

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

5.1 The Northern Prawn Fishery (NPF) is the most valuable Commonwealth fishery in Australia, worth between \$100 and \$150 million annually. The most valuable species caught in the fishery is tiger prawns. However, the annual catch of tiger prawns in the NPF has declined from around 5,000 tonnes in the early 1980s to around 2,000 tonnes in 1999.

5.2 This significant decline in the tiger prawn catch is primarily attributed to overfishing, which has been ongoing over several decades. In an attempt to redress this problem, the responsible authority, the Australian Fisheries Management Authority, developed the Northern Prawn Fishery Amendment Management Plan 1999.

5.3 The Amendment Management Plan alters the regulatory regime used in the NPF by restricting the headrope width at the top of the net, which effectively limits the size of the net that can be towed. At present, the catch of individual vessels at sea is controlled by restrictions on the hull size and engine capacity of those vessels. However, restrictions on hull size and engine capacity have not been sufficiently successful and have been found to be prone to manipulation. The revised arrangements will reduce the total available headrope across the fleet by 15 per cent, thereby reducing the quantum of the catch.

5.4 AFMA argues that the changed arrangements are advantageous for the following reasons:

- a) the current restrictions on vessel engine capacity cannot be enforced, leading to a blowout in fishing effort;
- b) the adoption of headrope restrictions provides greater flexibility to implement further restrictions in fishing effort, if necessary in the future.

5.5 However, the Committee notes that the adoption of the amendment management plan is not universally supported within the industry. The major criticisms of the plan put to the Committee are:

- a) The level of overfishing and effort creep is not as great as indicated by CSIRO and other researchers;
- b) Whatever the level of overfishing, headline length has very little influence on fishing performance (unless very drastic reductions in headline are enforced), and is a poor management tool;

- c) Should regulation of headline length nevertheless be adopted, the translation arrangements are inequitable for smaller operators in the fishery, notably those based in far north Queensland.

### **Committee Findings**

5.6 The Committee supports the Northern Prawn Fishery Amendment Management Plan 1999 as the most equitable and legally defensible means of achieving a long-term sustainable northern prawn fishery. The Committee considers that limited evidence has been presented to support any alternative proposal over the AFMA plan.

#### **Recommendation 1**

5.7 The Committee recommends that the Northern Prawn Fishery Amendment Management Plan 1999 be adopted without further amendment.

5.8 However, the Committee recognises that it is possible that the impact of the management plan may be disproportionately felt in some areas. Should this occur, then an assessment as to the impact and the implementation of structural adjustment measures may be necessary.

#### **Recommendation 2**

5.9 The Committee recommends that AFMA monitor the impact of the amendment management plan on shore based activity as well as off-shore activities, noting that if the impact is sufficiently severe, it may be necessary for the Commonwealth to provide strategic adjustment assistance.

#### *The Sustainability of the Northern Prawn Fishery*

5.10 The Committee is concerned at the extent of overfishing of the tiger prawn stock in the northern prawn fishery. Whatever the current level of effort creep, the fishery will fail if a significant reduction in catch is not implemented. The Committee is further concerned that the proposed amendment management plan may not deliver the sustainability required in the short term.

5.11 The issue of the extent of overfishing of the banana prawn stock and its long term sustainability should also be examined as a matter of urgency.

5.12 The Committee notes that there appears to be unwillingness on behalf of some operators in the NPF to accept that overfishing of the tiger prawn stock is a significant problem that has been ongoing for many years, and is in urgent need of being addressed.

### **Recommendation 3**

5.13 The Committee recommends that the proposal for an industry-funded research vessel for the CSIRO be adopted to assist in further research into the level of overfishing and effort creep in the northern prawn fishery.

#### *The Calculation of Effort Creep*

5.14 The annual calculation of effort creep is used as an input to make decisions about changed management proposals. There is industry scepticism about the process of calculating effort creep and the Committee heard evidence that those factors that do limit a fisher's ability to catch prawns are not included in the calculation. These factors have historically included increased seasonal closures, daylight trawling bans, area closures and banning of tri and quad nets. In the coming year the calculation of effort creep has not included the introduction of by-catch reduction and turtle excluder devices.

### **Recommendation 4**

5.15 The Committee recommends that AFMA/NORMAC consider including factors that remove effort in the fishery in the calculation of effort creep.

