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SOUTH PACIFIC COMMISSION

EIGHTEENTH REGIONAL TECHNICAL MEETING ON FISHERIES

(Noumea, New Caledonia, 4-8 August 1986)

COUNTRY STATEMENT - AUSTRALIA

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### COUNTRY STATEMENT - AUSTRALIA

#### 1. INTRODUCTION

The Australian fishing industry is based largely on inshore and continental shelf fisheries and most income is derived from crustaceans. To date, finfish have generally been caught from areas of the continental shelf close to capital cities and centres of population, particularly in waters off south eastern Australia.

Although the Australian fish fauna is very diverse (about 2,500 species) our fishery resource base is not extensive by world standards. Waters adjacent to Australia are relatively poor in nutrients and do not support large populations of photosynthetic organisms. Upwellings are sporadic and occur only in restricted areas around Australia so that coastal waters and adjacent oceanic waters are not particularly productive.

#### 2. PRODUCTION

##### (a) Fleet

In 1984/85 approximately 13,000 boats were licensed to fish commercially, however, only 4,973 were licensed to operate beyond three miles from the coast. Although boat numbers have not increased in recent years due to a policy of restricting the issuing of fishing licences, fishing effort has risen significantly due to upgrading of the fleet.

##### (b) Landings

Total landings by Australian vessels in 1984/85 were estimated at 158,000 tonnes liveweight, valued at \$503 m. This is a decrease of 1% in volume and an increase of 12% in value compared with 1983-84. Production of shellfish fell by 14% while finfish increased by 8%.

##### (c) Utilization

During 1984/85 approximately 88% of edible marine produce caught by commercial fishermen was marketed in fresh and frozen form: 7% was canned, 2% was cured and 3% reduced to meal.

##### (d) Imports

The value of Australia's imports of marine produce in the year ending June 1985 was a record \$318m, an increase of 17% over the previous twelve months. Exports were valued at \$420m an increase of 2%.

### (e) Exports

Australia's main exports in 1984/85 were frozen prawns (12,300 tonnes valued at \$150m), frozen rock lobsters (5,900 tonnes valued at \$157m), abalone (4,300 tonnes valued at \$55m) and scallops (2,100 tonnes valued at \$20 m). Nearly all prawns and whole rock lobsters and 54% of the abalone exports went to Japan. The United States took 98% of the rock lobster tails; Hong Kong took 25% of the abalone exports and France took approximately 25% of the scallops exported.

Over recent years Australia's exports of sashimi tuna have increased significantly. As a result of the reduction in the catches in the southern bluefin tuna fishery following the introduction of the current management programme, Australian fishermen have taken action to sell in the higher priced Japanese market to compensate for reduced catch entitlements. In 1985/86 approximately 2,700 tonnes, or about 20% of Australia's southern bluefin tuna catch was consigned to Japan. While prices for Australian caught product have been below average, partly because of the fishing methods employed (pole and line and purse seine) and partly because of the relatively small size of the fish, Japanese buyers nevertheless have maintained their interest in this product.

In waters adjacent to the east coast relatively small-scale tuna fishermen have achieved considerable success with air freighted, fresh chilled yellowfin and bigeye tuna, also for the Japanese and US sashimi markets. The fishery is, at present, relatively small, producing about 300 tonnes per annum, but it is expanding.

## 3. MANAGEMENT

### (a) General

Management plans are being developed, modified and implemented for Australia's main fisheries, to conserve stocks and partly to reduce economic problems associated with excess fishing capacity. The industry has taken a major role in the development of these management policies and the relevant State Governments have been involved directly.

Over the past three years long-term fisheries management regimes have been introduced for the Southern Bluefin Tuna Fishery, the Northern Prawn Fishery, the Torres Strait Fisheries and the South Eastern Trawl Fishery, while interim fisheries management regimes have been implemented for the East Coast Trawl Fishery, the Bass Strait Scallops Fishery and the Southern Shark Fishery.

Most management arrangements are based on limited entry, but the Southern Bluefin Tuna Fishery is managed through an individual transfer quota scheme. Gear restrictions, seasonal closures, vessel buy-back and restrictions on vessel upgrading are features of some management schemes.

Development programmes are being introduced for new fisheries to provide some security for fishermen or commercial firms which are prepared to undertake experimental and developmental operations in unexploited fisheries.

