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Deliverable N° 3.2

Inclusive assurance models in Vietnamese shrimp aquaculture

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1.

Summary

This report completes the amended WP3 task 4 on *Social Sustainability* which was refined to address *inclusion models for small-scale shrimp farmers in Vietnam*. The aim of this revised task is to improve understanding of the different ways in which current improvement and certification models in shrimp farming include and/or exclude small-scale farmers. The research focused on approaches for enhancing inclusiveness in export-oriented aquaculture value chains in Southeast Asia by comparing the design and practice of incorporating shrimp smallholders into different sustainability assurance models like the Aquaculture Stewardship Council (ASC) and Monterrey Bay Seafood Watch (SFW).

The majority of Vietnamese shrimp production (by volume) is based on small-holder production. The degree to which these smallholders are included in export value chains is determined both by their competitiveness in meeting buyer demands, including both safety requirements and sustainability (including organic) criteria based on certification standards like the ASC and seafood ratings like Seafood Watch. The high cost of certification, derived from upgrading and auditing farms against these standards have excluded smallholder farmers. This in turn means that farmers are also excluded from key export markets like the EU and US in which buyers are demanding these standards.

A variety of initiatives have emerged to promote new approaches for including small holders in sustainability certification and enabling their access to international markets. These initiatives include both internal and external reformist strategies by certification programs. Internal reforms are characterised by supporting 'group' upgrading and compliance, where smallholders develop internal management systems that enable them to engage with these certification programs like ASC. External reforms include initiatives that re-define standards

and compliance by buyers that seek to recognise the specific conditions in which small holders operate and amend compliance auditing to match these conditions, as currently seen in the work of SFW. But while substantial investments are currently being made in both 'internal' group certification and 'external' compliance auditing models, there is little reflection on whether and how they address barriers to small holder inclusion.

This report compares how ASC group certification and the SFW driven improvement protocol address the inclusion of small holder shrimp farmers in Vietnam based on qualitative research carried out over a period of 1 month in Vietnam (July-August 2019), complemented with additional expert interviews. The two programs are described as case examples of how 'inclusiveness' is translated into new assurance models for sustainable shrimp farming in Vietnam. The study used qualitative research methods to gain insights in how inclusive models are designed, rolled out and received through the social networks and practices that make up Vietnam's shrimp farming sector. During fieldwork, we assessed how initiatives to enhance inclusivity for smallholders work out 'in the field', as well as how these are perceived by different stakeholders directly involved in their application.

The research faced several practical challenges that may have affected its outcomes. For official research permission, a day-to-day itinerary specifically outlining informants, sites and days had to be submitted weeks before fieldwork, and no changes were officially permitted afterwards. These strict administrative requirements compromised the flexible quality of snowball sampling of informants and sites and made qualitative research based on an iterative research approach a challenge. Furthermore, all interactions with farmers were heavily monitored by local government. Finally, all farm visits required substantial informal payment to both government personnel and the farmers' cooperatives, which is an inevitable part of doing research in Vietnam's rural areas.

The results highlight similarities and differences between the ASC and SFW inclusive sustainability models in terms of how they improve market access and an enhanced participatory role for farmers are designed and organised, taking in different ways in which inclusiveness itself is defined. By comparing the cases the report shows how the terms of incorporation are set, what room different participants – particularly small-scale farmers – have to negotiate these terms. This variety is subsequently considered in the social context of Vietnam, which sheds light on structural conditions of (dis)trust, debt relations and the strategic role of middlemen, which is all shown to affect smallholders' incorporation in sustainable seafood programs.

We conclude that both the ASC and ASIC models enable, albeit to different degrees, *functional* inclusion by enabling input to standard setting processes, as well as through the design of cooperative arrangements amongst smallholders (through clusters of cooperatives) and between smallholders and processing companies. However, they do not address the *structural* conditions under which smallholders are included in global value chains. Failing to address these wider conditions of *structural* inclusion can in turn reinforce the position of processing companies both in export markets and as such over smallholders. Furthermore, more research is needed to determine whether and how addressing functional and structural inclusion of smallholders enhances or undermines the social and environmental sustainability of the sector.

Based on these findings the following three areas of support could be provided by the European Union in further supporting EURASTIP.

First, the national pilot platforms developed under EURASTIP can provide a platform for addressing the further innovation towards functional inclusion – in terms of technologies creating compliance efficiency. However, the multi-level and multi-actor character of the

national pilot platforms also provides a basis for addressing wider structural conditions of smallholder inclusion.

Second, the national pilot platforms could provide a basis to research social and environmental benefits of inclusive assurance models. This would involve supporting further research from platform members on how both the ASC group certification and ASIC/PAM model leads to improvement in the livelihoods of smallholders and/or improved environmental performance. The links that VINATIP already to domestic and international universities, the private sector and farming communities provides a strong basis to not only coordinate the collection of relevant data, but also structure a process of learning that can feed

Third, EURASTIP can provide a basis for rethinking what the assurance needs of buyers are in Europe and in doing so critically reflect on the social and environmental goals of the European market. Here support could be given to research on whether European buyers, and the consumers they sell to, demand a 'high level' of assurance over the source and conditions of production. Understanding how and the degree to which these trust smallholder production can help redesign more effective inclusive assurance models.

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1. Introduction

The sustainability of global aquaculture has been subject to a range of public and private governance initiatives developed in major export markets designed to set norms, rules and criteria for improved production practices (Bush and Oosterveer, 2019). Public governance of aquaculture includes a collection of regulatory controls set by importing states, like the EU and US, on food safety and traceability (Lewis and Boyle, 2017; He, 2018), as well as production standards and regulation by exporting states over their domestic production (Samerwong et al., 2018; Sun and van der Ven, 2020). Private assurance models include a range of NGO certification standards and seafood ratings designed to stimulate improved production through conditional market access (Gudmundsson and Wessells, 2000).

As the number of these public and private sustainability initiatives have continued to grow, to now more than 50 (Potts et al., 2016; Bush and Oosterveer, 2019), so too has concern over their role in excluding smallholder producers from export markets (Bush et al., 2013; Marschke and Wilkings, 2014). Smallholders are particularly vulnerable to exclusion by these initiatives because of both their relatively weak capabilities to comply with the requirements these initiatives set for providing assurance to buyers that production practices are being improved, and/or documentation and/or traceability of key inputs like feed and seed kept in an accurate and legal way (e.g. Bush and Belton, 2012; Sun and van der Ven, 2020). They are also commonly unable to meet the cost incurred through third party auditing that is the basis of demonstrating compliance to their requirements and providing assurance to international markets (Marschke and Wilkings, 2014).

One testing ground for new assurance models for aquaculture sustainability is Vietnam's shrimp farming sector. What makes Vietnam's shrimp production unique is that about 80% of shrimp supply comes from family-run farms with often only 1,5 to 2 ha.⁴ This dominance of smallholders is a primary challenge for the inclusivity of Vietnamese shrimp production in standards and certification programs. The land in the Mekong Delta is divided into small plots of land with ownership and use rights to land in the Mekong Delta has been divided amongst generations (Garschagen et al., 2012). The resulting geographical fragmentation of farmed land makes shrimp production in Vietnam's south a challenge for programs that attempt for a concerted move towards standardisation of environmental quality criteria. Yet such alignment of quality standards is a prerequisite for export to major international seafood markets such as the EU.

The challenges that smallholders face in engaging and complying with these sustainability standards and ratings presents a number of consequences. First, their exclusion means they are neither able to receive market incentives for improved production performance, nor rewarded for their potentially lower environmental impact relative to intensive producers. Second, their exclusion from export markets for which their products are primarily produced (especially in the case of shrimp), means their ongoing viability is undermined. Third, the exclusion of small holders from these markets can lead to domestic food safety concerns if shrimp are rejected from export markets. As outlined by Bush et al. (2013), if sustainability initiatives are to remain relevant in aquaculture producing countries they need to develop new inclusive assurance models for smallholders.

⁴ Based on interview with aquaculture specialist and document analysis at VASEP Office Ho Chi Minh City, 29 July 2019.

