

Title: **Does Large-Scale offshore Aquaculture Farming in Western Australia Make Economic Sense? the Case of Yellowtail Kingfish**

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Abstract: Aquaculture investments in virgin situations are subject to a large number of variables and range in values. This is even more so when considering investments in open ocean aquaculture.

The paper presents the key factors and results obtained for a proposed large-scale open ocean aquaculture development in Western Australia with an annual throughput of 2,000 tonnes per year of yellowtail kingfish (*Seriola lalandi*).

Given the high level of intrinsic risks, potential investors are considered to be unlikely to accept a rate of return below 25%. The model uses Montecarlo simulation analysis to determine the project's risk profile and sensitivity to a range of different variables.

The results indicate that the project is economic in the base case over a 10 year life with the fish being harvested at 3 kg after a rapid twelve month grow-out period resulting from the high sea water temperatures available in WA with a farm-gate price of A\$ 8.75/kg. The main risks measured in order of importance are as follows:

" Sales price " Feed costs " Capital costs " Farm labour costs and " Processing cost.

The analysis shows that economies of scale are highly significant.

The paper also considers the appropriate type and level of risk for the Western Australian Government to take on in developing an offshore aquaculture policy framework.