Australia is now in the process of developing a comprehensive management programme for the East Coast Tuna Fishery geared mainly to yellowfin and bigeye in response to its rapid development in recent years. The programme will be developed in close consultation with the appropriate industry organisations and State Governments.

A National Fisheries Adjustment Programme is being developed to assist in the reduction of excess capacity from limited entry fisheries where fishermen are willing to contribute a substantial proportion of the costs of such a programme. Fisheries management authorities will be able to seek funds from the National Scheme to commence 'buy-back' schemes in individual fisheries. Under the Programme, fishing access rights will be surrendered by fishermen who voluntarily wish to leave a fishery. Boats will not be purchased under the Programme.

#### (b) Torres Strait Treaty

The Torres Strait Treaty which Australia and Papua New Guinea signed on 18 December 1978, came into force on 15 February 1985. It represents a unique border agreement between independent sovereign nations in that it establishes a Protected Zone (PZ) within which both nations have rights and obligations, rather than a single border line. Within the PZ are lines dividing the areas of primary fisheries and seabed jurisdiction between the two nations.

The Treaty also is unique in that it protects the rights of the traditional inhabitants of the PZ and adjacent areas by recognising and preserving the existing pattern of traditional activities. In practice, this means favouring management options which allow the greatest opportunity for traditional inhabitants to participate in a fishery eg diving rather than trawling for lobsters. A research programme, in accordance with Australia's obligations has been set up to support management programmes.

#### (c) Turtles and Dugong

Turtles and dugong are protected species in Australian waters but they may be taken for traditional purposes by Torres Strait Islanders in the Torres Strait and aboriginals in other areas. The Commonwealth and Queensland fisheries authorities are working together to produce joint plans for turtle and dugong conservation and management in various areas.

(d) Great Barrier Reef Marine Park

The Great Barrier Reef covers an area of almost 350,000 square kilometres off the north east coast of Australia. Of this area 98.5% has now been declared Marine Park, under the auspices of the Great Barrier Reef Marine Park Act. The Great Barrier Reef Marine Park Authority is responsible for administering the Act. The Act's stated goal is to provide for the "protection, wise use, appreciation and enjoyment of the Great Barrier Reef in perpetuity through the development of the Marine Park".

The area contains fishing grounds of major significance to the Queensland fishing industry and recreational fishermen. Fisheries authorities are closely involved in developing management policies for the Marine Park to ensure the continued productivity of fish stocks and to ensure that commercial and recreational fishing interests are considered, along with conservation and tourism.

e) International Management of Southern Bluefin Tuna

Since December 1982 officials and scientists from Australia, Japan and New Zealand have held five meetings to consider international management arrangements for Southern Bluefin Tuna (SBT). The need for management was recognised as a result of unanimous scientific concern at the status of the spawning stock which, as a result of heavy and increasing fishing effort, (particularly by Japanese and Australian fleets), had been depleted to about 30% of its pre-exploitation level.

While no formal agreement has been concluded yet there is a consensus that an international co-ordinated management approach is necessary for the conservation and rational utilisation of the global stocks of SBT. In addition each of the three countries has developed and implemented its own catch quota arrangements and the levels of catch so set are generally in accordance with scientific assessment of acceptable catches. Currently Australia has a catch quota of 14,500 tonnes, New Zealand 1,000 tonnes, and Japan has advised a quota of 23,150 tonnes.

4. FOREIGN FISHING

The Australian-Japan Subsidiary Agreement on tuna longline fishing was renegotiated in August - September 1985 for the twelve months commencing 1 November 1985. A consideration in determining areas of access was an undertaking by Japanese industry to implement the 1986/87 global catch limit of 23,150 tonnes of SBT. That undertaking was in response to continued international scientific concern at the status of SBT stocks (see paragraph 3e). Largely as a result of the Japanese industry's acceptance of a quota for SBT the 1985/86 Agreement reopens some AFZ waters south of latitude 39 degrees south (generally, AFZ waters adjacent to Tasmania) to Japanese longline operations. The longline fleet had been excluded under the 1984/85 access agreement from AFZ waters south of 34°S in which historically virtually all the Japanese catch of SBT in the AFZ had been taken.

Negotiations for a 1986/87 Agreement are scheduled during mid-1986 and, again, conservation of SBT is expected to be a major factor for consideration. Other issues to be addressed will include level of access fees and areas of operation.

