Japanese flying squid

**SCIENTIFIC NAME**
Todarodes pacificus

**COMMON NAMES**
Japanese flying squid, Japanese Common Squid

**STOCK IDENTIFICATION**
Although further study is required, there is a possible homogeneity of the population structure in the Yellow Sea-East Japan Sea (Gong and Choi 2008). This can be classified as a transboundary fish stock, in that it is found in two or more EEZs, with undefined stock management units. This is a relevant shared fish stock of the Northwest Pacific, an important pelagic resource shared by two or more countries and by two or more coastal states in the Region, extending into the high seas, adjacent to the coastal state EEZs. The Yellow Sea is included in this profile as the northern part of the East China Sea.

In Japanese waters, squids are mainly caught in summer-autumn squid fishery; coastal catches are landed fresh while catches from offshore waters are landed as frozen blocks. In addition to squid jigging and net fishing in Japanese waters they are also caught in multi-gear fisheries within Chinese and Korean waters.

**ASSESSMENT**

**Strengths**
Regular stock assessments are conducted and the stock is well managed through annual TAC limits in Japanese waters (Fisheries Agency of Japan 2012a,b).

**Weaknesses**
There is shortage of information on stock assessments in Chinese and Korean waters. Extent of IUU catches may be high and remain unquantified in this fishery, esp., in Korean and Chinese waters.

**Options**
A more rigorous study of both Government reports and published literature is necessary for Chinese waters. Studies need to be conducted to evaluate seasonal movements of this stock across all three jurisdictions of Korean, Chinese and Japanese waters. Governance measures also remain unknown for this stock in Chinese and Korean waters. Suggest increased data collection to gather information to make an analytical assessment possible in the near future across its distribution range.

**SCORES**

<table>
<thead>
<tr>
<th>Management Quality</th>
<th>Management Strategy</th>
<th>Managers Compliance</th>
<th>Fishers Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 6</td>
<td>≥ 6</td>
<td>≥ 6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stock Health</th>
<th>Current Health</th>
<th>Future Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 6</td>
<td>≥ 8</td>
<td></td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS**

**RETAILERS & SUPPLY CHAIN**
- Conduct scientific studies to define the stock structure over the full range of the species and to evaluate seasonal movements of this stock across all jurisdictions.
- Encourage managers to collect and publish detailed fishery data by fishing method (e.g. catch, effort and fleet size) and biological data (length, sex, maturity, age) to support stock assessment development and improve accuracy of third-party, independent sustainability evaluations.
- Work with managers to design and implement fishery management plans in all relevant jurisdictions, including harvest strategies and harvest control rules suitable for short-lived species; ensure the management plans consider impacts of this fishery on the overall ecosystem structure and function. This management plan should be sensitive to the transboundary nature of these stocks and ideally would be implemented by a regional fishery management body which would coordinate conservation measures amongst all harvesting nations.
- Estimate the scope of any illegal fishing and under-reporting, and implement effective monitoring, control, and surveillance.
- Implement data collection programs to enable evaluation of bycatch, especially of protected or endangered species.
- Ensure your supply chains are represented in SFP’s Global Squid Supply Chain Roundtable to receive improvement needs in this and other similar fisheries, catalyze fishery improvement projects, and monitor progress in improvement efforts.