

Submission: Social and Environmental Responsibility in industrial SMEs**Sumisión: Responsabilidad Social y Ambiental en PyMES industrials**

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Abstract

The paper shows results of an exploratory and descriptive research of the practices of social and environment responsibility (SR) of industrial aquaculture small and medium enterprises (SMEs). It is a qualitative study, 15 farms in the municipality of Ahome, Mexico, which addresses the environmental dimension and relationship with the community. The most important findings indicate that aquaculture organizations have different levels in the way they manage and set their guidelines regarding the RS and environmental, to pass through different stages of organizational learning such as: compliance, gestion and strategic. The importance of studying this industry sector in the northwest of the country, constitute its strategic status in food production in the country, job creation and improved livelihoods in rural areas , as well as significant impacts to the environment and the communities where they are settled.

Resumen

El trabajo muestra resultados de una investigación exploratoria y descriptiva de las prácticas de responsabilidad social y ambiental (RS) de pequeñas y medianas empresas (PYMES) industriales acuícolas. Se trata de un estudio cualitativo, de 15 granjas del municipio de Ahome, México, que aborda la dimensión ambiental y la relación con la comunidad. Los hallazgos más importantes indican que las organizaciones acuícolas tienen diferentes niveles en la forma de gestionar y establecer sus lineamientos respecto a la RS y ambiental, al pasar por diferentes etapas de aprendizaje organizacional como son: cumplimiento, gestión y estratégica. La importancia de estudiar este sector de la industria en el noroeste del país, constituyen su condición estratégica en la producción de alimentos en el país, la creación de empleo y la mejora de los medios de vida en las zonas rurales , así como los impactos significativos para el medio ambiente y las comunidades donde se asientan.

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Introduction

Industrial aquaculture SMEs are especially relevant for being a productive activity that generates food and has a high co-dependence on the use of natural resources in their production processes; social and environmental responsibility among this type of organisations is increased by the shared responsibility they have in their impacts, which tend to be more local and with regional effects.

This industry has been subject to significant criticism, mainly from non-governmental organisations (NGOs) and some academic sectors, who have pointed out that shrimp farms heavily damage the environment: specifically the mangroves during the construction of the ponds, pollute estuaries with untreated wastewater, valuable losses due to the capture of wild larvae and the local displacement of the population. This has generated several debates among NGOs, academic institutions, and industry, and it is necessary to review the validity of these claims and suggest relevant remedial actions to improve the sustainability of aquaculture organisations (Engle and Valderrama, 2006).

There are countries that are already responding strongly to aquaculture issues with collective actions that seek to give legitimacy to planning, and trying to ensure that aquaculture producers self-enforce regulations related to environmental protection (Raux, Bailly, & Nhuong, 2006).

The objective of this study was to analyse the social and environmental responsibility (S&ER) actions of aquaculture industrial SMEs in the municipality of Ahome, in order to identify their levels of management and organisational learning in terms of corporate social responsibility.

The methodology is qualitative, using semi-structured interview and non-participant observation techniques, based on GRI and Aquaculture Practices Certified (U.S.) instruments; in the environmental dimension and the relationship with the community, as well as the proposal of Zadek (2004) for the identification of the levels of management and organisational learning of Corporate Responsibility.

Social and Environmental Responsibility in industrial SMEs

The origin of the concept, the context in which it has emerged, the evolution it has presented and the way in which it has been disseminated, has allowed academic discussion to proliferate, generating a series of national and international institutions, which have been dedicated to issuing definitions, indicators, and recommendations for the correct implementation of practices on Corporate Social Responsibility (CSR) (Portales & García, 2012).

In this evolution, CSR has been defined from different spheres and with different interests: trade unionists focused on the welfare of employees; environmentalists on respect for the environment; for communities living where extractive industry multinationals operate, CSR must first respect their traditions and customs of life, and so on. CSR thus appears to have multiple meanings depending on the lens through which it is viewed, making it difficult to encompass in a single definition (Portales & García, 2012). However, it is possible to find a common background that has allowed a certain consensus to be reached on the concept of CSR.

For this paper, the following definition has been adopted: "CSR is the conscious and consistent commitment to fully comply with the purpose of the company, both internally and externally, considering the economic, social and environmental expectations of all its participants, showing respect for people, ethical values, the community and the environment, thus contributing to the construction of the common good" (CEMEFI, 2009, p.4).

