimps are cooked and sold as chilled products (whether head-on or head-off and sometimes peeled).

- In the EU, there are different segments of cooked shrimp market depending on the size, the presentation and preservation, and the certification of the raw material.

- There is no statistic on the EU shrimp cooking industry, except some figures on the French market France cooked 50.000 tonnes of Penaeus shrimps in 2015 (source: Cooked shrimp in France, Price structure in the supply chain, 2017, EUMOFA)
Shrimp Penaeus

**TRADE**

- Combined nomenclature: Read more for whiteleg shrim, king prawn, giant tiger prawn

**EU-27 trade of shrimp products, excluding cold-water shrimps (except for prepared and preserved products where coldwater shrimps are included) (2021, tonnes)**

<table>
<thead>
<tr>
<th>CN code</th>
<th>Product</th>
<th>EU imports</th>
<th>EU exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>03 06 17 92</td>
<td>Shrimps of the genus Penaeus, frozen</td>
<td>303.299</td>
<td>4.181</td>
</tr>
<tr>
<td>03 06 17 99</td>
<td>Shrimps of the family Pandalidae, other than of the genus Pandalus, frozen</td>
<td>148.970</td>
<td>1.987</td>
</tr>
<tr>
<td>03 06 36 90</td>
<td>Shrimps and prawns, whether in shell or not, live, fresh or chilled (excl. 'Pandalidae' and 'Crangon')</td>
<td>282</td>
<td>368</td>
</tr>
<tr>
<td>03 06 95 90</td>
<td>Shrimps and prawns, other (other than Pandalidae and Crangon), cooked by steaming or by boiling in water, dried, salted, smoked or in brine</td>
<td>203</td>
<td>34</td>
</tr>
<tr>
<td>16 05 21 10</td>
<td>Shrimps and prawns, prepared or preserved, in immediate packings of a net content of &lt;= 2 kg (excl. merely smoked, and in airtight containers)</td>
<td>18.492</td>
<td>1.342</td>
</tr>
<tr>
<td>16 05 21 90</td>
<td>Shrimps and prawns, prepared or preserved, in immediate packings of a net content of &gt; 2 kg (excl. merely smoked, and in airtight containers)</td>
<td>19.670</td>
<td>2.248</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>490.916</strong></td>
<td><strong>10.159</strong></td>
</tr>
</tbody>
</table>

Given the small production of shrimps in the EU, the EU shrimp market is mostly dependent on imports.

Imports of frozen Penaeus shrimps reached 452.269 tonnes in 2021, 92% of the EU imports. In order to support the EU processing sector, the EU imports of frozen Penaeus shrimp are under an Autonomous Tariff Quota. The main importing countries were Spain (34%), France (20%) and Italy (14%). Main EU suppliers were Ecuador (32%), Argentina (19%) and India (13%).

EU exports of frozen Penaeus shrimps were quite limited, around 6.100 tonnes.

**EU importers (2021, tonnes)**
- Spain: 15.589
- France: 16.023
- Italy: 32.802
- Netherlands: 55.802
- Belgium: 62.673
- Germany: 90.438

**EU main suppliers (2020, tonnes)**
- Ecuador: 16.381
- Argentina: 61.514
- India: 145.773
- Vietnam: 19.691
- Venezuela: 27.895
- Bangladesh: 32.301
- China: 60.974
- Others: 87.740

*Source: EUROSTAT-COMEXT*
EU-27 trade of shrimps (tonnes - 2021)

CN codes for other preservation states do not allow to distinguish Penaeus shrimp but they are likely to represent a significant share. In 2021, 38,365 tonnes of prepared-preserved shrimps\(^1\) were imported. The main importers were the Netherlands (26%), Denmark (19%) and Sweden (13%). The main suppliers of prepared shrimps were Vietnam (31%), Morocco (12%) and Norway (10%). Imports from Morocco correspond to the shrimps caught by the EU fleet, sent to Morocco to be peeled in specialised units and then re-exported to the EU market.

EU-exports of prepared shrimps are quite limited.

\[\text{Main importers (2021, tonnes)}\]

- Netherlands: 10,130
- Denmark: 2,999
- Sweden: 4,531
- Germany: 7,397
- Belgium: 6,096
- Others: 7,212

\[\text{EU main suppliers (2021, tonnes)}\]

- Vietnam: 11,948
- Morocco: 10,037
- Norway: 2,455
- United States: 2,152
- Canada: 3,200
- Honduras: 3,909
- Others: 4,664

Source: EUROSTAT-COMEXT

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\(^1\) Prepared-preserved shrimps include three codes:
- 03 06 95 90: Shrimps and prawns, other (other than Pandalidae and Cragon), cooked by steaming or by boiling in water, dried, salted, smoked or in brine
- 16 05 21 10: Shrimps and prawns, prepared or preserved, in immediate packings of a net content of \(\leq 2\) kg (excl. merely smoked, and in airtight containers)
- 16 05 21 90: Shrimps and prawns, prepared or preserved, in immediate packings of a net content of \(> 2\) kg (excl. merely smoked, and in airtight containers)
**EU supply balance (2020)** – Tonnes of live weight equivalent – Shrimps *Penaeus* – EU production concerns *Penaeus* shrimps, while trade data include other species.

**Production**: 1.527 tonnes

**Supply**: 555.144 tonnes

**Import**: 553.617 tonnes

**Export**: 16.098 tonnes

**Apparent consumption**: 539.045 tonnes

*Source: FAO/ EUROSTAT-COMEXT*

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1 Supply balance is provided for the year 2020 (trade data for 2020 were taken into account). Detailed trade data provided in the slides 5 and 6 concern the year 2021.

