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Authority without credibility? Competition and conflict between ecolabels in tuna fisheries

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ABSTRACT

Certification is widely seen as an innovative strategy for dealing with environmental problems in supply chains. As the number of labels available in the fisheries sector has increased, each with its own framing of sustainability, questions are being asked about their credibility. In tuna fisheries, contrasting approaches have led to conflict over, among other things, the credibility of competing labels. This paper investigates one such conflict between the Dolphin Safe and the Marine Stewardship Council certification schemes in the West and Central Pacific. It looks at how key practices like scientific rigour, inclusiveness, transparency/openness, impartiality/independence and impact contribute to label credibility and explains the importance of authority in understanding how certification schemes maintain influence within global production networks. The results demonstrate that despite substantially different levels of credibility within these networks, the application of an environmental standard is more connected to the authority of the standard setter than the credibility of the label. The paper concludes that understanding the more nuanced role of authority, both with and without credibility, offers new insights into the wider dynamics that shape environmental regulation in global production networks.

1. Introduction

Certification is widely seen as an innovative strategy for dealing with sustainability issues in supply chains by setting and regulating standards for ecological and social interactions in the production process (Mutersbaugh and Klooster, 2005; Bratt et al., 2011). The final certificate and/or ecolabel is symbolic of the credibility of the standards they represent, the organisation of how these standards (and claims) are defined, codified and verified, and ultimately their environmental and social impact (Cashore et al., 2004; Hatanaka et al., 2005). However, different certification systems make different claims about sustainability, depending on their interpretation of sustainable practices. Once in the market, it is assumed that the credibility of certification systems, and the claims they make, grant them the requisite level of authority to govern those involved in the process of production and trade. But what happens when the perceived credibility of the labels differ? And what happens if the authority granted to a certification system is uncoupled from its credibility?

In this paper we focus on this relationship between credibility and authority of certification systems. Credibility, defined as "the perception and assumption that the operations of an actor or agent are trustworthy, responsible, desirable and appropriate" (Boström, 2006b, p. 351), is a centrally important factor structuring the inclusion of actors in non-state voluntary governance arrangements such as ecolabelling. Authority is related to credibility, in that once a label is deemed credible by those-to-be-governed, the standards and institutions used to verify compliance to them can exercise power through exclusion (Cashore et al., 2004). The link between authority and credibility is, however, not always straightforward. Certification systems are positioned within global production networks (GPNs) (Henderson et al., 2002; Coe et al., 2008), constituted by economic and political actors that struggle over the construction of economic relationships, governance structures, institutional rules and norms, and discursive frames that organise translational economic activity (Levy, 2008). Credibility is derived from social relationships in these networks and is thought to lead directly to authority (Boström, 2006b; Schepers, 2010; Gulbrandsen, 2013). The presumption of a credibility–authority axis may therefore be challenged if we investigate how different, and even competing certification systems impact upon each other's regulatory capacity, and in turn, influence production and consumption processes.

We explore the relationship between the credibility and authority of certification systems by comparing the conflict

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between the Earth Island Institute's (EII) Dolphin Safe and Marine Stewardship Council (MSC) certifications in the West and Central Pacific Ocean (WCPO) skipjack tuna fishery. The MSC, widely regarded as the highly credible 'gold standard' in sustainable fisheries certification (Sutton and Wimpee, 2008; Gulbrandsen, 2013), certified skipjack tuna fisheries in the waters of the Parties to the Nauru Agreement (PNA) that employ a 'free school' purse seining technique: meaning that nets are set around schools of tuna not associated with released floating objects called fish attraction devices (FADs) that lead to bycatch rates of non-target species and juvenile tuna 8–9% higher than in purse seine sets not associated with FADs (Bromhead et al., 2003). 'Free school' or 'FAD-free' fishing came to represent a new definition of sustainable purse seining. It was innovative because it provided an opportunity for a portion of the WCPO fishery to catch, trade and therefore create a new market for sustainably certified purse seine tuna – an industry first. However, it has also proven controversial because a return to free school sets contravenes the standards of the Earth Island Institute Dolphin Safe ecolabel. This came about due to controversy in the Eastern Pacific Ocean in the 1990s, which saw a ban on the use of free school sets because of the risk of associated mass dolphin mortality (Francis et al., 1992; Baird and Quastel, 2011). But while the Dolphin Safe ecolabel is now ubiquitous in the industry, with over 450 members including fishing companies and value chain actors (EII, 2007, 2011), its relevance in parts of the ocean other than the Eastern Pacific and a lack of transparency in decision making and certification is openly questioned (Baird and Quastel, 2011). Despite this, it has emerged as a threat to the credibility and authority of the MSC's certification of free school tuna.

