

# Aquaculture in the Gascoyne

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After operating for several years, the Gascoyne Inland Aquaculture Group (GIAG) became incorporated in February 2002 and is now underway with the fourth stage of the GMS funded project, the construction phase.

This phase will concentrate on the installation, monitoring and fine tuning of several water treatment systems that will allow more reliable use of artesian water for pilot scale aquaculture projects on stations. The financial support that the GMS has afforded GIAG has provided the opportunity to actually field test what previously was 'just a good idea'.

Andrew Beer, Aquaculture Development Officer for the Gascoyne Department of Fisheries, points out that "construction for the water treatment plant is a critical step in determining the viability of artesian aquaculture and a logical development following the trials GIAG have undertaken in recent years".

Financial assistance from GMS and technical advice from Fisheries, Waters and Rivers Commission, the Gascoyne Development Commission and Department of Agriculture, has enabled GIAG to be able to research and design low cost and low maintenance water treatment units.

Andrew explains that "these selection criteria were essential to ensure that the systems would cope with the harsh and isolated environment and also be relatively simple to construct and maintain. Modification of the iron, hydrogen sulphide, dissolved oxygen levels and temperature of the water is also critical for the survival of the fish."

GIAG have now initiated plans to operate pilot scale trials at 3 locations in the Gascoyne. Hamelin Pool station will focus on the culture of various ornamental species and Callagiddy Station will trial barramundi as a 'model' table finfish.

"In this phase we are going to get some valuable 'real life' monitoring data enabling us to explain to people the techniques required and the benefits of using artesian water for aquaculture" Andrew added.

"A third site has also been proposed to be adjacent to the Carnarvon Airport artesian bore. This site would provide a location to run more closely controlled experimental trials, explore the potential of other species and provide a venue for training and extension" Andrew explains.

In the future an assessment will be carried out on the effect of different conditions in artesian aquaculture on equipment, management practices and the biology of the culture species. "This will obviously impact on the economic aspects of the pilot farms and provide the information required to determine the risks for those choosing to engage in larger scale ventures" Andrew said.

With the large number of artesian bores in the region, there is significant potential to transfer the technology to pastoralists interested in exploring aquaculture as a diversification option. In years to come, the culture of ornamental and table finfish may be an unexpected and unlikely source of income for people in the arid Gascoyne and Murchison regions.

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*The use of artesian bores for commercial scale aquaculture in the Gascoyne is currently an untapped opportunity according to Andrew Beer, the Department of Fisheries Gascoyne Aquaculture Development*