

FISHING AND FARMING: A COMPARISON OF THE GOVERNANCE OF SOUTHERN BLUEFIN TUNA INDUSTRIES IN JAPAN AND AUSTRALIA

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ABSTRACT

The least well understood aspects of economic development in general are the social aspects, and economic activity around fishing is no exception. Far more research effort is directed to the biology and economics of fisheries than to the cultural, social and political facets of fisheries. Bilateral disputes over fisheries between Japan and Australia have been endemic, and culminated in an international legal dispute over southern bluefin tuna in the late 1990s. Clearly Japan and Australia have had difficulties understanding each other's position regarding fishing. This paper summarizes a wider project aimed at improving understanding by making information about the social and political structures of the fishery in each country available in both Japanese and English. Comparative analysis of these structures gives insight into the extent and precise nature of differences in marine resource governance in these two countries, and builds foundations for approaches to considering the sociology and governance of fisheries in other contexts.

Keywords: southern bluefin tuna, governance, Japan, Australia

INTRODUCTION

Since the late 1950s relations between Japan and Australia have been remarkably amicable, especially in terms of trade. Japan has been Australia's biggest export market for more than thirty years, and is Australia's second biggest source for imports [1]. From Japan's perspective Australia is the third biggest importing country and tenth biggest export market [2]. In most areas of international politics, such as support for USA initiatives, Japan and Australia's policies are very similar. There are frequent educational and cultural exchanges between the countries, and Japanese has been the most popular language other than English to study in Australian high schools for more than ten years [2, 3].

Relations regarding primary industries, however, sometimes run against the grain of these normally smooth relations. The Japanese Embassy in Canberra has a Counsellor seconded from the Ministry of Agriculture, Forestry and Fisheries to assist with the tricky bilateral relations under this portfolio. Japan, along with the European Union and USA, excludes its agricultural markets from trade liberalization under the World Trade Organization, a policy the Australian government opposes because it restricts market access for Australian products. Australian and Japanese policies also collide over various fisheries issues. Australia is one of the louder anti-whaling voices in the International Whaling Commission, while Japan equally loudly asserts that certain types of commercial whaling should be allowed.

For twenty years or so Australia and Japan have been the two major countries fishing southern bluefin tuna and in many ways the relationship is cooperative, but it has also been rivalrous and at times combative. Australia and New Zealand engaged Japan in an international legal battle over fishing quotas from 1998 to 2000, and Australia banned Japanese fishing boats from operating in Australian waters or using Australian ports for a time. The Australian government Resources Minister of the time Senator Warwick Parer was quoted as saying: "Japan's proposed experimental fishing program is nothing more than a pretext for increasing its catch. It will do little to assist the Commission's scientific work and poses a threat to the recovery of the stock. It is as spurious as scientific whaling." [4] These are strong words against a country of such vital trading importance to Australia.

Why did tuna become such a contentious issue between Japan and Australia? The whole answer to this question would include something of the history of relations between Australia and Japan, and analysis of political capital in the domestic sphere gained by grandstanding as tough against some perceived threat. Part of the answer, however, includes gaps in knowledge about approaches to marine resource management on the part of each side about the other. Our research aims to explain the nature of governance of southern bluefin tuna fisheries in each country through a qualitative comparative approach utilizing a range of data including interviews, documentary sources and participant observation. We started the project in late 2001 and have thus far produced a bilingual video giving an overview of the fisheries in each country. We plan to start publishing the outcomes in English in 2005. This paper gives background to the international management of southern bluefin tuna fisheries and to the dispute over quota, then background on the domestic management of southern bluefin tuna fisheries in Japan and Australia. Finally we summarize some of the main points of comparison we have been thinking of thus far into the project. In terms of conclusions arising from the comparison of marine resource governance in Japan and Australia our work is still in progress, so we welcome constructive comments and suggestions about directions to pursue in the analysis.

International management of southern bluefin tuna fisheries

Since Japan became an affluent society in the 1980s the market has grown for bluefin tuna sashimi, especially the fatty *toro* meat. Northern bluefin tuna (*honmaguro* in Japanese) has long been fished off the coast of Japan and was the initial source of bluefin tuna *toro*. With increasing demand however, attention turned to southern bluefin tuna, which has very similar meat, and which could supply the market during the off-season for northern bluefin. Southern bluefin tuna spawn in warm waters near Indonesia, but as adults live in the colder waters circulating the southern parts of the globe (see figures 1 and 2). From the 1950s Japan's distant water long lining tuna boats targeted these adult southern bluefin tuna on the high seas as well as other species that sell well in the sashimi market, such as big-eye and yellowfin.