The internal and external organisational environment considers the stakeholders, i.e. the shareholders or owners of the company, the managers and the employees, also involving the scenario in which the company's activities are carried out, such as the production process or decision-making. In this group, there is a series of commitments such as, for example, to carry out a business conduct that moves the company towards a management with principles and values aimed at achieving a better quality of life, a safer work environment and a positive reflection towards the external community.

It is in the internal environment, where the relationship with natural resources and responsibility for environmental impacts begins, from the input of inputs to the production process, the process itself and its forms of production and products and by-products, in order to achieve efficiency in the management of resources used and consumed, not only trying to lower production costs, but also seeking to prevent, reduce or eliminate the harmful effects on the ecosystem that belongs (community and environment).

In the external environment of the organisation, corporate social responsibility extends to business partners, suppliers, customers, competitors, public stakeholders, the local community, authorities and civil society organisations.

An external stakeholder group, relevant to the current research, is the community where the organisations are based, as it includes issues such as: competition for resources, employment and local hiring (inclusiveness), education and capacity building, wealth generation, local cultural and heritage resources, risk management for the business activity and avoiding health risks for the community(ies) where the farms are based, promoting the well-being of the local community and the contribution of the company to its economy (ISO, 26000). These factors are fundamental issues in business-community relations for the development of local communities.

Another factor of external interest for the research carried out has been the natural environment, which includes soil, the flora on it, fauna, water, basically (ISO, 26000). For this study, the importance is to identify the relationship that productive activities have with the natural environment and how significant their practices can be for the ecosystem in which they are located.

The search for a better quality of life requires a reduction in the total consumption of resources; an organisation should take actions to improve the quality of life, taking charge of environmental problems, which most of the time, are problems caused by these activities, which can have a significant impact on the localities where they are installed, affecting their development.

With the above, it can be seen that corporate social responsibility renews the conception of the company, giving it a broad and integrating dimension, which goes beyond the mere economic issue, in which the triple facet of sustainability is perfectly incorporated: economic, social and environmental (Perdiguero, 2005). It is through social and environmental responsibility practices that companies make their contribution to achieving sustainable development.

Management tools for SR and environmental management

At a global level, there are international and national organisations that have expressed their interest in developing actions to promote greater responsibility in the business sector in the face of environmental, social and economic problems. In 1999, the United Nations (UN) announced the Global Compact as an initiative that seeks to achieve a voluntary commitment to the social responsibility of organisations in four fundamental areas: human rights, labour conditions, the environment and anti-corruption⁸.

Other organisations such as the Organisation for Economic Co-operation and Development (OECD) and the Coalition for Environmentally Responsible Economies (CERES) have proposed principles and guidelines to promote compliance with environmental regulations and respect for different stakeholders, fostering the establishment of relationships of trust between companies and society.

This has been permeating the different sectors of society: governments, companies, NGOs, educational institutions and the population in general, also giving rise to the need for instruments and indicators that facilitate the measurement and communication of the performance of SR and environmental practices to stakeholders. One of the most important instruments worldwide is the Global Reporting Initiative⁹ (GRI), which aims to produce sustainability reports in three areas: economic, environmental and social. In Latin America, the Latin American Programme for Corporate Responsibility¹⁰ (PLARSE) is promoted by important civil society, business and governmental organisations to work together to strengthen the CSR movement in Latin America.

Other instruments of general use are the AA1000 assurance standard, developed by the British organisation Accountability¹¹ ; the ISO 26000¹² standard, a voluntary international regulatory guide; and the Mexican Social Responsibility Standard (IMNC), created by the Mexican Institute for Standardisation and Certification (IMNC)¹³.

Regarding the indicators that have been constructed to measure SR and environmental performance of organisations, we can mention the proposal of the Ethos Institute of Business and Social Responsibility¹⁴ , located in Brazil, the SA8000, created by Social Accountability International with the aim of promoting better working conditions¹⁵ ; and specifically for the aquaculture sector, there is the Global Aquaculture Alliance (GAA), which is an international non-profit trade association (NGO) dedicated to promoting environmentally and socially responsible aquaculture. The GAA was organised in 1997, and has developed the Aquaculture Best Practice Certification Standards¹⁶; it promotes the use of responsible aquaculture practices. It seeks to certify aquaculture industries in four areas: environment, food safety, traceability and community relations.

These different instruments have been refined to become a real organisational management tool for social and environmental responsibility, and for this research, they have also helped to identify the learning curve of aquaculture companies with regard to social and environmental issues.

