SPC/SPAR 5/WP 15
23 March 1993

ORIGINAL : ENGLISH

SOUTH PACIFIC COMMISSION
COMMISSION DU PACIFIQUE SUD

FIFTH SOUTH PACIFIC ALBACORE RESEARCH WORKSHOP
CINQUIEME REUNION DU GROUPE DE TRAVAIL SUR LES RECHERCHES CONSACREES AU GERMON DU SUD
(Papeete, French Polynesia, 29 March – 1 April 1993)
(Papeete, Polynésie française, 29 mars – 1er avril 1993)

PROSPECTS FOR AN ALBACORE FISHERY IN AUSTRALIA

presented by

A. Caton
Fisheries Resources Branch
Bureau of Resource Sciences
Department of Primary Industries and Energy
P.O. Box E11
Queen Victoria Terrace, ACT 2600
Australia

Prospects for an Albacore Fishery in Australia

During the southern summer of 1991-92, Australia carried out a survey to examine the feasibility of commercial trolling for albacore off south-eastern Australia. The project involved the charter of two small commercial vessels which were converted for trolling and provided with fuel and trolling equipment. The vessels operated for a total of 2380 line hours between September 1991 and July 1992. They trolled in waters deeper than 100m but within 50 nautical miles of the coast, and worked southwards from New South Wales towards Tasmania then northwards again with the seasonal intrusion and withdrawal of the warm East Australian Current.

The total albacore catches were 28 t and 21 t. Catch rates over the entire survey averaged 31 albacore per 100 line hours, which was better than catch rates of surveys of the developing New Zealand fishery (14-25 albacore) but lower than those of the commercial operations in the Sub-Tropical Convergence Zone (51-123 albacore). Highest catch rates occurred when sea surface temperatures were 17-21°C. The largest catches (395 kg per 100 line hours, with fish averaging 4 kg) were in March near Tasmania's north-east coast (40-42°S). Larger fish (7 kg average weight) were taken off New South Wales, where highest catch rates (182-332 kg per hour) were taken in December, May and June.

The costs of operation (gear, operating costs and fixed costs) of the survey vessels exceeded their returns from sales of albacore and by-catch. If Australian vessels are to participate in albacore-target operations, they have the option of following aggregations of fish (like vessels which work seasonally in the Sub-Tropical Convergence Zone) or awaiting movement of fish to their vicinity (essentially the practice of the two survey vessels, given the limited offshore range of their operations). Driftnetting has indicated the presence of substantial quantities of albacore in the southern Tasman Sea. However, the location of those operations was beyond the boundary of the Australian 200-mile fishing zone. It is possible that similar commercial quantities of albacore occur within the zone but beyond the coastal areas worked by the survey vessels. Weather was a severe limiting factor during the conduct of the survey, so it would seem that any attempts to establish wider ranging Australian commercial albacore trolling operations would need to involve larger vessels (presumably more expensive to operate). It is therefore still uncertain whether profitable 'offshore' albacore-target operations could be established under the operating cost structure to which Australian vessels are subject.

Unless enhanced demand and price structure for albacore can be developed on local markets, it is likely that the main Australian albacore catches will continue to be by-catch from fisheries such as the domestic longline fishery, and that commercially profitable Australian operations directed specifically at albacore will be limited to a few vessels combining trolling with other activities.

The report of the survey (Chapman, Ward and Ramirez, 1992) has been circulated to participants who attended the previous SPAR meeting. An article describing the survey and publicising the results was contained in the February 1993 issue of Australian Fisheries magazine. It is appended for information.

Reference:
Chapman, L.B., P.J. Ward and C.M. Ramirez (1992). Is trolling for albacore tuna off south-eastern Australia commercially feasible? Working Paper, Bureau of Resource Sciences, Canberra, Australia. 154 pp.

A.E. Caton
Fisheries Resources Branch,
Bureau of Resource Sciences,
CANBERRA, Australia

Albacore prospects look good

An albacore feasibility fishing project carried out by the Bureau of Resource Sciences (BRS) has indicated the potential for a new Australian fishery, helped set up troll fishermen and initiated a fledgling value added albacore market. Roger Nicoll reports that an effective marketing campaign in Australia and the development of value added exports could see a prosperous future for this underutilised resource.

