

Management of recreational fishing in inland waters in Tasmania

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Tasmania's freshwater recreational fisheries have been under some form of administrative control since 1862. A unique feature of this control is the statutory provision for input from angling organisations to management of these fisheries, i.e. consultation has long been a routine process.

Close liaison is maintained with anglers with the result that satisfaction with management performance is generally quite high compared with other States. Commitments to research and data collection are extensive.

Efficiency of operation is also ensured by financial arrangements. All recreational fisheries management functions are funded from angling licence fees and include administration, research, management and enforcement.

The various components of these management arrangements in Tasmania are briefly outlined.

Inland recreational fishing in Tasmania

Tasmania has had an authority of some form responsible for recreational fishing in inland waters since 1862. Whilst initially this organisation was primarily responsible for the administration and development of recreational trout fisheries, it is today

responsible for freshwater fauna in total with the following primary functions:

- management, regulation and protection of recreational trout fisheries;
- regulation, development and management of commercial fisheries in freshwater—these are primarily a wild fishery for eels, and some involvement with the trade in aquarium species;
- regulation and development of fish farms in freshwater;
- regulation, protection and management of other recreational fisheries including the freshwater lobster, white-bait, river blackfish and other species;
- protection, management and conservation of all freshwater fauna throughout the State, including the endangered galaxiid species.

In relation to its present role in the administration of recreational freshwater fisheries, the Inland Fisheries Commission (IFC) is generally acknowledged by trout anglers at least as being amongst the most successful in the country.

It is therefore worthwhile to briefly examine some of the elements contributing to the perceived success of the organisation.

Finance

The recreational trout fisheries in Tasmania are funded entirely from angling licence fees or other income generated by way of commercial sales or research grants. No Government funding is received at all for administration, research, management or enforcement of these fisheries.

As a consequence, the fees are perhaps high by Australian standards at \$38 for a full season licence with various concession and short term options. Licence fees have been loosely linked to the Consumer Price Index (CPI) but other political imperatives, such as impending elections or changes to funding arrangements, have also had an impact one way or another. Opinions on value for money do vary somewhat with keen anglers regarding the fee as fair. However, this view is obviously not shared by everyone as there is a definite link between fee increases and licence sales figures (Figure 1).

With such a dependence on licence fee income the Commission has an active programme to attract new participants as well as to hold present anglers.

Research

Research effort is focussed across the full scope of the agency's responsibilities but funding sources largely dictate what can be achieved.

Specific trout management questions are addressed from internal funds.

Whilst the biology of trout species is generally well researched, there is still a great deal to be known about the reasons for such things as variations in growth rate and

abundance between waters and variations in angler returns.

Recent IFC research on factors affecting recruitment of trout in rivers has established a link between flow and life history stage to recruitment success. This may offer the opportunity to add some certainty to recruitment in drought years, by regulating flow during critical periods and/or stocking in poor recruitment years.

Questions relating to other areas can usually only be pursued if external funding sources can be arranged. These may also have some spin-off value to recreational fishers such as the work on stream flows.

The Commission's record has been extremely good in attracting external funding with endangered fish research being a good example.

A unique consultancy arrangement between the IFC and the State's power generating authority, the Hydro-Electric Commission (HEC), has also been arranged. Through this arrangement various applied research projects of relevance to recreational fishers, the IFC and the HEC have been successfully undertaken. For example, the severe eutrophication problem experienced at Lagoon of Islands was investigated and solved with mutual benefit to anglers and other water users.

Data collection

Keeping track of where people are fishing and what they are catching is central to the management of recreational fishing. This also provides feedback on the success or otherwise of stocking programmes.

A number of methods are used by IFC including:

- postal questionnaire;
- creel census;
- direct population estimates;
- spawning migration assessment.

