



The hidden environmental and social cost of prawns in Australia



CONTENTS

Section 1: Introduction	0		
ection 2: Where our prawns come from and why you should care. ection 3: Australia's top 3 prawn suppliers ection 4: Abuse in the Thai seafood sector	10		
		Section 5: The good news	2
		Section 6: Greenpeace guidance on seafood labelling, traceability and transparency	2
References	2		

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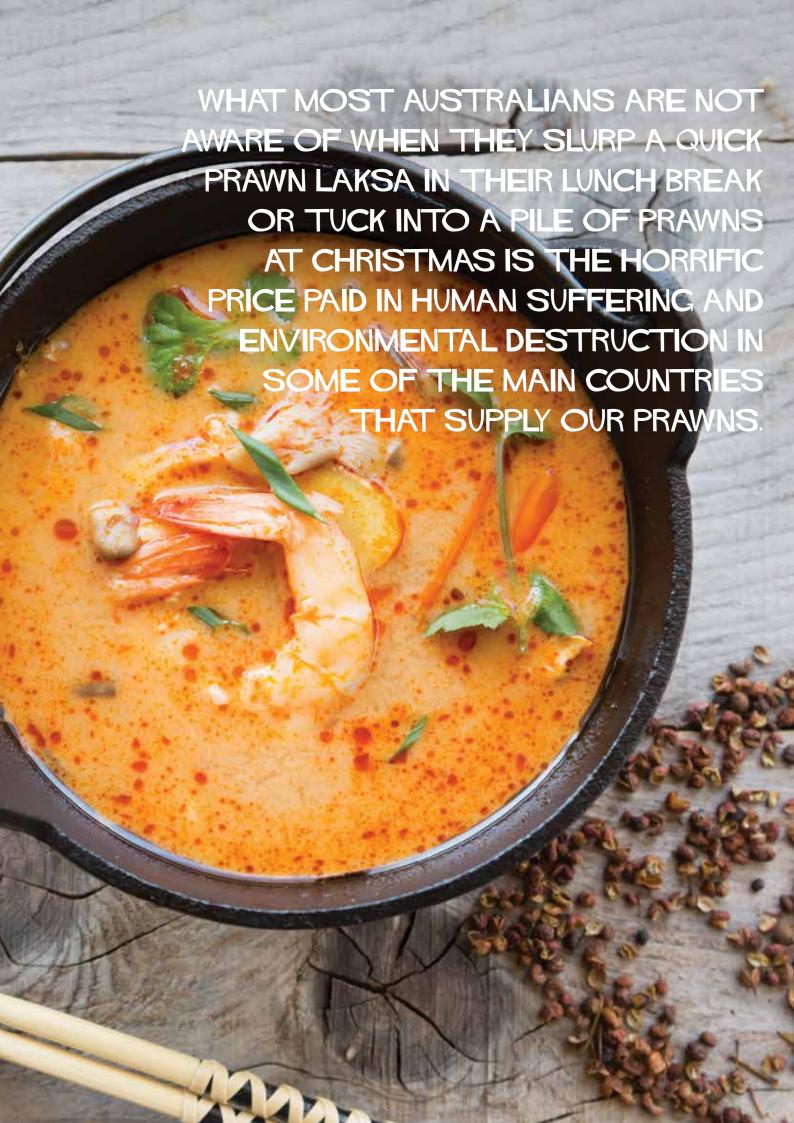
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INTRODUCTION

When Paul Hogan famously threw 'another shrimp on the barbie' in 1984, he probably gave very little thought to where it came from.

Back then, it was almost certainly an Australian prawn, probably caught by a local trawler. The proportion of seafood we imported was much lower then, than now and prawn farming was almost non-existent.

Fast forward to the present and prawns are one of the world's most widely traded and consumed seafood products, the majority grown in prawn farms that now cover millions of hectares of coastline across Asia.

In three decades, global production of prawns has increased almost twenty-fold and demand shows no signs of abating.

The market price of imported prawns, once a luxury item, has plummeted and Australians now eat about as many tonnes (about 50,000) of prawns every year, as we do of the ubiquitous pantry staple, tinned tuna.

