out new quota from new stocks or increased quota from old stocks should more than cover the cost of buy-backs.

But by 1989 the government finally realised it had a problem. The orange roughy TAC on the Chatham Rise was far too high and needed to be reduced by over 75 percent. To do this, the government would have to pay out over $80 million. It was also likely that other orange roughy stocks were in a similar state and that the hoki TAC would need to be reduced. It was likely that several hundred million dollars would be needed to correct the structural flaws in the initial system.

Negotiations between the government and the industry led to an agreement on the introduction of a proportional rather than a fixed tonnage system. Under this system each quota is set as a proportion of the total catch. The total catch itself may be varied from year to year. And as part of the 1990 introduction of a proportional Total Allowable Commercial Catch (TACC) came a taxpayer-funded $47 million compensation pool.

IN NEW ZEALAND, despite the hype from ministers and fishing industry leaders, the quota management system by itself has not resulted in sustainable fisheries. The current catch in the New Zealand EEZ of around half a million tonnes is near the likely long-term sustainable yield from the zone, but many of the individual stocks are fished at unsustainable levels. The reported catch also does not take account of a considerable level of illegal activity such as under-reporting, dumping and illegal selling.

If TACs are set too high, as they have been for orange roughy or rock lobster, then the quota management system will fail to deliver.

The current decision-making system on TACs leaves too much power in the hands of the Minister of Fisheries with precious few criteria on which he can base his decisions. Fish stocks were the only major resource excluded from the Resource Management Act and are therefore not subject to the sustainability principles set out in that Act.

The industry itself has been unwilling to manage fisheries sustainably. It has selectively used information to support TAC increases and then ignored similar information in order to oppose TAC reductions.

New Zealand is not alone in having problems managing its fish. According to a report prepared by the United Nations

> "... virtually every fishery in the world has been criminally overfished for years. We know this because, for years, fisheries scientists have politely recommended to their governments that they should not let their fishing fleets catch quite so many fish next year.
>
> Canada has severely reduced the numbers of cod on what was once the world's richest fishing grounds, the Grand Banks of Newfoundland. European ministers are trying to reform a Common Fisheries Policy that is causing the imminent collapse of fishing in the North Sea. Norwegians, North Africans and Thais puzzle over their dwindling catches.
>
> None of this is surprising. Fish is a finite resource. You can run out of them. The world is doing just that. And this will be serious for the large number of people who rely heavily on fish for protein."
>
> *Editorial in* New Scientist *11 April 1992*

Case 2

Rock lobster – slow progress to end overfishing

CONCERN ABOUT the state of the rock lobster or crayfish fishery has been raised by MAF scientists since the early 1970s with little response from ministers. In 1990 an assessment by MAF stated that:

> For at least ten years effort has been two to three times higher than optimal for this fishery. As a consequence the stock is smaller than the optimal level. Further consequences are that the catch is less than the potential maximum sustainable yield, economic yields are small compared with their potential, and the fishery may decline further and be in some danger of collapse.

In 1990 rock lobster was added to the quota management system. A particular problem with rock lobster is that the total catch includes a large illegal and recreational catch as well as the reported commercial catch.

To deal with the continuing debate over the sustainable rock lobster catch the Minister for Fisheries established a committee of representatives from the fishing industry, Maori, recreational and conservation groups to come up with a plan to rebuild the population within ten years. The committee met for five months and, although its report last October made progress in the area of integrating catch limits, enforcement, and size controls, it failed to agree on any catch reductions.

Last November MAF's Dr Paul Breen reported that "at the present catch levels, the risk of collapse is very high: 29 percent over four years and 78 percent over the next ten years". Extrapolation from Dr Breen's figures means that to rebuild the stock within ten years the TACC would need to be reduced to under 1,500 tonnes.

Under pressure from the industry Mr Kidd made only a modest reduction to the TACC for 1992-3 taking it down from 3,000 to 2,700 tonnes. This was against the advice of his own department, the Department of Conservation, Ministry for the Environment and conservation groups.

ALISTAIR MACDIARMID

Rock lobster are caught in baited pots and have been a major fishery for over 30 years. The lobsters start breeding when they are between five and nine years old and can live up to 30 years or more.