

## Where Our Fish Comes From

*Or, what happens to a fishery without expert management.*

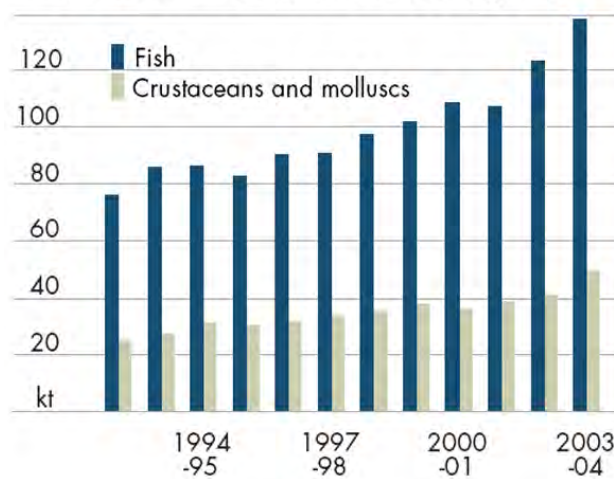
Walter Starck

### Some facts and figures

Hardly a week passes without some media report on new findings about the health benefits of seafood or dire threats to fisheries from over-fishing. On the one hand government is encouraging us to eat more seafood while at the same time they tell us our fisheries are being over-exploited and further catch restrictions are needed. Australia has the largest fishery zone per capita and lowest harvest rate of any developed nation. This difference isn't small either. Commonly it is over 10 times and in some cases it is over 100 times larger and lower.

Currently 70% of seafood consumed in Australia is imported and a CSIRO study projects a 400% increase in consumption over the next one and a-half decades. The largest single source of these imports is Thailand which supplies 25% of the total.

**Volume of Australian seafood imports**



From Tedesco and Szakiel - ABARE Research Report 06.9

- 70% of seafood consumption is imported.
- Thailand and N.Z. are biggest suppliers.

Australia's fishery zone (EEZ) is over 20 times larger than that of Thailand and the shelf area, which provides most of the catch, is 10 times larger.



Australian and Thai EEZ areas

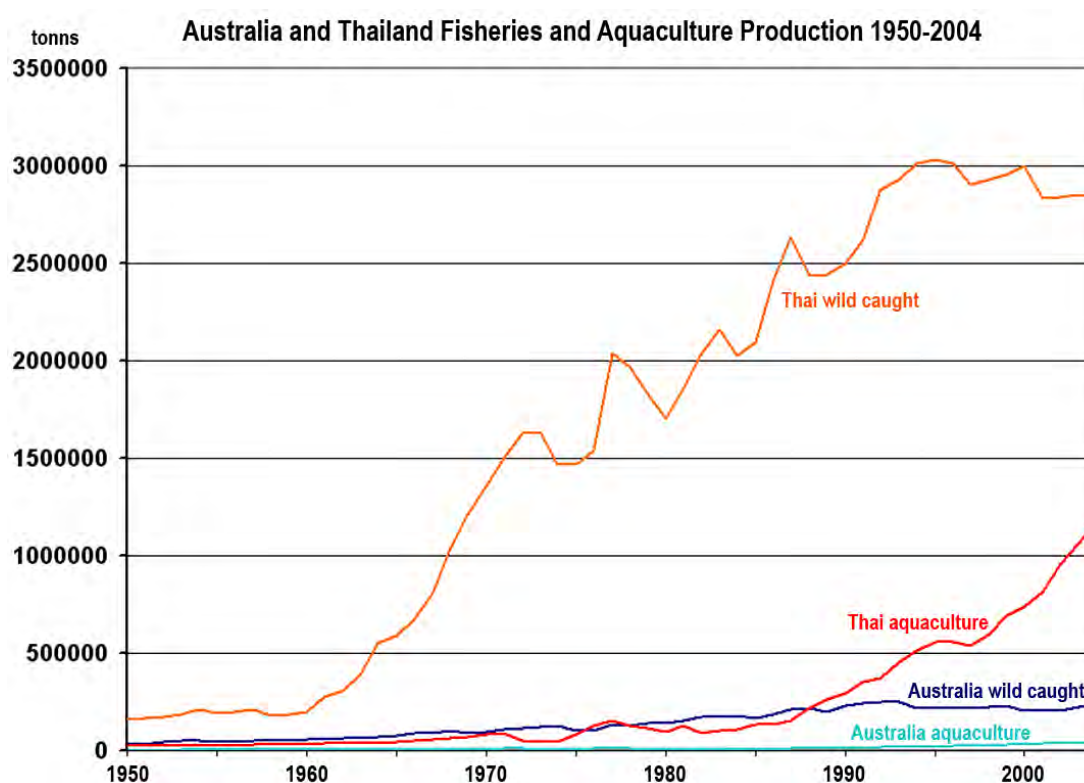
In 2004 wild caught Thai fishery production was 11 times larger than Australia's and aquaculture production was 30 times greater. When the size of fishing zones is taken into account the discrepancy is astounding. On an area basis the Thai wild caught production in 2004 was 250 times greater than that of Australia.

#### Thailand and Australia Fisheries Comparison

Thailand has:

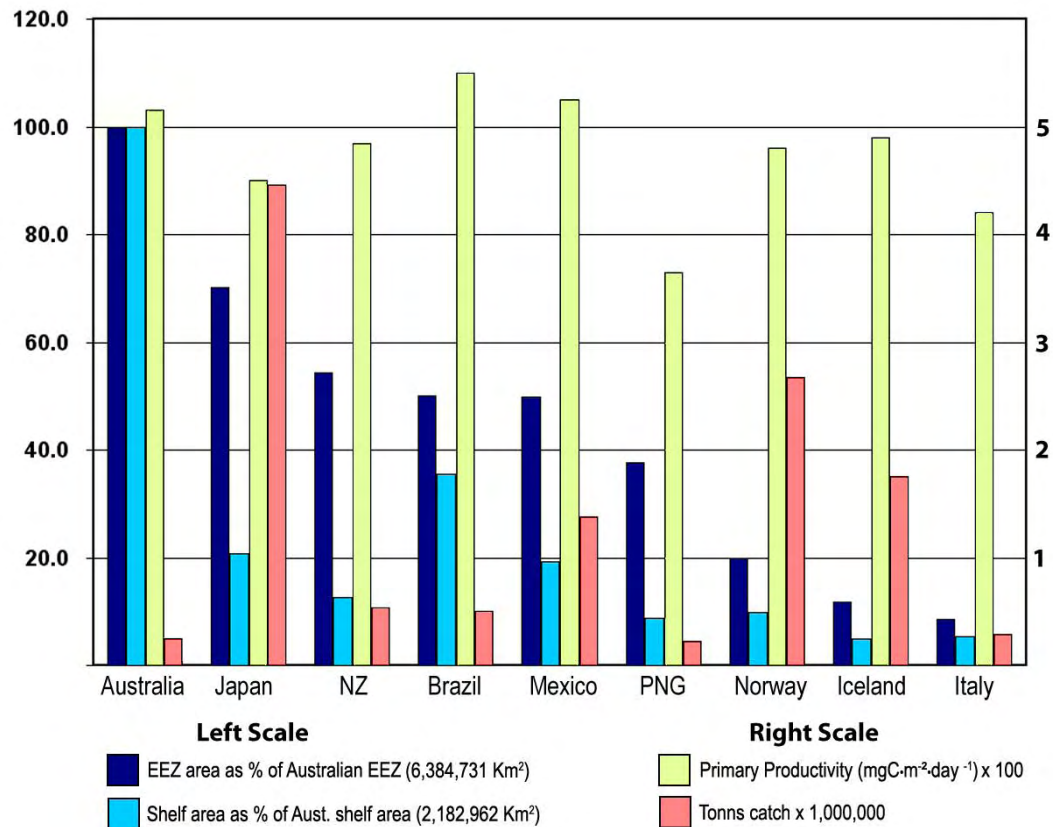
- $\frac{1}{10}$  the shelf area of Australia
- $\frac{1}{20}$  the EEZ area of Australia
- 11 times more wild caught production
- 30 times larger aquaculture production
- 250 times greater harvest rate

A comparison of Australian and Thai fisheries over time is instructive as well.

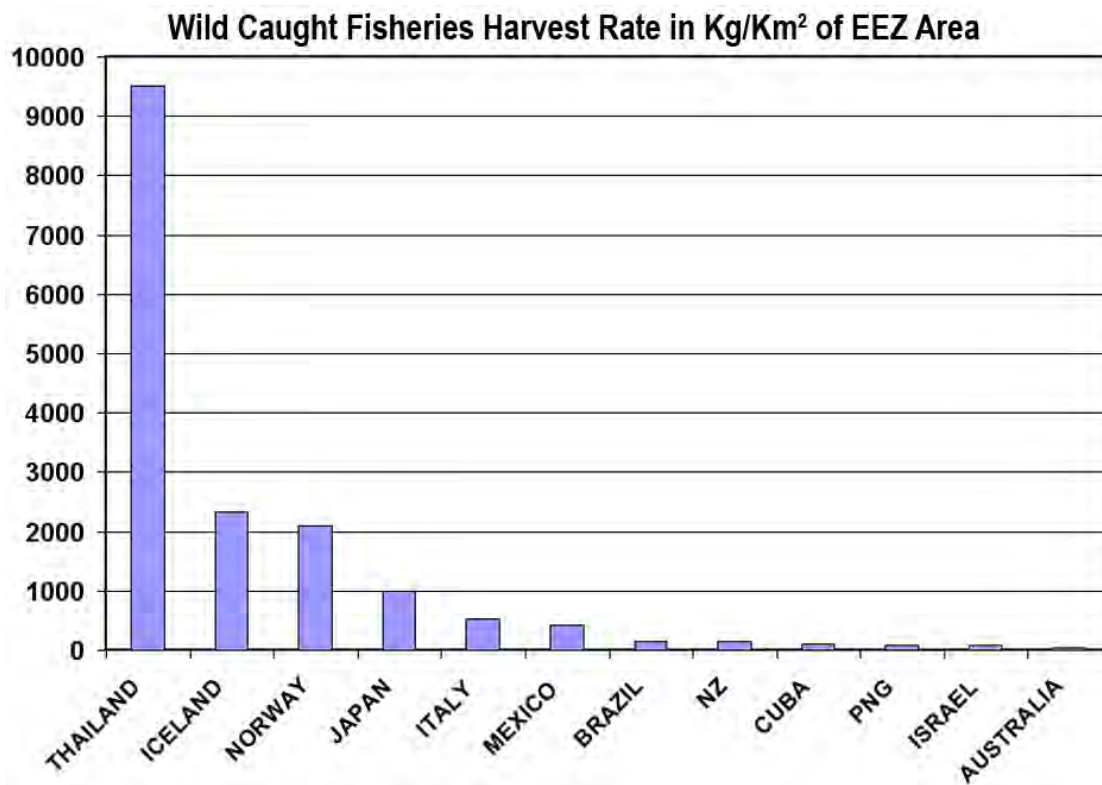


While proclaiming themselves the best fishery management in the world Australian bureaucrats have tried to explain away our extraordinarily low harvest by attributing it to the low natural productivity of our waters. This is blatantly untrue and claiming it can only be either incompetence if actually believed or deliberate dishonesty if not. Primary productivity of oceanic waters is continuously monitored on a global basis by satellite measurement of chlorophyll concentration. It of course varies with time and place but average values have been calculated for every nation's EEZ and are readily accessible online at [www.seaaroundus.org/eez/eez.aspx](http://www.seaaroundus.org/eez/eez.aspx).