But our hunger for cheap imported prawns comes at a cost. What most Australians are not aware of when they slurp a quick prawn laksa in their lunchbreak or tuck into a pile of prawns at Christmas, is the horrific price paid in human suffering and environmental destruction in some of the main countries that supply our prawns.

Global boom

Thirty years ago, total global prawn production was less than 400,000 tonnes.¹ In 2012, world prawn production registered a new maximum of 7.7 million tonnes.² In 2012, prawns were the largest single seafood commodity in value terms, accounting for about 15 per cent of the total value of internationally traded fishery products.³ The boom in prawn consumption is a decidedly recent phenomenon, and clearly tied to the explosion of farmed prawn production, especially in Asia. That explosion has had a major impact in the countries that supply Australia's seafood.



Australian consumption

While prawn trawlers have plied the waters around our coastlines since the early 1900s, prawns were never a household staple. But the availability of cheap imports has changed that.

Australians eat more seafood than ever before, doubling our consumption in about four decades. But importation of prawns has increased at a rate that has outstripped growth in total seafood imports, as production increased rapidly in Asia and the cost of importing them declined. Over a period of ten years to 2008, the price per tonne of imported prawns halved.⁴

In the last 15 years, the quantity of prawns imported into Australia has more than doubled, reaching 38,700 tonnes in the year to June 2014, making it our second largest imported seafood category after tuna. In the year to June 2015, Australian consumption of prawns topped out at 49,800 tonnes.⁵

While Australians clearly prefer to buy local, consuming a total of 17,400 tonnes of Australian prawns a year, almost a third of what we produce is exported to markets in China, Japan and the United States, where consumers are willing to pay a higher price for our highly regarded produce.⁶

Two-thirds of the prawns we eat in Australia are imported – almost 40,000 tonnes – almost all of it farmed in China and South East Asia.



MOST
IMPORTS ARE
FROM CHINA
AND SOUTH
EAST ASIA

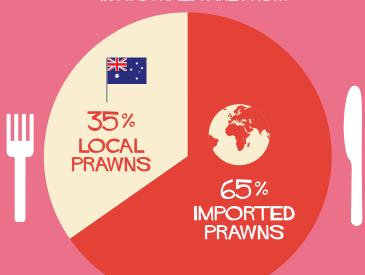
49,800
TONNES
PRAWNS CONSUMED IN AUSTRALIA IN 2015

AUSTRALIAN CONSUMPTION

IMPORTED PRAWN PRICES

50% OFF
PRICE PER TONNE OF
IMPORTED PRAWNS
in 10 years to 2008

WHERE PRAWNS CONSUMED IN AUSTRALIA ARE FROM



72%

AUSTRALIANS

BELIEVE THEY

ARE BUYING

AUSTRALIAN

PRAWNS



PRAWN IMPORTS HAVE
MORE THAN
DOUBLED
IN 15 YEARS



WHERE OUR PRAWNS COME FROM AND WHY YOU SHOULD CARE

Where do our prawns come from?

Australia imports seafood from over 80 countries, and prawns from 21 countries. Vietnam is the largest source of imported prawns in Australia, followed by China and Thailand, with Malaysia also on the rise.

Due to a failure by governments to properly invest in import data collection, the Australian Customs and Border Protection Service does not record details as to which prawn species are imported into the country. However, export data from Australia's top suppliers reveals that two species make up the overwhelming majority of prawns imported to Australia from these countries: vannamei or whiteleg prawns and giant tiger prawns.

Unfortunately, government failure to collect and ensure provision of accurate, necessary information to consumers occurs not only at the borders, but at supermarkets, fish shops, restaurants and takeaways where Australians buy prawns and other seafood. This means that when most Australians are purchasing prawns or other seafood, they're unlikely to be given enough information to make an informed choice about where their seafood comes from, how it was produced, or even what species it is.



Why should we care?

While there is significant variation around the sustainability and ethics of global seafood production generally, the differences between available production systems for prawns are among the most extreme. Some prawn production, in Australia and the countries from which we source our imports, has a very minimal environmental impact and supports local fishing and farming communities.

