

United we stand, divided we fall

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Abstract

There is a very high expectation within the community in relation to Governments' role in control and management of freshwater pest fish. However, it is ironical that most pest fish incursions occur due to the members of the community:

- transporting pest fish such from one location to another as pets or to establish new fishing and food resources,
- using pest fish as live bait in recreational fishing,
- releasing their unwanted pet fish into waterways.

Community education, surveillance and monitoring and eradication of pest fish in confined water bodies have to be done indefinitely, and require significant resources. Current resources allocated to relevant Government departments are not sufficient to carry out pest fish management on a full scale. However, combining these resources with those of various community based groups could enhance the State's capability to control and manage pest fish in Queensland.

Queensland Primary Industries and Fisheries (QPIF) has established a community based network in Queensland to deal with the freshwater pest fish problem. The main responsibility of this network is to not only provide stakeholder advice on the development of management strategies for the control of pest fish, but also carry out on-ground activities such as surveying and monitoring pest fish, eradication and community education.

Introduction

It is estimated that there are about 34 alien fish species which have established viable populations in rivers across the mainland Australia (West et al., 2007). This does not include those such as climbing perch which have already established on islands in close proximity to mainland Australia. Once alien fish colonise Australian waters, their spread throughout and between catchments may be due to both human intervention or natural pathways; however, their primary vector into Australian waters in the first place is humans.

The main cause for alien fish incursion in Australia is people who, accidentally, deliberately or sometimes out of ignorance or fear spread alien fish (Wells, 2007). Despite being illegal, the reasons people spread alien fish include using as bait for recreational fishing, releasing them due to kindness, and stocking farm dams for the purpose of breeding fish. There is also likely

misconception amongst some people who believe some alien fish are native (Wells, 2007).

On the other hand, there is an increasing amount of communication and community education about pest fish being conducted and supported by various government agencies, natural resource management groups, recreational fishers, and volunteers who are trying to do their best in looking after fish habitats and fisheries resources. Such communication and education efforts exponentially increase pest fish awareness amongst the members of the public.

Alien fish monitoring and surveillance is becoming more intensive as education and awareness grow. Greater frequency of reports from the public indicates that noxious fish education is working in the community, but with it comes increased community expectations. It is increasingly apparent that agencies which have the responsibility for the control and management of alien fish have finite resources to conduct these activities. In many cases, to control an alien fish outbreak, external assistance would be required to augment the short fall in resources, knowledge and expertise.

There is a very high expectation within the community in relation to roles of governments in control and management of alien fish. However, it is almost paradoxical that as better alien fish management is demanded by the community, most alien fish incursions occur due to the members of the community. Resource managers now argue that responsibility for alien fish control and management rests with the entire community, not just government agencies, and there is a need for a coordinated approach between government, industry, research and the broader community to deal with this issue (Wells, 2007; West et al., 2007).

Community involvement

Community involvement in the control of alien species may have a layered hierarchy. Different levels of involvement could be expressed by distinct terms such as – community education, community awareness, communication, community participation and community engagement. Although they all involve the participation of the community the terms do not refer to the same action. For example, Wells (2007) indicated that good community awareness does not equal to good community engagement. Similarly, he also stated that the development of a great community education strategy would be worthless if there were no people to implement it.

In this article, community involvement means active and long term community engagement in the control and management of alien fish species and the development of policies and strategies which will govern these actions. It is expected the community participation in the control and management of alien species will not be homogenous at all levels. That means different layers of the community may participate at various levels and capacities.

There are many community based groups such as “Carpbusters” who can directly be involved in pest fish, particularly in relation to community education. On the other hand local governments or non-government organisations such as natural resource management groups have capacity to actively control noxious fish by engaging in activities such as removal, monitoring or surveillance of noxious fish.

Larger and national community based initiatives such as Waterwatch may also have potential to make significant contribution to noxious fish control and management. Waterwatch has a monitoring network with 2000 groups monitoring more than 6000 sites in over 200 catchments across Australia (Koehn and Mackenzie, 2004). The monitoring carried out by such organisations provides invaluable opportunity for obtaining data on the occurrence of alien fish species in waterways. Community involvement in alien fish monitoring and control activities also endows the community with a sense of ownership of the alien fish issue and an enhanced recognition of the complexities of managing alien fish (Koehn and Mackenzie, 2004).

The QPIF Model

Most Queensland catchments have some level of alien fish incursions. Some of these are considered as noxious such as carp, tilapia and gambusia, while others such as swordtail and goldfish are not prohibited. Whether noxious or not, all alien species have some level of impact on native fish species and freshwater habitats. Their control and management across the State requires a significant amount of resources and all control and management actions such as community education, surveillance and monitoring and eradication of pest fish have to be done indefinitely. Executing all alien fish control and management actions by a single agency across a large state such as Queensland is almost impossible, but becomes easier and more effective if the community is engaged.

Early 2009, QPIF developed a new community based program which is called “*The Pest Fish Control and Management Network*” and takes the control and management of alien fish to the community by encouraging and actively engaging all stakeholders and community groups in alien fish management (Figure 1).

The Pest Fish Control and Management Network includes a state wide Community Advisory Group with representations from key stakeholder groups including research and fisheries industries, local governments, natural resource management groups and AQIS. The Network also includes two Regional Pest Fish Working Groups; based in the North and South Regions. The main tasks of the Community Advisory Group are to provide policy advice to QPIF in relation to alien fish management and assistance to the Regional Pest Fish Working Groups in implementation of pest fish actions in regions.

The Community Advisory Group provides:

- stakeholder advice into the development of management strategies for the control of alien fish in Queensland.

- a forum for the flow of information between stakeholder groups.
- advice on new alien fish incursions within high risk catchments.
- advice towards the development of a State management plan for alien fish control in Queensland.
- assistance and directions to the Regional Pest Fish Working Groups in the development of regional alien fish management actions.
- assistance to the Regional Pest Fish Working Groups in achieving community understanding of the management actions being taken.

The Regional Pest Fish Working Groups have a wider representation and deal mainly with regional pest fish issues. These Groups are involved in implementing pest fish control and management actions in the regions, and provide input in to alien fish policy development at a regional level and report to the Community Advisory Group. The main responsibility of the Regional Pest Fish Working Groups include:

- coordinating efforts between various groups that contribute to the alien fish management,
- raising the profile of alien fish within the community,
- acting as a forum to share ideas and news as related to alien fish,
- providing advice and report to regional NRM groups, government agencies and other stakeholder groups in relation to alien fish management,
- informing stakeholders on key elements and directions for investment on alien fish management,
- acting as a vehicle to develop and support initiatives related to alien fish by enhancing communication and co-operation with the broader community through a partnership within a diverse working group,
- providing advice and where necessary working as a conduit in identifying and promoting research needs in alien fish control and management.
- providing regular updates to the State Community Advisory Group.

References

- Koehn, D.J. and Mackenzie, R.F., 2004. Priority management actions for alien freshwater fish species. *New Zealand Journal of Marine and Freshwater Research*, 2004, Vol. 38: 457–472 in Australia.
- Wells, A., 2007. Community understanding and attitudes to alien fish. In: Ansell, D. and Jackson, P. (Editors), Emerging issues in alien fish management in the Murray-Darling Basin. Statement, recommendations and supporting papers, Workshop held in Brisbane, 30-31 May 2006.
- West, P., Brown, A. and Hall, K., 2007. Review of alien fish monitoring techniques, indicators and protocols: Implications for national monitoring of Australia's inland river systems. Invasive Animals Cooperative Research Centre, Canberra.

Figure 1: The Queensland Pest Fish Control and Management Network.