Recognizing the need for more inclusive assurance models a number of new approaches have been developed by aquaculture-focused certification and ratings initiatives. Different initiatives have emerged over the last years to develop inclusive models for certification and standardisation of small-scale shrimp farmers in Vietnam. Among these is the recent group-certification program by ASC and the development of the regional (Southeast Asia) standard ASIC, rolled out in the Mekong Delta in collaboration with the Minh Phu Seafood company and Seafood Watch. Both are prominent examples of the current experimentation carried out in Vietnam to develop environmental sustainability standards that are compatible with the daily practice and organisation of small-scale shrimp farming. While the various initiatives share an objective of better incorporating smallholder shrimp farmers in certification programs and improvement initiatives, they also show differences in how 'inclusiveness' is defined, leading to different models and different approaches to incorporate farmers in practice. What is lacking is an empirically-informed understanding of how different inclusion models relate to actual organisation practices among shrimp farmers as well as structural social conditions for market access for smallholders.⁵

This report analyses the ways in which these inclusive assurance models were able to foster inclusiveness through new forms of farmer organisation and compliance assessment in the Vietnamese shrimp sector. To this end, we compare the SFW-supported ASIC regional standard and ASC's group certification program. Through this comparison we ask if and how their modes of inclusion succeed in improving access to shrimp export markets for small-

⁵ Based on our consultation with Vietnamese stakeholders during a 2018 EURASTiP brokerage meeting in November and interviews with prominent people in major sustainability programs (ASC, SFW, Oxfam) in May, July and August 2019.

holders. We also shed light on the social conditions that affect and are affected by these modes of inclusion. For this we explored empirically how small-scale farmers are included or excluded by current models aimed at inclusivity, what are the main bottlenecks, and what are the 'best practices' that could be adopted in a future improvement framework. The following questions guided the research: How is inclusiveness defined and translated into the different models? How are the terms of incorporating smallholders set and how are smallholders involved in this? What processes and social conditions stand out as adverse to this incorporation?

The research was set up to complete the amended WP3 task 4 on *Social Sustainability* which was refined to address *inclusion models for small-scale shrimp farmers in Vietnam*. The refined focus on Vietnam and inclusion models within the theme of social sustainability resulted from the iterative research methodology of the EURASTiP program, taking in the feedback from project stakeholders. The importance of focusing on inclusiveness of certification schemes and improvement protocols for aquaculture became clear through the feedback from Vietnamese partners during brokerage activities in 2018 within the EURASTiP project. This consultation was required to make the research and data collection of WP3 aligned with knowledge gaps as identified by the Asian EURASTiP partners. With our focus on Vietnam and using a case-study approach with empirical fieldwork, the study provides valuable insight in an understudied segment of current developments of inclusive shrimp farming: what it means for actual improved access to markets for small scale farmers. As we combine the fieldwork with document and literature study, there is a cross-over application of insights and recommendations to small scale farming in other partner Southeast Asian countries, which ensures the study's cross-regional relevance.

In the next section (2) we discuss the concept of inclusiveness within the debate of social sustainability, certification and standardisation in aquaculture. Subsequently, in section three we elaborate on the methodological considerations underpinning the reported research and the methods used for data collection. In sections four and five we report and discuss main findings from the research, followed by the final section six discussion and conclusion.

2. Sustainable Aquaculture and Inclusiveness

Aquaculture production has grown exponentially over the last decade, representing 53% of global fish consumption and providing employment for over 19 million people worldwide (FAO, 2018). The prospects for aquaculture is that it will continue to be one of the fastest growing food sectors in the coming decade, with Asia as one of the primary production and export regions (Kobayashi et al., 2015). This rapid growth of aquaculture since the 1990's has, however, led to a variety of sustainability challenges (Naylor et al., 2000; Edwards, 2015). In Asia, the development of shrimp farming has produced harmful effects on local coastal ecosystems, disrupting wild fish stocks for feed, introducing exotic species into local marine systems (Hall et al., 2011; Rurangwa et al., 2016). In the case of shrimp farming challenges related to disease and water quality, and their effect on the economic sustainability of the sector, are well documented (see for e.g. Bush et al., 2010; Shinn et al., 2018).

While the majority of studies focus on aquaculture's environmental effects, social sustainability challenges are also receiving growing attention, highlighting issues of inequality, forced labor, gender imbalance, migration and access to credit (e.g. Resurreccion and Sajor, 2010; Belton et al., 2012; Kusumawati et al., 2013; Toufique and Belton, 2014). Small-scale farmers face difficulty in accessing funds and capital for investment while also carrying the burden of high economic risks due to diseases and other risks effecting harvest of

extensive aquaculture production methods (Ha et al., 2012b; Ha et al., 2013). In Vietnam, the clearing of mangroves for shrimp ponds has caused enhanced flood risks for coastal populations, while also undermining the availability of resources for economically marginalised groups in society (Adger et al., 2001; Bush et al., 2010).

Certification and ratings programs both face the challenge of driving the resolution of these environmental problems while providing assurance to buyers on product sustainability (Bush and Oosterveer, 2019). They differ, however, in their ‘theories of change’ and the degree they exclude smallholders. The major third-party assurance mechanisms certification schemes, such as Aquaculture Stewardship Council (ASC), Global Aquaculture Alliance Best Aquaculture Practices (BAP) and Global Good Agricultural Practices (GlobalG.A.P.), are focused on incentivizing farm-level improvement. In doing so they rely on the individual capabilities of producers to respond to price signals and/or preferential market access to upgrade their production systems and comply with standard requirements. Seafood ratings, such as Monterey Bay Aquarium Seafood Watch, base buying recommendations on species and/or country level assessments. These assessments, in contrast to certification, mask differences between producers – meaning that ‘better’ individual performers are lumped with the performance of the industry as a whole. In both instances, small holders are negatively affected, either because they are not able to individually demonstrate compliance or are ‘averaged’ with poorer performing industrial scale producers with (potentially) far larger cumulative environmental impacts.

The exclusionary character of assurance mechanisms like certification and ratings programs is a matter of social sustainability in the seafood sector. While there is increasing attention for social issues of inequality and exclusion in aquaculture, revised policies and standards have effect only if smallholders are included in certification and improvement

programs in a meaningful and effective way. This involves also the participation of smallholders in the development of sustainability criteria as they are applied to their modes of production. Inclusiveness affects the role and status of standards, and inclusive business models in aquaculture play an increasingly vital role nowadays in the development of improvement pathways for small-scale farmers who sell to international markets such as the EU.

Recognizing the barriers to smallholder inclusion, certification and ratings programs are currently developing new models to increase smallholder inclusion, in terms of the design of standards and compliance assessment (e.g. Bottema et al., 2018; Bottema, 2019; Bush et al., 2019). The variation of these new inclusive assurance models are commonly made up of a combination of four activities. First, attempts are made to build the capacity of individual or groups of individual farmers to comply with certification standards (Bottema, 2019). Second, attempts are made to improve the organisational and procedural capacity of groups of farmers (Kassam et al., 2011; Ha et al., 2013). Third, systems are developed to reduce the informational burden of audits, often through the application of new farm or ambient environmental sensing technologies (Ferreira et al., 2010; Shareef and Reddy, 2020) and/or new informational technologies designed to automate documentation by farmers (Føre et al., 2018). Finally, albeit in fewer cases, attempts are made to redefine sustainability standards with smallholders or experts from the countries or regions in which smallholder production takes place (Kusumawati and Bush, 2015; Kruk, 2017).

A common theme across these different attempts to include smallholders is a strong utilitarian or functional logic of cost reduction and procedural efficiency. Each approach attempts to redistribute the cost and organisational burden of compliance beyond individuals, or tailor the standard requirements to small holders in a way that increases the likelihood of

compliance. At the same time, they aim to increase the impact of certification and ratings by increasing the number of individual producers involved and/or changing the model of verification to provide greater assurance at a larger collective scale. Still, what remains unclear is how exactly these models affect the inclusion of smallholders in practice.

To analyze whether the ASC and ASIC assurance models succeed in improving access to shrimp export markets for small-holders, we focus on four dimensions of inclusiveness.