Albacore has long been in a 'catch 22' rather than forming a large part of the fishermen's catch. While large quantities (5000 t in 1988–89) of albacore have been caught in the past by driftnetters near the Australian fishing zone, Australian fishermen have allowed albacore to swim relatively untouched in south-eastern Australian waters because there was no market for it.

Fishermen were not prepared to spend money and effort developing a fishery that didn't have a market. At the same time there was little incentive to develop a market for a fish that was caught in such low volume.

Finding a market

Australians do not have a preference for canned albacore like consumers in other parts of the world according to General Manager of Heinz Greenseas cannery at Eden, David Bateman.

'The Australian market for canned tuna was developed using southern bluefin tuna (SBT) and people are accustomed to the colour, the size of the flakes, the texture and the flavour of the fish,' he said. 'Whenever we have run small amounts of albacore we have had complaints because of the colour — how white it is.'

Albacore is quite a high valued fish on the world canned tuna market attaining up to $3.80 Australian a kg (August 1992 price for longline albacore in Samoa) for canning purposes and higher for value added product.

Ken Harada of the NSW Fish Marketing Authority (NSWFMA) confirms that this aversion for albacore has extended to whole fish at Australian fish markets. He says albacore is usually only bought as a substitute for other types of sashimi tuna. It is often bought when the price of yellowfin is high (at around $10–$15 a kg) and doesn't seem to have its own market.

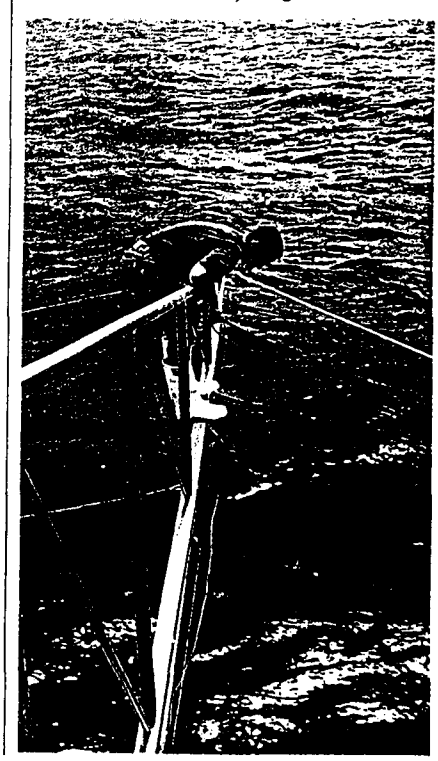
David Bateman, Ken Harada and others in the Australian fishing industry agree Australian consumers need to be educated to the taste of albacore but that a greater volume catch is needed to warrant further promotion.

Albacore's reputation may have suffered in the past because of poor handling, for example not bled or gutted promptly or stored at the right temperature. Handling techniques have changed. Fishermen who were criticised in the past have taken that criticism onboard and now look after their catch. Sashimi style handling is gaining followers in response to the growing returns to be made from value adding.

David Bateman said, 'Our marketing people believe, to set up an albacore pack in Australia and notify people about the fish would probably cost $750 000 or more. But no-one is really going to do anything until you can show that we have got a resource here.'

This is where the recent BRS project has played an important role.

The BRS project involved trolling for albacore aboard two commercial fishing vessels.



Breakthrough for the fishery

The albacore fishery feasibility project initiated by the BRS and funded by the Fisheries Development Trust Account and the Fishing Industry Research Trust Account has provided a long awaited breakthrough for the fishery.

Two commercial fishing vessels, the *Eileen M* and *Ocean Lady* were chartered for the project and fished off the NSW coast between Sydney and Eden commencing in September 1991. The boats moved south to waters off Triabunna and Eaglehawk Neck, Tasmania in March and April 1992 before moving back to NSW where they fished until July.