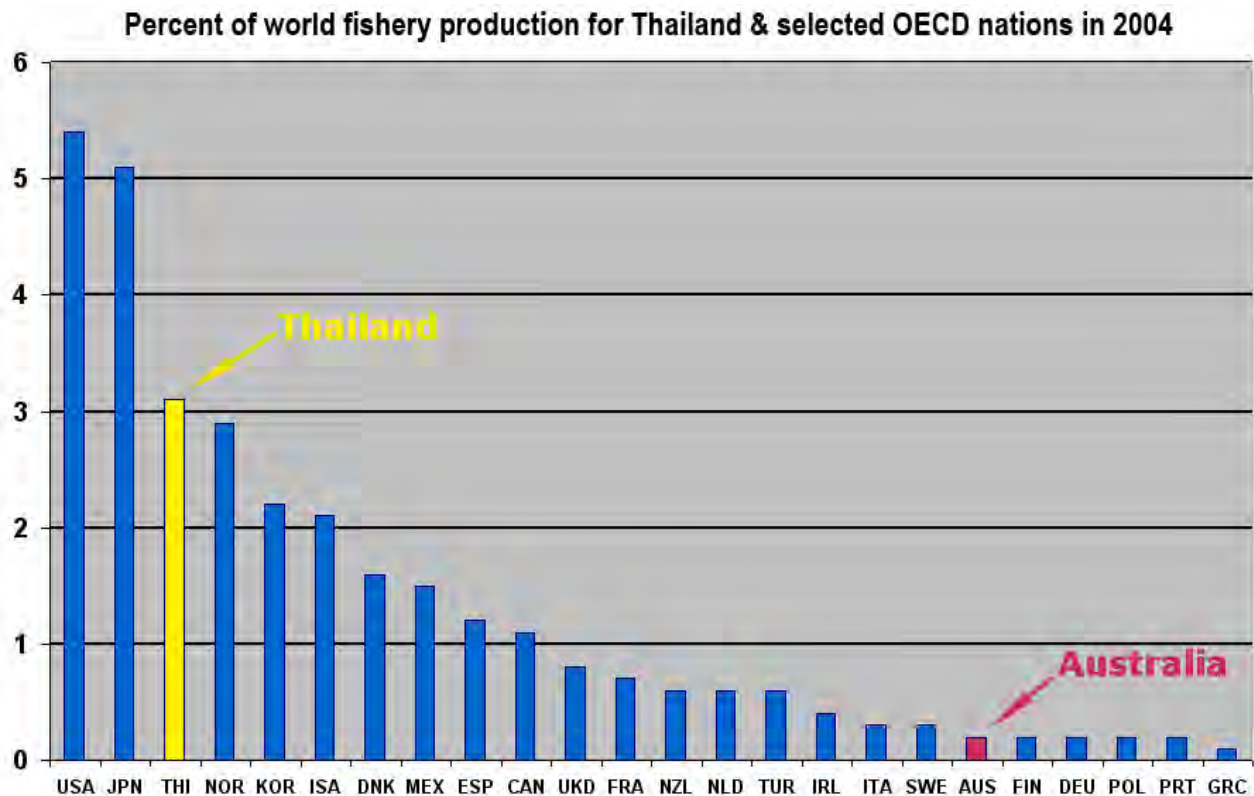
Primary productivity is measured in mg of carbon fixed by photosynthesis per square meter in a day. The figure for Thai waters is 702mg. For Australia it is about one-quarter less at 513mg. This is not a large difference and in reality it is much smaller if one considers only the highly productive shelf areas where most fishery production comes from. Comparison of Australia with a sample of other nations whose primary productivity is close to or less than Australia's is also revealing.



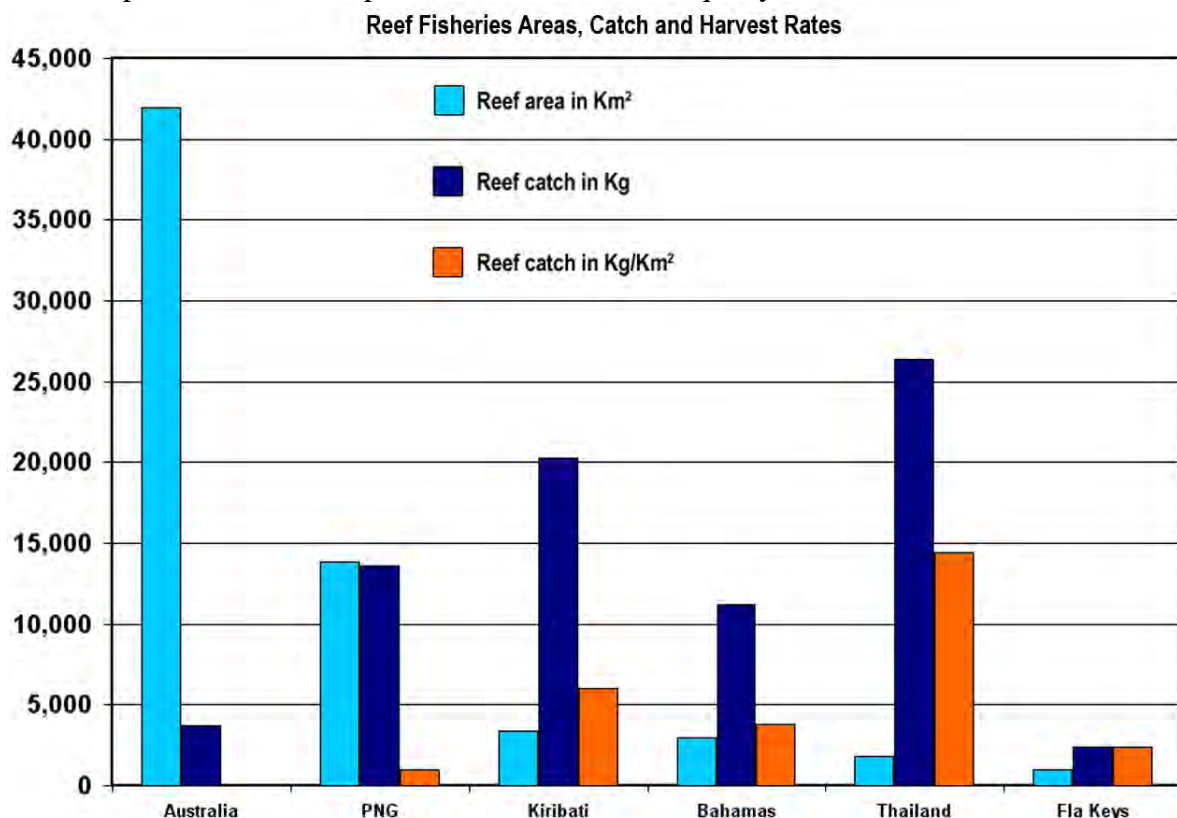
A comparison of the harvest rate per Km<sup>2</sup> is even worse.