First, we focus on how inclusiveness is defined and translated into different models. Here we focus on translation as an ideational process of defining the logic and incentives for inclusive models. How do these ideas then translate into decisions on rules and procedures aimed at, for instance, increasing efficiency for farmer cooperatives, or audit sampling across large numbers of individual small holders? Are inclusive business models aimed at fostering sustainable improvements to production, or are they an end to themselves in terms of increasing available production for buyers for instance (Baumgartner and Nguyen, 2017). To address these wider goals it is necessary to understand how inclusiveness is defined and translated. For instance, inclusiveness can be defined as being incorporated into the shrimp value chain for (sustained) access to the international export market, or the sharing of costs and benefits. But inclusiveness can also be defined as the sustained involvement of smallholders as stakeholders in procedures of defining quality criteria and improvement pathways. At a governance level, inclusion may also entail that social-economic concerns for farmers' livelihoods are taken seriously in aquaculture policy and regional development.

Second, we analyze the degree to which smallholders are able to (re)negotiate their terms of incorporation in inclusive assurance models and the markets they enable access to. Following Ponte (2008), we explore the extent to which inclusion is based on rational incentives for compliance, or instead a set of terms and conditions that adversely constrain the

choice of small holders *not* to become subject to standards and ratings requirements (also see Hickey and Du Toit, 2007). These adverse terms and conditions can include enclosing or formalizing informal relations in standards and ratings that undermine the flexibility and adaption, or by creating lock in to a mode of production that reproduces rather than overcomes structural inequities in contracts, or access to resources or technical support (Omoto and Scott, 2016). Our analysis explores whether and how small holders are included in inclusive certification models by taking into account the degree to which the models are imposed, knowingly or unknowingly, or allow for a degree of self-determination. Making this distinction leads to further questions over the degree to which producers can opt for voluntary non-participation and/or partial inclusion should the terms of incorporation be adverse to their ability to either fulfil livelihood goals and/or make decisions that reduce their expose to production risks like disease.

Third, and finally, we explore the degree to which wider structural conditions influence the inclusion of small holders in inclusive assurance models. We consider structural conditions to include relational mechanisms of social reproduction (such as rules, norms, values) that order shared social practices and, as such, 'social integration' in post-traditional relations such as global markets (Giddens, 1984). In the context of small holders in Vietnam this includes the social relations that structure access to the means of production and trade, including market access, finance, technical knowledge, labour and wider social welfare support. The scope of these structural conditions can be extended to the a wider political economy of the state and civil society (see for instance Thayer, 2009). However, based on previous work on aquaculture and fisheries in Vietnam (see Bush and Oosterveer, 2007; Ruddle, 2011; Ha et al., 2013), and elsewhere in Southeast Asia (see for e.g. Kusumawati et al., 2013; Pauwelussen, 2015), we focus our attention specifically on the extent to which

inclusive models are able to disrupt social relations that influence access to production and trade.

3. Methodology and methods

The report is based on four weeks of empirical fieldwork research carried out in the Mekong Delta in July and August 2019, complemented by expert interviews conducted in the months preceding fieldwork. The study used qualitative research methods to gain insights in how inclusive models are designed, rolled out and received through the social networks and practices that make up Vietnam's shrimp farming sector. During fieldwork, we assessed how initiatives to enhance inclusivity for smallholders work out 'in the field', as well as how these are perceived by different stakeholders directly involved in their application.

Two cases were selected for the research: 1) efforts by ASC to enhance inclusiveness in their certification program, particularly current efforts to move small-scale farmers towards group-based certification and 2) The Seafood Watch ASIC improvement protocol that is rolled out in Vietnam through the Minh Phu company's social enterprise model. The cases were selected based on their prominence as current initiatives to better incorporate smallholders, and on their differences in terms of approaches and level of operation. ASC is a case of a global standard applied through an accredited third-party certification program. The ASIC case employs a regional standard that was collaboratively designed by Southeast Asian stakeholders and benchmarked with Seafood Watch sustainable seafood labelling. While ASC applies a global standard but is now experimenting with ways to make this standard more accessible to small-scale farmers, ASIC – as a regional standard – originates from a collaborative stakeholder process in which the incorporation of small-scale farmers was already intended to be included by design.

The primary methods of data collection for this study are interviewing and observation during (farm) site visits, complemented with document analysis and literature study. In Vietnam, we interviewed NGO staff, government officials, researchers, different kinds of shrimp farmers, extension workers, cooperative leaders, seafood entrepreneurs and people working for a seafood company. To select informants, we combined a targeted selection of informants and sites based on the two cases with the more open-ended method of snowball sampling. Several site visits were carried out for first-hand observations, documented through note-taking and photography. Most of the fieldwork research was carried out in four provinces in the Mekong Delta: Soc Trang, Bac Lieu, Ca Mau and Can Tho, with farm visits limited to the first three. While ASC's work field is mostly in Soc Trang and Bac Lieu, the ASIC improvement protocol is predominantly rolled out with farms in Ca Mau that produce for Minh Phu. In preparation for the fieldwork, we conducted semi-structured interviews with experts and specialists involved in certification and aquaculture improvement protocols.

The research faced several practical challenges that may have affected its outcomes. For official research permission, a day-to-day itinerary specifically outlining informants, sites and days had to be submitted weeks before fieldwork, and no changes were officially permitted afterwards. These strict administrative requirements compromised the flexible quality of snowball sampling of informants and site and made qualitative research based on an iterative research approach a challenge. Furthermore, all interactions with farmers were heavily monitored by local government. The requirement of being accompanied by government personnel for all farm visits may have influenced the responses of the interviewed farmers. Also, strict government monitoring limited our interactions with farmers to brief visits and short formal interviews, leaving less options for observations and informal interviewing that are usually part of qualitative research methodology. To make the most out

of given situation, the fieldwork received valuable assistance from a local guide and fellow scholar from Nong Lam University who also translated during interviews with farmers. Also, given above challenges, we decided over the course of the fieldwork to focus research effort on the meso-level of NGO staff and company personnel rather than a higher sample of farmers. A list of all interviews and site visits can be found in Appendix 1.

Fieldwork was carried out following regular ethical guidelines and informed consent in qualitative research. The purpose and scope of the research was disclosed beforehand to all informants before interviews and site visits were carried out and research activities were carried out in agreement with the Vietnamese government. Individual names are not used in the report for anonymity reasons. Instead, we use pseudonyms or official roles and titles. All farm visits required substantial informal payment to both government personnel and the farmers' cooperatives, which is an inevitable part of doing research in Vietnam's rural areas.

4. The ASC model: Towards group certification

ASC as organisation was established in 2010, linked primarily to the EU market. From the beginning, the Vietnamese aquaculture sector has been closely involved in the development of ASC's quality standards, of which the first (pangasius) was launched in 2012, with a standard for shrimp following in 2015. By 2019 ASC had nine different species standards, and over 1000 certified farms in sixty different countries (Interview #2). By 2019, at the time of research, there were about fifty certified shrimp farms in Vietnam. Twenty to thirty of these consist of large and intermediate intensive shrimp farms companies. In 2019 the ASC launched a new methodology for group certification in Vietnam as a way to incorporate smallholders in their shrimp certification program. This new model was assisted by a number

of NGOs, including the Vietnamese branch of the World Wildlife Fund (WWF) and Vietnam-based NGO International Collaboration Centre for Aquaculture and Fisheries Sustainability (ICAFIS).

Several cooperatives of small-holders or mixed farming groups (small-scale and intensive larger scale) are now ASC certified, but according to the farm-based model, not the group certification discussed below. In this standard ASC model, farmers grouped together in a cooperative can apply for certification together. However, each farm still needs to go through the auditing process individually. So, whereas the cooperative can operate as a legal entity, the ASC audit methodology for certification is based on the individual farms that make up the cooperative.

4.1 The inclusivity challenge for ASC

As demand for certified products is growing globally, European importers paid a premium of about €0,30 per kilo in mid-2019 for ASC certified shrimp (Idem). This premium is an incentive for larger farms and companies in Vietnam to become and stay ASC certified. For smallholders, in contrast, this premium often does not balance out the costs of investing in farm adjustment and paying the yearly auditing fee. They simply do not produce enough volume to make the investment financially attractive and of an acceptable risk-level.

