The Thai Blue Swimmer Crab Supply Chain

The blue swimmer crab (*Portunus pelagicus*) – also known as the blue crab, or sand crab is a large species of crab found in the Indo-West Pacific region. Blue swimmer crabs are caught throughout the Indo-Pacific region, primarily by India, China, Vietnam, Thailand, and Indonesia (Taylor, 2013). Blue swimmer crab is an extremely important species for Thai fishers along the coasts of both the Andaman Sea and the Gulf of Thailand and made up 70% of Thailand’s total crab catches (20,582 tonnes out of a total of 29,613 tonnes in 2011) (Fishstat, 2011).

**Fisheries:**

In Thailand, blue swimmer crab are found along the coasts of the Andaman Sea and the Gulf of Thailand although on average 60% of the catches are landed from the Gulf of Thailand (Fishstat, 2011). The species is usually found in sheltered coastal waters or estuaries and is mainly targeted by small-scale fishers (Songrak, 2013).

There are three main types of gear used to catch blue swimmer crabs; bottom gillnets, bottom trawls, and crab pots. Thailand primarily uses bottom gillnets, and pots as crab fishing in Thailand is mainly artisanal (Nitiratsuwon et al, 2010). Small-scale fishers can set up 100-300 traps per trip, using either fixed box traps, collapsible vertical traps, or collapsible box traps whilst industrial-sized vessels may use gillnets and trawls. There are few regulations in place to limit mesh size for crab gillnets resulting in significant bycatch and catches of juvenile crabs (Songrak et al, 2013). 64% of crab landings in Trang province are juveniles (Nitiratsuwon et al, 2004). This has resulted in over-exploitation of blue swimmer crabs and is illustrated by a steady decline in crab catches in Thailand with an average annual reduction in catches of -7.5% (Fishstat, 2011).

Artisanal fishing vessels can vary from 10-20 metres and the number of crew can range from 10-15 persons whilst industrial sized vessels of 20-40 metres OAL can have between 20-35 crew (Chantavanich et al, 2007; Noranartragoon et al, 2011; BOBLME, 2012). Reports suggest that most workers on these vessels originate from Myanmar, Cambodia, or Vietnam with up to 80% of workers on Andaman Sea based vessels coming from Myanmar (Chokesanguan et al, 2011; Fujita et al, 2010).
Many of these trawling vessels are poorly maintained, have old, or unreliable equipment, and operate without proper registration or documents (BOBLME, 2012). In Pattani province for example, there are reports that up to 70% of fishing vessels are unregistered, and that 50% of vessels do not meet safety requirements, increasing the risks for illegal fishing, and illegal trafficking of migrant workers (Chokesanguan et al, 2011; Fujita et al, 2010).

Local trading:

As crabmeat can spoil very quickly, crabs are kept in aerated holding tanks onboard trawling vessels in order to preserve the quality of the meat (Feltault, 2010). Crabs are therefore landed alive in Thai ports on the Andaman coast, Southeast Gulf, and North Gulf coasts. These crabs are then either auctioned off at the harbour and local markets, or transported directly to large-scale processing plants (INFOFISH, 2013). Imports make up a very small proportion of the Thai crab industry with only 3,295 tonnes of fresh and frozen crab being imported into Thailand in 2011 (Index Mundi, 2014). The main sources for imported crab are Canada (average 50% of market share), Russia, and Malaysia (Stanton, 2010). In contrast, domestic crab production was 29,613 tonnes in 2011 (Fishstat, 2011).

Processing:

Crab must be de-shelled and their meat separated and steamed before they can be processed into value-added products. As with the prawn industry, this work is often carried out in pre-processing facilities called ‘picking factories’ where the crabs are steamed and then selected to separate and sort the meat (Feltault, 2010). These factories are usually sub-contracted to the larger processing facilities or exporters. Workers sort the meat into three categories; ‘mega’, ‘jumbo’, and ‘lump’ meat (SFP, 2009). These categories denote the quality and quantity of the meat with ‘mega’ and ‘jumbo’ being the most prized cuts. ‘Lump’ crabmeat is often sent to canneries to be processed for export.

The main processing factories are located in Samut Sakhon, Nakhon Prathom, and Songkhla and are predominantly owned by Thai Union, Sea Value, or one of their subsidiaries (Hamilton et al, 2011; Puthy, 2007). Phillips Foods has recently opened a new factory in Songkhla, increasing exports to Australia and Europe (Dash, 2008). There are also several large processing plants – such as Grand Bay Seafood and Blue Star Food Products – in Trat province, on the East coast of the Gulf of Thailand (Desmon et al, 2006).

Thai processing plants struggle to attract Thai workers as they see the work as demeaning (Hamilton et al, 2011). This means that factories and canneries are reliant on foreign labour, predominantly from Myanmar and Cambodia. Human Rights Watch estimates that 90% of the workforce in the Thai seafood processing industry comes from Myanmar, Laos, or Cambodia (HRW, 2010).

Products:

Thailand only exports a quarter of the crab produced or processed in its factories with 7,861 tonnes (26%) being exported in 2011 (Index Mundi, 2014). 73% of this was exported to the US followed by Taiwan (3.8%), Canada (3.4%), and China (2.9%) (TFFA, 2013). On average, Thai exports of crab have dropped by 9% per year since 2000 due to declining crab stocks in the Andaman Sea and Gulf of Thailand (Kunsook et al, 2013).
In terms of crab meat products, 47% of crabs are sold fresh, 15% are frozen, and 40% are canned (Laowapong, 2010). The primary canned crab products that can be produced are lump, special, and claw meat, which can be packaged in cans, or pouches. The meat can also be graded by quality and weight, producing either shredded or jumbo lump meat (Taylor, 2013).

Reference:

BOBLME. (2012). Scoping Study on Migrant Fishers and Transboundary Fishing in the Bay of Bengal. Bay of Bengal Large Marine Ecosystem Project.


INFOFISH. (2013). Thailand Seafood Market and Potentials for Peruvian Products. INFOFISH.


Trisak, J, H. Soasung and P. Wongkaew. 2009. *Seasonal variations in catches and efforts of a small-scale swimming crab trap fishery in the Eastern Gulf of Thailand*. Department of Fishery Management, Faculty of Fisheries, Kasetsart University, Chatuchak, Bangkok, Thailand.

The **Labour Safe Screen** is built on seafood research. This includes quantitative survey results, qualitative interview results, and product-based research to better understand the flow of seafood from sea to ports to processing facilities through to export and the working conditions along the way.

Contact us for feedback or more information on this project: info@sustainability-incubator.com
Website: [http://www.laborsafescreen.com/](http://www.laborsafescreen.com/)

---

Last Updated: May 23, 2014