

## **New Zealand Sea Lions**

New Zealand squid fishing vessels that operate in the area around the Auckland Islands - a group of sub-Antarctic islands south of New Zealand - sometimes encounter New Zealand sea lions. Accidental capture of these large marine mammals does occur, however the industry has worked hard over recent years, and has successfully reduced the incidence of sea lion mortalities significantly.

These creatures are considered threatened because of their low number of breeding sites (rookeries), which makes them vulnerable to biological threats such as disease.

While it has been proven that fishing does not threaten the sustainability of the population the industry is focused on ensuring that their activities mitigate any sea lion mortalities. Innovations in trawl gear, restrictions on fishing near the sea lions' rookery, and crew training have all been tactics used to reduce sea lion mortality as a result of fishing.

### **Sea lion facts - here is what is known:**

- New Zealand sea lions (*Phocarctos hookeri*, also known as Hooker's sea lion) occur primarily in the sub-Antarctic region, with a few animals present in southern parts of the South Island and a breeding colony in Otago.
- The total mature population has been estimated between 5,000 to 20,000 individuals with a median of 7,800 (excluding pups).
- Sea lions are gazetted as a threatened species under the Marine Mammals Protection Act because they have a restricted breeding range and in 2010 were upgraded to 'Nationally Critical' by the Department of Conservation after a decline in pup numbers at the breeding colonies in the Auckland Islands.
- The main colonies are on the Auckland and Campbell Islands.
- Small numbers of sea lions are accidentally killed in trawl fisheries, with most interactions occurring in the squid fishery around the Auckland Islands (part of the SQU 6T Quota Management Area).
- Population modelling under Government direction, using an extensive set of data from annual monitoring of the breeding colonies, shows that fisheries bycatch constitutes little risk to the sea lion population\*.
- Changes in the sea lion population size are largely related to processes other than fishing mortalities, including bacterial epidemics and natural variation in breeding and survival.

## **Squid fishery facts – here is what is known:**

- The squid fishery is one of New Zealand's most important and valuable fisheries.
- In 2009 almost 38 000 tonnes of squid were exported, with a value of over \$75 million.
- Fishing effort in the SQU 6T fishery is restricted to limit sea lion mortalities.
- Rules for managing fishing effort are tested against a detailed population model.
- All vessels in the SQU 6T fishery use an approved "Sea Lion Exclusion Device" (SLED) in their trawl nets.
- SLEDs contain a grid which excludes sea lions from the trawl cod end, and an escape hole which allows sea lions to swim out of the net.
- The use of SLEDs has been very effective in reducing the number of sea lions landed dead on fishing vessels.
- Underwater cameras on SLEDs on trawl nets have captured footage of a sea lion and fur seal exiting the net safely.
- Ministry of Fisheries observers monitor a high proportion (38% in 2009) of trawls in the SQU 6T fishery.
- Research which aims to assess the survival of sea lions following their escape from trawls has proved scientifically challenging, and is ongoing.
- It is not feasible to use the jigging method for catching squid off the Auckland Islands, as it is unsafe in the extreme weather conditions of the area.

\*Breen, P.A., Fu, D. & Gilbert, D.J. (2008). Sea lion population model projections and rule evaluations for Project IPA200609, Objective 4. Final research report for Ministry of Fisheries project IPA200609, Objective 4, Revision 1  
24 July 2008.