Compared to a broad sample of OECD countries the disparity remains. Total Australian production is half that of New Zealand or Netherlands and on a par with Finland, Poland, and Germany.



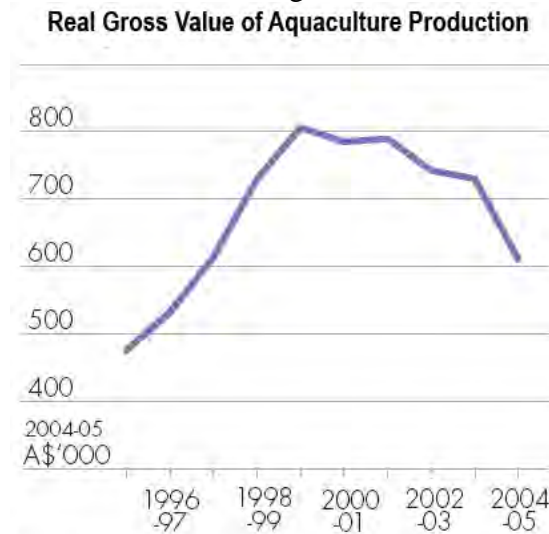
Thailand's entire fishery zone is actually only about 85% the size of the Great Barrier Reef park area. Their area of coral reef however is less than  $\frac{1}{20}$  that of the GBR. Their catch of reef dwelling groupers and snappers (*e.g.* coral trout and emperor) is similar to the GBR and their catch of mackerel is much larger. In addition to reef fish however their total catch from the same area is about 1000 times greater! A comparison with a sample of other reef areas is equally informative.



The reef catch rate for Australia's GBR fishery is too small to be visible on a scale necessary to accommodate the rates common elsewhere. It is less than 1% of the rate widely considered sustainable for reef fisheries. The actual figure is 9 Kg/Km<sup>2</sup>/year.



Australian aquaculture development is equally puny. While it is booming elsewhere all over the world ours appears to be the only in the world with declining value.



From Tedesco and Szakiel, 2006 - ABARE Research report 06.9

Thai aquaculture alone currently produces over four times the total Australian wild caught and aquaculture production combined.

Our bureaucrats have attributed our feeble aquaculture development to our higher costs. This is a deliberately misleading half-truth. Our labour, land, equipment, power and feeding costs are clearly not generally higher than the EU, U.S. or Japan where aquaculture is growing healthily. All our higher costs come from the morass of ill-conceived regulatory demands and restrictions imposed on the industry. The costs, restrictions, delays and uncertainties are so bad in Queensland that there have reportedly been no new applications for aquaculture in the past three years and one of the largest companies there has recently begun to shift offshore.

An article in the *Townsville Bulletin* on 3 January 2007 reported: "GFB Fisheries is preparing to establish grow-out facilities in the Marshall Islands - a central Pacific nation - because of what's described as the regulatory quagmire in Queensland. GFB spokesman Carey Ramm states government approvals for aquaculture are taking three to five years and are far too onerous for any small scale start-up venture. He observes, "...it's probably one of the few industries where there's more regulators than people employed." A government spokesman agrees approval processes are complex but says it's for good reason - to maintain sustainability of the industry and the environment." The idea that making an industry economically unviable is maintaining its "sustainability" is reminiscent of the dropping of napalm on villages to "save" them from the Viet Cong

No matter how it is figured Australian fisheries production is pathetically low and claims of a widespread threat of over-fishing are simply absurd. The so-called scientific support for such claims is not based on any real world evidence but solely on theories and models designed and adjusted to produce results that accord with preconceived notions. Management decisions are not being driven by science but by popular opinion, bureaucratic empire building, political pandering for the green vote and notions of environmental correctness. The outcome is a strange acceptance of the double think delusion that selling non-renewable resources to pay for the import of a renewable one we could readily produce ourselves is sustainability and good management.

### **A reality check**

Although the facts and figures are overwhelming there is nothing like the impact and insight of direct experience. Recently I had the opportunity of having an intensive two week look at the Thai fishing industry. Despite a fore-knowledge of the above statistics the actuality was still a real eye opener. My

visit enjoyed the huge benefit of two expert guides. Bill Izard is the last trawlerman still fishing the Cairns area. All of the others have been put out of business by over-regulation. He remains as the last man standing only because his niche market specialty of providing tiger prawn broodstock for aquaculture only requires catches of a few dozen prawns at a time.

Bill spent several years living in Thailand as a teenager and over the ensuing years has returned many times for visits. His wife Li is Thai and for many years she headed a management team at one of Thailand's largest (20,000 employees) fishing and aquaculture companies. Her job entailed oversight and reporting to head office on the company's many, diverse and scattered operations. With Bill and Li's depth of knowledge and contacts I was able to gain an overview of Thai fishing that would have taken months or even years to independently discover. The following are some highlights from my impressions.

### **The fleet**

Every port and coastal waterway in Thailand seems to teem with fishing boats. Where there is no sheltered water there are frequently long wharves serving fishing boats and where even these are absent fleets of small boats operate from open beaches. The diversity of vessel types is remarkable. They range from small dory type craft a few meters long up to reefer ships with a capacity of as much as 3000 tonnes. In total the Thai fishing fleet comprises an estimated 60,000 vessels. Of these some 17,000 are registered and about 25,000 more are supposed to be registered but haven't done so. In addition there are estimated to be another 18,000 small, so called "unlighted", vessels that do not require registration.

Every area also seems to have its own fishing specialty or variation with an attendant type of gear and vessels. The following is but a sample of some common types.