We examine this case by asking what happens if two labels regulating the same fishery, with differing perceived levels of credibility, make conflicting sustainability claims? We do this by analysing how the two programmes interact; do they work cooperatively, recognising they have different definitions of appropriate that may be usefully complementary, or do they compete? Finally, we reflect on what the wider implications inter-label interactions hold for the effectiveness of private, voluntary forms of environmental governance such as certification.

The research is based on a case study approach to gain an in-depth understanding of contemporary phenomenon within a real-life context (Yin, 2009). The case we have chosen is in many ways exceptional; the kind of interaction between the incumbent Dolphin Safe ecolabel in tuna fisheries, and the challenges it presents to the MSC certification in the PNA. But it does offer an example that challenges existing understandings of a specific phenomenon; in this case interactions between certification schemes analysed through a defined framework of credibility (outlined in the following two sections), and may therefore be considered a valid focus of research (Gibbert et al., 2008). Fieldwork consisted of document analysis and key informant interviews, conducted in person or via Skype/telephone, with 11 respondents, including the MSC actors engaged in the certification, EII, regional experts, industry representatives and NGOs. Additionally, observations were made during the 9th West and Central Pacific Fisheries Commission Meeting in December 2012 and the European Tuna Conference in 2011 and 2013 where many themes related to MSC certification of the PNA were discussed. The results are analysed on two levels. The paper first takes a broader look at the wider political economic relations of competition between ecolabels, focussing on the discursive and material flows in tuna GPNs. It then moves on to look at the finer scale to analyse the operational modes of Dolphin Safe and MSC ecolabels exploring the extent to which ecolabelling strategies can maintain label credibility.

2. Sustainability standards in global production networks

The broader relevance of examining the interaction of standards is best understood in the context of global production networks. Analysis at the network level helps in understanding how the activities of firms are affected by 'networked' international trade regulations and normative standards (Henderson et al., 2002, p. 5). It also extends to the activities of extra-firm networks, encompassing a wide range of non-firm actors like NGOs, government agencies, and international organisations. In taking these to be constituent parts of the overall production system, the GPN framework provides a means of identifying how firm and/or non-firm actors interact and sites of contestation and collaboration (Henderson et al., 2002; Coe et al., 2008). In the context of this research, the GPN framework provides a conceptual basis for examining the interaction between two different certification programmes, while also recognising that the regulatory practices of each are linked to a wider network of firm and non-firm actors.

Adopting a networked approach builds on other research that has investigated interactions between certification schemes. Although relatively sparse, one key focus of this literature has been whether competition between standards leads to a 'ratcheting up' of sustainability standards, or conversely a 'race-to-the-bottom' (e.g. Hatanaka et al., 2005; Cashore et al., 2007; Ponte et al., 2011). Some researchers have criticised certification and labelling programmes for working off progressively weak compliance criteria, thus lowering the bar and allowing companies to 'greenwash' their image (Raynolds et al., 2007). Others, such as Bitzer et al. (2008) have argued that the proliferation and resulting competition among coffee standards creates a danger of older, more stringent sustainability standards like Fair Trade and the organic coffee certification being supplanted by newer, less stringent ones. Offering a more positive perspective, Auld (2007) and Gulbrandsen (2010) both describe how new initiatives might complement existing programmes and therefore, help broaden the scope of issues addressed, as well as the inclusiveness of certification schemes. Overdevest (2005), for example, suggests that the co-existence Forest Stewardship Council and Sustainable Forestry Initiative schemes in the United States, has seen them "compete to be the 'high-road' scheme" (p. 9).