#### *The Gear Statutory Fishing Right Proposal*

5.16 NORMAC and AFMA believe that gear SFRs provide a better measure of fishing effort than the Class A SFR system, and allow greater flexibility when reductions in fishing effort in the NPF are required.

5.17 Opponents of gear SFRs question their efficacy as a management tool. The Committee was presented with modelling showing that modest reductions in headrope length have little impact upon swept area performance, the submitters arguing that a reduction in headline length and net size inevitably leads to an increase in vessel speed, which in turn increases the force on the otter boards and stretches the mouth of the net wider.

5.18 However, the Committee notes that there are limits to which trawl speed may be increased in the NPF, and that accordingly there is a valid relationship between headline length and swept area performance. The Committee also notes that with the removal of net restrictions in 1993, smaller operators significantly increased the size of their net in order to maximise catch.

5.19 Accordingly, the Committee considers that the adoption of the amendment management plan as provided for in the Regulations provides the most practicable means of achieving a reduction in catch. At the same time, the amendment management plan also provides the flexibility for an annual adjustment in fishing effort, at relatively small expense to operators, who generally will need to replace nets on an annual basis. Should other alternative management measures be found to be more equitable and effective, the Committee is assured that they can be implemented at relatively little expense.

5.20 Reducing the size of nets will reduce prawn catches. The Committee notes that, after the lifting of net restrictions in 1993, vessels below 375 SFRs increased their headrope length significantly. This increase could only have been in order to increase efficiency and therefore catch. It is axiomatic that a reduction in headrope will reduce the total catch.

5.21 The Committee is concerned that, to maintain the ecological sustainability of the fishery, a reduction in fishing effort of the order of 25–30 per cent is required. However, the current proposal is to reduce the total available headrope across the fleet by 15 per cent. Evidence was presented to the Committee that this will result in a reduction in effort of somewhere between 5 and 10 per cent.

5.22 In addition to further gear restrictions, other alternatives to reduce fishing effort may be a new voluntary buy-back scheme funded by a continuation of the industry 1993 levy, or the possible adoption of time units as a more flexible alternative to season closures. These measures should be investigated by AFMA/NORMAC, in conjunction with the CSIRO, during the first twelve months of the gear SFR management regime to ensure that, if a change is warranted, it could be implemented without undue delay. However, at this stage, on the evidence available to it, this Committee is not in a position to recommend such alternative measures.

### **Recommendation 5**

5.23 The Committee recommends that further research be undertaken by CSIRO, in conjunction with DJ Sterling Trawl Gear Services and the Australian Maritime College, into the prawn trawling performance prediction model developed by Mr Sterling, and its implications for gear SFR management.

### **Recommendation 6**

5.24 The Committee recommends that an industry poll be conducted, possibly by AFMA, to ascertain the level of support for a continuation of the 1993 levy to raise funds for voluntary buy-outs.

### **Recommendation 7**

5.25 The Committee also recommends that AFMA investigate the use of time units as an alternative to season closures.

#### *The Translation Arrangements*

5.26 AFMA's move to adopt gear SFR management of the NPF has been made following an extensive consultation process which began in 1992. The length of this process has been due to the difficulty of determining an equitable method of translation from Class A SFRs to gear SFRs.

5.27 The report of the AAP endorsed the one-to-one basis of translation as the most equitable translation scheme. The fundamental argument in favour of one-to-one translation from Class A SFRs to gear SFRs is that it preserves current proportional

access to the fishery, and is therefore the only legally defensible means of translation. This argument was not disputed during the inquiry.

5.28 The Committee also notes that failure to implement the amendment management plan will disadvantage operators who have positioned themselves in reasonable anticipation of the implementation of the amendment management plan.

### **Recommendation 8**

5.29 The Committee recommends the endorsement of the proposed one-to-one translation from Class A SFRs to gear SFRs as the only legally defensible means of translation.

### **Recommendation 9**

5.30 The Committee recommends that, during the next two years, AFMA:

- a) Undertake thorough research to calculate the ability of the Northern Prawn Fishery Amendment Management Plan to deliver the long term sustainability of the fishery;
- b) Undertake an assessment of the proposed effort units management proposal to ascertain the ability of the proposal to deliver sustainable management of the fishery; and
- c) Commission research to ascertain the future economic impact of the Northern Prawn Fishery Amendment Management Plan on the operators in the fishery.

Senator Winston Crane  
Chairman  
March 2000