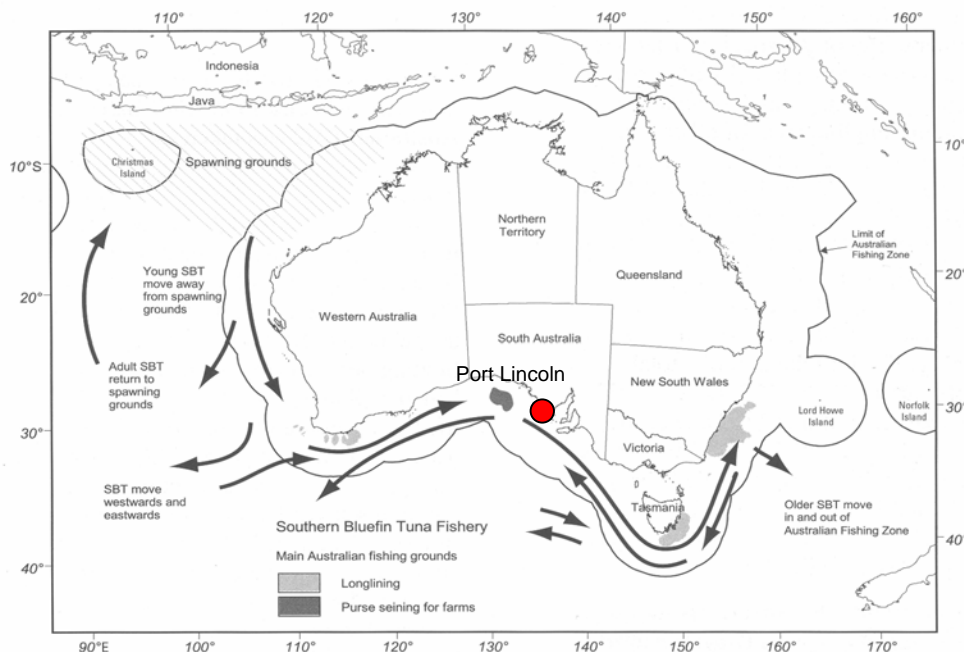


Figure 1. Map of southern bluefin tuna fisheries off Australia and spawning grounds off Indonesia [5].

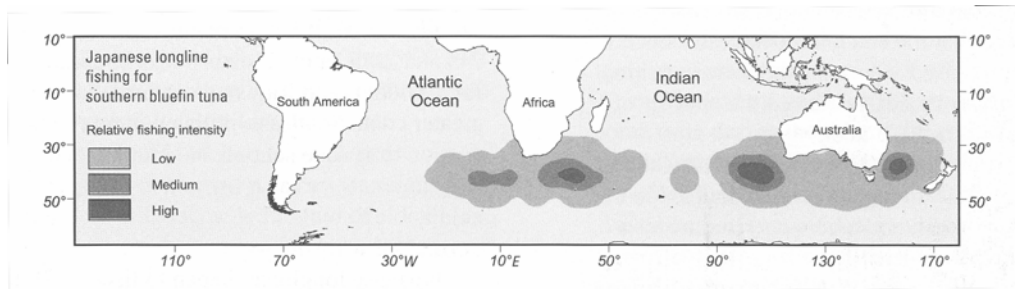


Figure 2. Map of Japanese southern bluefin tuna fisheries in southern waters around the globe [5].

In Australia the fishery for southern bluefin tuna started as a purse seine fishery for tuna canneries in Australia in the early 1960s. Australian fishers targeted stocks including juvenile fish migrating around Australia. The industry was quite lucrative in the early years but eventually it became uneconomical to catch for the low value cannery market. During the 1980s some of the Australian fishers made connections with Japanese buyers and started selling in the high value sashimi market.

The combined fishing efforts of Japan, Australia and New Zealand, put too much pressure on the fishery and by the late 1980s the stocks of southern bluefin tuna had dropped dramatically. Fishers recognized the problem and cooperated with their governments to establish regulations to protect remaining stocks and try to foster a recovery. A series of trilateral discussions between the governments of Australia, New Zealand and Japan were initiated in the late 1980s, setting quotas. Each country committed to limiting their catch to those international quotas. Japan, Australia and New Zealand's quotas in tonnes have remained the same since 1990 (Japan: 6,065, Australia: 5,265, New Zealand: 420) [6]. In 1994 the trilateral talks were formalized into the international Commission for the Conservation of Southern Bluefin Tuna (CCSBT), with its secretariat in Canberra. The stated aim of the body was to regulate the fishery cooperatively such that southern bluefin tuna stocks could recover to the levels they had been prior to 1980. Korea joined in 2001 (with 1,140 tonnes of quota) and the "Fishing Entity of Taiwan" joined in 2002 (with 1,140 tonnes). The Philippines, Indonesia and South Africa have indicated desire to be "cooperating non-members" and will be invited to join in 2004. Cooperating non-members between them have 900 tonnes of quota, 800 of which is earmarked for Indonesia. [7].

International regimes such as the CCSBT are inherently limited in their effectiveness because they have very little capacity for enforcement. International regimes basically rely on member states cooperating. Notwithstanding this limitation the CCSBT was relatively successful in coordinating the international effort to manage southern bluefin tuna fishing in that member states more or less stuck to their quotas. Scientific evidence tabled at the CCSBT meetings seems to indicate that the establishment of the CCSBT slowed the plunging decrease in southern bluefin tuna stocks, and that stocks have remained fairly stable since then [8]. Some Australian fishers we interviewed say that based on their observations stocks have recovered since the worst point of depletion in the late 1980s. Thus far the Scientific Committee, however, has been unable to agree that there has been a major recovery, or that it is more likely than not that at current rates of fishing the stocks will continue to recover.