Longtail boat

Thailand is famous for its longtail boats. These are generally small flat bottom dory or shallow-V longboat hulls 5 to 10 meters in length. They are propelled and steered by an engine mounted above the stern in a gimbal. It directly drives a long propeller shaft. They can be petrol or diesel and range from a few Kw to over 200 in power. The smaller ones are usually of the lawnmower type while the medium to larger ones are second-hand automotive ones. Longtail boats are used for a variety of fishing purposes including push and gill nets, hand lining and bottom longlining, squid jigging, trap fishing, stake net tending and shellfish harvesting. Although they are a bit awkward to handle they are cheap, simple, efficient and easy to maintain, virtues that widely describe the Thai fishing industry in general.



At Rayong we talked to this young fisherman who only a few months before had acquired his own longtail boat. He regularly went out for 4 days at a time fishing for squid some 30 Km offshore. With hard work, in a few years he will own a bigger boat and have a crew to help him. Twenty five years ago you could do that here, but not anymore. Entering our fishery now means buying a license and a quota for perhaps \$100,000 if you can find one. To support that and meet all the equipment requirements would require a vessel costing a minimum of that amount again. Even then you wouldn't be able to operate without a masters ticket. That requires several years sea time which you can't get because nobody is hiring in a declining industry where every year more and more fishermen are giving up the struggle to remain viable in the face of increasing regulatory costs and restrictions.

Larger vessels of about 15m and more are of a variety of types to suit different fishing methods but mostly they follow the general layout of an aft wheelhouse and crew quarters above deck with the forward half to two-thirds of the hull devoted to an ice-filled hold. In vessels over about 20 or 25 meters the wheelhouse and captain's quarters are on a top story with a galley at deck level and with a half-height crawl space in between that is the crew's sleeping quarters.

Electronics are generally absent save for radio communication which is normal for all vessels that work offshore, even the longtails. Hydraulics are also lacking. For heavy hauling capstans driven by power take-off from the main engine are the norm. On the larger vessels three or four capstans with a man at each are used to control swing, tilt and hoist for operating deck cranes to handle heavy loads. Hand-to-hand relay chains take care of all the smaller stuff.



Purse seiner

Several types of vessels are particularly impressive. Purse seiners with massive piles of net on deck are common. They carry large crews and in port they seem to spend hours pulling the massive net over a boom to repair and stack it carefully so that it can be smoothly deployed.



Push netter



Push net in use.

Push net boats are a unique Thai development. They are an enlarged version of the small traditional hand seines pushed with two sticks while wading, only in this case they are much bigger and pushed by a motor vessel. The push poles range in size from 8-10m long bamboo poles to huge steel pipes 30cm in diameter and 40m long. Push nets of different sizes are used in depths up to about 20m. They offer the advantage of not having the vessel precede the net and scare away the fish as tends to be the case with a conventional trawl in shallow water.

The largest wooden trawlers are also impressive. These are big beamy vessels up to 40 or 45m in length with massive hold capacity. Such ark-like vessels somehow seem to hark back to the days of iron men and wooden ships.

Equally impressive are the much larger refrigerated vessels. These are modern steel ships with refrigerated hold capacities of 1000 to 3000 tonnes. As modern ships go they are modest but what they represent in term of fishing is awesome. About 30 such vessels operate out of the port of Bangkok alone. They serve as carriers for fishing operations in various distant overseas locations. One of the larger ones could carry a whole year's commercial fishing catch from the GBR.





Large reefer

Some are licensed by Indonesia to operate on their side of the Arafura Sea off northern Australia. They bring the catch of fleets of smaller vessels that do the actual fishing. Quite probably some of these smaller vessels are among the 13,000 reported sightings of illegal fishing vessels reported last year in our northern waters. What can we do about it? The truth is, very little. Despite all of the righteous bluster the reality is that under the International Law of the Sea Treaty by which we claim our EEZ rights the use of deadly force is prohibited and our own exclusive rights can be challenged if we ourselves do not make use of the resource. Use it or lose it is the rule and if challenged before the World Court our management rationale and usage would be difficult indeed to defend.



New vessel under construction

Almost all of the Thai fishing fleet is of wood construction. In addition to the large reefer vessels the only notable exception is the tuna longliners that operate right across the Indian Ocean. Virtually all of the domestic fishing fleet is of wood construction and uses ice refrigeration. Use of ice in wooden hulls makes rot an endemic problem. Their solution is simply to cut out and rebuild as needed. It is not uncommon to see rebuilding where the entire hull (including the keel) forward of the engine room is replaced or where almost any sized portion of any part of a vessel is replaced and spliced into whatever portion remains useable.

There are no regulations for construction, design or safety equipment for small fishing vessels and no crew certification. Accident statistics are not available but a UN report on safety of small fishing vessels in India, Maldives, Sri Lanka and Thailand states: "A long and successful tradition with longtail boats and an accident-free performance seems to indicate that no immediate improvement is necessary."

## The ports

Thailand has some 16 main fishing ports and there are numerous smaller ports, wharves and beaches that also support fishing. Most unloading occurs in the pre-dawn and early morning hours when the wharves are a hive of activity. In addition to intense bustle involved in unloading vessels there is usually a large secondary activity involved with sorting and grading of catch as well as loading it into trucks for transport elsewhere. By afternoon all is quiet and blasted to cleanliness with fire hoses.



Unloading at the wharves



Beaches serve as fishing ports as well.

At privately owned wharves it is not unusual to see an elegant (*i.e.* million dollar) home of the owner immediately adjacent to the wharf with dilapidated tin sheds and fish sun-drying on racks on either side. The niceties of zoning do not appear to be of concern. I suppose to the owners it smells like prosperity and a lot better than no fish on the racks. To me it smelled like fish mixed with a strong scent of freedom.

## The catch

For the sake of discussion let's accept the claim that Australia's current fisheries harvest rate is pushing the limits of sustainability and let's also generously allow a 50% higher harvest rate for the 37% greater primary productivity of Thai waters. On this basis Thai fisheries were overfished by 4 times (*i.e.* 400%) in 1950. by 1963 this had increased to 10 times (1000%) and for the past quarter-century it has remained above 50 times (5000%). By any standard of fisheries management Thai fisheries are overfished at an unbelievable level but even more unbelievably, they have not collapsed.