At the extreme end of the scale, farmed prawn production in some countries that supply the Australian market is characterised by destruction of crucial habitat, introduction of invasive species, pollution, chemical and pharmaceutical use, reliance on destructive fishing for feed, and human rights and labour abuses including slavery and even murder.



Environmental problems

Prawn farming operations are often associated with land degradation, negative impacts on the environment through discharge of sediments, pharmaceuticals and chemicals with waste-water. The introduction of non-native species, spread of disease to the wild, and the sustainability of wild-caught fish used in prawn feeds are also key issues. However, the destruction of crucial mangrove forests is arguably the most severe impact that prawn farming has had.

Coastal prawn farming development is estimated to have contributed to as much as 38% of mangrove forest loss worldwide.

Mangrove loss exposes coastal areas to erosion, flooding and storm damage and removes critical habitat for a large number of marine and terrestrial species. Increased erosion and siltation can destroy important downstream habitats, such as seagrass beds and coral reefs. Mangroves provide breeding and nursery habitat for a substantial proportion of fish and shellfish species. Direct relationships between declining mangroves and declining fish catches have been observed.⁹



'Trash fish' unloaded from a Thai trawler at the port of Khura Buri, Southern Thailand



Labour issues

One way in which industrial fishing vessels and seafood producers keep overheads down and seafood cheap is by exploiting workers.

Many countries' seafood industries, most infamously Australia's biggest seafood supplier, Thailand, are characterised by labour exploitation – although to be clear, Thailand is not the only culprit.

Thailand relies heavily on migrant workers to catch and process fish and prawns. Often migrant workers are not legally registered to work and are therefore vulnerable to abuse and exploitation. The plight of these workers is truly heartrending. Many stories continue to be told about the fate of workers on fishing vessels, from debt bondage to physical abuse, and in extreme cases, murder at sea.

In prawn production, labour abuse occurs in the factories that process prawns and the fishmeal used to feed them, and most notoriously on the vessels used to catch the fish that ends up as prawn feed.



Portrait of Min Min Thein from Myanmar. He is a victim of trafficking and forced labour. He was confined against his will before being forced to work aboard fishing vessels supplying Marine One, a cargo vessel that transported fish to one of Thailand's main export-oriented seafood processing hubs.





VIETNAM

With over 10,133 tonnes of prawns imported into Australia in 2014-2015, Vietnam is Australia's number one source of imported prawns. 10 Australia imported roughly equal quantities of black tiger prawns and vannamei from Vietnam,11 mainly as frozen raw prawns, at a value of approximately \$220 million. 12





Environmental

Vietnam's aquaculture industry has witnessed an unprecedented boom in recent years. Between 2000 and 2010, the surface area dedicated to prawn aquaculture almost doubled and now exceeds 600,000 hectares.13

Prawn farming is the number one cause of mangrove forest loss in this region. Loss is estimated at over 112,000 ha (over 58%) between 1980 and 2000,14 and has resulted in loss of biodiversity, salt intrusion and coastal erosion.¹⁵

Vietnam is the world's largest producer of black tiger prawns, a species native to both South East Asia and Australia, with an output of 300,000 tonnes per year. 16

Until 2010, the majority of Vietnam's prawn production was for black tiger prawns in extensive systems with low density stocking. However, there has since been a move towards intensive systems that are characterised by a range of issues related to pollution of waterways. 17 Like other Asian aquaculture powers, Vietnam has also embraced the non-native vannamei prawn, which has now become the country's most widely produced prawn species.18

The growth in vannamei prawn production and more intensive farming, which may be leading to increased use of chemicals like detergents and antibiotics, and the farming of non-indigenous species is generally associated with threats of disease introductions and transmission as well as reducing biodiversity. 19, 20

Labour

Vietnam has ratified 21 International Labour Organization (ILO) conventions including 5 of 8 core conventions and the Maritime Labour Convention (MLC).21 It is ranked as Tier 2 – watch list – in the 2015 US State Department's Trafficking in Persons Report, but is considered a source country rather than a destination country for trafficked persons, many of whom end up in the fishing industry abroad. According to that report, "[t]he Government of Vietnam does not fully comply with the minimum standards for the elimination of trafficking; however, it is making significant efforts to do so."22



CHINA

In 2014-2015, Australia imported 9,522 tonnes of prawns from China, making it the second largest source of imported prawns and the largest supplier of frozen prawns in 2014-2015, almost all likely to be vannamei.23

China is the world's largest aquaculture prawn producer with an estimated 1.1 million tonne output, 600,000 tonnes of which were estimated to be vannamei prawns in 2013.²⁴ This is lower than the 2012 output, mainly due to typhoons affecting the four provinces where vannamei prawns are produced during the main farming season.