There had always been room for disagreement among member countries because of scientific uncertainties about how many southern bluefin tuna there were in the sea, at what rate they were reproducing, what level of fishing they could sustain without stocks dropping further, and what level of fishing (if any) would enable stocks to return to pre 1980s levels. In order to try to clear up some of these uncertainties the Japanese delegation to the CCSBT had been asking for a scientific program since the mid 1990s. But because the main way to see where the fish are and how many there are is to catch them, this meant more fish had to be caught. Australia and New Zealand did not agree to the Japanese plan for a scientific program.

In 1998 Japan unilaterally declared an extra 1,425 tonne scientific quota on top of their 6,065 tonne fishing quota to do this research. Australia responded by closing Australia's 200 nautical mile exclusive economic zone to Japanese boats. In January 1999 Australia extended the ban to Australian ports as well. In May 1999 Japan declared their intention to take more than 2,100 tonnes for the 1999 scientific quota. In July 1999 Australia and New Zealand filed a request for an injunction against Japan's experimental fishing program with the International Tribunal for the Law of the Sea (ITLOS) in Hamburg. Their request was successful, but Japan countered by challenging the jurisdiction of ITLOS to determine the matter in an Arbitral Tribunal administered by the International Centre for Settlement of Investment Disputes. This tribunal found that ITLOS jurisdiction did not override the CCSBT and so the issue was sent back to the CCSBT to sort out. The CCSBT cleared up the experimental fishing program quite quickly by establishing an Independent Scientific Committee, chaired by a scientist not from any of the member states, but Japan and Australia remained unable to agree on the total allowable catch for another couple of years. By 2003 feathers ruffled by the court case had mostly been smoothed and the CCSBT meeting held in Christchurch New Zealand that year was very cooperative.

Apart from this belligerence over the quota, fishing outside the agreement by fleets registered to non-member states has constituted the main threat to the effectiveness of CCSBT. As the main market, Japan is in the best position to do something about not allowing product from outside the CCSBT to be sold, and has implemented a Trade Information Scheme as a certifying system for southern bluefin tuna imported to Japan [9]. In addition the Tokyo based Organization for the Promotion of Responsible Tuna Fisheries (OPRT) has been running various activities including public awareness campaigns to publicize the evils of Illegal Unregistered and Unreported (IUU) fishing and Flag of Convenience (FOC) fishing to Japanese consumers [10]. However, fish continue to be caught and sold outside the CCSBT arrangements. Fishing on the spawning grounds in Indonesian waters is particularly concerning. As Indonesia is brought into CCSBT this fishing will become part of the CCSBT arrangements, but it is as yet unclear that the Indonesian state will have the capacity to carry out the domestic monitoring and enforcement effective management of the fishery requires. After general management principles and the international total allowable catch is set and divided among member states at the CCSBT, the domestic management of southern bluefin tuna fisheries is conducted by member states. Each state does this in a distinctly different way.

Governance Structure Japan

For the purposes of our whole project we interpret the concept 'governance' broadly to include not only government and industry, but also the other sectors influencing the development and implementation of policies, such as the scientific community, media and civil society. For the purposes of this presentation, however, we limit our scope to look just at government and industry, and relations between these sectors.

The main government body responsible for the southern bluefin tuna fishery is the Japan Fisheries Agency, which is part of the Ministry of Agriculture Forestry and Fisheries. The Fisheries Agency leads international negotiations on fisheries such as the southern bluefin tuna fishery. The Ministry of Foreign Affairs also participates in the international negotiations, but the Fisheries Agency takes the lead. The Fisheries Agency also does the domestic management of Japan's southern bluefin tuna fishery by administering the national quota.

When national quotas were introduced in the late 1980s the model of management decided on for Japan was a kind of 'olympic' (competitive) fishery. The Fisheries Agency allocates the fishing grounds to tuna fishing companies by a lottery system. From the beginning of the season fishers boats go to their allocated fishing grounds and start catching tuna. Every ten days or so each boat reports to the Japan Fisheries Agency on how much southern bluefin tuna they have caught. The Fisheries Agency keeps a tally of how much is being caught by the whole fleet and calculates when they will hit the quota limit. Then they set that date as the closure of the southern bluefin tuna fishing season. With this system the Japanese national

quota sits with the national government, individual fishing companies do not own any part of the quota in any way, they just catch as much as they can within the national limit.

Japan's southern bluefin tuna fishery is part of the distant water long line fleet that targets a range of tuna species. Japan's distant water fisheries were an integral part of Japan's imperial expansion in the half century leading up to World War II. This means they have a long history, and it also meant that for more than a decade after WWII the international community restricted Japanese distant water fisheries [11]. By the late 1960s these restrictions had all been lifted. As the Japanese fleet was permitted to go south it made use of 1950s developments in long line boat and cold chain technology and expanded its catch of southern bluefin tuna greatly, peaking in the early 1960s.

As Japanese society became more affluent, especially in the 1980s, demand for bluefin tuna sashimi also grew. The contemporary Japanese bluefin tuna catch is virtually all for the domestic sashimi market. At the same time Japanese wages increased, and younger Japanese people chose not to go into distant water fishing. Distant water fishing is physically hard work, means spending most of each year away from home, and fishing in general came to be seen as undesirable compared other kinds of work. Japanese fishing companies responded to these factors by employing more willing and cheaper crew from various countries including Taiwan, Korea, Indonesia, Vietnam and the Philippines.