Stages of organisational learning in Corporate Responsibility

According to Simon Zadek (2004) organisations generally go through five stages of organisational growth or learning in the way they handle social responsibility (Table 1).

When it comes to develop a sense of corporate responsibility, organisations corporate responsibility, organisations typically go through five stages as they move along the learning curve

Stage	What organisations do	Why they do it
Defensive	They deny practices, effects or responsibilities	To defend against attacks on its reputation that could in the short term affect sales, recruitment, productivity and branding
Compliance	They adopt a focus on compliance based policy-based as a cost of doing business	To mitigate the erosion of economic value in the medium term due to ongoing reputational and litigation risks
Management	Introduce social issues into their core business core business strategies	To mitigate the erosion of economic value in the medium term and longer-term gains by integrating practices of business practices responsible business practices into their daily operations
Strategic	Integrate social issues into their core core business strategies	In order to improve the long-term economic value and gain first mover advantage by aligning strategy and process innovations and process innovations with social social
Civil	Promote broad industry participation broad industry involvement in corporate responsibility	To enhance economic value in the long term by overcoming any initial disadvantages and initial disadvantages and to make gains through collective action

Table 1 The five stages of organisational learning
 Source: Zadek (2004:127)

These stages are related to knowledge, and the ability to anticipate the needs and expectations of stakeholders in order to develop future strategies that coincide with society and contribute to regional and sustainable development.

The SR and environmental practices of SMEs are a product of these levels of organisational and social learning and the level of maturity of social problems in certain localities and regions of the world.

Methodology

This exploratory and descriptive study was based on a convenience sample of 25% (15 farms) of the 60 industrial aquaculture SMEs in the municipality of Ahome. The method designed for the research was constituted at an intra-organisational level of analysis, contemplating the actions related to the community where the farms are located, and to the natural environment with which they interact. At this level, the aim is to understand the degree of understanding of the people, groups, knowledge, tools and tasks that make up the organisation in relation to SR and A practices (Baum and Rowley, 2006).

A qualitative methodology was designed to provide the possibility of understanding the phenomenon by exploring it in the field, collecting data in situ, with the actors involved in organisational tasks at the strategic and operational levels: managers and farm managers.

The research process involved the search for various sources of primary and secondary information. Firstly, information was sought on the study problem, and documents and reports from international and national CSR organisations such as the UN, OECD, GRI, PLARSE, CEMEFI, and from the aquaculture sector: SAGARPA, CONAPESCA and SENASICA were reviewed.

The field work was carried out in 15 farms in the municipality of Ahome, the observation was carried out in order to know the production process, described and shown by those responsible for production, and to identify the technology used; as well as to know the area, the conditions, and the ways in which the farm workers carry out their activities.

The visit to the farms made it possible to verify and, if necessary, contrast the information obtained through the interviews with the farm managers and those in charge of the farms.

The semi-structured interview was conducted with the managers of 15 farms and the operational managers (25% of the universe). The questions were posed with the aim of finding out the level of information, knowledge and maturity that these actors have in relation to the topics studied: Social and Environmental Responsibility and to identify the practices they carry out in their organisations, taking as a reference the indicators proposed by the GRI and the Best Aquaculture Practices certification standards; as well as the influence that their effects have or may have on the community and the natural environment where the aquaculture companies are located.

From the indicators considered by the GRI, those considered in the social and environmental dimensions, such as the use of materials, energy, water, impact on biodiversity, emissions and discharges, among others, as well as relevant social aspects such as occupational health and safety, training, human rights and consumer health and safety, were taken into account.

From the Best Aquaculture Practices certification standards, the standards used for aquaculture certification processes were considered, which include legal aspects such as: land and water use and building regulations; community relations such as: communication to avoid or resolve conflicts and access passes; worker safety and labour relations: wages, working conditions and health; and the relationship with the environment: mangroves, wastewater, sediments, soil, water, post-larvae origin, storage and disposal of supplies, medicines and chemicals, microbial health, etc.

Contextualisation of the case studies

In Mexico, there are 9,216 aquaculture production units, with a total of 115,207 hectares, of which the state of Sinaloa, located in the northwest of the country and with data as of 2011, had 727 aquaculture production units, with an extension of 37,992 hectares¹⁷. See figure 3 for the location of the object under study.



Figure 1 Physical location of the group of companies studied: Ahome, Sinaloa, Mexico.