Environmental

In China, vannamei prawns are grown in both brackish and fresh water environments. As is the case for all of Asia, vannamei is non-native and given the nature of water exchanges and the potential for occasional floods, it is likely that the species has escaped. Prawn farming is considered to be one of the direct threats to mangroves in the parts of China where mangroves occur.25,26 While the focus of prawn farming has been on mangroves over the years, it is likely that there are other types of coastal habitat that are of importance and have been lost to aquaculture, including the loss of mud flats which have an important ecological role for many species.27

Waterway pollution may also be a serious issue in some areas as there is little use of treatment for pond farming effluents, very intensive development and an unwillingness by farmers to adopt treatment facilities unless mandated by law.28,29

China is known to produce significant quantities of trash fish; however, whether this is used for prawn feed or not is not known.

Labour

China has ratified 24 International Labour Organisation (ILO) conventions including 4 of 8 core conventions and the Maritime Labour Convention (MLC); but the latter will not enter into force until 2016.30,31



Of all seafood products prawns are the most commonly associated with poor labour practices.





THAILAND

Thailand is one of the world's largest producers of prawns. The country witnessed a phenomenal expansion of vannamei prawn aquaculture in the 2000s. According to the United Nations Food and Agriculture Organisation (FAO), the production of vannamei prawns in Thailand reached its peak in 2011 at 603,227 tonnes before a disease outbreak halved its production.³²

In 2014-2015, Australia imported 7,458 tonnes of prawns from Thailand, making Thailand the second largest exporter of frozen prawns to Australia, behind China. Thailand is also second for imports of prepared and preserved prawns, behind Vietnam.³³

Thailand also exports significant quantities of tiger prawns to Australia – 1,115 tonnes in 2014, making Australia Thailand's third most important market for this species.³⁴

Environmental

Aquaculture is believed to have been a major cause of recent mangrove loss in Thailand. Although estimates vary, as much as 50–65% of Thai mangrove forests are suspected to have been lost due to prawn farm conversion since 1975. In recent years mangrove areas in Thailand have partially recovered through replanting and enforcement of regulations. However, situating prawn ponds in areas behind mangroves can have detrimental effects by blocking fresh water inputs and accumulation of sludge deposits, which are not effectively regulated in Thailand. 35, 36, 37, 38

While Thailand has come some way in reducing localised impacts of prawn farming, the high density of intensive production systems and the siting of farms in highly sensitive habitats mean that the pollution and habitat impacts remain a serious issue.³⁹

Studies in a major prawn farming area, the Bangkapong River in eastern Thailand, have reported invasive vannamei occurrence in the wild, including of mature adults. 40,41 This indicates that a self-sustaining, non-native population is theoretically possible, but the impact on the population of wild native prawns is not known.

Labour

Thailand has ratified 15 ILO conventions but, crucially, has not ratified the Maritime Labour Convention.⁴²

Thailand is listed as Tier 3, of most concern, in the 2015 US State Department Trafficking in Persons Report, with trafficking, forced labour and other abuses directly linked to the fishing industry. The report states that, "the Government of Thailand does not fully comply with the minimum standards for the elimination of trafficking, and is not making significant efforts to do so."43

[See page 17 for more detail on Thailand's labour issues]





ABUSE IN THE THAI SEAFOOD SECTOR

Although by no means the only culprit, Thailand's seafood sector has become internationally notorious for human trafficking, debt bondage, child labour, forced labour and gross human rights abuses. Men and women working throughout the seafood sector globally are exposed to a range of abuses. However, migrant workers in Thailand are among the most vulnerable to exploitation and abuse. The Thai prawn industry employs approximately 700,000 workers, 80 per cent of whom are migrant workers, primarily from Myanmar.