Many doubt that Japanese long lining has much of a future [12]. The boats are expensive to maintain and consume vast amounts of fuel. In addition, in recent years Japanese long liners have been loading (fuel and other supplies) and offloading (fish) at sea, so it is common for boats and their crews to stay out at sea for as long as two years without coming into port. This is causing health problems among crews. In order to sustain this very high cost industry sashimi tuna prices must also stay high. It is far from clear that prices will stay high since in the last couple of years large amounts of farmed northern bluefin tuna from the Mediterranean and Mexico have joined Australian farmed southern bluefin tuna in the market. Long line fleets from Taiwan, Korea and Indonesia can undercut Japanese costs somewhat, but even fishing companies from these countries see long lining as having a limited future and are exploring options for moving into aquaculture.

The fishing community we focused on for this project is the distant water long lining tuna fishers of Kushikino City in Kagoshima Prefecture on Kyushu in the far south west of Japan. As well as an agricultural and mining history, Kushikino has a strong fishing history. Many residents speak of relatives who fished, before and after WWII, in a range of fisheries including sardines, squid, and tuna. But as for most Japanese fisheries, Kushikino's long line tuna fishery has employed decreasing numbers of locals over the years. Because Kushikino's existing port was not large enough for long liners, several years ago an enormous public works project built a large outer port for the long liners, but Kushikino long liners rarely use it. Fishing companies based in Kushikino never land their catch there, and might only visit the port for repairs once in every five years. Yaizu in Shizuoka Prefecture near Tokyo is the main tuna port in the world, so it is from Yaizu the long liners come and go. The head offices of family run tuna fishing businesses remain in Kushikino, and long liners are registered to Kushikino port, but many young people in Kushikino have never even seen a bluefin tuna. Most of the crew on Kushikino registered long liners these days are from Indonesia and Vietnam.

Japanese fisheries are organized into cooperatives and industry bodies. The cooperative system emerged from the old village fishing systems as Japan modernized. The fishing cooperatives undertake tasks that in other countries might be done either by companies themselves, or by unions, such as administering payrolls, recruitment, managing contracts, organizing freight and sales, and setting working conditions. In each fishing community there is a local fisheries coop called the *gyokyô* (in abbreviated Japanese). Almost all people working in fisheries belong to their local *gyokyô*. Above the municipal *gyokyô* are prefectural peak bodies and above that a national peak body called *zengyoren* (in abbreviated Japanese). The *gyokyô* system is related to the agricultural cooperatives called *nôkyô* (in abbreviated Japanese) and as part of the same system provides a range of services including financial services and insurance.

As well as the local *gyokyo* system, Japan's distant water tuna fisheries also have another two networks of industry bodies for tuna and skipjack fishing companies. In Kushikino the tuna fishing companies belong to a group called the *Senshugumiai*, which in turn belongs to the Japan Tuna Boat Owners Federation, called *Nikkatsuren* in abbreviated Japanese. In some prefectures there is also a prefectural level office between the local and national level offices. The head office of *Nikkatsuren* in Tokyo employs hundreds of people, which enables it to provide a range of services to members, including the procurement of fuel and equipment. The other tuna industry body is called *Kinkatsuren* (in abbreviated Japanese). *Kinkatsuren* offers similar services to *Nikkatsuren* but seems to focus more on coastal/off shore fisheries than distant water fisheries. Many of the owners of companies that fish for southern bluefin tuna we spoke to were members of *Nikkatsuren* and *Kinkatsuren*, but some preferred to work with one or the other. Representatives of both *Nikkatsuren* and *Kinkatsuren* participate in the Japan delegation to CCSBT meetings, but *Nikkatsuren* takes the lead in working with the Fisheries Agency to develop and implement policies regarding distant water tuna fishing.

Tamai Tetsuya of the Ministry of Agriculture Forestry and Fisheries was the Counsellor for primary industries to the Japanese Embassy in Canberra for the period ending 2004. According to Mr Tamai *Nikkatsuren* representatives and Fisheries Agency managers work very closely in developing and implementing policy regarding southern bluefin tuna through meetings at which each side presents their positions and then negotiates towards a consensus position. The outcome of this process becomes policy. Mr Tamai said that in his experience Ministers were not involved in southern bluefin tuna issues, policy was mostly worked out between the bureaucrats of the Fisheries Agency and *Nikkatsuren*. As often happens in relations between industry and government in Japan, cooperation between industry and the bureaucracy is furthered by having high-ranking positions in *Nikkatsuren* occupied by former senior bureaucrats of the Distant Water Section of the Fisheries Agency.