2 The conversion factors were used to convert net weight of imports and exports of fishery and aquaculture products into live weight equivalents.
Shrimp Penaeus

PRICES ALONG THE SUPPLY CHAIN (EUR/kg)

First-sale (fresh)
First-sale prices are provided for Italy, for the main shrimp species landed (i.e. caramote prawn).

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</thead>
<tbody>
<tr>
<td>Italy, fresh,</td>
<td>14,85</td>
<td>15,27</td>
<td>14,42</td>
<td>15,27</td>
<td>15,27</td>
<td>12,30</td>
<td>11,51</td>
<td>12,91</td>
<td>13,91</td>
<td>16,20</td>
<td>17,94</td>
<td>EUMOFA</td>
</tr>
<tr>
<td>Caramote prawn</td>
<td></td>
<td></td>
<td></td>
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* From January to October 2022

Retail/consumption (cooked, chilled)
Retail prices refer to France, which is among the largest EU markets for chilled cooked shrimps.

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<tbody>
<tr>
<td>France</td>
<td>12,5</td>
<td>13,5</td>
<td>13,1</td>
<td>13,9</td>
<td>14,6</td>
<td>14,1</td>
<td>13,8</td>
<td>13,8</td>
<td>FranceAgriMer</td>
</tr>
</tbody>
</table>

Import (frozen Penaeus shrimps)
Import prices are provided for Spain, France and Italy, major importers of frozen shrimps from third countries.

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</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>5,42</td>
<td>5,90</td>
<td>6,14</td>
<td>6,29</td>
<td>6,36</td>
<td>6,12</td>
<td>6,07</td>
<td>5,50</td>
<td>6,09</td>
<td>EUROSTAT</td>
</tr>
<tr>
<td>France</td>
<td>6,33</td>
<td>7,14</td>
<td>6,89</td>
<td>7,13</td>
<td>7,46</td>
<td>6,78</td>
<td>6,58</td>
<td>6,10</td>
<td>6,34</td>
<td>EUROSTAT</td>
</tr>
<tr>
<td>Italy</td>
<td>5,75</td>
<td>6,57</td>
<td>6,48</td>
<td>6,57</td>
<td>6,65</td>
<td>6,34</td>
<td>6,20</td>
<td>5,75</td>
<td>6,66</td>
<td>EUROSTAT</td>
</tr>
</tbody>
</table>

Export (frozen Penaeus shrimps)
Export prices refer to Spain, the Netherlands and Germany major EU exporters outside the EU.

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</thead>
<tbody>
<tr>
<td>Spain</td>
<td>6,84</td>
<td>8,87</td>
<td>8,43</td>
<td>8,16</td>
<td>8,27</td>
<td>8,60</td>
<td>8,70</td>
<td>8,79</td>
<td>9,46</td>
<td>EUROSTAT</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8,40</td>
<td>10,36</td>
<td>10,68</td>
<td>9,00</td>
<td>10,79</td>
<td>10,35</td>
<td>10,60</td>
<td>9,41</td>
<td>8,05</td>
<td>EUROSTAT</td>
</tr>
<tr>
<td>Germany</td>
<td>8,78</td>
<td>10,78</td>
<td>9,87</td>
<td>8,41</td>
<td>9,09</td>
<td>8,88</td>
<td>8,85</td>
<td>9,95</td>
<td>8,05</td>
<td>EUROSTAT</td>
</tr>
</tbody>
</table>
MARKETING

- National lists of commercial designations (Read more)
- Information system on commercial designations and scientific names in all EU languages (Read more (1) (2) (3))

CONSUMPTION

- Nutritional value (Shrimps, cooked meat, values per 100 g – source: NUTRAQUA/AQUIMER)

<table>
<thead>
<tr>
<th>Nutritional value</th>
<th>King prawn - <em>Penaeus brasiliensis</em></th>
<th>Giant tiger prawn - <em>Penaeus monodon</em></th>
<th>Whiteleg shrimp - <em>Penaeus vannamei</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>kilo calories (kcal)</td>
<td>113</td>
<td>98</td>
<td>94</td>
</tr>
<tr>
<td>Kilojoule (kJ)</td>
<td>480</td>
<td>418</td>
<td>401</td>
</tr>
<tr>
<td>Water (g)</td>
<td>71,2</td>
<td>73,5</td>
<td>73,9</td>
</tr>
<tr>
<td>Ashes (g)</td>
<td>1,3</td>
<td>2,3</td>
<td>2,9</td>
</tr>
<tr>
<td>Proteins (g)</td>
<td>26,6</td>
<td>23,4</td>
<td>22,6</td>
</tr>
<tr>
<td>Carbohydrates (g)</td>
<td>0,2</td>
<td>0,4</td>
<td>0,3</td>
</tr>
<tr>
<td>Lipids (g)</td>
<td>0,6</td>
<td>0,4</td>
<td>0,3</td>
</tr>
<tr>
<td>Cholesterol (mg)</td>
<td>237,1</td>
<td>204,5</td>
<td>181,1</td>
</tr>
<tr>
<td>Omega 6 (mg)</td>
<td>76</td>
<td>122</td>
<td>119</td>
</tr>
<tr>
<td>Omega 3 (mg)</td>
<td>197</td>
<td>145</td>
<td>177</td>
</tr>
<tr>
<td>EPA (mg)</td>
<td>103</td>
<td>50</td>
<td>86</td>
</tr>
<tr>
<td>DHA (mg)</td>
<td>68</td>
<td>84</td>
<td>77</td>
</tr>
</tbody>
</table>