According to the farmers, researchers and NGO and government staff we interviewed (Interviews 1, 5, 8, 9, 25) this situation is the primary reason for a general lack of interest in ASC certification by small-scale shrimp farmers in Vietnam. As a shrimp farmer in My Xuyen district explained: “For small farms like mine, it is hardly feasible to become ASC certified. We receive a slightly higher price for the shrimp, but we also have to bear the costs

for the yearly audits, and certification requires more administration work” (Interview 13).⁶ He went on to explain, that in spite of this apparent burden, “the added value for me is that certification expands the scope of where I can sell my shrimp”. According to a calculation by WWF Vietnam, it takes about €180.000 for an average farmers group or cooperative or 20-30 farmers to become ASC certified over a period of around three years (Interview 10).

From the perspective of ASC, shrimp certification in Vietnam is a particularly complicated issue due to its fragmented and small-scale nature.⁷ A coordinator of the ASC improvement program in ASC headquarters explained:

“The primary difficulty for us is in the number of smallholders. If we’re talking about inclusivity, the main tension is with the number of smallholders in Vietnam. That’s a major challenge for ASC. As an organisation we strive for aquaculture that is as sustainable as possible so we set our standards high, but then the downside is that it is often not easy for producers to meet these standards without substantial technological and organisational adjustments. The paradox is that we also want the standard to be widely applicable. We do not wish to exclude producers and create more inequality. Still, it is a fact that big professionally managed shrimp production companies can meet our demands much more easily, they can make the technical adjustments and have the financial resources for that. Their access to the market is already good and will be further improved. This contrasts with the more marginalised producers, who

⁶ Similar concern and incentive was expressed in Interviews 7, 15, 16, 25.

⁷ This was expressed by both staff in ASC’s headquarters in the Netherlands and by field officers and researchers working in Vietnam: interviews 5, 7, 8, 9, 10, 11, 14.

face bigger technological challenges, and often lack access to financial resources to make necessary adjustments. The risk is that ASC becomes a bottleneck for Vietnam's majority of smallholders to export to the EU market." (Interview 2)

Being an international standard depending on worldwide credibility and trust in its quality control, it is in the interest of ASC to maintain a global standard in its certification model. However, this ambition for global standardisation also compromises possibilities for adjusting criteria to local circumstances and, as such, increasing the inclusion of small holders (cf. Bush et al., 2013). This conundrum was directly reflected by an ASC program coordinator, who stated "lowering our standards is not an option, it would make our position as global certification authority impossible. We need to be able to justify the claims we make on a product" (Interview 2). Inclusivity therefore appears to be a goal for ASC to the extent that it enables a global standard to extend its coverage without compromising its ambitions for quality control in export markets.

4.2 Defining and translating inclusiveness in ASC group certification

The ASC group certification model for incorporating smallholders concentrates on ensuring that their standard for shrimp can be applied "as well as possible", with emphasis on helping producers to meeting ASC requirements. In practice this means keeping the standard and its criteria for sustainable shrimp production itself unchanged, the ASC strives to adjust the methodology of monitoring and auditing for quality control (Interviews 2, 8, 9, 10).

For this purpose, ASC developed its methodology for group certification in Vietnam for small-scale shrimp farmers, launched in 2019 in Vietnam. The core idea is that smallholders organised in a cooperative can share an ASC certificate, which stimulates them

to collaborate for meeting requirements and enables them to share the financial burden of farm adjustments and auditing. In regular ASC certification – referred to as farm-based or multi-sited certification – a certified cooperative needs to have every farm audited. In contrast, for ASC group certification only a sample of the farms is audited. Part of this sample is randomly selected; the other part is based on risk analysis. To estimate this risk properly, the group certification model requires the cooperative to carry out an internal audit. Within a group of farmers, someone needs to be responsible for this internal audit, and carry out checks at all farms in the group at a regular basis. The strength of the risk analysis is defined by this internal auditing (Idem).

In ASC group certification, inclusiveness is approached as making the certification process more accessible to farmers while keeping the externally-defined standard itself unchanged. ASC group certification seeks to enhance inclusiveness by changing the methodology of quality control and by re-organizing the units of certification from farm to cooperative/group-based. These changes for enhanced inclusiveness require social and organisational adjustment from the farmers. It is here that NGOs and extension workers of the aquaculture division of the Department of Agriculture and Rural Development step in: supporting farmers to reach ASC's technical and organisational standards. The incorporation of small-scale farmers depends on this extension work and outreach practices by government and non-governmental organisations (Interviews 8, 9, 10, 11, 15). ASC thus collaborates with local governmental and non-governmental partners to support farmers and cooperatives to reach ASC standards together.

4.3 Terms of incorporation and farmers' participation

By design, the group certification methodology assumes and requires that besides farm-based adjustment also a certain administrative and organisational structure is developed and in operation in the cooperative. This includes membership rules, conflict management, and administrative routine (Interviews 8, 10, 15), e.g. to carefully document the selling and transport of shrimps to the processor. According to ASC's program coordinator:

“this is where it becomes particularly complex. In theory it is very effective, but in practice setting up an internal organisation and administration is not that simple. It takes a lot of effort and time. Precisely because of this social aspect, we shouldn't expect that many cooperatives in Vietnam can jump in this group certification methodology right away.” (Interview 2)

When reflecting on the difficulty for smallholders to live up to certification, an aquaculture expert in Can Tho University explained:

“In this model, they need to form groups and collaborate, develop better management. This is the road to reach the international market through certification. Farmers alone cannot do this. They need the support of the government and NGOs.” (Interview 11)

NGOs and consultants play an important role in helping cooperatives to develop a management structure and training farmers in administrative capacities. Interviews (8, 10) with these local parties and their training documents show the standardisation in how cooperatives are required to operate as group to be (considered as) fit for group certification.

In the move to enhancing inclusiveness for smallholders into ASC certification, terms of incorporation have moved from a focus on technological farm improvements to social engineering to create the organisational structures through which farmers can access ASC certification collectively. Interestingly, the certification process thereby moves into the realm of social development are a necessary support based for inclusive certification. This is reflected in the way WWF and its Vietnamese partners MCD (Center for Marinelife Conservation and Community Development) and ICAFIS carry out the Aquaculture Improvement Program (AIP) in concert with ASC's movement towards group certification.

The AIP started in 2010, funded by DANIDA. The primary aim of this project, carried out in the Mekong Delta, is to promote certification and better management practice for small-scale shrimp farming in Vietnam to enhance market access. According to WWF and ICAFIS officers in charge of the project's execution four activities are central to the AIP: (1) building capacity among farmers for group management through workshops, (2) giving technical training on management practices to farmers to help them reach global standards (particularly ASC), (3) enhancing market access for smallholders by creating direct links between farmers and processors, and (4) advocacy for the improvement of farmers' livelihoods (Interviews 8, 10).

All activities relate directly or indirectly to enhancing inclusiveness for smallholders in the context of ASC (group) certification (Idem). Activities 1 and 2 are carried out as direct support for farmers to accomplish ASC certification; informing and training farmers in technical and organisational skills to not only improve their farm, but also develop and sustain an internal management structure required for group certification. Major issues for farmers, according to our interviewees, is to be able to comply with the traceability requirements for ASC as a group. This requires a well-developed way of internal collaboration and knowledge-

sharing, as well as administrative capacity. Activity 3 furthermore works the link between farmers and export market by incentivizing adjustments to the relationship between small-scale farmers and processing companies in the supply chain. The core idea here is cost-sharing; to have processing-export companies share the costs of ASC certification, in exchange for the exclusive purchase of the shrimp. According to various interviews with farmers, NGOs and experts, ASC certification is currently only affordable to small-scale farmer cooperatives if processing companies pay the auditing fee and/or provide the farmers with free or reduced-price Post-Larvae. Companies are stimulated to see cooperatives as an investment, and NGOs help farmers with negotiating a business contract. Clustering farmers into groups is a prerequisite: “If there is a model with 20 farmers and a production of 300 MT per year or more, it is quite affordable for a processor to invest in that model.” (WWF Project manager (WWF 1, Interview 10)

In practice, however, only the top 20% of smallholder farmers stands any chance of applying to ASC - as stated from the start of the ASC standard setting process (see Anh et al., 2011), and repeated in interviews with ASC staff. This is not just a matter of their own technical and organisational capability, but rather whether they are considered of enough potential for buyers to invest financially in the cooperative's development towards certification. If farmers are able to organise themselves in a form of cooperative, with legal status, they are able to make contractual agreements with buyers. But this brings with it competition as companies make their decisions on which cooperatives to invest in based on the degree to which farmers are able to exhibit the capacity to put internal management systems in place, and the capacity of the cooperative leadership to support cooperatives to maintain these systems (Interviews 11, 16, 18, 25). It is this competition to be a ‘top group’

rather than a 'secondary group' (as one buyer interviewed put it) that distinguishes who will make it to the top 20% of smallholders Interview 18).