The explicit focus of this literature on the interaction between different certification programmes and the influence of external, firm and non-firm actors on network dynamics offers a useful complement to the GPN framework. As argued by Rosenau (2003), it is within these same networks that relational attributes of regulation, such as credibility and authority are constantly reproduced. Focusing on the relative positions of and relationships between different certification systems, we now define attributes for assessing credibility.

3. Credibility and authority

Standards require constant reaffirmation of their credibility in order to legitimise them and ultimately gain and maintain authority to govern the structure and function of production and consumption practices in GPNs. As a relational attribute, credibility is actively produced and reproduced, making it the core business of any certification scheme. The key practices for building credibility, drawn from a growing literature, include scientific rigour, inclusiveness, transparency/openness, impartiality/independence and impact (see Table 1) (e.g. Boström, 2006a; Eden, 2009; Bush et al., 2013). These practices can also be used as indicators for assessing credibility.

The scientific basis of defining principles, standards and assessment criteria is seen as fundamental to the credibility of

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Table 1
Summary of practices used to assess credibility of certification schemes.

Credibility practices	Description
Scientific rigour	• Incorporation of scientific knowledge into definition of principles and standards • Transparent and independent scientific process underlies standard creation and verification
Inclusiveness	• Incorporation of diverse interests in a formal structure of deliberation • Facilitation of critical engagement rather than defection of with expert and non-expert groups
Transparency/ openness	• Continual demonstration of capacity to practice the ideals that are embodied in their principles and standards • Degree of openness of decision making or adjudication (procedural transparency) • Accessibility of information needed to determine whether and how regulation is effective in meeting its goals (outcome transparency)
Impartiality/ independence	• Organisation of information and degree of transparency • Separation of the standards and those verifying standards
Impact	• Measurable impact based on compliance provides feed back on the salience and precision of standards • Organisational capacity certification system to both long-term strategic and short-term operational improvements

voluntary certification schemes. The incorporation of expert scientific knowledge in the definition of principles and standards create what Eden (2009) refers to as a 'credibility alliance' between science and certification systems; legitimating their content as well as the process through which they are created. Scientific knowledge is also used by certification systems when principles and standards are operationalized into verifiable indicators, and also as technical expertise in the verification or auditing process (Hatanaka and Busch, 2008). At each step credibility is built and backstopped by the wider scientific institutions of peer review, on which the knowledge about the issues being standardised is based, and the presumed independence of scientists and their organisations. As argued by Auld and Bull (2003), in the absence of science as an institutionalised part of the standards-setting process, 'technical advice' is seen as a vehicle for groups to "further their own normative perspective on what management practices are best" (p. 48).

The risk of over-subscribing scientific or expert input is equally a risk to the credibility of a certification system. The inclusion of non-scientific actors is also necessary so that controversy is met with critical engagement rather than defection, which in turn undermines whatever authority is conveyed by these schemes (Boström, 2006b). In practice inclusiveness is a deliberate strategy by certification systems seeking to incorporate the range of diverse interests in a formal structure of deliberation. And once a network is built, the certification system can secure credibility by advertising these formalised attempts to create consensus over the content and governance in the system (Eden, 2009). However, inclusiveness also has its risks, especially when creating an open process of innovation undermines a requisite level of *agreed* environmental stringency (Cashore et al., 2004). The consequence is that any changes in the content and procedures of a certification system, in order to respond to new problems or recognise the need for further improvement, can bring into question the credibility of the certification system.

Features like transparency/openness and impartiality/independence concern the internal governance of the labelling programme, and contribute to what Boström (2006a) refers to 'input' legitimacy. They enable the programme to continually demonstrate a capacity to practice the ideals that are embodied in their principles and standards. The degree of transparency a certification system adopts, and the more accountable it makes itself to external scrutiny, the more credibility and legitimacy they are presumed to command (Auld and Gulbrandsen, 2010). Two types of transparency are commonly recognised. 'Procedural' transparency, related to the openness of decision making or adjudication processes and 'outcome' transparency, concerning the accessibility of information needed to determine whether and how regulation is effective in meeting its goals (Fung et al., 2007; Vermeulen, 2007). Impartiality/independence is largely demonstrated by the organisation of information and how transparent it is, but also determined by the clear separation of the standards, conformity assessment bodies (auditors) and those being certified (Hatanaka et al., 2005; Mutersbaugh, 2005). Both tasks are particularly important for private actors if the issues are controversial and/or there is mistrust among the groups involved.