As well as this cooperative relationship between *Nikkatsuren* and the Fisheries Agency, the Japanese tuna industry has another avenue for participating in the policy making process through the Japan Fisheries Association or *Dai Nippon Suisankai*. The *Dai Nippon Suisankai* was established in 1882 and has always been closely involved in fisheries policy development. It helped establish the fisheries university in Tokyo in 1889 and helped develop the Distant Water Fisheries Promotion Act of 1898. In the post WWII era it has been involved in the establishment of the Overseas Fisheries Cooperation Foundation (OFCF), which promotes the development of fisheries around the world to supply the Japanese market, the Institute of Cetacean Research, an organization that promotes whaling, and the Organization for the Promotion of Responsible Tuna Fisheries (OPRT). Since before WWII representatives from the highest levels of government and the imperial family have participated in the *Dai Nippon Suisankai*. The late former Prime Minister Suzuki Zenko was President of the organization for some years recently. The Council of the organization includes leaders from marine product trading companies and fisheries cooperatives. The Board of Directors includes retired Fisheries Agency senior bureaucrats, heads of fisheries industry bodies, and directors of companies involved in fishing, trading and the Tsukiji market. The membership of the organization is made up of representatives from all facets of Japan's marine industries from fishing to trading, processing, shipping, marketing, and investing. The *Dai Nippon Suisankai* provides a forum for members to meet and discuss issues across sectors, and also to lobby on those issues to the highest level of government.

Japan's distant water fisheries have a special relationship with government. Part of this is due to their status as resource producers. As a resource poor country Japan has long been preoccupied with protecting resource supplies. For the same reason Japanese agriculture also has a special position, and Japanese governments often feel justified in protecting food producers, including fisheries, in the name of food security. Another part of the political importance of distant water fisheries in Japan lies their role in Japan's international politics. As mentioned previously during the imperial era this meant fisheries expansion went hand in hand with military expansion. In the post war era the international politics role of fisheries has more been in terms of economic ties and aid diplomacy [13]. In addition, the distant water

sashimi tuna fishery is an economically significant part of Japan's huge seafood industry. The political importance of the distant water tuna fishery is demonstrated in the support the Japanese government extends to the industry. The recent scrapping exercise in which the Japanese distant water long line fleet was reduced by a third is an example that demonstrates such support.

In 1999 the United Nations Food and Agriculture Organization announced that the world long lining fleet should be reduced immediately by 20 – 30% in order to counteract over fishing of large tuna species for the sashimi market. Nikkatsuren responded by reducing the Japanese fleet by this proportion. According to interviewees including tuna boat owners and Sugai Hiroshi from the Kagoshima Prefecture Tuna and Skipjack Boat Owners Federation (the prefectural level office of Nikkatsuren), the decision about which companies should lose boats was made on the basis of two criteria: lack of profit and lack of a new generation willing to continue the company in future. The companies with least profits and no heirs were instructed by Nikkatsuren to surrender their boats to the fleet reduction exercise. In this way the fleet reduction can be seen as a rationalization of the industry.

The Japanese government helped with the fleet reduction by providing funds to make it a boat buy-back scheme. Some interviewees said the amount provided by the government for the fleet reduction was ¥200,000,000,000 (US\$1,855,287,570 at the exchange rate in 2000) others said ¥300,000,000,000. Either way it was a substantial contribution by Japanese taxpayers to ease the financial costs to the industry of the fleet reduction. It shows the extent to which the Japanese government is willing to support the industry, and also shows the nature of support they are willing to provide, in that direct financial transfers were allowed. In the following section we will compare this with Australian government responses to financial crises faced by the Australian bluefin tuna fishing industry.

Governance Structure Australia

The southern bluefin tuna fishery in Australia started in the early 1960s, and has utilized mostly the purse seine and pole and line methods, with some companies also long lining at various times. Southern bluefin tuna was fished from Western Australia and New South Wales, but since the early days Port Lincoln in South Australia was a major center of southern bluefin tuna fishing in Australia (see Map 1). Most of the Port Lincoln companies were started by families who moved to Port Lincoln specifically to fish tuna from other parts of Australia, and from fishing regions of Croatia and Italy. The Australian catch of southern bluefin tuna peaked in the early 1980s but after that the stocks started to fall and by the late 1980s the Australian southern bluefin tuna industry was in dire trouble.

Originally the Australian southern bluefin catch was sold to canneries, but as it became harder to find fish the price per tonne in the cannery market no longer contained a profit margin. In the mid 1980s some companies established links with Japanese buyers and managed to recover profitability by selling to the much higher value sashimi market. But as stocks continued to decline by the late 1980s even catching for the sashimi market was not economically sustainable. By 1991 many of the Australian tuna fishers were close to bankruptcy. They needed a new direction. Aquaculture was quite successful in salmon and other fisheries at the time, so it was decided to try farming tuna in some way. The plan settled on was to catch juvenile southern bluefin tuna out in the Australian bight, tow them back to coastal waters off Port Lincoln, transfer them to cages anchored in the coastal waters, feed them every day for a few months to fatten them up and then sell the product in the sashimi market. But southern bluefin tuna need to swim many kilometers a day to stay alive so it was questionable they would thrive in cages, and the idea of towing wild tuna back to cages in coastal waters was seen as bizarre. It seemed extremely unlikely the plan would succeed.

For a year or so a group of Port Lincoln fishers tested and developed the methods, in a joint venture with the Overseas Fisheries Cooperation Foundation, a Japanese quasi government organization that provides international aid to fisheries supplying the Japanese market. The Japanese tuna fishers' body Nikkatsuren also helped by leasing the Port Lincoln fishers' quota. This gave the Port Lincoln fishers an income for several years from 1986 during the period the Australian fishery was in crisis and then was testing the

new methods.¹⁴ The leasing arrangement was a commercial one in that Nikkatsuren profited from the fish they caught with the Australian quota. But it was nevertheless a cooperative gesture, because by refusing to lease the quota, which they did not need at the time, Nikkatsuren could have let Australian industry go bankrupt and collapse.