The goal of cooperatives is therefore to attract the investment needed from companies to apply for ASC certification. This brings opportunities in terms of developing leadership on improved production and marketing and organizing production and reporting on production processes that can have positive effects on reducing key production risks such as disease. However, cooperatives that are able to attract investment from companies linked to ASC brings new dilemmas. While the initial form and function of internal management systems remains somewhat open, determined by the challenges that farmers face in overcoming disease and/or food safety issues, investment reduces this freedom (Interviews 15, 16). At the same time, farmers with a contract specifying they work towards ASC group certification means they are effectively captured by these processor buyers, further reducing their freedom to choose buyers on the basis of price (Interview 25).

The dilemma of fostering investment from processing companies while increasing the inclusion of small holders is recognised by ASC. For them, the model and methodology of group certification can give farmers a more prominent role in the certification process including increased group autonomy, as they are primarily in charge of internal quality control, risk assessments and conflict management. But for ASC, this partial decentralisation of monitoring contains a risk when a cooperative is not transparent about possible internal problems, or when internal conflict hinders a fair internal quality control and risk analysis. This explains, according to an WWF officer, the need for ASC to prescribe and audit cooperatives' mode of operation and administration as part of the group certification methodology – which in turn contributes to the need for external investment (and capture) by processing companies (WWF officer 2 Interview 10).

In summary, the ASC group certification model enables smallholders to become included as active participants in the certification process, building their capabilities for reducing a range of production risks, while at the same time being assisted to connect to the EU market. On the other hand, however, these farmers have little room for negotiating the terms of this incorporation of what these internal management systems entail, and subsequently the contract conditions that enable their market access.

5. The ASIC – Minh Phu Seafood Company initiative

ASIC was developed in 2013 as a stakeholder platform, supported by USAID funding. It brought together private-sector aquaculture stakeholders from Indonesia, Thailand, Cambodia, Philippines, Myanmar and Vietnam. Together these participants aimed to develop a standard to acquire better market access for the export of shrimp to the US. ASIC is embedded in a wider concerted move towards redesigning global aquaculture sustainability and standard-setting programs to make them more inclusive and adaptable to different regional contexts supported by Seafood Watch to gain market recognition in the US.

The ASIC improvement protocols have been further developed through a Partnership Assurance Model designed to create a scalable ‘area-based’ form of verification that overcomes limitations of farm based assurance models (Moore et al., 2019). Its core aim is to improve aquaculture sustainability and verification in a more inclusive way, particularly with smallholders in mind. The ASIC Shrimp improvement protocol is a target program through which the new Partnership Assurance Model is applied and tested ‘on the ground’, with Vietnam’s Mekong Delta as its field of operation. The improvement protocol is modelled on

the G.A.P standards, adapted to regional context, and subsequently benchmarked with the sustainability labels of the Seafood Watch aquaculture rating program (Interviews 3, 4, 5).

In Vietnam, the ASIC protocol and PAM is being applied by seafood company Minh Phu to incorporate smallholders in certified organic black tiger shrimp (*Penaeus. monodon*) corresponding to the green label of Seafood Watch. This is done as part of the MOU between Minh Phu, Seafood Watch (SFW), SGS and ASIC. This Vietnam Sustainable Shrimp Alliance VSSA was set up 17 June 2019 in Ca Mau province, with a plan to target 20.000 shrimp farms to reach the SFW Yellow or Green Label. As a Monterey Bay Aquarium staff member explained: “With the Ca Mau agreements: That’s now as close as one can get to see the new model being put into practice” (Interview 3).

5.1 The inclusivity problem from a regional perspective

The ASIC platform was developed to creatively address and find solutions to structural problems that the Asian stakeholders identified in established certification models related to inclusiveness. During the meetings leading up the Ca Mau agreements mentioned above, two key issues came up repeatedly, shared by private sector, government and farmers across the Mekong Delta.

First, they expressed the desire for added sustainability value for shrimp products for export without increasing costs for verification and the need to better share benefits (Interview 3). The problems identified in Vietnam are first of all the high costs of certification and the financial burden that farm adjustment and the auditing process usually places on smallholders rather than stakeholders higher up in the value chain. As one SFW staff member pointed out while reflecting on the ASIC process, “right Now, only 3% of the Vietnamese shrimp sector is certified, at most, after decades of work! This is not enough. We need to rethink what we are

doing to accelerate change” (Interview 4). Another respondent from Monterey Bay Aquarium elaborated further by arguing that in order to reach the “hundreds of thousands of farmers that certification is never going to reach”, a more inclusive assurance ‘business model’ is needed that doesn’t require them to directly pay (Interview 3).

Second, they expressed their concern that the effectiveness of global standards is undermined by the fact that local stakeholders usually have no voice in their development. This, they argue, limits the legitimacy of these standards from the perspective of not only farmers, but the NGOs and governments that are tasked with supporting smallholders to comply with their requirements (Interview 4, 5), and argument also brought up by Minh Phu staff (Interviews (18, 20). Inherent to this concern is the observation that these global standards and protocols are generally ill-fitted to the complexity and diversity of shrimp production in Asia, and the social-environmental contexts in which the sector operates – brought by NGOs, scientists and farmers (Interviews 1, 4, 5, 7, 25).

5.2 Defining and translating inclusiveness in the ASIC standard

In the ASIC model inclusiveness is defined as the sharing of benefits and costs between the different stakeholders in the shrimp value chain (Interview 3). In the model, this is made possible by making verification affordable, by distributing costs along the supply chain and by upscaling verification from farms and cooperatives to entire regions (Interview 4). In doing so Minh Phu Seafood, Seafood Watch, SGS and ASIC outlined a joint ambition in 2019 to make this regional approach a reality by developing and employing the PAM to move the province of Ca Mau to a SFW green level rating. This represented a fundamental shift from a farm-by-farm approach, engendered by certification, to a higher scale of assessment and assurance that is assumed to be more inclusive of smallholders (Interviews 4, 18, 20).

The ASIC model translates inclusiveness in four different ways.

First, inclusiveness is defined by the development of a Southeast Asian ‘regional’ standard aimed at de facto inclusion, rather than exclusion. To this end, ASIC is an explicit effort to re-write standards with the regions exporting smallholders in mind. It took the ASIC platform three years to create a stakeholder-inclusive regional standard accepted for the US market. As one of the NGO stakeholders commented in an interview:

“What really was a huge bonus for us was that we used all the regional G.A.P standards, such as VietG.A.P [Vietnam Good Aquaculture Practices standard]. The sector representatives from the region didn’t want their regional standards to be ignored. So, starting with those that the countries felt proud of, we started adding elements to get them fit for Seafood Watch sustainability labels in the US. So, in the end we had something with on the one hand local buy-in and on the other hand added market value for the US market as we could increase the trust from the US market in Asian shrimp through the labels. I think this is what really makes this approach more inclusive from the start”. (Interview 4)

Initiated by a multi-stakeholder process, melting together the different regional standards and coming to agreements with a variety of stakeholders representing from the industry (including farmers representatives), was a relatively long and complex process; Indeed, it is yet finished as it now goes into a testing and application phase through the PAM approach signed in 2019. Nevertheless, as one NGO representative commented, “the group is very committed. They are proud of what they have accomplished. There is a lot of local buy-in for the standards because of the inclusive way they were developed” (Idem).