A catch of scads from a purse seiner

What has happened it that they have changed. The bulk of the catch is now made up of small, fast growing plankton feeders. Anchovies, sardines, scads, Indian mackerel and squid dominate in the pelagic catch while so-called trash fish make up most of the demersal catch. However, our notion of “trash” or by-catch is misleading in that in Thailand all of it is processed directly or indirectly (via fish meal) into much higher value products. Environmentally correct fisheries managers pooh-pooh this as fishing down the food chain but the reality is that each step down the chain provides an order of magnitude increase in biomass and an even larger increase in sustainable harvest. In Thailand no species have been lost but their relative abundance has changed.



The Thai reef fish catch is still as large as that of the GBR

Most knowledgeable observers of the Thai fishery and many in it would agree that with fewer boats the improved catch per boat would make for an economically more efficient industry. However with most of the nation’s animal protein supplied by fisheries and as many as 10 million people dependent on them, cutting back on the industry to improve profits is difficult to justify and would be even more difficult to implement. Although the current harvest level may not be optimal there is no reason to believe it is not sustainable as it has in fact maintained near present levels for the past 20 years.

## Aquaculture



Satellite view of modern high intensity aquaculture ponds near Rayong

A 2006 sustainability impact assessment of proposed WTO negotiations reports current Thai aquaculture production at 1.2 million tonnes coming from 398,000 farms comprising 1.4 million Ha of ponds. In the absence of all the regulations that have strangled our industry the Thai industry has thrived with only quite manageable problems resulting. Disease problems have been scattered and short term while the net effect on water quality and coastal ecosystems has been enrichment. The waterways serving the extensive ponds support a rich secondary aquaculture and fishery that thrives on the nutrients produced by the ponds. Our approach in contrast imposes huge costs and difficulties to prevent this. An aquaculture operation here is not so much the rearing of aquatic livestock as it is the running of a water purification plant which is full of animals. Ironically, the result is an environmental footprint several times larger for the same production and impoverishment of adjacent waters by removal of nutrients rather than enhancing them.

To me one of the most interesting forms of Thai aquaculture I saw was one you hear the least about. This is the long established low density, low input, mixed species coastal pond aquaculture. No feeding, fertilization, stocking or pumping are used. These are provided by nature at no cost. Effective functioning comes from the long narrow shape of the ponds, the bottom contours and control of tidal flushing by head-gates. They produce a mix of shellfish, prawns, crabs and fish. While the yield is not high compared to modern high density farms costs and problems are minimal. Their profitability is attested by owners houses easily worth several hundred thousand dollars next to many such ponds.

Much hand wringing has occurred over the destruction of mangroves by aquaculture development but in reality the impact is generally not so destructive as is portrayed. Although mangroves can be highly productive and provide nursery areas important to coastal fisheries not all mangroves are either highly productive or serve as nurseries for anything other than sandflies. The rich productive ones are those inundated by normal tides but there are also large areas of coastal salt plain only inundated for a few



hours in a year by king tides. Such areas support a few sparse mangroves or none at all and are too salt affected to support normal terrestrial plants. They are wetlands in name only. Much of the time they are bone dry. Their biodiversity and productivity would make most desert areas seem rich in comparison. They are however, ideal for pond aquaculture. Much of the “mangroves” cleared for aquaculture have been of this type. and their conversion from the least productive land to the most productive should only be commended.



Freshwater aquaculture prawns in a Bangkok market



## Markets

There are numerous kinds of fish markets in Thailand. They include some impressively large centralized ones in a number of different areas. The main Bangkok market is huge. It consists of several giant sheds each the size of two football fields set end to end. Between midnight and dawn each day hundreds of large trucks deliver fish and shellfish from the wharves and aquaculture farms for sorting, grading and auctioning to processors, retailers and smaller markets. We made a 4 a.m. visit one morning. Several thousand people were engaged in an intense bustle of activity loading, unloading and handling perhaps a thousand tonnes of seafood.





Bangkok markets at 4 a.m.

Immersed in the sea of action I was getting great video and photo close-ups but nothing to convey the immense scale of the activity. The only elevation I could find was a stack of large plastic bins so I clambered up and stood atop them. Half expecting some outraged official to start yelling if not a SWAT squad to arrive I got my pictures. As usual there, nobody was concerned.



Muddies trussed for market.

In the big Bangkok market one huge shed is devoted to wild catch, another to aquaculture and a third one to retailing. This last one offers a vast variety of live, iced and dried seafood from both wild caught and cultured production. Virtually nothing seems to be considered inedible. Among the more exotic offerings were live mantis shrimps, fresh horseshoe crabs and rosettes of dried slices from stingray wings.





Dried seafood comes in a wide variety.  
At lower centre are rosettes of dried stingray wings

### Processing

Seafood processing takes place at every level of hygiene and technology from the most primitive to the most sophisticated. On the more primitive end sun drying is a major technique. Squid, anchovies and prawns in particular are dried in large quantities. Flies were remarkably scarce around product drying in the open air.

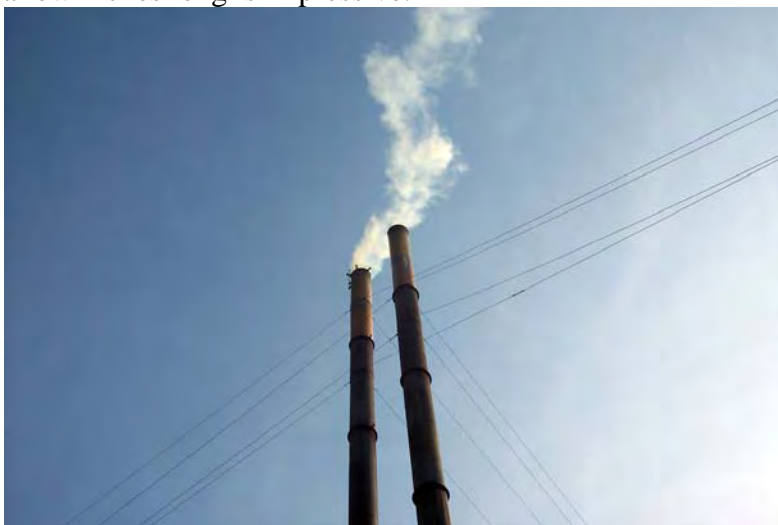


Squid drying

One of the more interesting dried products is called *kapi*. It is of granular past consistency and varies in colour from pinkish grey through brown, maroon and purple as well as red and orange. It is displayed in large egg-shaped mounds from which it is scooped out and sold by the gram. It has a pungent salt taste and odor, not very appealing in itself but it is a key flavouring ingredient in many dishes. It is a staple throughout S.E. Asia where it goes under different names in various countries. In Malaysia it is known as *belacan*, *terasi* in Indonesia and *bagoong alamang* in the Philippines. Elsewhere, in pasteurized and bottled form, it is available in Asian food stores as shrimp paste. What it actually is, is a salted and fermented paste made of dried shrimp. However, these are not what we call prawns but rather a mosquito-sized planktonic species that forms dense shoals in mangrove waterways where they are caught