Credibility is also derived from evidence that the rhetorical goals set by certification standards are reflected by material changes in the process of production. Termed 'output legitimacy' by Boström (2006a), measurable impact as a result of compliance provides feedback on the salience and precision of the standards, as well as the credibility of those who defined them. Impact is also defined in more dynamic terms, such as the capacity of a certification system to foster 'continual improvement'. These may be either operational or day-to-day improvements, as well as long-term 'strategic' improvements to the production process, above a specified baseline (Ammenberg and Hjelm, 2002; Tlusty, 2012; Bush et al., 2013). For fisheries this may relate to stopping fish stock decline by moving fishing pressure from above to below maximum sustainable yield, or additional environmental gains related to ecosystem function. Credibility is then a function of how well a certification system fosters innovation towards meeting sustainability goals over the longer term.

While these indicators for assessing credibility bear considerable relevance to sustainability standards, certification systems also demonstrate authority when decision making or exclusionary power is exercised. Credibility is directly related but different to authority which implies a vertical relationship of compliance and subordination (Boström, 2006a). Once market demand has been created, 'vertical' authority can be exercised to leverage cooperation among network actors that continue to support a dominant claim around sustainability associated with an iconic image or principle in a global production network, through fear of market exclusion should they not do so (Hatanaka et al., 2005; Ponte et al., 2011). While we agree that authority is directly related to credibility, the potential for dominant network actors to use the threat of market exclusion can play a fundamental role in taking up a particular certification system and can override the relational, dynamic characteristic of credibility. A caveat here is that while some literature have focussed on how specific 'audiences' within networks perceive credibility and authority (Cashore, 2002), the attributes described here provide a broader overview for understanding credibility at the network level.

4. Credibility and the PNA tuna fishery certification

4.1. The Marine Stewardship Council

The certification of the free school, FAD-free purse seine fishery in the waters of the PNA is the first MSC certification of an industrial purse seine tuna fishery, described by one key actor involved in the certification as the "biggest assessment in MSC history". The certification was stimulated by a partnership between the PNA secretariat and the Netherlands-based company Sustunable BV, which led to the creation of the Pacifical brand. This actor explained their decision for choosing MSC over any other certification system

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was because it "is by far the highest standard and it's ecosystem based". Their open support reflects their perceived credibility of the MSC in what Ponte (2014) labels the wider 'market for sustainability certifications'.

The credibility of the MSC also comes through its governance structure and the scientific basis of its assessment. Its governance structure is comprised of a Board of Trustees, a Technical Advisory Board and Stakeholder Council, which facilitates top-down control while maintaining expertise on fishery management, marketing, processing and chain of custody (Gulbrandsen, 2009; Ponte, 2012). Third-party certification also lends both credibility and authority to the MSC with independent auditors in charge of assessing compliance of fisheries. In addition, the assessment process has an inbuilt objections procedure open to any parties involved in the fishery assessment process, and provides an opportunity for concerns about certification decisions to be formally lodged, reviewed and resolved by an independent adjudicator (MSC, 2012a).

The scientific credibility of the MSC is constituted of three levels: principles, criteria and performance indicators (see Ward, 2008; MSC, 2010). The three principles of the MSC cover the status of the stock, the environmental impact and the management of the fishery. Each of the principles is further broken down into 31 performance indicators, which represent the sustainability of a fishery under assessment and are therefore the fundamental determinants of credibility. Performance indicators are based on three 'scoring guideposts': an 'ideal' fishery would score 100; a 'best practice' fishery would score 80; and the conditional level of entry into the MSC certification procedure is 60. To become certified the weighted average of all performance indicators must achieve a score of 80 or more for each of the principles.