Processing facilities prepare, package and add value to the seafood we consume. Unacceptable abuses in both licensed and unlicensed processing facilities in Thailand include the refusal of pay, charging of excessive fees, confiscation of documents, physical abuse, sexual assault, forcible confinement, debt bondage, trafficking and the use of child labour. 46, 47, 48, 49, 50 In one International Labour Organization (ILO) survey, almost one in ten workers in processing facilities reported being forced to work while a UN body found that 57 per cent of workers in Thailand's main processing hub had experienced forced labour and one third had been trafficked. 51, 52 A 2015 ILO study found that roughly one in five underage migrant workers in Thailand's seafood sector suffer injuries in the workplace – making it more than twice as common compared to other sectors using child labour.53 One third of the child seafood workers in this study did not even attend school.

The situation facing workers in the Thai fishing industry is even more serious.



A United Nations body found that fifty-seven per cent of workers in Thailand's main processing hub had experienced forced labour and one third had been trafficked. Above, migrant fishers begin sorting trash fish aboard *Boonlarp 7* (Andaman Sea).

Two major International Labour Organisation studies have found that around twenty per cent of fishers on Thai vessels exhibit indicators of trafficking, forced or bonded labour. 54,55

One of these studies found that over 40 per cent of fishers surveyed had experienced arbitrary wage deductions, 17 per cent were threatened with violence and roughly one in ten had attempted to escape, been severely beaten or both. A more recent study, involving hundreds of trafficked fishers, found that 80 per cent reported "never feeling free"; over two-thirds had experienced physical or sexual violence; more than half had seen their broker harm someone; and almost a quarter had been forcibly confined or imprisoned.⁵⁶

While most prawns imported to Australia from Thailand are farmed, the prevalence of labour abuse in the fishing industry is of major concern because of the prawn farming industry's reliance on Thai trawlers to provide the fish component of feed for prawn farms.





How overfishing in Thailand drives human rights abuse

Evidence from Thailand suggests that declines in fish stocks over the last half century and rising operational costs - particularly those related to crewing and fuelling fishing vessels - have driven the use of trafficked, forced and bonded labour in the industry.⁵⁷ Increasingly poor yields from Thai territorial waters, caused largely by severe overcapacity within fishing fleets, have exerted outward and downward pressures on vessel operators. Thai fishing boats are now going further out to sea to fish for longer periods of time and resorting to more unsustainable methods. As revenues fall and costs rise, vessel operators have turned to trafficking networks to supply crew and depress expenditure on labour.

In a 2013 ILO study, long-haul fishing vessels which often operate outside of Thailand's exclusive economic zone (EEZ) as many supplying the fishmeal industry do – were found to be five times more likely than short-haul vessels to have crew aboard who had been deceived or coerced into fishing.58

Fundamentally, exploitation flourishes in the Thai fishing industry because of inadequate regulatory frameworks, poor enforcement, and limited pressure from consumer countries to drive genuine reform. Combined with other economic pressures and the quest to produce seafood as cheaply as possibly to win the largest share of existing and emerging markets, these factors shape the prevalence of abuses in Thailand's fishing industry.59





Above: Thai operated fishing boats anchored in Indonesia; Below: Sacks of fishmeal at a fishmeal production facility in Kantang, Thailand.



When you buy cheap prawns, you could be supporting human trafficking and environmental destruction

IN SEARCH OF A BETTER LIFE

Tens of thousands of people from Myanmar, Cambodia, Laos and Indonesia head to Thailand every year for a better life escaping war, violence and poverty. Many pay brokers to help them.

FROM SLAVERY TO PLATE



Migrants are then sold into slavery and put to work aboard Thailand's many fishing boats.



NO PAY &

LITTLE FOOD

Workers on fishing ships

work up to 20 hours a

day in squalid conditions

without adequate food

and water.

MICRANTS

200,000 migrants work aboard Thai fishing vessels, many in slave-like conditions.



MURDERS

Slaves who speak out about their conditions or become ill may be beaten, killed or thrown overboard and left to drown. More than half of trafficking victims have reported witnessing executions at sea.

"SOME WERE SHOT, OTHERS WERE TIED UP WITH STONES AND THROWN INTO THE SEA."