With the understanding of tuna contributed by the OFCF consultants and the engineering problem solving skills of the Port Lincoln fishers, the experiment in farming tuna was successful beyond anyone's wildest dreams. It was commercially profitable within two years, and within five years the fishers had gone from the brink of bankruptcy to very wealthy. One interviewee who has fished southern bluefin tuna for more than twenty years put it this way: At the peak of the wild fishery in the early 1980s the Australian fleet caught around 20,000 tonnes a year, employed 380 people and turned over less than AUD\$15 million. As an aquaculture industry with a catch of around 5,200 tonnes, in 2002 the industry employed over 2,000 people and turned over about AUD\$300 million.

The move from a wild fishery to aquaculture meant many changes for the tuna fishers of Port Lincoln. Before the industry only operated during the fishing season, for the rest of the year workers had to find other things to do. Fishers were at sea for weeks or months at a time, spending only a few days with their families between trips. Now the boats go out only once for a few weeks at the beginning of the fishing season to catch the fish and tow them back to the grow out cages in coastal waters near Port Lincoln. From then on employees work during the day then go home at night. The next phase of work involves going out to the cages to feed the fish and maintain the cages until harvest season. Harvesting and processing goes on for a few weeks, some companies do their harvesting in batches over the year to take advantage of peaks in the Japanese market due to times such as holidays when people buy more sashimi tuna. After harvesting is finished the cages and other equipment have to be cleaned and repaired for the next season, which by that time is not far away.

Farming has lost some of the romance of fishing, but it provides a stable year-round income, attracts a wider range of employees, and is much easier on families. One of the Japanese trading company employees we interviewed joked that farming was the only direction possible for the Australian fishers, because the other option, long lining, is so hard on families that the Australian fishers wives would have divorced their husbands if they had gone into long lining. With more employees and more shore based activities southern bluefin tuna aquaculture involves more management and administration work. Until recently all the Port Lincoln companies were very much family run companies, but these days unrelated professional managers are employed in larger numbers. In 2001 one of the largest family companies Australian Bluefin sold its tuna farming operations to the multinational seafood giant Stolt.

The move from fishing to farming is not the only major change the Australian southern bluefin tuna fishery has undergone since the 1980s. Another major change resulted from the management policies chosen by the Australian government. While international negotiations were under way to develop national quotas for the fishery the Australian government decided that the domestic fishery should also operate under a quota system. The fishery had been competitive or 'olympic' until 1983, but over the next year the government allocated a proportion of the national quota to each boat involved in the fishery [14]. These quotas were Individual Transferable Catch Quotas (ITCQs or ITQs), which means use rights to tonnes of southern bluefin tuna, use rights that may be bought and sold. The value of a tonne of quota is set by market mechanisms. Tonnes of quota thus became financial assets. A company can only catch as many tonnes of fish as they have bought rights for, so their earning potential is directly related to the tonnage of quota for which they have catch rights.

As a principle of management ITQs are fundamentally different to the model of management employed in Japan in that ITQs manage fish stocks by putting a control on the output of the fishery. The Japanese government has chosen to try to manage fish stocks through mechanisms such as the fleet reduction, which is a control on the inputs to the fishery.

Fishers in Port Lincoln say that the move from a competitive fishery to a quota fishery caused significant changes to the way they operated. Many interviewees said the introduction of quotas reduced the competitive relations between companies. Companies still compete in the market but many Port Lincoln interviewees said the level of competition prior to the introduction of ITQs was dysfunctional. For example, especially during the 1980s when the companies were under financial pressure, there was intense competition to find 'patches' of fish and get to them before any other boat. Interviewees told stories of races between fishing boats going for patches of fish identified by spotter planes. Apparently there were occasionally gunshots across bows and anchors dropped through nets as a result of this competitive atmosphere. These kinds of activities were manifestly unsafe. Now with a restricted quota each company can catch the tonnage fish to which they are entitled quite quickly at the beginning of the season, and there is no need for competition out in the ocean. Fishing company owners and Brian Jeffriess (President of the Tuna Boat Owners Association of Australia) said that since the introduction of ITQs the fishery has moved from being fiercely competitive to very cooperative. This is evidenced by the fact that several companies banded together to develop farming methods, and illustrated by the comments of one tuna industry leader who said that now the fishers often have coffee together.

The introduction of quotas also had the effect of consolidating the industry into far fewer companies. Within months of the introduction of ITQs almost all of the New South Wales fleet and more than two thirds of the Western Australian fleet had left the fishery [14]. By the early 2000s virtually the whole Australian quota was controlled by less than 20 companies based in Port Lincoln.

Whereas the Japan Fisheries Agency is responsible for most aspects of government management of the Japanese southern bluefin tuna fishery, in Australia governance responsibilities are more diffuse. The international negotiations conducted through the CCSBT are led by the Fisheries and Aquaculture Branch of the Department of Agriculture Forestry and Fisheries Australia (AFFA) with some input from the Department of Foreign Affairs and Trade. But also the Attorney General's Department usually participates, as does another body called the Australian Fisheries Management Authority (AFMA). AFMA is responsible for the domestic management of the fishery; for monitoring and enforcing the international policies negotiated by AFFA.