by fine mesh push nets. The paste consistency is achieved by grinding with mortar and pestle. Talk about fishing down the food chain, this is gourmet plankton feeding.

Another interesting form of processing is the filleting of tiny scads, gudgeons and other fishes that is often done in the retail markets. This seems to mostly be done by women and their speed and dexterity in filleting tiny fish only a few inches long is impressive.



Fishmeal factories are conspicuous by their smokestacks and smell.



Offal and “trash fish” = fishmeal = high value aquaculture

A major form of processing is the many fish meal factories that process all of the offal and what we would call by-catch or trash fish into high protein meal. This is a major activity in itself and the product is an essential supply to an even larger animal feed industry which in turn underpins the still larger aquaculture production. On a global scale the rapidly growing demand from aquaculture is pressing the limit of supply for fish meal and potential for increased production is limited. With no fish meal production of our own Australian aquaculture as well as poultry and pig farming will likely face significant availability and cost pressures in this area in the not too distant future.

At the high end Thai fish processing is a global leader. They are the world’s largest exporter of canned tuna and Thai processing plants produce a wide variety of other quality seafood products meeting the highest global standards.

Through one of Bill’s connections we had the opportunity of visiting one of the modern high tech processors. This one was producing *surimi* for export to Japan, Korea and the EU.





Surimi processing plant

Surimi is a fish mince product made from white meat fish mixed with additives such as starch, egg white, salt, vegetable oil, sorbitol, sugar, soy protein, and seasonings. It is used to make fish cakes, sticks and sausages as well as a variety of artificial crab, shrimp, shellfish products. In this case the product was exported in large frozen blocks to be used in further processing into the final consumer product.

The extremely high standard of hygiene and quality control of the plant were impressive. This included their own well equipped laboratory for chemical/ bacteriological monitoring as well as a final x-ray inspection of every block for any foreign particle contamination. Also impressive was their own treatment facility where waste water was treated and recycled. In addition they had their own ancillary fish meal plant and feed mill where all of the offal was processed not just into meal but into fully formulated animal food.

Their workers were mostly from Myanmar and the company provided their accommodation and partial subsidization of their meals. After two years most would go home with enough money to start their own small business.

Perhaps most remarkable of all was the fact that all of this was based on utilization of what we throw away. The fish species used were primarily a mix of grinders, pony fish and threadfin bream. We consider all to be trash species in trawler by-catch.

### **Retailing**

In Thailand there are no regulations on who, where, or how fish may be sold. Amazingly, in view of the numerous regulations we find necessary, there are no apparent adverse consequences. The spectrum of fish retailing ranges from simple marketplace stalls to ultra-chick department store delis alongside shops offering the wares of Louis Vuitton and Gucci. One of the most pleasant, and indeed elegant, retail setting we encountered was a simple fishing village near Rayong on the eastern side of the Gulf. It was situated beneath casuarinas and palms in the midst of a popular tourist beach bordering a busy coastal road. A small fleet of inboard dories operated from the beach. Dwellings and shops were simple shelters under the trees and a multipurpose concrete sidewalk served for pedestrian access, clearing and repairing nets, sorting and selling catch as well as sidewalk dining. In clean, cool idyllic surrounds you could buy fresh uncooked seafood to take home or order delicious dishes to eat as a takeaway or at sidewalk tables. In the absence of any permits, certificates or inspectors it all seemed to work very well and with a great atmosphere. The lack of regulation doesn't seem to have hurt business either. Their tourism industry is twice the size as our own.

In the more modern retail sector the Tesco Lotus department store/supermarket chain has numerous stores all over the country. The seafood section in any of their stores would make those in Coles or Wollies look anemic in comparison.

At the up-market extreme was an extensive seafood section in Bangkok's Siam Paragon shopping centre.



Frozen prawns, cooked or uncooked are the same price. 390 Baht is about AUD \$14.50

Amid the huge range of fresh and frozen seafood two packets of frozen prawns caught my eye. Both were first grade attractively packaged and identically priced. One was raw prawns, the other cooked ones. This bemused me. After much lobbying by the Australian prawn industry over concerns about white spot virus, Australian bans on the import of raw prawns have now been put in place. The fact that there has never been an outbreak of whitespot virus attributed to frozen prawns anywhere in the world despite a global trade of billions of prawns clearly means any risk is remote. All the Australian industry has achieved by pressing for the ban is to hand the bureaucrats another stick with which to beat them about their own head while importers and consumers will simply switch to the cooked product.



Seafood snacks



A fascinating aspect of the seafood retail market in Thailand is the large variety of colourfully packaged seafood based snack food available everywhere. Various crunchy, chewy, flakes, chips and sticks in a choice of seasonings are on offer. Some are entirely dried seafood others combine it with soya, tapioca or other vegetable ingredients. I tried a few and found them not bad but not immediately morish either. They would seem to be an acquired taste. Judging from the ingredients their nutritional value would appear high. For any who might like to taste for themselves some of these products are available here in Asian food shops.

### **The fisherfolk**

*Fish Farming International, February 2006* reports Thailand has 1.35 million fishers, with 10m people dependant on the sector (out of a total population of 65m). Australian Bureau of Statistics data for 2001 (the most recent available) puts Australian fisheries, aquaculture and processing employment at just under 20,000. Indications are that the 2006 figures will be even lower when they become available later this year.