As part of the project the BRS disseminated (*Australian Fisheries* March and August 1992) technical information to fishermen on fishing gear and techniques, particularly on trolling gear that was purchased in New Zealand and modified to suit Australian conditions. Lindsay Chapman of the BRS provided fishermen with information, lures and hooks to get them started and catch survey forms to provide feedback on catch.

Under the funding arrangements for the project all fuel, oil, ice for chilling, trolling and poling equipment was paid for. Skippers of the vessels were not paid in cash but rather received the proceeds of their catch. This situation necessitated an urgent need to develop markets. Processors (particularly in Tasmania) accepted the challenge of marketing the whole fish and also developed a small market for value-added (mainly smoked) albacore.

The relative simplicity of setting up trolling gear and the promise of improved prices has lured more fishermen into a developing albacore troll fishery off Tasmania's east coast between St Helens and Eaglehawk Neck.

The BRS reports (Chapman et al (in press))that although overall catch rates during the feasibility project were lower than for commercial operations in the Sub-tropical Convergence Zone they were higher than in the developing New Zealand fishery which involves 200 vessels and lands 2000–4000 t of albacore a year. While the operational costs of the BRS project exceeded the returns from fish sales, wholly commercial ventures may be able to increase the viability of the operations.

By targeting and following the fish during the likely trolling and poling season from December to June and integrating albacore trolling with other fishing methods and activities fishermen could make better returns.

Les Buchanan, a tuna fishermen operating out of Eaglehawk Neck in Tasmania and the Secretary of the Tasmanian Sashimi Tuna Fishermen's Association

(TSTFA), says quite a few of the traditional inshore SBT boats have moved into albacore because of smaller SBT catches and leasing costs.

'There appears to be a local industry starting up. We have had a lot of enquires from people, mainly local industry, wanting to obtain albacore.'

Most of the fishermen landing albacore have been operating from Tasmania's east coast and out of the NSW ports of Bermagui, Ulladulla and Eden. Poor weather conditions hampered efforts to commence the season in November and December 1992, particularly in Tasmania. However, NSW fishermen were landing albacore in December and industry hopes are that by careful observation of water temperatures the season will eventually run from late November through to June.

Moving towards a value added market

An almost worldwide driftnetting ban has left a gaping hole in world albacore supplies and the American market, in particular, will be looking for albacore from areas that can maintain a supply. Catch records from New Zealand, Taiwanese and Japanese driftneters in the Tasman Sea in the past decade suggest a sizeable resource.

To export albacore for canning form, David Bateman of Heinz Greenseas says you need the sort of volumes (400 t) that warrant bringing in a small freezer carrier.

'There is not a great future in accumulating fish and exporting it out of here in containers. You have inland freight and ocean freight and then you have to finance the fish and hold them until you accumulate enough.

'The prices that people talk about for albacore are always for fish that are over 10 kg. A lot of people don't realise that under 10 kg is a reduced price, under 5 kg is reduced again and from 4 kg and under you get the same price as skipjack on the world market which is only about $1.35 Aust a kilogram delivered, to US canneries.

'If you are paying $1500 a tonne Australian ($1.50 a kilogram) which we did last season for the range of fish, by the time you get it over there you are almost in a break even situation.

'If we could get 400-500 t landed here that would warrant bringing in a carrier boat, we could reduce the freight component dramatically, recover our handling costs and the fishermen would probably get a higher price as well. But for the whole of last season we got 80-90 t so it could take five years at that rate.'

Tasmanian processor Tas Crays accepted albacore in 1991 to see what they could do with it. According to Michael McGee, the company initially sent albacore to Thailand for canning.

'That was to attract the fishery and to set us up, and to see what albacore was, how to handle it, how to grade it etcetera,' he said.

Catches from the BRS project fuelled a developing market for albacore.

'We firmly believe that we must firstly provide a price that is viable to the catcher, and secondly make sure that the supply will sustain some sort of continuity into a low valued marketplace to start with and we can work from there. That way the industry finances itself. It doesn't become a high investment speculator industry which can prove a problem down the track. As we learn better techniques and source better markets and establish the necessary confident relationships with the marketplace we will then increase our value adding and obviously the price will increase because we will be recognised as a supplier of very good product.'