NO ESCAPE

Fish are transferred onto motherships to be taken to shore - meaning slaves can be kept at sea for years at a time.

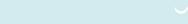


TRASH FISH

Thai trawlers catch of inedible and juvenile fish (trash fish) which is turned into fishmeal.



50% decline in fisheries in the Gulf Thailand since the 1990s mean boats go further and stay away longer.



PRAWN FEED

This fishmeal is sold to prawn farms to feed the prawns that can end up on your plate.



PRAWN PONDS

Industrial prawn farmers overstock ponds, which leads to disease and the need for antibiotics and chemical treatment.





MANGROVES DESTROYED

Fish depend on mangroves to survive, but up to 20% of the world's mangroves and 60% of Thailand's have been destroyed for prawn farms.





RIVER POLLUTION

Dirty effluent and chemicals from the prawn farms are dumped untreated into rivers.

♦₩**•**



CHILD LABOUR

An International Labour
Organisation investigation
found high levels of child
labour in Thailand's
seafood industry, with
many children involved in
dangerous work.



THAILAND
IS ONE OF
THE WORLD'S
BIGGEST PRAWN
PRODUCERS

Ш



ALMOST

1 IN 4 PRAWNS



IMPORTED TO AUSTRALIA COMES FROM THAILAND

CHEAP
PRAWNS
MAY CONTAIN TRACES OF
SLAVERY



THE GOOD NEWS

Prawns can be farmed and fished sustainably and ethically; and consumers can choose to buy those prawns, given the right information.

In Ca Mau province in Vietnam, farmers are using integrated mangrove systems to grow native tiger prawns using a low-intensity farming method that requires no external feed or chemical inputs. Such integrated forestryfishery operations are known as 'silvo-fishery' systems and the model is growing across South East Asia. Similar organic systems of prawn farming are known to be operating in Andra Pradesh, India as well. 60 Because they are mostly family owned farm operations and require no chemical inputs, utilise native species, and rely on naturally available feed, these farming systems have a significantly reduced environmental impact⁶¹ and almost no association with significant labour abuse. Stocking densities are low, however, and so these operations are unable to produce large quantities of prawns at a price that is competitive with intensive systems. Certified organic prawns from Asia are currently available in Europe⁶² but are rare in Australia.

Best practice farms in Australia, that utilise locally manufactured, responsibly-sourced feed, have not displaced significant coastal ecosystems, do not rely on antibiotics or chemicals, and treat waste water adequately, are able to produce significant quantities of prawns for the domestic and export market, and represent a good option for Australian consumers. If new farms follow the example of industry leaders in terms of sustainability, then there is significant scope for the industry to expand.63

Prawn farming in Australia is also less exposed to the worst examples of labour abuse. However, concern remains that some Australian farms may be utilising feed imported from Thailand that may be associated with some of Thailand's worst labour problems.

