1-1-2012

An Analysis of Efficiency in the Tasmanian Salmon Industry

Amy White
Bond University, Amy_White@bond.edu.au

Follow this and additional works at: http://epublications.bond.edu.au/research_posters

Part of the Agribusiness Commons

Recommended Citation
http://epublications.bond.edu.au/research_posters/6

This Book is brought to you by the Research Week at ePublications@bond. It has been accepted for inclusion in Research Week Posters by an authorized administrator of ePublications@bond. For more information, please contact Bond University's Repository Coordinator.
**PhD Research Topic:**
An Analysis of Efficiency in the Tasmanian Salmon Industry

**OVERVIEW**

Food producers from around the world are under increasing pressure to provide for a growing population that is demanding more protein (Charles et al., 2010). At the same time, they face significant supply-side constraints as the ecosystem goods and services required to produce food are pushed past carrying capacity (Nellemann, 2009). As producers of high quality, nutritious protein, aquaculture is in a prime position to help bridge the gap between future supply and demand. However, if the industry is to capitalize on this opportunity, producers will need to look for innovative ways to measure and manage their operations in order to concurrently meet the demands being placed upon them by consumers and the limits of the natural environment (Costa-Pierce, 2002).

Life cycle assessment (LCA) is an environmental accounting tool that transforms production data into environmental metrics that allow for the cumulative environmental impacts and natural resource use of a product or service to be quantified (Pelletier and Tydemers, 2011). Where it differs from other sustainability tools is that it goes beyond the direct impacts of a production process to incorporate those associated with the upstream and downstream players in the supply chain and in doing so provides a better indication of the associated environmental cost (Hertwich, 2005).

The Tasmanian salmon industry is the largest aquaculture operation in Australia and the highest earning fisheries product (ABARES, 2010). It offers an interesting case study as it has recently implemented a number of initiatives such as state of the art hatcheries, changes to feeds to include more locally grown materials and the value-adding of by-products from salmon production. This research aims to measure the overall environmental performance of their supply-chain and the efficiency gains achieved as a result of these changes using LCA.

Production data has been collected from the four major producers within the Tasmanian industry, as well as the feed companies and processing facilities that make up their supply chain, as shown below. This data is in the process of being analyzed to quantify the resources embodied in their supply-chain and to determine the environmental impacts using a series of LCA impact categories.

It is anticipated that the findings of this research will help the Tasmanian salmon industry to keep abreast of growing consumer demands and natural resource constraints to remain viable in the future. It will also provide policy makers with vital information required to regulate this and similar industries to ensure more sustainable outcomes for society. The research findings will have application to salmon producers in other countries.

**KEY REFERENCES**