The central data collection procedure has been a postal questionnaire of licensed anglers which has been conducted annually since 1985. This method has its detractors but is generally acknowledged as being best suited to high value/low catch fisheries such as trout. Other validation procedures have also been used in conjunction with the questionnaire. Provided the limitations of the results are appreciated, routine information on fishing pressure and catch returns can be effectively monitored over time for all of the State's major fisheries.

The questionnaire also offers real advantages when specific issues arise at short notice, because at least some information on effort and catch is available for all major waters.

Two specific examples which have come up recently are the development of a catchment management plan for the Lake Sorell area and the proposal to drain Lake Pedder. Both of these lakes support significant recreational fisheries, and the fishers' point of view in the debate needs to be backed up with statistics from the questionnaire.

Information on other issues such as minor fisheries (freshwater crayfish and blackfish), boat usage and angling related expenditure have also been periodically collected at the same time as the routine trout fishery information.

As indicated, creel census is used but not extensively as it is usually too expensive to conduct exhaustively.

Direct population sampling by electrofishing or gill netting is also employed. Many of Tasmania's streams are amenable to quantitative sampling using electrofishing equipment whilst gill netting is primarily used for growth rate assessment in lake populations.

Spawning fish have been routinely monitored in a number of lakes with data sets in excess of twenty years being available from several sites.

Consultation

Angler consultation is mandatory for the Inland Fisheries Commission because of its structure. The Commission itself consists of a four person board, three Associate Commissioners and a Government appointed Chairperson. Two of the Associate Commissioners are nominated by angling groups whilst the third is an angler-nominated Government appointee. The Chairperson is responsible for the day to day operations of staff.

Each of the three regional angling associations has direct representation on the Commission and therefore direct input to policy and decision making. There is in turn a hierarchical structure of angling clubs at local level such that ideas or opinions generated at this level can feed through a local/regional/State structure to and from the Commission.

Commission staff at all levels have considerable involvement with angling clubs both in a consultative way as well as for education purposes.

However, it is still a fact that less than 10% of licensed anglers are involved in the club system and consequently other avenues for consultation are not ignored.

Formulation of management rules

There are a number of ways in which changes to management rules are generated:

- Government policy directives;
- staff generated changes;
- angler initiated changes.

Depending on the reasons for the change, varying degrees of consultation would be involved and the actual pathway may also vary.

The specific rules may be contained within a three-tiered Act/Regulation/Order system with some less specific rules being simply a policy directive of the Commission. The latter is being used less frequently in recent years although there is a move to what is probably only a more formal system of informal policies, known as 'The Management Plan'.

Stocking arrangements

Most of Tasmania's major lakes contain self-supporting populations of brown trout. Similarly, river fisheries are generally self-supporting.

If any lakes do require additional recruits the first resort is for improvement of spawning habitat. This has been successfully applied to major fisheries such as Great Lake and Lake Sorell.

Other lakes that do not have suitable spawning habitat may be stocked regularly,

with the questionnaire information or other surveys being used to assess the success of these stocking programmes.

Additionally, rainbow trout are frequently used in storages closer to population centres to provide a readily catchable resource for the less dedicated angler or for those without the means to travel to the lakes. The emphasis in these areas is on return to the angler. Waters that do not provide reasonable returns generally receive minimal attention. Once again, the questionnaire data are useful in assessing the success of rainbow trout stocking.

Angler involvement in stocking is encouraged either through assistance at time of release of IFC-reared stock or through club participation in regional rearing units. The rearing units obtain trout fry free of charge from the Commission and rear them to a more advanced stage prior to release in certain waters.

Education

Numerous avenues are used for education purposes:

- angling club meetings;
- newsletters, annual reports;
- media—including television, radio and newspapers via news, interviews, articles or advertising;
- open days;
- displays at various shows, exhibitions or special events;
- direct contact via staff.

It is very difficult to say which is the most effective and no one method has anywhere near 100% coverage. For instance, the 'Angling Code', which is a condensed ver-

sion of rules and regulations handed out with every licence, is not 100% effective in getting the message across to every angler even on basic rules.