Source: *Own Elaboration*

Shrimp farming in Mexico, and particularly in Sinaloa, has focused since its inception on technical-economic aspects, and it is due to the large accumulated economic losses caused by viral shrimp diseases and the decapitalisation of a good number of companies in the social sector and private initiative, that the environmental issue has been included as a preponderant factor for the survival of the activity. Therefore, aquaculture is now considered as a combination of social, economic and environmental requirements.

In the economic dimension, shrimp aquaculture production has been a strong activity, generating foreign currency and a high volume of production, ranking among the first places at the national level in the fish trade balance¹⁸.

In the coastal strip of Sinaloa, 154 fishing communities are located, with a workforce of thousands of fishermen who are mainly dedicated to the exploitation of marine species, either by capture or aquaculture techniques. A significant number of families depend on the aquaculture activity¹⁹, either because they are members of an aquaculture cooperative or because they are workers of companies installed in their communities, which is why the activity has benefited the quality of life of the local inhabitants where they are settled.

With regard to the ecological dimension, the shrimp farming industry depends heavily on natural resources such as quality seawater and pathogen-free soil, which are essential elements for its production processes to be carried out properly and not cause disruption to the production activity itself and to the ecosystem to which it belongs.

The aquaculture organisation and its internal and external stakeholders

The stakeholders that predominate in the internal environment of the shrimp farming organisations studied are: shareholders, managers and workers, most of whom come from the communities where they are located.

In the external environment, the following stakeholders can be distinguished as relevant and highly influential in the development of these organisations: their suppliers, because they provide information and financing to the farms; the natural environment, because of the high dependence they have on it in their production processes; the communities, because of the impact they can have on their way of life; the competitors (other producers who dispute or can dispute both the market and the local natural resources), their commercial partners, their consumers, the authorities, including the three levels of government, and the regulatory and support bodies that the same producers themselves dispute; Competitors (other producers who compete or may compete for both the market and local natural resources), their commercial partners, their consumers, the authorities including the three levels of government and the regulatory and support bodies that the producers themselves have created for their development, among them the State Committee for Aquaculture Health in Sinaloa (CESASIN), a body created by the federal government and directed by the aquaculture producers themselves to address the health problems that have arisen. The research findings of the different cases studied are presented below, focusing on the variables community and natural environment, before describing the distinctive features of the groups of companies studied.

Cases A, B and C.

Of the 15 cases studied, their Social Responsibility practices are classified into 3 groups, according to the characteristics and progress they show in relation to Social and Environmental Responsibility (see table 2).

Characterisation/Cases	Group cases A	Group cases B	Group cases C
Legal figure.	Society from production Society from liability limited.	Rural production company unlimited liability.	Cooperative Society.
Seniority from the farm.	8 years	18 years.	25 years
No. De has.	Start: 232 Current: 950	Start: 20 Current: 550	Start: 120 A 2007: 320 A 2013: 130
Shareholders.	Family business.	Private equity	Ejidatarios: 75 members.
Training of decision-maker.	Degree in Biology.	Bachelor's degree in biology.	The decision is collective and its education is basic. The responsible of the farm has a degree in biology.
Feature distinctive feature.	Leaders in the use of new technologies. Risk takers. Constant experimentation. Activity managers.	Trend from Growth sustained. Cautious. Leader in the use of new technologies. Experimentation when are problems arise problems of health. Practise the cooperation inter-organisational cooperation.	Relationship cooperative intra-organisational. Social sector. System of production production system.
Knowledge on CSR topics and the Development Development.	They start in the process of recognition of the issue of CSR and Sustainability as element key element that can be strategic for the organisation. They have the good practices aquaculture.	They start with awareness and recognition of CSR and the Sustainability as concepts; no however, at its practices there are important important elements implicit from approach to the subject. They have started with the process of "Good practices aquaculture with the aim to be certified.	No have considered issues in their strategy. Without however, they care for the environment to where they is possible; they know that they have a high dependence on water and soil water and soil quality for their development of their productive productive activity.

Table 2 Profile of Aquaculture Organisations studied: A, B and C.

Source: Own Elaboration

The group of companies analysed were born with similar or the same legal status, developed in the short term, similar operational features, however, in the medium and long term, some of them have modified and implemented aquaculture practices that have allowed them to have significant differences in their results.