Purse seiner crew washing up after unloading.

During my two week visit every day was spent visiting different facets of the fishing industry. In total we visited several dozens of operations. At most of them we were the only foreigners present. In all I shot some 1200 still images and 7 hours of video. Not once did we encounter any objection, demand for permits, or indeed any indication of concern or displeasure. On the contrary, most people seemed genuinely pleased at our interest. The complete lack of suspicion and officiousness was refreshing.



Women net mending on a wharf

The energy and enthusiasm of workers seen on the boats and wharves as well as in the markets and factories was both pleasing and a bit worrying in view of the trudging disinterest so often seen in our own workplaces. Smoking, drinking, and obesity were noticeably rare. Begging was entirely absent.



Dried seafood seller in Bangkok market

Why is it that people with so much less material wealth than we have can be so pleasant and happy with life while so many of us seem so bored or displeased? I don't pretend to have an answer but suspect it's probably a combination of factors. Diet may be one. Numerous studies now indicate the importance of the omega 3 fatty acids in seafood to neural development and function. In particular a diet high in seafood has been shown to be of significant benefit to cognitive ability and in reducing aggression, anxiety and depression. A lack of obsession over rules and controls may also be a big help. Certainly the whole concern over obeying, breaking and enforcing them is eliminated when they don't exist. As Bill expressed it, the only rule here is; there aren't any! Their Buddhist philosophy of compassion and non-attachment would contribute as well.

Whether it's diet, psyche or philosophy the result is a good one and could be valuable to learn from if we are not too arrogant to do so.

### **The take home lesson**

The Thai fishing industry provides several important lessons for our own. One is that claims of widespread overfishing at our levels of harvest are beyond absurd. Another is that fisheries are robust resources. There is little risk of irreversible damage from dealing with problems when they actually develop rather than invoking precautionary measures to avoid every hypothetical problem before it occurs. A third is that bad management can be even worse than no management at all.

Our world is changing at an unprecedented pace. Advanced technology, manufacturing, skills and education are no longer the exclusive province of a few advanced nations. Significant adjustments will be necessary for the already developed economies to maintain the standard of living they have enjoyed in the face of formidable market competition from newly developing ones.

Maintaining our standard of living will require effective use of the competitive advantages we do possess. The popular notion that we can somehow do this by being smarter than others is *prima facie* evidence we are not. Our one clear advantage is a wealth of natural resources and high quality food producing ability. Handicapping our renewable resource sector with a morass of ill-conceived and unnecessary regulations is beyond stupidity. While no one would suggest that we push our fisheries to the limit or do away with any restraint it is clear that our overall harvest could be increased several fold and still remain the lowest in the world.

Environmentalism has become the religion of choice for trendy new age urbanites. Our resource administrators have become high priests of the new green religion and researchers its prophets. Chanting



mantras of *sustainability*, *biodiversity* and *precaution* they have ritually sacrificed our fisheries to appease the green god Gaia while aquaculture has been strangled at birth to exorcise the demons of private profit and detectable effects upon nature. Unfortunately our leaders have either swallowed this bullshit themselves or if they know better are taking the political cheap shop of pandering to it.

Trying to argue every issue, change the climate of opinion and undo the regulatory morass we have erected seems impossible but there is a relatively easy solution that is fully in accord with good management practice, good science and democratic principles. Only two small changes are required. One would be to set management and research budgets in accord with the production and profitability of the industry. That is, make the manager's own funding depend directly upon the results of their management. The other would be to provide for genuine industry input into management decision making in place of the phony charade of consultation with government funded "peak bodies" that are nothing more than handbags for the bureaucracy purchased by government for the sake of appearance.

### **Confirmation**

If any doubt might have existed regarding my accusation that Australian fishery management has become disconnected from any relation to reality this has been erased by the bureaucrats themselves. After an ongoing barrage of gear restrictions, size and species restrictions, ever increasing area and seasonal closures, individual quotas, total allowable catch limits, moratoria on licenses and a \$300 million program to "restructure" the Commonwealth licensed fleet to halve its 1200 vessels to 600, Australian fisheries are in decline. Meanwhile aquaculture has remained vestigial in the face of over-regulation. The bureaucratic solution however, is not to ease up a bit but, on the contrary, it's even more bureaucracy. Last month a large new boondoggle was announced. This one is a cooperative state and federal initiative costing \$135 million over seven years. In it a new Seafood Co-operative Research Centre will aim to double our production. How this is to be achieved in an industry declining under the burdens they themselves have imposed is something only a bureaucrat might fantasize.

### **The bigger picture**

Australia is indeed the lucky country with its wealth of resources, small population, mild climate and isolation from problems of immediately adjacent neighbors. In addition to good luck there is also much for which Australians can justly take credit in creating a stable, prosperous, fair and democratic society. In terms of natural advantages and current condition no nation is better placed for a prosperous future. However, life does not come with a guarantee. Ongoing prosperity will require making the right decisions in a complex and changing world. The biggest risk to our future well being is not terrorism, global warming or other external threats. The real and present danger is in the ongoing development of a malignant bureaucracy that is eating away at the vital organs of freedom and prosperity. I do not exaggerate. Fifteen years ago a caravan park in Cairns required 6 permits to operate. Today it must have over 100. This is not just an isolated instance but unfortunately symptomatic of a malaise that is now an epidemic. No imagined problem is too trivial, unlikely or non-existent to not be addressed by more regulation. Worse yet, the cost, efficacy and outcome of regulations are rarely assessed. The power and budgets of the bureaucracy is unrelated to any results. The proliferation of unaccountable bureaucracy is a genuine threat to national security.. The political leaders that recognize this and have the fortitude to address it will find they enjoy immense support.



Bill Izard's wife Li Saeng at the Tiger Temple

**What's wrong with this picture?**

It's a Buddhist monastery that has become a petting zoo with 20 tigers. It started by an act of kindness when monks took in an orphan tiger cub. More followed. Now a hundred or more tourists visit each day to see and pet the tigers. It operates with no regulations, permits, liability insurance, lion tamers, wildlife warriors, or certified experts, just care and compassion.