There is still a need for continued education in relation to codes of practice and general ethics, but there is no doubt that anglers' attitudes are changing in relation to many key issues; for example:

- litter is decreasing but remains a problem in some areas;
- the 'stocking is the only answer' mentality is slowly changing;
- the fishing experience itself rather than just the catch is becoming much more important.

Compliance

A relatively strong commitment to enforcement remains necessary in Tasmania although generally speaking the number of offences related to recreational fishing is slowly decreasing for a similar level of policing effort.

It is also a fact that the role of enforcement staff is slowly changing. From a strict policing role some twenty years ago, a greater involvement in research and management functions, as well as public relations, has emerged in recent years. In our experience this type of change can be dictated as much by the particular staff involved as it can by management requirements.

In relation to enforcement, it is definitely a significant advantage for the management agency to also have the responsibility for enforcement as is the case in inland waters in Tasmania. This allows for much better control and liaison and also has definite

feedback advantages between anglers and management.

Summary

In general, anglers are very supportive of the present structure and operation of the Commission. The fact that anglers have the opportunity to contribute to Commission policy etc. is seen as a major plus by them. Funding remains a contentious issue, with many anglers calling for greater government assistance to the Commission, and relief from ever increasing licence fees. However, for those anglers who make the most of the number and variety of fishing locations and experiences available, the licence fee is generally accepted as reasonable value. The fact that all IFC income for trout is derived from anglers' fees means that the Commission staff must strive to meet anglers regularly, listen to their suggestions and complaints, and attempt, where possible, to solve problems as they arise. This has probably diverted resources away from strategic issues. However, with the questionnaire survey, a regular population assessment programme for both rivers and lakes and a fairly intensive enforcement presence, it is hoped that real problems can be detected early, and appropriate plans made to research, manage and enforce within the limits of our relatively small funding base.

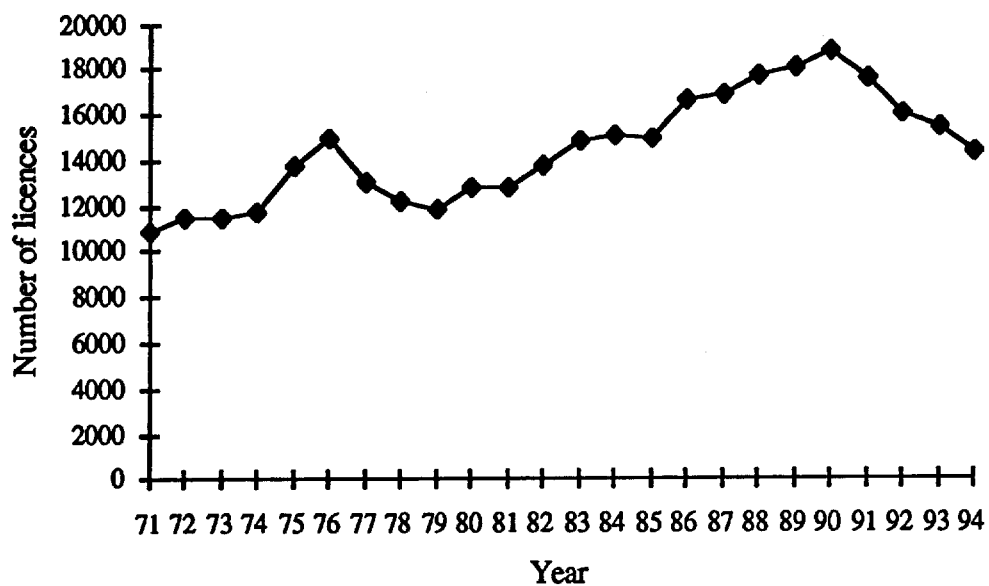


Figure 1. Trend in the number of full season angling licences, 1971–94.