Furthermore, because Australia's southern bluefin tuna fishery is also substantially an aquaculture industry the state government of South Australia is also responsible for some of the governance of the industry. This is largely done through the allowing or disallowing of tuna farms to be opened up in coastal areas. Policies for development applications for tuna farms have developed as the tuna aquaculture industry developed, leading to a process involving several state and local government bodies under the auspices of Primary Industries and Resources South Australia (PIRSA) regulated by two sets of legislation, the Development Act and the Aquaculture Act.

Australia has no real equivalent to Japan's fisheries cooperative and industry body system. While the networks of cooperatives involved in the Japanese tuna industry employ hundreds of people from the municipal to the national level, the industry bodies for Australian tuna fishers employ very few people. This can partly be explained by the fact that, although Australia's southern bluefin tuna industry is no smaller than Japan's, Japan's tuna industry as a whole, including all tuna species and skipjack, is much larger than the Australian tuna industry. The main reason for the difference in size and complexity of industry bodies between Japan and Australia, however, is that the roles and expectations of industry bodies in Japan are much larger than for other countries, including Australia. Some states have Tuna Boat Owners Associations for yellowfin and skipjack fisheries. Southern bluefin tuna, as a commonwealth (federal) fishery belongs to the Tuna Boat Owners Association of Australia (TBOAA). Whereas Nikkatsuren employs hundreds of administrative and management staff, the TBOAA has only two paid staff members, the President, Brian Jeffriess, and his administrative assistant.

Brian Jeffriess was employed by the TBOAA in the late 1980s because of his experience in Japanese business, and in his knowledge of government in Australia. Mr Jeffriess had worked for the car

manufacturer Mitsubishi for some years, and also spent a couple of years working for the leader of the opposition (Andrew Peacock) in the federal government. As President of the TBOAA Mr Jeffriess' role has been to coordinate relations with Japanese businesses, and to represent the industry to the Australian federal and South Australian state governments. Mr Jeffriess says that most of the negotiations between industry and government are conducted between him, as the industry body, and the relevant bureaucrats in AFFA and AFMA, rather than politicians. His rationale for this is that if he lobbies politicians then the politicians direct the bureaucrats, which makes the bureaucrats feel 'bossed around'. He says that if industry lobbies the bureaucrats directly, rather than going to the Minister, the bureaucrats are more likely to feel like cooperating with industry. So the Australian system is like the Japanese system in that management is largely worked out through negotiations between the industry body and bureaucrats. In Australia, however, when a consensus position cannot be worked out in these meetings it may boil over into the public arena and Ministers may become involved. For example, in 2002 the industry publicly disagreed with AFMA over new management proposals, including an expanded observer program [15].

Although the tuna industry organizations in Australia are much simpler and smaller than the fisheries cooperatives in Japan, Brian Jeffriess says the connections between industry and government that influence the development of policy in Australia can be quite complicated and are often conducted informally. For example, he sits on various aquaculture steering committees, and many of the members of these committees are on a range of other committees and boards. He says that members of the tuna steering committee who are also on another steering committee might end up discussing tuna matters in the morning tea break of the meeting for the other fishery.

In recent years the southern bluefin tuna industry has undoubtedly been politically important in Australia, partly because of its economic success. The turnover of the southern bluefin tuna industry is several times larger than the whole fisheries revenue for the state of New South Wales. Tuna farming has revitalized the regional economy of Port Lincoln, which suffered a bad recession in the early 1990s. In addition, the southern bluefin tuna industry has been highly successful in moving to aquaculture, and Australian government bodies are keen to promote aquaculture as higher value adding than straight fisheries, so in this sense the southern bluefin tuna industry is somewhat 'flavor of the month' with Australian government bodies.

But tuna has never had a special position with the Australian government the same way tuna has with the Japanese government. One reason is that Australia is a resource rich country so does not have a preoccupation with food security like Japan. Another reason is that since the 1980s successive governments from both the left and the right have followed policies of marketization and liberalization. Special government support for particular industries goes against this philosophy of government. In the words of Brian Jeffriess the Australian southern bluefin tuna industry has never received a 'government hand-out' in times of financial difficulty.

If the Australian government were to give financial support in the way the Japanese government did with the fleet reduction, it would probably have been in the late 1980s. The Australian industry teetered on the edge of collapse for several years and successive cuts in quota made things worse, since some fishers had taken out loans to buy quota that then became worthless. But apparently there was no financial support offered by the government to help the fishers through this difficult patch. The fishers that survived did so through their own entrepreneurial activities (leasing their quota to Japanese fishers and developing tuna aquaculture). Brian Jeffriess says he feels the fact that the industry has never relied on subsidies has improved the industry's relations with government because it means politicians and bureaucrats respect the industry, rather than feeling the industry wants something from the taxpayers. This is a far cry from the Japanese situation where the amount of government support tuna receives is seen not as a weakness, but as an indication that the industry has high status with the government, and is important to the 'nation'.