For Vietnam, government was not included in the initial phase for fear of slowing down the process: “We worked with people working on the ground, and when they agreed, it was them who went to the government to get them on board too” (Interview 3). The shared ambition in the ASIC program as it is applied in Vietnam is to agree on the end goals and attempt to reach large regions to work together on enhancing inclusivity, while maintaining credibility of the standard and the program.

Second, ASIC is characterised by a progressive ‘step-by-step’ approach to improvement and assurance rather than a punitive approach as seen in most farm level certifications. The approach is illustrated by the application of the ASIC standards in Ca Mau. There, 20,000 smallholder farms will be assessed under the ASIC improvement protocol through a new PAM sampling based assurance model. The intention is for those farmers to reach a SFW Green rating by 2025 (Interviews 4, 20). All these farms are household-based, producing Monodon shrimp in extensive systems for the Minh Phu Seafood company. As presented by SFW and Minh Phu staff, aligning the ASIC protocol with the SFW ratings allows for a flexible and tiered approach to reach farm improvement step-by-step as opposed to the binary logic of certified/non-certified (Interviews 3, 20). This step-by-step “learning as we go” approach also applies to organisations involved in the alliance such as SFW and SGS. As one respondent expressed, the approach is flexible and open to reflection, adaptation and iteration (Interview 4).

Third, inclusiveness is aimed for through the PAM – a ‘partnership’ model between producers and supply-chain for verification – and the involvement of diverse actors in the definition of the ASIC protocol. Both processors and cooperatives were included in the development of the Vietnam Sustainable Shrimp Alliance that applies the ASIC model to shrimp farming in the Ca Mau province. Importantly, the alliance was not an external

initiation, but was based on a partnership already in place between Minh Phu company, Ca Mau producers and the Vietnamese government. As explained by SFW, which was directly involved in its development:

“Vietnam’s prime minister announced a push for enhancing the value of export shrimp, putting pressure on the Private Sector Development Committee (PSDC). It was the PSDC that contacted us [SFW] as they thought the US market to be key to enhancing export value for Vietnamese shrimp. They already had this connection to Minh Phu for sustainably sources shrimp, and so the government actually came to us saying they wanted to work with us. So we had several meetings, discussing what are the main issues” (Interview 4)

By having political support, not only was SFW able to engage with Minh Phu but Minh Phu was able to further develop their sourcing policies through the ASIC/PAM model (Interview 20). Here the notion of inclusiveness was included in the overall narrative used to support the PAM, but it did not enable producers to voice their aspirations or concerns about the standards or the sourcing model.

Fourth, the ASIC/PAM model aims to reduce cost and increase accessibility to export markets by operationalising farm level verification at scale. As outlined in the previous section, a key barrier for smallholders to become involved in market assurance is the costs and logistical complexity of audits. In Vietnam, these audits in ASC certification schemes for shrimp usually take two to five days (Interviews 9). The alliance therefore sought to develop a verification system that is quicker but still sufficiently rigorous to be able to attract the interest of end-buyers. The ASIC program collaborated with SFW and SGS to develop a verification

platform through which farmers themselves can do quick assessment within one or two hours, involving a tablet, making pictures for documentation to reduce the amount of writing.

Central to this model was the establishment of an ‘Improvement Verification Platform’ to verify performance level of sampled farms. SFW then checks these assessments for accuracy, but only in the short term, with ownership over this process gradually being moved to farmers and companies over time “so at some moment the standard [and sampling methodology] has become the norm of practice” (Interview 4).⁸

5.3 Terms of incorporation and farmers’ participation

The ASIC model has inclusiveness as a central goal, which has fed into the design of the improvement protocol, development of the collaborative PAM and the Improvement Verification Platform. The questions remains, however, as to whether this has also enabled farmers to have a say in the terms by which they themselves are incorporated into the assurance model and subsequently international markets.

In absolute numbers of farmers included the ASCI/PAM model has significantly enhanced farmers inclusion. By building on Minh Phu’s mangrove-shrimp social enterprise model, in combination with the organisation of farmers into cooperatives, the model has the potential to expand the scope of the improvement protocol to the region/province involving 20,000 farmers. Minh Phu’s existing relations with farmers in this region has been central to this process, as has Minh Phu’s relationship with the PAM. By creating political support for the ASIC/PAM the legal structure of inclusion has been adapted, if not changed. Vietnamese

⁸ In line with insights from interviews 5, 20.

law stipulates that a social enterprise may not have more than 100 members. Minh Phu has adapted their social enterprise to consider a cooperative as one member of the social enterprise. That way, Minh Phu can involve 100 cooperatives in their social enterprise model, and use this a basis to apply for standards (Interviews 18, 20).

The ASIC/PAM model has enabled a massive increase in numbers of farmers involved in sustainability assurance. The model has also improved their representation in defining standards and, through the tiered system, enhanced their access to the export markets. However, in spite of building on an established system of representation (i.e. cooperatives), it does not appear that the model necessarily empowers farmers to have a greater say in whether and how they are included in this system, and by default, export markets. In addition, because of the functional monopoly of Minh Phu over mangrove shrimp producers in Ca Mau, and because farmers are 'locked' into extensive organic shrimp production through a mix of land tenure and mangrove forest regulation (Interviews 19, 21, 22, 23) (see Ha et al., 2012a; Omoto and Scott, 2016; Baumgartner and Nguyen, 2017), the degree to which farmers are able to determine the terms by which they are included in the industry, let alone trade, is inherently limited.

Similar to the ASC group certification model, cooperatives have to demonstrate a degree of capability to attract investment from Minh Phu. Once Minh Phu has identified and invested in a cooperative they directly support them to develop their technical skills (farm visits, interviews 18, 21, 22). They do this by guiding and training farmers, with assistance from Oxfam/SNV (Interview 23). In return the farmers receive a 10-20% higher price for organic shrimp. But, as argued by Minh Phu, the company also enables their incorporation into export markets through local shrimp collection teams that also provide direct support to farmers. As a respondent from Minh Phu outlined:

“We go to the farms and look around. We assess their condition and how they work. Based on that we invite the farmer to join a certain standard that fits them. What is important is to make clear to the farmer the actual information about the requirements. So, if you do this, you can sell there. It is very important to be specific and neutral in that rather than selling a good picture for them. We also explain about longer-term sustainability of their farm if they consider the environment. So, it’s not just the premium price, it’s the bigger picture, and we have to manage expectations in that.”
(Interview 20)

Overall, the ASIC/PAM model appears to have, in addition to protocol development and scaling up absolute numbers, entrained support for farmers by building on the existing social enterprise and sourcing model of Minh Phu. However, based on our field work and the observations of others (SFW Interviews 3, 4 and Oxfam interview 5), questions remain on the degree to which premiums are passed on, as well as the degree to which farmers improve their production practices in response and ultimately ‘benefit’ more than if they were not part of model. Finally, similar to the ASC model, questions remain on the degree to which farmers are able to negotiate the design of the verification model and the conditions of Minh Phu’s benefit sharing model.

6. Functional vs. structural inclusion

The cases of ASC and ASIC provide insights to the extent to which smallholder inclusion to global value chains can be managed through assurance models. Both the ASC and ASIC

models enable, albeit to different degrees, *functional* inclusion by enabling input to standard setting processes, as well as through the design of cooperative arrangements amongst smallholders (through clusters of cooperatives) and between smallholders and processing companies. However, we also observe that this notion of functional inclusion does not necessarily address the structural conditions under which smallholders are included in global value chains. In fact, our results demonstrate that failures to substantially alter these conditions of *structural* inclusion reinforce the position of processing companies both in export markets and as such over smallholders.

The following outlines three tensions that emerge between functional and structural inclusion through the implementation of the ASC and ASIC inclusive assurance models.

First, internal management systems enable farm level monitoring and improvement, but in turn create new social hierarchies. These hierarchies do enable the functional inclusion of smallholders into cooperatives, and as such facilitate inclusion to ASC and ASIC. In cases where there is relative homogeneity between the type of farming systems this functional inclusion can also contribute to structural inclusion – by empowering farmers of apparently equal competence and capacity to gain shared control over information and decision making related to water exchange, and the shared purchase of seed and feed (farm-based interviews 15, 21, 22). However, as cooperatives increase in size there is a tendency for the variation in farm types to also expand (Interview 11).

