

Case Study Summary Report

Lessons Learned from conducting a cost - benefit analysis for Aquaculture Stewardship Council certified farms in Vietnam: The business case to illustrate value of certification through case studies of ASC certified farms

WWF Austria, WWF Viet Nam and ASC

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ASC with WWF Australia and Viet Nam commissioned a cost benefits analysis in May 2016 to illustrate the business value of certification through case studies of ASC certified farms in Vietnam. Due to the limitations of the research in terms of sample size, comparison groups and causality, the findings from this case study are not conclusive and should not be generalized for ASC versus non-ASC certified farms. However, there are many lessons learned from the process and results which point to potential trends for further research in terms of reduced costs, avoided costs and realized benefits of ASC certification. The study also highlighted unintended effects (positive and negative) such as the very high bank loan interest rates for necessary investments, preferential land policies of governments for certified farms and quality of inputs. The findings, while not scientifically robust (statistically significant), enable ASC to identify focus areas for further research and provide input for internal learning.

Background

ASC works with aquaculture producers, seafood processors, retail and foodservice companies, scientists, conservation groups and consumers to:

- *Recognise and reward responsible aquaculture through the ASC aquaculture certification programme and seafood label.*
- *Promote best environmental and social choice when buying seafood.*
- *Contribute to transforming seafood markets towards sustainability.*

ASC aims to promote meaningful improvements in aquaculture production in a credible and cost efficient way. Understanding and evaluating producer costs and benefits in various regions and commodities is necessary to understand and communicate the value proposition of ASC certification.

ASC commissioned a cost-benefit analysis (CBA) of the application of ASC certification to address the research questions:

What are those benefits and costs associated with ASC certification? Do the benefits of implementing the standards outweigh the costs? Which benefits go directly to the certified aquaculture farms and which go to the surrounding environment and communities? Which direct benefits and costs can be quantified and valorized?

In the analysis focused on the farmer benefits of implementing the ASC requirements in terms of social, environmental and economic aspects. The costs include expenses for farm upgrading, improving production conditions and welfare of workers and other changes on farm to meet the ASC standard requirements. Other costs include costs of the initial application, audits and ongoing certification costs.

Scope, Research Design and Limitations

The scope of the research was the Mekong Delta of Vietnam, in Soc Trang and Ca Mau provinces (shrimp) and An Giang and Dong Thap provinces (pangasius), which represent the majority of aquaculture production in 2015.

The research sample design was to have statistically significant sample and a comparison group, but with ASC certification relatively new (2015), the overall pool was limited. Challenges in reaching farmers, as well as the sensitive nature of sharing cost information reduced the participation. In addition, some of the social and environmental benefits are external to the farm and longer term. Because of the small sample size, short time frame of ASC implementation and lack of causality, no general conclusions can be drawn from the research on cost benefits. See Methodology for more details.

There are some general trends and findings that are useful for ASC and its stakeholders. See Findings.

The resulting case study is particularly useful for understanding how different elements (implementation, context and other factors) fit together and how these different elements have produced the observed results, while also exploring unintended effects (positive and negative). The main objective of the study was to look at cost benefits within the specific context of Vietnam for shrimp and pangasius; however, there are broader learnings of enabling and hindering factors of ASC uptake that are useful for internal learning and continuous improvement for example upfront costs of certification and infrastructure versus longer term gains.

Findings

The CBA analyzed investment costs, added benefits, and avoided costs across economic, social and environmental effects on a quantitative and qualitative level.

Area of Assessment	Examples
Investment Costs	infrastructure, repairs, worker conditions, farmer training, certification costs and fees
Added Benefits	increased access to markets and premium pricing, workers income, and production sustainability (survival ratio, the feed conversion rate, and yield).
Avoided Costs (or cost savings)	reduced losses from improved stock, Reduced losses from improved traceability, Reduced losses from improved relationship with the community

There were observed differences across production models and the different species, but generally on the farms within this case study of ASC certified versus non-certified farms:

Overall	Better Results	Better results
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Economic Effects	ASC Certified farms in the study	ASC Certified farms
Social Effects ¹	ASC Certified farms in the study	ASC Certified farms
Environmental ²	ASC Certified farms in the study	ASC Certified farms
Market Resiliency	Non certified farms in the study	ASC Certified farms

¹ Social benefits compared in the study: wages, social welfare for labor, relationship with local communities

² Environmental benefits compared in the study: cost reduction in term of feed, drugs and chemicals, probiotic and premix, energy and fuels

The analysis finds the main difference between the ASC farms and the non-ASC farms is costs with more investment costs, particularly upfront, but also higher avoided costs (or cost savings) specifically in inputs (chemicals). Overall, in the study, ASC farm financial situation was positive, but inconclusive as discussed below.

Financially the implementation of ASC standards is a challenge for most farms in the initial years, but the benefits outweigh the costs over time with respect to environmental, social and longer term economic benefits.

Details of some of the differences

ASC certified versus non-certified farms in the case study:

Chemicals - costs ↓

- less chemicals → less out of pocket \$
- Higher quality → higher \$ but more effective so less \$
- Direct purchasing for traceability → reduced costs

The drugs, chemicals and supplement costs on the ASC farms is much lower than the non-ASC farms. For shrimp farms, the costs is about 70% less and about 35% less on pangasius farms. Compliance with the provisions of ASC in controlling the use of medicines and chemicals has been a major cause of this reduction. This reduction contributes in improving the environmental benefits.