Sharing the value of the resource

Michael McGee said Tas Crays was predominantly a receiver and support for the catching sector. He said the company would ultimately like to do the preliminary processing for about 1000 t of albacore each season.

'We would like to handle it and prepare it for another operation that would further value add. We would like to see other smaller service industries or value adders take the benefit of the product that we receive and prepare for them. That way we all share the value of the resource.'

He said Tas Crays had carried out research into sending loins, fillets, or value added products to the United States, particularly California. At the same time Mariner's Larder had been established in Georgetown Tasmania, specifically targeting albacore for value adding.

Tuna medallions

Mariner's Larder has developed a process for smoked and chilled tuna medallions targeted at the food industry and catering market.

Company Chairman John Baily says, 'Nobody likes slime or blood and guts in the kitchen. The tuna medallions are 100 per cent fish, boneless, skinless, calorie-controlled, portion-controlled. They Can be barbecued, microwaved, steamed, baked, or cooked however you like. It is a 100 per cent protein that we believe the market is screaming for.'

Using a 1.2 t capacity computerised smoker and other equipment not seen before in this country, he says the company was able to obtain the fleshy texture they were seeking.

Mariner's Larder hoped to process 100 t during the first year of operation which would only be touching the surface of the potential market. The company has also produced a range of smoked salmon and ocean trout, products which already have established markets in Australia.

One of the pioneers of cold smoked albacore in Australia is Kay Drysdale who sells product under the Pirates Bay label. Together with husband Bob, a longline fishermen, Kay recently opened a cafe and take away shop at Eaglehawk Neck to sell smoked tuna products as well as other locally caught fish. The albacore Kay uses is a bycatch of catching bluefin aboard their own boat.

'Smoked albacore is on the menu and sells quite well to tourists and some locals particularly through tasting platters and sampling sessions,' she says. 'We sell more to tourists because a lot of the locals are keen amateur fishermen and they have their own you-beaut backyard smokehouses.'

Kay has sold more than half of the original 600 kg of tuna that she smoked.

While the product has been received well Kay says albacore is still underrated and people don't really appreciate it. Further marketing is required to achieve greater success and an amount of 2 t would be necessary to make freighting worthwhile.

A well known tuna biologist from the BRS in Canberra is one of Kay's best customers for the smoked tuna products.

Cold smoking, slicing and presenting albacore like smoked salmon, would make the product more attractive, Kay says, but would also put the price up.

Kay uses the whole headless Albacore for fish cakes and fish patties which also sell quite well in the shop.

Fellow Eaglehawk fishermen Les Buchanan says members of the TSTFA are aiming to smoke albacore for overseas markets where the consumers have a taste for albacore. 'We have established some contacts in Europe and we will be hoping to crack that market.'

The recent acquisition of a former Japanese longliner and further large vessels should enable SBT and albacore operations to go into full swing in the next couple of years off Tasmania.

Members of the TSTFA were also investigating the possibility of exporting to the central Pacific cannery at Pago Pago, American Samoa.

'But we continue to look at quality rather than quantity. We would much pre-

Chairmen John Baily and Managing Director Ian Aldridge of Mariner's Larder display a Tasmanian albacore.

fer to highgrade or value add than to send the fish to a cannery. But you have got to do a little bit of canning to get the name.'

Michael McGee expresses a similar sentiment but adds that Tas Crays will be maintaining contacts with the United States where there are large operations in search of albacore supplies. 'We would not like to get locked in to supplying all the product we get to a low grade value adder offshore. We would like to see the value adding done here and the product then exported and also used in the local market as a finished, well value-added product.'

Prices and market movements

Albacore fetches a wide range of prices on the Australian market depending on size, quality, quantity of fish, and the particular market.

Michael McGee says that in the 1991/92 season the bottom beach price was around $A1.40 for good quality bled product. He said the prices extended through to $3.50 and $5.00 but they were very limited markets.

Albacore landed in NSW from the BRS project was sold mainly at the Sydney Fish Market and the Heinz Greenseas cannery at Eden with some being freighted to the Melbourne Fish Market. The cannery price ranged from $1.40–$1.50 a kg while prices fluctuated widely in response to demand and supply at the Sydney and Melbourne markets.