For example, in the ASC certified cooperative in Bac Lieu characterised by such diversity, the capacity of farmers to engage in both upgrading their farming systems or contributing to the operation of the internal management systems is not equal (Interview 16). The group certification brings a degree of freedom for individuals given there is a degree of freedom in how the systems are designed and how compliance assessment is carried out

across the group. This means that smallholders can as such be facilitated better through these systems than if they were individually assessed. However, it is also apparent that representation within the cluster is not distributed amongst types of farming system.

Representation is instead determined by who the cooperative, and local commune level administration, determined to be 'representative' – which in practical terms means farmers that are capable and present the lowest risk in being able to present the smooth functioning of the cooperative (as illustrated above). Whether these farmers, and the hierarchy their representation presents, is able to effectively enable smallholders to improve their production remains a question.

Second, the ASC and ASIC models create new dependencies with exporting processors that reinforce rather than overcome structural value chain relations that enable market access. Processing companies are central to providing the necessary investment, in terms of both finances and technical support necessary for engaging with both assurance models. As outlined in the previous section, cooperatives have to attract this investment by demonstrating the internal functioning and organisation of their cooperatives. The investments made by companies are as such positive for creating competition and incentivizing improvement by cooperatives. They can also appear to create a more direct link between farmers and processors, which in turn enables direct investments by these processors in materials required for production. As was observed in one cooperative, this can include paying half the cost of fingerlings, providing free disease prevention advice and the provision on probiotics (Interview 15). In some cases processors have agreed to cover the cost of auditing for these cooperatives (Interview 15, 22, 23).

Increased dependency on processors also brings with it new risks and forms of exclusion. Farmers that are not able to attract investment from processors, for instance,

remain just as excluded from ASC certification as those smallholders faced with farm level assessment. ASIC does make an attempt at dramatically increasing the scale of assessment which can in turn lead to a substantial increase in the number of farmers included in assurance. But this model also remains dependent on the Minh Phu processing company. Again, the benefit is the ability to leverage market access to stimulate action by both a processor and farmers towards improving production practices. But in doing so ASIC reinforces and even increases the scope of control of Minh Phu over smallholders that were either already involved in the supply chains, or were not but now fall under their extended influence (if not through a direct contract) (Interviews 21, 22). If this logic is followed through, the ASIC model may in fact reinforce market control while, because it operates at such a large spatial scale, obfuscates the ways in which smallholders are able to (re)negotiate the terms of inclusion in this assurance model and as such the export markets this model serves.

Third, by strengthening the role of processing companies, both the ASC and ASIC inclusive assurance models tend to bypass existing relations between smallholders and farm gate buyers (so called middlemen and middlewomen). This is generally seen as a positive development given these first tier buyers are seen as rent seeking actors that reduce farm gate prices for smallholders. They can also reduce the transparency needed in supply chains needed to control certain practices, such as the use of illegal antibiotics. Furthermore, the high administrative requirements for shrimp feed and harvest transport under both ASC and ASIC standards are made difficult with the informal character of these first tier buyers. In practical terms this includes, for instance, that getting certificates on the source of feed ingredients is often not possible. Finally, these first tier buyers are often the main (or only) source of finance for smallholders; with debt-tying being a practice of maintaining long term trust in supply

relations. This is problematic because some standards require farmers to be debt-free, as do some processing companies who offer to support farmers to become certified. Debt relations can therefore limit farmers' options to sell to different processors, whichever provides the best 'package' (prices, services) to the farmer – as well as their inclusion in sustainability and certification assurance programmes.

Seeing first tier buyers as only problematic, however, ignores their important role in aquaculture value chains. These buyers play a crucial role in the smooth operation of small-scale shrimp production. Their functional role is in fact valued by processing companies as they create economies of scale by aggregating small amounts of shrimp across often highly spatially dispersed and commonly marginalised rural places. In doing so they provide crucial service as mobile in-between brokers moving around shrimps, ice, credit and information where companies are reluctant or unable to do so, and government has structurally neglected infrastructural development. They also play an important role as 'patron creditors', providing credit as a safety net and for small-scale farmers who are usually excluded from regular bank loans. Finally, they sustain extensive social networks and are sources of information for farmers, although this is changing with the increased use of social media and mobile phones which allows farmers to find (market) information online, from processors and from each other. By setting up systems that promote closer relations with processors, and in the process potentially by passing these first tier buyers, smallholders can be marginalised from these informal sources of credit, information and support.

7. Discussion and conclusion

The ASC group certification and ASIC inclusive assurance models represent new forms of farmer organisation and compliance assessment in the Vietnamese shrimp sector. In this report we have explored how these new assurance models succeed in improving access to shrimp export markets for small-holders, as well as the wider social conditions that affect the effectiveness of these models.

The results show, as expected, a number of differences between the ASC and ASIC inclusive assurance models. The first obvious difference, that precedes but influences the results, is that the ASC is derived from a third-party farm level certification standard while ASIC is borne out of a species/country ratings scheme. This difference has set the two inclusive assurance models on different pathways. The ASC has chosen increased inclusion within without comprising the integrity (and credibility) of their standard. Its approach to inclusiveness through a group's structure supports the functional (procedural) constraints to compliance rather than the wider structural constraints to compliance to its standard. The ASIC model has opted for a more radical realignment to the SFW ratings scheme with which it has partnered. This has meant defining a new improvement protocol that supports a pathway of improvement towards a buying recommendation in the US market. It also meant rescaling the SFW rating for to a level that enables the recognition of better performing producers. In summary, the models, scales and rationales of the two models differ considerably, while their goal essentially remains the same.

Despite the different starting points of the ASC and ASIC model, and their different design, similarities are also observed. Both models have been developed to 'scale up' the numbers of small holders beyond what is achievable beyond farm level assurance. In doing so both have developed sampling models that make assurance more affordable by reducing the

number of days need for assessment by third party auditors. Both models have also sought cost sharing at two levels. First, between farmers through the establishment of internal management systems run by cooperatives, and second, by attracting investment by processing companies who partially cover the cost of auditing and provide direct technical input to running cooperatives. The ASC and ASIC models are also similar in terms of linking farmers to and, as such, operating through processing companies. This may on the one hand as an artefact of working in Vietnam – where constraints remain on producer or civil society organisations can only operate under a remit from the state (Thayer, 2009). But on the other hand, it highlights that both the ASC and ASCI models reinforce commercial relations rather than offer an alternative that could create new terms for the inclusion of smallholders in global value chains.

Most of these similarities and differences between the ASC and ASIC models are functional, in that they compare how inclusion is facilitated through improved efficiency and scale. By doing so both models appear to offer an effective means of creating assurance that can support farmers to meet export market exportations related to improved aquaculture production. However, our comparison of ASC and ASIC raise three ongoing challenges that these models, and others like them will face if their goals are to be more effective into the future.

First, while fostering the inclusion of smallholders it remains unclear whether these models enhance the ability or scale of improvement in the aquaculture sector. This leaves open the question as to whether these models are an end to themselves, in terms of increasing available production for buyers, or whether they offer a mechanism for change improved environmental outcomes (Baumgartner and Nguyen, 2017). Further research is needed to determine whether these assurance programs lead to improved outputs, in terms of changed

farmer practices, and ultimately improved environmental quality (in terms of any of the criteria in the both the ASC and SFW standards).

Second, it is not known whether by enabling smallholders to be included in market assurance they also contribute to social sustainability – in terms of livelihood outcomes and social wellbeing (reproducing the findings of others on the limitations of farm level certification Ha et al., 2012a; Ha et al., 2012b; Omoto and Scott, 2016). Increasing the number of smallholders with export market access can provide a basis for improved market prices, but it does mean that those same smallholders are able to realize these prices, either because of ongoing cost of compliance or because they are not able to negotiate high prices from the processing companies to which they sell. Said differently, the models have enabled smallholders to negotiate some of the terms of their inclusion into markets demanding assurance (e.g. by having input into standards in the case of ASIC), but have not necessarily improved their ability to negotiate benefits within those markets. Here too further research is needed to determine the link between assurance and negotiating improved benefits in and from the market.