Group C is a pioneer not only in the locality, but also in the country, in the implementation of shrimp aquaculture practices. In the first years of production it was a bonanza thanks to the environmental conditions and the ways in which decisions were made in the cooperative; it was an exemplary cooperative organisation in its first 18 years of operation. However, with the passage of time, and by not following technical specifications for the safety of production and continuing to produce in the traditional way, they began to have substantial losses due to sanitary problems caused by viruses, losing the entire production. Note the number of hectares of production with which they started (120 hectares), reached 2007 with a significant growth (320 hectares), and in 2013 there was a considerable loss in the number of hectares of production (130 hectares). It is worth mentioning that in 2014, the group is thinking of selling or renting the aquaculture farm due to its unsustainability.

Group B has its origins in cooperative societies, however, they are producers who decided to become independent and are long-term success stories. Therefore, their willingness to inter-organisational cooperation and recognition in the community.

Group C. is the group of farms with the least seniority but with impressive growth. Their managers are young, which is perhaps why they are more risk-taking in business, in entering new markets, in implementing new technologies and in continuously informing themselves and seeking knowledge for the development of their business. In tables 3 and 4 below, the aim is to provide an approach to the general indicators that could regulate the shrimp farming activity, as a result of the research carried out. The general indicators shown are taken and adapted from the GRI and the Best Aquaculture Practices certification standards, adapting them to the local context and bringing them into line with international requirements in the dimensions studied: environment and community.

The objective is to be able to identify, group and compare levels of progress in the practices carried out by the aquaculture organisations; and also to be able to identify, with the help of Zadek's proposal, the level of organisational learning in which the cases studied are found.

The group of companies B and C, have their origin as aquaculturists in the community, so their commitment to it is implicit in their daily practices, however, they do not have a strategic plan for social and environmental responsibility. The group of companies A was born as a business opportunity, taking advantage of the accumulated experience of their managers in aquaculture practices in other leading organisations in the locality, so the company-community relationship is incipient; this group has focused mainly on the technical-economic-environmental elements, which will be seen in greater detail in table 4, due to the aquaculture practices they carry out. However, this is a group that is already considering including community development support issues in their practices.

	are not handled on the farm, the supplier is responsible.	stored at the farm. A collector goes through the waste at a period period.	
Respect a the biodiversity	They have excluders.	They do not have excluders..	No excluders.
Water use	Seawater is used, not consumed. At the process production process it is cared for and treatment water to maintain or increase its quality. Water is returned to its environment in a condition for to be reused.	Seawater is used, not consumed, it is returned to its the production process. Drinking potable water is used for and the kitchen, and once used, it is discharged into the water drainage system. The volume is not the volume. The purified water is used for drinking and cooking.	Seawater is used, not consumed, it is returned to its its environment once the production process.
Energy use	The largest energy consumption is the fuel used in engines for pumping water on farms. Their strategy is to do less water replacement water to decrease the fuel consumption.	The largest energy consumption is the fuel used in engines for pumping water on farms. No there is implemented a strategy in place to reduce energy consumption.	The major consumption of energy consumption is the fuel used on engines for pumping water on farms. No there is no implemented a strategy is not implemented for decrease energy.

General indicator	Cases Group A	Cases Group B	Cases Group C
Emissions y discharges.	They pour the water into the estuary sea water to the estuary at once it has been used. They test the water quality water quality tests at the inlet and outlet of the process production process. They carry out good practices aquaculture practices that are reflected in the quality of the water they they discharge, comes out with higher nutrients.	Pour the seawater once used. No do test the quality of the water quality at the outlet.	Pour the seawater once used. No do test the quality of the water quality at the outlet.
Waste.	Kitchen: garbage rubbish local. Ecological toilets. Fuel. They have with infrastructure for prevent any spillage. Oils and lubricants are not	Kitchen: collector from waste collector. Ecological toilets. Fuels. See has with infrastructure in place for prevent spills. Oils and lubricants. Are	Kitchen: collector from rubbish collector. No toilets. Fuels and lubricants. A collector goes through the waste at a period period.

Table 4 Environmental dimension

Source: Own Elaboration

The company-environment relationship is a difficult issue for shrimp farming companies, especially in 2013, a year in which the industry suffered a huge setback due to the appearance of new diseases such as the so-called "early disease", which was not considered for treatment in the biosecurity protocols that local producers had been implementing. These new shrimp diseases have led to a significant drop in productivity and competitiveness and probably to the cessation of a significant number of companies. This is the case of CASE Group C (see table 2), where we can see the reduction in the number of hectares under cultivation due to the appearance of new viruses, new crustacean diseases and accumulated losses.

