



Responsible fishmeal: the key to sustainable Thai fisheries

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Huge demand for wild caught fishmeal for aquaculture is driving destructive overfishing in Thailand, a problem WWF and the Thai Sustainable Fisheries Roundtable are addressing through a fishery improvement project (FIP).

What's the deal with responsible fishmeal?

Here is some food for thought – **healthy oceans are fundamental to life**. Oceans produce 70% of our oxygen, influencing weather systems, support economies and feed billions people. However, the world's oceans are threatened by overexploitation, destructive fishing, coastal destruction, sea level rise and ocean acidification to name a few. Tackling each of these massive, complex issues requires a similarly massive, complex solution.

For example, let's focus on fisheries and aquaculture. According to the Food and Agricultural Organisation, **85% of the world's marine fish populations** (i.e. our seafood) are either fully exploited or overfished. This dire situation is driving accelerated growth in farmed seafood – aquaculture.

On the surface, aquaculture seems like a promising solution to help feed the world's growing population without relying exclusively on overexploited, wild fish populations. In fact, **aquaculture is the fastest growing food production system in the world and already half the seafood we eat comes from farms**. But so far, not all impacts from the aquaculture industry have been good.

Feeding Thailand's Vast Aquaculture Industry

Thailand is one of the world's largest aquaculture producers, especially for farmed shrimp, producing between 250,000-300,000 metric tons^[1] of these tasty little crustaceans in 2014. But farmed shrimp also need to eat, and small as they are, that's a lot of little mouths to feed. And what do shrimp need to eat to grow up nice, healthy and nutritious? Why, their natural diet of marine proteins of course – a.k.a. wild caught fish.

Feed for aquaculture is one of the industry's most contentious issues for sustainability. It is estimated that on average, a humble *Penaeus vannamei* (the most common farmed shrimp species in the world) will eat somewhere between 1.2-1.8 times its weight of fishmeal (i.e. the raw material derived from wild caught fish in their feed formulas) before it is harvested^[2]. So in the most extreme case, Thailand's shrimp industry needed **540,000 metric tons of wild caught fishmeal** to produce 300,000 metric tons of farmed shrimp. **That is A LOT of fish**.

Fishmeal from Thailand's Fisheries

Supplying so much fish requires a massive fishing operation to support it – and this is where it gets complex. Most fishing operations in Thailand, both small-scale and large-scale, are "mixed fisheries". These fisheries do not have a clear target species, but rather just keep and land anything caught on their nets, lines or traps. Whatever cannot be set aside for direct human consumption – usually the smaller, lower quality 'forage fish' species that we don't like to eat – would be set aside as fishmeal for animal feed.

So because everything a fishing vessel catches has a potential client at port willing to buy the catch regardless of quality or species, there has been little incentive for fishermen to restrict and be more selective with their catches, which has led to very destructive overfishing along Thailand's coasts. These aren't just strictly environmental problems either – as boats have to travel further and further from shore to catch shrinking numbers of fish, there have been severe instances of forced 'slave' labour on boats where basic labour and human rights are ignored (allegedly, to reduce the costs of fishing operations), and violent social conflicts between small-scale fishers versus large-scale fishers over limited fisheries resources.

Andaman Fishmeal FIP – Working with Seafood Producers for More Responsible Fishmeal

So... is aquaculture contributing to the overfishing problem it was trying to solve in the first place? No fear tom yum goong lovers, solutions are being innovated!

In light of the environmental and social issues arising from fishmeal, the **Thai Sustainable Fisheries Roundtable**, made up of the 8 key Industry Associations involved in Thailand's seafood trade^[3], was established to address the issues of fishmeal sustainability in March 2014. The Roundtable is made



Fishing trawler in Tarutao National Park, Thailand.

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established through a memorandum of understanding signed on November 2013. The Roundtable works closely with the Thai Department of Fisheries and Department of Labour, FAO (UN Food and Agricultural Organisation), SEAFDEC (Southeast Asian Fisheries Development Centre), SFP (Sustainable Fisheries Partnership), and WWF to tackle the social and environmental issues rampant in the Thai seafood industry.

As a partner to the Roundtable, WWF's role is to advise and assist government and industry action plans to improve the social and environmental performance of Thai fisheries and to coordinate a **Fishery Improvement Project (FIP) for Fishmeal in the Thai Andaman Sea** to complement existing plans of eradicating forced and illegal labour on fishing vessels. WWF FIPs are long term activities to improve the environmental performance of a fishery based on the Marine Stewardship Council's (MSC) best-practice standard for fisheries. For the Andaman Fishmeal FIP, there are three major goals:

1. Improve the environmental performance of the fishery towards the MSC standard within five years, with an MSC pre-assessment scheduled for March 2015
2. Ensure the fishery meets credible, internationally recognised labour standards within one year
3. A responsible shrimp feed using fishmeal from the fishery is introduced to the Thai market to help shrimp farmers meet best practice aquaculture standards

These goals can lead to profound on-ground marine conservation and impacts that can help many overfished species recover to a more healthy level, while allowing farmers to pursue best practice for shrimp aquaculture.

Committed to More Responsible Fisheries and Aquaculture

WWF believes that, when produced responsibly, aquaculture can thrive alongside healthy wild fish populations without harming the marine environment, for the benefit of both businesses and local people. And in order for there to be sustainable aquaculture, there must be sustainable fishmeal. While working with industry partners on a Fishmeal FIP is a complex issue that will take some time to yield the results we want to see, the Roundtable's commitment to a best practice approach for fisheries can ensure our common vision for responsible, sustainable fishmeal and shrimp comes true. And then, we can all enjoy a guilt-free tom yum goong to celebrate.

[1] Undercurrent: <http://www.undercurrentnews.com/2014/12/18/thailand-shrimp-production-recovering-to-250000-300000t-in-2014/>

[2] FAO: http://www.fao.org/fishery/culturedspecies/Litopenaeus_vannamei/en

[3] Thai Frozen Food Association, Thai Feed Mill Association, Thai Fishmeal Producers Association, Thai Shrimp Association, National Fisheries Association of Thailand, Thai Overseas Fisheries Association, Thai Food Processors' Association, Thai Tuna Industry Association

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