francs/kg until July 1991, but the world slump in the market then led to a total suspension of purchasing in the Territory for four months.

The price per kilo in November that year dropped to 210 CFP francs. To avoid this total dependency on the world market, the fishermen involved will need to diversify their activities. about the current stock. On the basis of annual catch figures, the trend would appear to be a downward one. However, this impression is also due to other factors such as restrictions on catches (at Canala) or mechanical breakdowns. Monitoring catch levels will be an important task in forthcoming years.

Professionals and scientists have mixed feelings

Trochus exports (kg) 1987-1991, by exporter (since 1988, two exporters have accounted for 93% of the local market), and by country (exports mainly go to Italy, but also, since 1989, to Japan). Source: Customs Service statistics.

Year Exporters	1987	1988	1989	1990	1991
Exporters					
Α	84,800	92,240	65,300	80,700	91,400
В	85,000	68,030	68,000	87,500	34,175
С	23,624	4,574	7,918	9,816	10,000
D	29,335	11,000			
E	574		0.061		
F G			2,861	1,150	
				1,130	
Total	223,333	175,844	144,079	179,166	135,575
Year	1987	1988	1989	1990	1991
Year Countries	1987	1988	1989	1990	1991
Countries					
	1987 152,800 17,000	1988 160,270 274	1989 88,800 36,861	1990 134,200 39,966	1991 91,400 34,175
Countries Italy	152,800	160,270	88,800	134,200	91,400
Countries Italy Japan Hong Kong Spain	152,800 17,000	160,270 274	88,800 36,861 7,918	134,200 39,966	91,400
Countries Italy Japan Hong Kong Spain French Polynesia	152,800 17,000 41,624	160,270 274	88,800 36,861	134,200 39,966	91,400 34,175
Countries Italy Japan Hong Kong Spain French Polynesia U.S.A	152,800 17,000 41,624 574	160,270 274	88,800 36,861 7,918	134,200 39,966	91,400 34,175
Countries Italy Japan Hong Kong Spain French Polynesia	152,800 17,000 41,624	160,270 274	88,800 36,861 7,918	134,200 39,966	91,400 34,175

Establishing trochus fisheries biology in King Sound, north-western Australia

by Karina L. Magro, Department of Zoology, University of Western Australia

The marine gastropod *Trochus niloticus* occurs on the northern reef platforms in King Sound, northwestern Australia. The Bardi Aborigines Association, based at One Arm Point, has fished trochus commercially since mid-1979 and it is regarded as a traditional resource.

The annual catch of trochus has declined from the 1980 high of 135 tonnes but has remained relatively stable at around 40 to 70 tonnes. The catch in 1991 was 40 tonnes, which supplied a gross revenue of A\$360,000 in the form of raw shell sold to overseas buyers. Value-adding facilities at One Arm Point

provide additional income through the sale of jewellery and polished trochus shell.

There is little information about the fishery but anecdotal accounts from fishermen suggest reefs are becoming depleted, especially those closest to the mainland. There is also a possibility of impact on the fishery by illegal Indonesian fishing. An additional source of concern is the recent issuing of further licences for the fishery.

The Aboriginal Economic Development Corporation initiated a collaborative research project in mid-1990 between the Bardi Aborigines Association and the University of Western Australia. Its aim was to provide some basic biological information for management of the trochus fishery, specifically to:

- develop suitable methods of measuring trochus abundance to efficiently record changes in stock levels;
- examine trochus life history characteristics: reproduction, recruitment, growth and mortality; and
- An analysis of factors influencing the development of policy for management of trochus

Presented below is an abstract of Bu Wilson's Honours Thesis.

It is proposed that policy development occurs within a complex of interacting factors. While some of these factors are directly concerned with the policy's subject matter, other relevant factors may appear extraneous. This is illustrated by an analysis of factors influencing the development of policy for the management of the marine gastropod *Trochus* in the waters off the north-west coast of Australia. Historical influences and legislative and policy arrangements for the Aboriginal trochus fishery at One Arm Point and the Indonesian fishery for trochus in Australian waters are reviewed and compared to determine factors that impact on management of the fishery.

Factors relevant to the development of policy are explored. These include not only biological con-

Beached in Broome: Indonesians, trochus and the Bardi of One Arm Point

investigate some of the processes controlling the variability in population structure and life history characteristics.

The program was funded by Bardi Aborigines Association and the University of Western Australia. A preliminary report is currently being written to document the results of trochus research conducted so far.

straints and questions of nature conservation and ecosystem management, but also the socio-political issues of sovereignty over coastal waters, requirements for quarantine and questions concerned with Indonesian-Australian international relations. In addition, a discussion of the term 'traditional' examines how the variable nature of this term fails to give clear guidelines for policy.

It is concluded that a diversity of influences have bearing upon the environmental management of trochus in a situation of increasing social, cultural and technological change.

by Bu Wilson

Excerpt from an article by Bu Wilson, entitled Beached in Broome – Indonesian, trochus and the Bardi of One Arm Point (How do the Indonesians in Broome jail and the local Aboriginal community feel about Indonesian fishing in Australian waters?), *published in* Inside Indonesia, *October 1990.*

About 20 km out of Broome on the dirt road to One Arm Point is the turn off to Willie's Creek. It's here that Craig and Coralie Kennedy are charged with caring for the growing numbers of Indonesian trochus fishermen awaiting trial in Broome or repatriation to Indonesia. While out at Willie's Creek the men live either on their boats or in a partly finished house on the property and spend their days fishing and being interviewed by relevant authorities. Under an agreement between the Australian and Indonesian governments made in 1974 and unilaterally updated in 1988 it was recognised that traditionally Indonesians have fished in what are now regarded as Australian waters. Under this Memorandum of Understanding Indonesian fishermen are allowed to fish in an area adjacent to Ashmore Reef (*Pulau Pasir*), Cartier Island, Browse Island, Scott Reef and Seringapatam (*Pulau Datu*). The agreement allows them to fish inside the Australian