The BRS reported (Chapman et al) that one albacore consignment of 100 kg fetched $4.00–$4.35 a kg but when longliners delivered 1000 kg the following week prices fell to $1.00–$1.50. Average prices paid for albacore at the Sydney and Melbourne fish markets were $2.34 and $2.16 a kg respectively.

From the Melbourne Fish Market, wholesaler Jim Racovolis of Racovolis Australia reports a price range from $2.50–$3.50 (average bottom $3.00) to $5.00 a kilo. He says there has been an increase in supplies and popularity of albacore over the past 12 months with particular interest from Asian and Japanese sectors of the community. He reported selling about two tonnes a week mainly caught off Eden, Bermagui and Ulladulla.

Ken Harada of the NSWFMA also reported recent increases in albacore price ranges from $1.50–$2.50 up to $2.75–$3.20, but said this was probably due to shortages of other tuna supplies.

Canneries in the South Pacific are also prepared to pay high prices for albacore but demand a high quality of product. Pacific canneries paid $2.80–$3.20 Australian for jig/troll albacore and $3.20–$3.85 for longline albacore between January and August 1992.

Calculations from the BRS project showed that even at these high Pacific prices, the returns to be made from exporting relatively low quantities would not be much greater than on the domestic market.

Michael McGee says that with albacore quantities reduced initially because of driftnetting bans, prices will increase. He says it is unlikely the canning market will sustain the prices needed for a viable catching sector in the longer term.

'The target market for the fish will be a value added arena. The price in the coming 12 months should be at a bottom level of around $2, moving up to $3.50 in the next couple of years as the value adding arena firmly bases itself closer to the local fishery'.

Potential of albacore

Industry representatives expressed an increasing confidence that there is an albacore resource to sustain a significant fishery but added the potential of this fishery will probably not be seen until fishing techniques are fine-tuned and operations extended from inshore areas into the Tasman Sea.

Fishermen may initially need to add Albacore trolling onto existing activities and follow the fish throughout the season to make operations viable.

Bycatches may also play a vital role in the viability of albacore fishing operations. Rays bream also known as pomfret or brama brama has been identified as a possible bycatch of longlining, if a suitable catching method can be devised.

Tuna fisheries biologist with the BRS, Peter Ward, said the development of an albacore fishery was still uncertain and would take time.

'If we were certain that an albacore trolling fishery would develop off south-eastern Australia, those invovled in developing the fishery could rest satisfied that they have contributed to that development,' he said. 'But the development of new fisheries often takes years of unrewarded work by a few, far-sighted individuals.

'The steering committee which directed the BRS project included fishermen, industry representatives, scientists and managers. It has shown how scientists and the fishing industry can work together to foster a new fishery.

'The establishment of a viable fishery will hinge on the continued commitment of fishermen and industry. Government too has a clear role in monitoring developments and providing assistance at critical stages along the way.'

Already the Tasmanian consumers are being re-educated regarding tuna and more people are now eating tuna, especially albacore, than ever before according to Les Buchanan.

Michael McGee concludes, 'We have the capability here: we certainly have an unemployed population that needs to work, we have the expertise, we have the technology. What we need is positive support for industry from the Government and in that way we can get together and effectively manage our resources. Albacore is only one of them.'

Further information

BRS's report analyses the result of feasibility trolling off south-eastern Australia, detailing the geographic and seasonal distribution of albacore catches. Analyses of costs and returns of survey vessels, and comparisons with existing fisheries provide an assessment of commercial prospects for albacore trolling. Copies of the report: *Commercial Feasibility of Trolling for Albacore off South-eastern Australia* can be obtained from:

The Publications Officer, Corporate Communications Branch, Bureau of Resource Sciences, PO Box E11, Queen Victoria Terrace, Parkes ACT 2600, tel (06) 272 4012, fax (06) 272 4747.

REFERENCES

Chapman, L.B., Ward P.J. and Ramirez, C.M. (in press). The Commercial Feasibility of Trolling for Albacore off South-eastern Australia. BRS Working Paper.