In relation to CASE Group A, these are farms that, as one of their managers said

"For us, the appearance of viruses and diseases in shrimp have been opportunities to improve and grow". This can be seen in the strategies they have implemented over time, and not only to achieve the survival of shrimp, but also to increase their productivity and competitiveness in national and international markets.

It is a group that is currently a leader in the management of its biosecurity protocols and in productivity (see table 4) and the key for them has been to bet on innovation and new technologies; it is a group, as mentioned at the beginning, that takes risks.

In CASE Group B, it is a group of farms that owe their constant growth to continuous experimentation in production processes, which has allowed them to identify key elements to increase productivity and competitiveness with crop health. They are managers who share experience and learning with and among their specialised staff, in addition to the close relationship they have with other local producers. As can be seen in Table 4, these farms are on the way to Good Aquaculture Practices certification; however, they recognise that support is needed for other aquaculture stakeholders, mainly in terms of specific legislation for shrimp farming, its regulation and enforcement.

In the CASE of group C, their managers recognise the importance of environmental care, however, they do not have the necessary resources to apply the organisational learning they have had over the years on sanitary and environmental issues. As of 2013, they are among the farms that have suffered from decapitalisation due to the lack of sanitary control and viral problems.

With the findings presented here and trying to diagnose the level of organisational learning that companies go through in terms of social and environmental responsibility, as argued by Zadek (2004), the following is summarised in Table 5:

Dimensions analysed / groups of cases	Group A	Group B	Group C
Dimension social: communities	Stage compliance	Stage of management.	Stage strategic
Dimension environmental.	Stage stage.	Stage of management.	Not applicable. No are in the defensive defensive, and comply to the to the extent of their capacity capacity allows.

Table 4 Organisational learning of the cases analysed in terms of social and environmental responsibility
Source: Own Elaboration

As can be seen in Table 5, the different cases studied are at different levels of progress in organisational learning for the implementation of responsible practices. The case of Group A shows greater progress in the environmental dimension than in the social dimension: communities; for them, the environmental dimension has been strategic for the development of the business, so that as mentioned above, their success lies in innovation and technological development in their production processes and the growth of their staff with the required labour competences, including good working conditions.

For CASE Group B, organisational learning in both the social and environmental dimensions is in the management stage. The group is introducing social issues into its core management processes as a strategic element for the operation of its farms.

It is important to mention that for this group, the practices carried out for the company-community rapprochement are implicit, due to the close relationship they have maintained throughout the development of the activity; there is evidence that the community takes care of the business because they consider it an instrument for their local survival.

It should be remembered that this is the group that has shown a sustained growth trend (approx. 22%) throughout its 18 years of productive activities.

CASE Group C, recognises that it is essential to carry out good aquaculture practices because of the impact this can have on the environment and on the actors that depend on the ecosystem itself. This group is in a stage of compliance in some indicators of the environmental dimension, such as the agreed local regulations, and complies with the control of some of the waste they manage, but in the rest of the indicators, they are not complying with the minimum required by the regulatory bodies of good aquaculture practices, and not because they do not wish to comply, or are in a defensive stage of denial of the attacks, but because they do not have the resources to do so. In relation to the social dimension: community, this is an issue that is integrated into their core business strategy, precisely because their main objective as an organisation is social benefit.

Preliminary conclusions

In the aquaculture organisations studied, social and environmental responsibility practices have been identified in relation to workers, the community and the environment. However, in most of the interviewed producers there is minimal knowledge about CSR.

Levels of organisational learning and maturity on CSR were identified, which vary from farm to farm and from one dimension of analysis to another. This is the result of a complex learning journey between the organisational and the social; a journey that they have made sometimes alone and sometimes together with other producers, complementing each other, discussing, sharing information and finding ways to better develop their work, which in some cases, have not given the adequate or expected results.

The case studies found farms at a level of organisational learning ranging from the compliance stage: "We will do only what we are obliged to do" and "We make sure we don't do what we agreed not to do"; to the management stage, where organisations have already realised that these are or will be long-term problems if not addressed, and that they must ensure that the business takes responsibility for the problem and the solution presented.

Producers recognise that they have limitations to their development, directly related to the way they carry out their aquaculture practices and that their main problem has been the sanitary problems caused by viruses over time; and the lack of awareness of producers for viral control and environmental care; as well as the lack of adequate regulatory laws and protocols and/or the application of existing ones.

It is considered relevant to continue studying the practices of social and environmental responsibility of the same industrial sector, in order to be able to provide more elements of analysis to the organisational scientific discussion and to contribute to the resolution of common local problems of the aquaculture industry.

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