This is not to say that the Australian industry receives no support from government. Municipal and state government bodies in particular have actively supported the development of tuna aquaculture as a

regional development strategy. This has included helping establish coastal sites for farms and research and development support. For example, testing manufactured feed to replace the frozen whole fish imported as feed for the tuna farms, which may carry unfamiliar pests or diseases and thus damage local ecosystems. Australian government support for R&D, and even government services such as monitoring and surveillance, however, are not entirely funded by taxpayers, but are partially funded by industry through levies. This is in line with Australian government 'user pays' policy to fund government services through not only tax revenue, but also through fees for services. In future publications we plan to further examine various examples of government support on both sides to compare and contrast philosophies of government behind decisions to support or not support industry, and the modes of support offered.

CONCLUSION

The southern bluefin tuna fishery in Japan is a distant water long line fishery. Like virtually all other fisheries in Japan it is managed not only by government but also through a large and complicated system of Fisheries Cooperatives Associations and industry bodies, the most significant of which is Nikkatsuren. Since the southern bluefin tuna fishery is distant water and involves one main gear type just one government body, the Fisheries Agency under the Ministry of Agriculture Forestry and Fisheries, undertakes virtually all of the international and domestic government management of the fishery.

The philosophy of fisheries management in Japan tends towards control of inputs. The southern bluefin tuna fishery has a control on outputs in the form of the national TAC, but this was developed in the international sphere. Within the framework of the national TAC, domestic efforts remain focused on inputs. This is evident in the Japanese response to the FAO call that large tuna species are being over fished; Japan's long line tuna fleet was reduced but regulations regarding the Japanese long line tuna fleet's catch remained unchanged. Japan's management of southern bluefin tuna is also affected by its historical and political status as a food producing industry and as a distant water fishery. Japanese concerns about food security means there are policies to prevent an even larger proportion of Japan's food supplies being imported and to protect food production industries that may be in danger of disappearing. Fisheries thus receive a wide range of financial supports from the government, including direct transfers of money as occurred with the fleet reduction of 2000. The political importance of fisheries is visible in the Japan Fisheries Association (Dai Nippon Suisankai), which provides a forum for cooperation between fisheries sectors and access to the highest level of government for input into any policies affecting fisheries. In addition, distant water fisheries have long acted as a facet of Japan's foreign policy, so distant water fisheries' activities have been particularly closely coordinated with government activities.

Australia's southern bluefin tuna fishery is a hybrid with a wild purse seine fishery operating within the EEZ, connected to an aquaculture industry in which tuna caught by the purse seines are fattened up in cages in coastal waters for several months before being harvested. There are no fishing cooperatives involved in the Australian southern bluefin tuna fishery. There is an industry body, but in contrast to Japan's Nikkatsuren, which employs hundreds of people, Australia's Tuna Boat Owners Association has one main person who has been in the job since the late 1980s. He lobbies appropriate government bodies directly. The Australian wild fishery is federal, managed domestically by the Australian Fisheries Management Authority, but the international negotiations regarding the fishery at CCSBT are headed up by a different body, the Fisheries and Aquaculture section in the Department of Agriculture Forestry and Fisheries Australia. The aquaculture part of the industry is then governed by several different departments within the South Australian State Government. The range of government bodies involved in Australia's southern bluefin tuna fishery is thus larger and more complicated than in Japan's case.

The philosophies of government involved in Australian management of southern bluefin tuna are quite different to Japan. First, Australia is a resource rich country and is thus not preoccupied with food security, and food producing industries have no special political status. Second, the Australian government chose to manage the fishery via controls on outputs via ITQs rather than inputs. Fishing capacity is left to the industry to organize while government monitoring is concerned with making sure

fishing units catch only as much as they are entitled. A third factor related to both of the previous two factors is that since the 1980s successive Australian governments have enacted policies based on principles of marketization, liberalization and ‘user pays’ approaches to government services. This means any kind of government support that may be construed as subsidy has been avoided, and such government supports as do exist are not entirely funded by tax revenue but are also partly funded by the industry.

The governance structures compared in this paper give some preliminary indications of some of the underlying differences in management approach that may have contributed to the confrontation that erupted in the CCSBT in the late 1990s. Further analysis to be published in more lengthy future publications will build on these preliminary indications to present a more comprehensive picture. Some of the issues to be considered in future analysis include inputs from other sectors of society to governance processes, as well as questions about what concepts of ‘sustainability’ and ‘fisheries management’ mean to the major players in Japan and Australia respectively.

ENDNOTES

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 - 3 *Review of the Commonwealth Languages Other Than English Programme*, A report to the Commonwealth Department of Education, Science and Training (Australian Government) by Erebus Consulting Partners, December 2002.
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 - 8 See reports of the Scientific Committee and the Stock Assessment Group at http://www.ccsbt.org/docs/meeting_r.html.
 - 9 For details on the Trade Information Scheme see the Meeting Reports of the CCSBT meetings at http://www.ccsbt.org/docs/meeting_r.html.
 - 10 <http://www.oprt.or.jp>
 - 11 For an overview of this history see Matsuda Yoshiaki, 1987, Postwar Development and Expansion of Japan’s Tuna Fishery, in D. Doulman (ed) *Tuna Issues and Perspectives in the Pacific Islands Region*, East-West Centre, Hawaii, pp. 71-91.
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 - 13 See Tarte, Sandra, 1998, *Japan’s Aid Diplomacy and the Pacific Islands*, Asia Pacific Press, Canberra.
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