In July 1986 Australia participated in the 9th round of negotiations between the United States Government and the member countries of the South Pacific Forum Fisheries Agency treaty on access by US purse seine vessels on a regional basis.

Australia has made no commitment to US access at this stage although it has indicated that it would consider allowing US vessels to operate in a limited area of the AFZ in the Coral Sea should Australia accede to the proposed treaty.

The current twelve months agreement with the Australian agents for the commercial fishing interests of Taiwan expires on 31 July 1986. Negotiations have been held for renewal of the agreement for the twelve months from 1 August 1986. There has been an unacceptable high incidental catch of dolphins in pelagic gillnets and in May 1986 the Minister for Primary Industry announced that the maximum length for pelagic gillnets would be 2.5km in northern waters. As a result Taiwanese fishermen have indicated that they will cease gillnetting in Australian waters and future Taiwanese fishing operations will therefore be confined to trawling. Quotas, areas of operations and the number of vessels permitted to trawl have yet to be finalised.

The Australia/Korea subsidiary agreement on squid fishing was re-negotiated for the twelve months from 1 October 1985. The agreement was subsequently amended to allow up to four Korean squid jiggers to take 2,000 tonnes of squid. Re-negotiation for the next twelve months is at present being finalized.

Australia has two joint venture agreements with companies involving commercial fishermen of Taiwan and Thailand. These agreements grant access to pelagic and demersal resources in northern waters. Pelagic fishing under these agreements is likely to be heavily curtailed as a result of the restrictions on pelagic gillnets.

Specific controls are placed on foreign fishing vessels. Taiwanese vessels are required to report their position every day and their catch every 6 days as well as to complete comprehensive logbooks. Japanese, Korean and Thai vessels have similar reporting requirements.

##### 5. COMMONWEALTH FINANCING OF FISHERIES RESEARCH AND DEVELOPMENT

Grants totalling \$6.1m for 1985/86 were allocated from the Fishing Industry Research Trust Account (FIRTA) for a range of research projects, including biological research, gear technology, exploratory fishing, education and extension, and seafood handling and marketing. Research into tropical diseases, and ciguatera, received funding support.

Exploratory surveys, funded from the Fisheries Development Trust Account, were undertaken during the 1985/86 financial year. Major projects include continued exploratory deep water trawling for orange roughy and monitoring of the stocks of the South East Trawl Fishery. Drop lining off northern Queensland for emperor, sweetlip and coral trout is presently being undertaken but as yet no indication of viability has been possible. A longline project is also being undertaken off the Northern Territory with the aim of establishing a viable alternative to the pelagic gillnet fishery. Automatic longlining for bottom fish is being tested off southern Queensland and exploratory longlining for yellowfin tuna is continuing.

## 6. ASPECTS OF PARTICULAR INTEREST TO THE PACIFIC

### (a) Mariculture

Mariculture in Australia is led by the culture of oysters, Crassostrea commercialis (the Sydney rock oyster) and a recent addition the Pacific Oyster, C gigas. Total rock oyster production in 1984/85 was around 8000 tonnes (12.7 million dozen). Cultivators of Sydney rock oysters in New South Wales and Southern Queensland accounted for 91% of the total production; the remainder was Pacific oysters produced in Tasmania. The proportion of Pacific oysters comprising the catch is expected to increase in 1985/86.

Current mariculture research funded by FIRTA in Australia covers the following

SPECIES/SUBJECT	INSTITUTION
Nutrition	NSW Department of Agriculture
Prawns	NSW Department of Agriculture
Scallops	Tasmanian Department of Sea Fisheries
Oysters	Victorian Department of Conservation, Forests and Lands
Pearl Oyster	WA Department of Fisheries
Shellfish	University of Tasmania
Abalone	Tasmanian Department of Sea Fisheries.

In addition, the States also fund mariculture research, particularly Tasmania, Victoria, Queensland and New South Wales. Queensland and the Great Barrier Reef Marine Park Authority are carrying out research on trochus, essentially for fisheries management purposes, but the research has some significance to mariculture.