Infrastructure Costs ↑

- Higher pond preparation costs → \$ \$
- Higher repairs → \$

Certification Costs ↑

- application, training and certification assessment cost

Bank Interest Costs ↑

In particular, the ASC farms in the study had very large interest expenses, due to the need to invest in pond repairs and renovations to meet the compliance requirements of the ASC certification standards. For short-term loans, this was particularly high and severely eroded any of the cost savings. This highlights the potential to think of other strategies to address this issue, including working with banks for preferential rates and/or setting up loan funds.

Revenues

On the revenue side, the findings were less clear. This is due to several factors including variations in sizes, production models, and market factors. Higher revenues were observed in ASC certified shrimp farms with various contributing factors - higher selling prices – ASC certification, larger size and reduced middlemen. Profits (revenue less costs) ranged from + 3% to +123% in the ASC shrimp farms in the study.

The financial analysis for pangasius of the farms in the study, indicated a better financial situation of the ASC farms over the non-ASC farms of participating farms, primarily due to lower production costs (reduced chemical expenditures) and slightly higher prices. There are many caveats to these findings and cannot be considered conclusive because of the high variability of the farms compared and market factors which were not part of the research.

Social benefits – costs benefits

- higher labor costs on farm
- improved social benefits for individuals
- improved community relationships

Labor costs were higher on the farms in the case study. The cost of upgrading infrastructure, living conditions of workers accounted for only low ratio in total costs of the ASC farms in the study. One possible reason is that these farms already have other certification (e.g. GAA, GlobalGAP) and the difference in the standards' requirements was minimal. Interestingly, on the pangasius farms, labor efficiency of the ASC farms was higher than non-ASC farms. One explanation to be further researched is that the ASC farm creates a better welfare for workers and they gain better efficiency. By following the requirements on labor of ASC standards, the farm workers in ASC farms gain better salaries with full benefits under the labor law. The ASC certified farms provide higher social benefit for the workers than the non-certified farms in the study. Moreover, the social welfare of workers is also guaranteed, and the ASC farms contributed more to local communities.

Methodology

The research design included a desktop review of existing information and documentation related to the sector as well as a field survey.

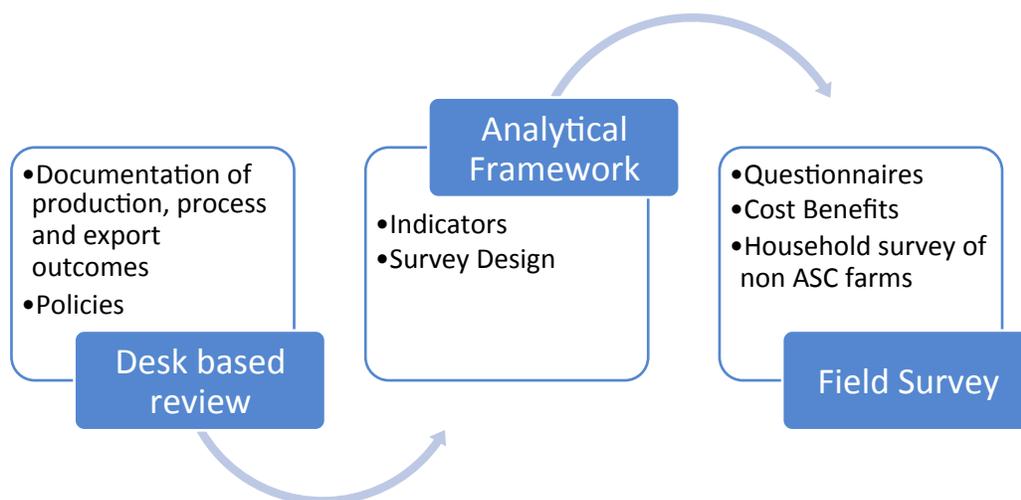


Table 1: Study Farm Breakdown

Province	Shrimp		Pangasius	
	ASC	Non-ASC	ASC	Non-ASC
Ca Mau	3	2		
Soc Trang	3	3		
An Giang			2	3
Đông Thap			7	2
Total	6	5	9	5

Conclusions

Due to the limitations of the research in terms of sample size, comparison groups and causality, the findings from this case study are not conclusive and should not be generalized for ASC versus non-ASC certified farms. However, there are many interesting results for relating to the participating farms. These are useful for indicating potential trends in terms of reduced costs, avoided costs and realized benefits of ASC certification. The study also highlighted unintended effects (positive and negative) such as the very high bank loan interest rates for needed investments, preferential land policies of governments for certified farms and quality of inputs. The findings, while not scientifically robust, will enable ASC to determine focus on areas for further research.

Finally, in the course of the study, other areas for learning and improvement emerged as an added benefit. This included an analysis of the strengths, weaknesses, opportunities, and challenges in the implementation process of the ASC certification standards at the farmer level in these regions and with specific standards. These identify potential areas for improvements to overcome the challenges of the

application of ASC standards; as well as adjust some provisions of ASC standards for the context of Vietnam.

Another issue identified in the course of the study for further analysis is the large number and diversity of certifying bodies (CABs) and standards in Vietnam. For the multiplicity of standards, there are questions of interoperability and the burden on farmers to meet multiple standards. For ASC specifically, there is also variability across CABs, which *could* result in inconsistent application and assurance of the requirements has become a burden to the sector resulting in unstable outputs. Variability in compliance with standards between countries also raises questions regarding credibility of CBs.

While not statistically significant, overall, this report provides instrumental findings for improving the effectiveness and efficiencies of the implementation of ASC certification in the region, while identifying potential areas to work towards improved farm level social and environmental performance with positive economic results.

ASC acknowledges the challenges of effectively demonstrating impact of the ASC program considering the complexity and multiple influencing factors and actors. However, we remain committed to improving our M&E system and collaborating with partners to better understand our contribution to positive change, provide evidence of improvements and to more effectively deliver value to producers.

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