

# Pearling and Aquaculture

## Northern Inland Bioregion

### Regional Management Overview

Small-scale cage farming of barramundi on Lake Argyle has been successfully developed by a local fishing company over recent years. In an effort to expand production more rapidly to create economies of scale, an expression of interest process to select a developer for large-scale barramundi farming was undertaken by Fisheries WA, and completed in June 2001. The outcome of the process was that the Selection Board preferred not to grant preference to any of the applicants. While not creating an incentive for rapid growth in aquaculture development on Lake Argyle, this decision should clear the way for smaller developers, who have already shown some interest, to make application for additional aquaculture licences. Fisheries WA will continue to work with interested proponents to encourage smaller-scale aquaculture projects at Lake Argyle, and is confident that there will be some significant development over the next one to two years.

Other management activities in the bioregion included the provision of technical advice in relation to the production of redclaw crayfish, aquarium fish, sooty grunter and barramundi by landholders on the Ord irrigation system around Kununurra.

Northern Inland Aquaculture Figure 1 shows the major licensed aquaculture sites in this bioregion.

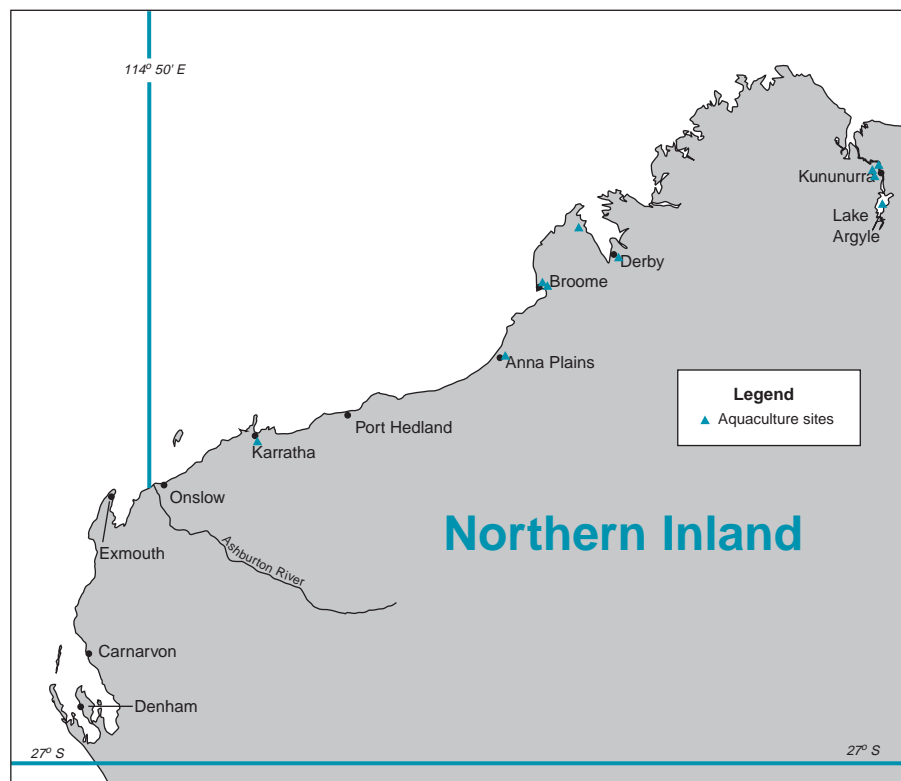
### Regional Compliance and Extension Overview

Aquaculture Development Officers were stationed in Broome and Kununurra. One of their major roles is to facilitate the necessary approvals to commence major aquaculture ventures in the Kimberley. Special efforts are focused on assisting Aboriginal communities to meet their aquaculture development objectives. In addition, the officers were directly involved in the production of juvenile barramundi in liaison with the Broome TAFE, inspection of properties for their suitability for the production of redclaw crayfish, and the establishment of aquaculture research facilities at the Frank Wise Institute of Tropical Research at Kununurra.

Extension work included the provision of assistance to the Gascoyne Inland Aquaculture Group which is looking at the production of ornamental fish in artesian waters. Ongoing technical advice was also provided in response to public enquiries.

### Regional Research Overview

Research staff have contributed to efforts to develop a risk assessment of barramundi farming in Lake Argyle and assisted a barramundi hatchery nearby. Barramundi is one of the species included in an ADF project, on modelling nutrient outputs from farming systems for key aquaculture species, undertaken by research staff in collaboration with Israeli scientists. Interaction with Aboriginal communities has included establishing a pilot farming trial with sooty grunter.



**NORTHERN INLAND AQUACULTURE FIGURE 1**

Map showing the major licensed aquaculture sites in the northern inland bioregion.

## Barramundi Farming

### Barramundi Farming Status Report

Prepared by G. Maguire

#### INDUSTRY DESCRIPTION

##### Production areas

Intensive production in cages in Lake Argyle or in recirculating systems in the southern half of the State. Interest in producing barramundi is growing strongly, with 35 licences issued as at 30 June 2001. Production from these farms is expected to increase in 2000/2001.

##### Production methods

Barramundi can be farmed in cages in Lake Argyle or coastal areas, in inland saline ponds, or in intensive recirculating culture systems using fresh water, inland saline water or sea water.

#### AQUACULTURE PRODUCTION

**Production current season (1999/2000):**  
**Not reportable**

Where fewer than five producers are involved in a particular industry, the data are subject to the confidentiality provisions of the *Fish Resources Management Act 1994* and are not reported. However, the barramundi production forms a significant part of a statewide freshwater finfish farming industry of 55 tonnes.

**Number of producers for year 1999/2000:** **3**

**Production projection next year (2000/2001):**  
**40–50 tonnes**

The increased number of new producers allows a projection to be made.

#### ECOSYSTEM EFFECTS

Barramundi farming is considered to present a medium risk to the environment. Cages within protected coastal areas and lakes can be operated with low environmental impact if appropriately located in deeper water with good current flow and if modern feeding practices and feed design are used which minimise uneaten food and soluble nutrient release. Land-based farms producing more than 1 tonne of fish require discharge licensing, which includes monitoring of water quality. Fisheries WA recommends use of swirl separators and/or settlement/reed ponds to improve the quality of this discharge prior to release or reuse.

#### SOCIAL EFFECTS

Not a major employer of staff so far. Visual impact is relatively minor.

#### ECONOMIC EFFECTS

**Estimated annual value (to producers) for year 1999/2000:** **Not reportable**

#### INDUSTRY GOVERNANCE

A Fisheries WA licence must be issued and a water quality monitoring program that is to the satisfaction of the Department of Environmental Protection is a condition of the licence.

#### EXTERNAL FACTORS

This industry has the potential to grow significantly, particularly in Lake Argyle.