(b) Use of Fish Aggregation Devices (FADs) in Australia

Most success with FADs has been achieved off the south-west coast of Western Australia where catches of up to 30 tonnes per season of SBT have been achieved in close proximity to FADs. However, since the introduction of individual transferable quotas (ITQs) no further FADs have been deployed in this area. Four FADs are now in position off Exmouth and the Abrolhos Islands. Two FADs set on a seamount about 90 miles off Cairns, North Queensland, in approximately 45 metres of water have remained in position for four years. The design of these is similar to the early Western Australian type with plastic strands threaded through the lay of the synthetic mooring rope. Species taken around these FADs include yellowfin, bigeye and skipjack tunas, dolphin fish and rainbow runner. Deterioration of the plastic strands at the surface has been observed and is probably due to the action of ultraviolet light. New South Wales has an ongoing program and it is proposed to deploy six FADs off Sydney this year.

7. INTERNATIONAL DEVELOPMENT ASSISTANCE

(a) Australian Development Assistance Bureau (ADAB)

Through its aid program, Australia has provided over \$800,000 support for the SPC Tuna and Billfish Programme since its inception five years ago, including \$210,000 in 1985/86. It similarly supported the earlier SPC Skipjack Tagging and Survey Programme. In 1985/86 Australia provided \$70,000 towards an SPC regional training project for fisheries. Assistance has also been provided to the UNDP Pacific Regional Programme for projects such as the FFA Workshop on National Tuna Fishing Operations and the SPC Artisanal Fishing Training Module.

Australia also provides the Forum Fisheries Agency with one-third of its regular budgetary funds and supplements these with project-linked extra-budgetary funds. For 1985/86 Australia's assistance to the FFA was nearly \$700,000.

(b) Australian Centre for International Agricultural Research (ACIAR)

The Australian Centre for International Agricultural Research (ACIAR), a statutory authority established in 1982 by the Australian Government, commissions Australian research institutions to carry out high priority agricultural and fisheries research on a partnership basis with the individual South Pacific countries. Research projects with time frames usually of two or three years can be carried out in either the South Pacific country or Australia or a combination of the two. Currently, ACIAR supports research in the culture of giant clams (*Tridana*) in Fiji and Papua New Guinea with James Cook University as the Australian partner. ACIAR can only support bilateral projects, but it encourages linkages to



international research centres, such as ICLARM. Another project underway is that of establishing the life cycle and recruitment systems of the Coconut Crab, Birgis latro, again with the view of protecting and enriching the natural population of these crabs in many islands of the South Pacific. The project is being conducted jointly by the Queensland Department of Primary Industries, University of Queensland, Queensland Institute of Technology and the Fisheries Department, Vanuatu. A third fisheries project which is about to start will involve research on the biology of bait fish species which are important to the pole and line tuna industry of the Solomon Islands and Papua New Guinea. Collaborators are the Ministry of National Resources of the Solomon Islands, the Department of Primary Industry in Papua New Guinea, and the CSIRO Division of Fisheries Research in Australia.

(c) International Centre for Living Aquatic Resources Management (ICLARM)

ICLARM has a presence in the developing marine science centre in Townsville. ICLARM is an independent centre of scientific research and expertise which has built up an excellent reputation for the high quality of its output, both as a research body and as a centre for information dissemination.

ICLARM is involved in the giant clam culture project coordinated by ACIAR in Fiji, PNG and the Philippines.

## 8. TRAINING IN PRACTICAL FISHERIES

### The Australian Maritime College

The Australian Maritime College was established to provide maritime, engineering and fisheries training for the whole of Australia. First students were enrolled in 1980.

The College is in a unique position to provide maritime education and training in all aspects of a fisherman's job, at all levels, and is geared to provide that training at any location in the South Pacific region. The importance of Australia's tropical fisheries means that existing courses stress tropical aspects of training. Courses in gear technology also cover low technology fishing methods which are appropriate for isolated areas and developing countries.

Information on the courses offered are available in the College Prospectus. These courses have all been developed to meet the needs of the Australian industry. However, students from the South Pacific region as well as South East Asia are already enrolled in both the Diploma and the Graduate Diploma courses. The College would welcome an initiative that would lead to the provision of courses, on or off campus, designed specifically for the needs of the South Pacific region.

Further Information

This paper provides a brief list of Australian fisheries activities. Any reader interested in further details, on any aspect is welcome to contact the organizations mentioned or the Director, Australian Fisheries Service, Department of Primary Industry, Canberra, ACT 2600.