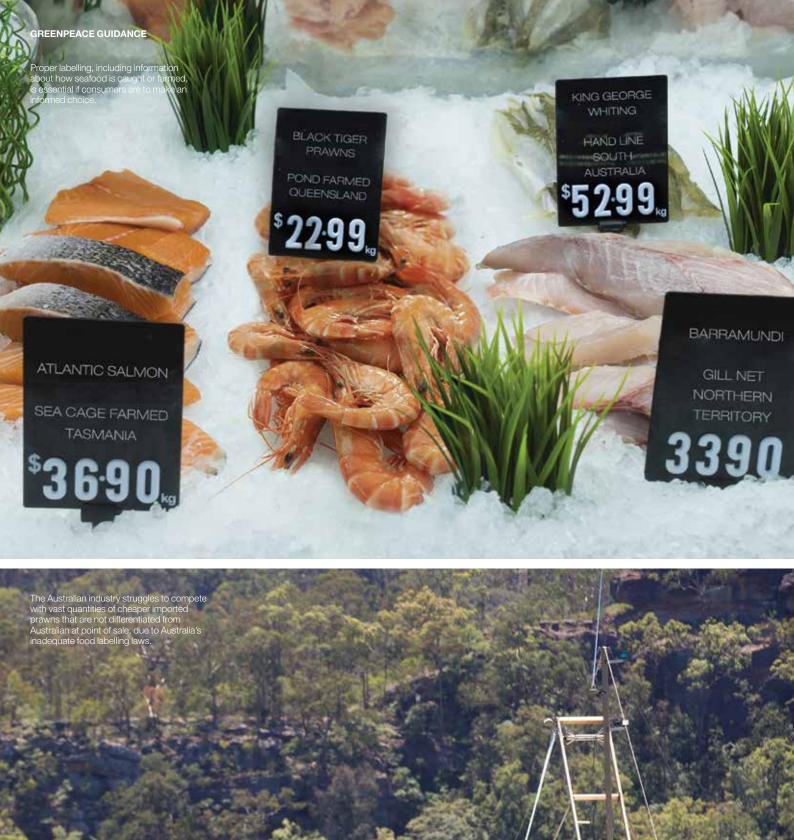


School prawns are caught relatively sustainably in the wild in Australia in lakes and estuaries such as the Hawkesbury and Clarence Rivers, New South Wales.

Prawns, especially school prawns, are also caught relatively sustainably in the wild in Australia in lakes and estuaries such as the Hawkesbury and Clarence Rivers, New South Wales, and Moreton Bay, near Brisbane, Queensland. Best practice offshore trawling, such as that practised by boats targeting banana prawns in the Northern Prawn Fishery, can also produce commercial quantities of prawns responsibly.

Production costs in Australia are much higher than in the countries that export prawns to Australia. The industry struggles to compete with vast quantities of cheaper imported prawns that are not differentiated from Australian prawns in restaurants, clubs and takeaways, where Australians increasingly purchase prawns, due to Australia's inadequate food labelling laws.

'Silvo-fishery' systems . . . are mostly family owned farm operations and require no chemical inputs, utilise native species, and rely on naturally available feed, these farming systems have a significantly reduced environmental impact and almost no association with significant labour abuse.





GREENPEACE CUIDANCE ON SEAFOOD LABELLING, TRACEABILITY AND TRANSPARENCY

In Australia a seafood label at all points of sale, regardless of whether sold fresh, frozen or prepared/cooked in a food service venue, should include:

1 What it is

standardised species common name indicating unique species and/or scientific name;

2 Where it was caught

a. For Australian seafood: the individual Australian state or Commonwealth fishery from which the fish was sourced:

b. For imported seafood: the United Nations Food and Agriculture Organisation (FAO) major fishing area designation identified by name or, where fish are harvested exclusively in national exclusive economic zones (EEZ), the name of the individual country where seafood was harvested; and

3 How it was caught or farmed

specific type of fishing gear used or farm production method according to FAO.

In addition to informative labelling, seafood sellers should ensure that full traceability information is available to the consumer on request, with wholesalers and suppliers responsible for ensuring the information is available to the final retailer. The following information should be readily accessible for all seafood products.

Wild-caught seafood or products made from wildcaught seafood:

- the specific stock or fishery and status of the stock (depleted, lightly-exploited, fully-exploited, over-exploited), according to the scientific body advising the management organisation in charge (e.g. Australian Fisheries Management Authority (AFMA) Resource Assessment Group (RAG), for Australian Commonwealth managed fisheries);
- the name, identification number (Maritime Mobile Service Identity (MMSI) or International Maritime Organization (IMO) number), and flag state of vessels that caught each seafood species contained in a product;
- the date of catch for each species contained in the product;
- the port and country of landing, as well as the country of processing, for each seafood species contained in the product; and
- the name and address of processing facilities employed in the production of each seafood component.

Farmed seafood or products made from farmed seafood:

- name or identification number of farms;
- information about the farming/ranching method: extensive, semi-intensive, intensive;
- information about the sources of feed, including manufacturing facilities – for feed including wild-caught fish components, information about the fleet involved in supplying those components the identification number (MMSI or IMO number) and the flag state of the vessels that caught seafood contained in the product;
- composition of feed (species and agricultural sources) and average conversion ratio;
- name and address of processing facilities that have handled the product; and
- chemical products (pharmaceuticals, fertilisers, fungicides etc.) that have been used in the production process.

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