Third, and finally, the models tend to address issues related to functional inclusion rather than structural inclusion. As outlined above, the two models tend to reinforce commercial relations and asymmetries in the sector rather than offer an alternative that could create new terms for the inclusion of smallholders in global value chains (as argued, amongst others, by Pouw et al., 2019). By reinforcing these commercial relations the position of processing companies in terms of taking control over the smallholder sector is significantly strengthened. This means that these models have, knowingly or not, risk formalising informal relations (like those with first tier buyers) in standards and ratings that undermine the flexibility and adaption, and even created a degree of lock in to set of trade relations that

increase their dependency on commercial actors for access to resources and technical support (see Omoto and Scott, 2016). It also appears that the higher the scale at which inclusion operates, the greater the distance between producers and the decisions and decision makers that are determining the terms of their inclusion.

These challenges do not dismiss the advances made by either the ASC group certification or ASIC assurance models. What they collectively point out, however, is that social inclusion through market-based assurance requires a multi-layered design that increases room for farmers to participate in defining not only the functional but also the structural conditions that shape their inclusion. Given it is not clear whether the existing approaches enable either ASC group certification or the ASIC mode to address these structural conditions, the further innovation of these models appears necessary for them to support wider social sustainability goals.

While both the ASC and ASIC have made considerable progress in developing more inclusive assurance models, further development is needed. The results of this report provide a basis for critical reflection on the degree to which both functional and structural dimensions of inclusion can still be taken up in this development. Notably, these results are not only applicable to Vietnam, but also provide insights and recommendations for smallholder farming in other partner Southeast Asian countries.

The following are three areas of support that the European Union, when deciding on further support to EURASTIP could take into consideration.

First, the multidimensional nature of trust, assurance and social inclusion means that a multi-stakeholder approach like EURASTIP in support ASC and ASIC-like models appears highly relevant. In Vietnam, for instance, the Vietnam Innovation and Technology platform established under EURASTIP can convene a diverse group of private sector actors (both

domestically and internationally) and government departments and Ministries. In doing so, VINATIP could support shared learning about the goals and approaches of ASC and ASIC in Vietnam (see for further details Bush et al., 2020). It could also structure a process of reflection and innovation designed to enhance the functional inclusion of smallholders – including both more efficient reporting technologies and compare models of farm organisation (including the role and function of farmer cooperatives). More importantly, based on our findings, VINATIP could take up the challenge of also addressing structural inclusion/exclusion of smallholders. For instance, by reflecting on the challenges of greater private sector control, the degree to which cooperatives can negotiate the terms of inclusion for smallholders in export trade, and what support the state could provide to providing support to cooperatives and/or requirements for exporting processors to support smallholder inclusion.

Second, VINATIP could provide a basis to research and structure create shared learning on what the social and environmental benefits of inclusive assurance models. Leading on from our observations above, how exactly either the ASC group certification or ASIC/PAM model leads to improvement in the livelihoods of smallholders and/or improved environmental performance is not known. The links that VINATIP already to domestic and international universities, the private sector and farming communities provides a strong basis to not only coordinate the collection of relevant data, but also structure a process of learning that can feed back into improving both functional and structural inclusion in models like ASC and ASIC.

Third, EURASTIP can provide a basis for rethinking what the assurance needs of buyers are in Europe and in doing so critically reflect on the social and environmental goals of the European market. The assumption underlying models like ASC and ASIC is that buyers, and the consumers they sell product to, demand a ‘high level’ of assurance over the source

and conditions of production. However, there has been little engagement and discussion with buyers and consumers alike what level of assurance would be acceptable when trading off high environmental performance with smallholder inclusion. Buyers and consumers may be willing to accept 'lower' levels of oversight, either because smallholder inclusion is valued or because the risk of environmental impact of these smallholders is (potentially) lower than industrial scale producers. They may also, as is elsewhere pointed out, see value in involving smallholders in smaller incremental improvements rather than the binary in/out logic of most current market based assessments (see for e.g. Tlusty and Tausig, 2015; Bush, 2018). If so, then an opportunity could be opened up to redesign assurance models that address both functional and structural inclusion.

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Appendix 1: List of semi-structured interviews

Interview #	Date	Place	Function	Institute
1	6 March 2019	Utrecht, Netherlands	Aquaculture researcher	Worldfish
2	24 May 2019	Utrecht, Netherlands	Program coördinator	Aquaculture Stewardship Council (ASC)
3	31 May 2019	Skype call	Senior policy manager (SFW1)	Monterey Bay Aquarium
4	31 May 2019	Skype call (linked to previous)	Science director (SFW2)	Seafood Watch (SFW)
5	5 July 2019	Utrecht, Netherlands	Programme Officer Southeast Asia	Oxfam Novib
6	27 July 2019	Ho Chi Minh City, Vietnam	Senior Researcher	Research Institute for Aquaculture (RIA2)
7	29 July 2019	Ho Chi Minh City, Vietnam	Aquaculture Specialist	Vietnam Association of Seafood Exporters and Producers (VASEP)
8	31 July 19	Can Tho, Vietnam	Deputy Director (ICAFIS 1) and Project Officer (ICAFIS 2)	IKAFIS
9	31 July 2019	Can Tho, Vietnam	Aquaculture Technical Consultant	RECERD
10	2 August 2019	Can Tho, Vietnam	Project Manager (WWF1) and Project Officer (WWF2)	World Wildlife Fund (WWF)

11	2 August 2019	Can Tho, Vietnam	Associate Professor in Coastal and Marine Aquaculture	Can Tho University Department of Coastal Aquaculture
12	3 August 2019	Can Tho, Vietnam	Aquaculture Researcher	Can Tho University and Wageningen University
13	5 August 2019	My Xuyen district, Soc Trang, Vietnam	Vice Director and Farmer	Hoa Nghia A Cooperative <i>(small holders extensive farming)</i>
14	6 August 2019	Hoa Binh district, Bac Lieu, Vietnam	Vice Director (cooperative), Aquaculture Entrepreneur and Local Government Official	Long Manh Company and local government
15	6 August 2019	Gia Rai Town, Bac Lieu, Vietnam	Director (1), Vice Director (2), Secretary (3), Farmer (4), Local Government Officer (5) <i>(group discussion)</i>	Thanh Cong 1 Cooperative <i>(small holders extensive farming: rice-shrimp system)</i>
16	7 August 2019	Dong Hai district, Bac Lieu, Vietnam	Director of Cooperative & Farmer	Thanh Dat Cooperative <i>(small holders mixed intensive and extensive farming systems)</i>
17	8 August 2019	Can Tho, Vietnam	Aquaculture Researcher	School of Natural Resources, Can Tho University

18	12 August 2019	Ca Mau, Vietnam	Director Sustainability Program	Minh Phu Seafood Company
19	13 August 2019	Ca Mau province, Nhung Mien, Vietnam	Dep. Director	Forest Management Board
20	13 August 2019	Ca Mau, Vietnam	Project Manager Mangrove-Shrimp Chain Social Enterprise	Minh Phu Seafood Company
21	13 August 2019	Ca Mau, Vietnam	Head of Social Enterprise Group and Farmer Mangrove-shrimp System	Vien An Dong Commune (<i>Extensive mangrove-shrimp farming system</i>)
22	13 August 2019	Ca Mau, Vietnam	Farmer Mangrove-shrimp System	Vien An Dong Commune (<i>Extensive mangrove-shrimp farming system</i>)
23	15 August 2019	Ca Mau, Vietnam	Mangrove and Markets Project	Netherlands Development Organization (SNV) SNV
24	16 August 2019	Soc Trang, Vietnam	Provincial Government Officer & Vice Director of My Thanh Shrimp Association	Soc Trang Province and My Thanh Shrimp Association
25	17 August 2019	Soc Trang, Vietnam	Director (1), Secretary (2) and Farmer (3) (<i>group discussion</i>)	My Than Shrimp Association