Under the PNA assessment, the free school tuna purse seine fishery gained scores in the 80s for each of the three principles of MSC. However, there was considerable opposition from a number of organisations, notably the International Sustainable Seafood Foundation (ISSF) – a global partnership among the tuna industry, scientists and WWF, the European tuna consortia Organizacion de Productores Asociados de Grandes Atuneros Congeladores (OPAGAC) and Comité européen interprofessionnel du Thon Tropical (EUROTON). Objections were raised on the grounds that the assessment contained serious procedural irregularities and errors along with arbitrary and unreasonable scoring (ISSF, 2010). This led to an objections hearing in 2011, the outcome of which upheld the certifying body's recommendation for certification. Through their system of performance indicators, the MSC has an inbuilt framework, which requires improvements that need to be made in order to maintain the certificate over subsequent reviews. As suggested by reviews conducted by MSC scientists (Agnew et al., 2006; Cambridge et al., 2011), meeting the conditions for certification has motivated the biggest operational changes in fisheries under assessment - measured in terms of institutional development, instances of new knowledge, and operational changes and also shows evidence of making environmental gains.

Following the outcome of the hearing, no further objections were raised. In fact, some even altered their positions, expressing their support for the certification, with the ISSF stating that the certification "demonstrates how stakeholder engagement in the MSC process can result in strengthened conditions that better ensure a fishery meets its sustainability objectives" (Jackson cited in ISSF, 2012). While it would be unlikely that ISSF would have continued to oppose this certification, their endorsement lends weight to the objections procedure, in part by allowing grievances to be publically aired and reviewed. Additionally, the use of an independent adjudicator further adds to the credibility of the certification, underscoring the objectivity and transparency of the procedure.

One aspect of credibility that the MSC has been deemed to fall short on is inclusiveness (Jacquet and Pauly, 2008; Ponte, 2012; Bush et al., 2013). The cost of certification in addition to the high demands placed on a fishery seeking to meet certification requirements has excluded many developing country fisheries from this process. This is reflected by the fact that developing country fisheries only account for seven per cent of their certifications to date (MSC, 2013). The case of the PNA tuna certification is therefore, a significant step as it represents not only the first major certification of a large, transboundary fishery, but one that is under the jurisdiction of developing countries. The access fees paid to PNA countries by fleets wishing to fish in their waters constitute an important source of revenue. For example, access fees make up between 20 and 50 per cent of the national income or GDP of the member countries Federated States of Micronesia, Kiribati, Marshall Islands, Nauru and Tuvalu (Deiye, 2007). Therefore, this certification could hold key financial rewards for the PNA countries.

When considering the PNA MSC certification from the perspective of its credibility, it appears that the MSC has established a credible case for the certification of skipjack tuna that is based on a fundamental shift away from the sustainability claims for industrial tuna fisheries embodied in the EII Dolphin Safe ecolabel. It would therefore stand to reason that in European and North American markets, demand would drive the trade of MSC-certified skipjack tuna. However, according to an industry actor, it has taken the first certified products almost two years to reach the market after the certificate was awarded. Following the certification of the fishery itself, the final requirement of the MSC before their tuna products can be traded under the MSC logo, is that the whole chain of custody must be certified, from boats to retailers. This is in place to ensure full traceability of fish caught in purse seine nets set on free schools of tuna and therefore, an assurance that the final product does not contain a mix of certified and non-certified tuna. Gaining the chain of custody certification requires only one company under the PNA certification to agree to put in place the systems that effectively separates MSC from non-MSC fish. This additional layer of certification further increases the credibility of the standard, by ensuring chain-level compliance with FAD-free fishing standards. However, it has posed a considerable challenge to the PNA and their Pacifical brand. Broadening the focus to the production network level indicates that conflicts have surfaced between the PNA MSC certification and the EII and are playing a significant role in the hold up of certified fish to reach the market.

4.2. Earth Island Institute Dolphin Safe

While remaining silent during the certification procedure for the Pacifical skipjack free-school fishery, the US-based NGO Earth Island Institute (EII) expressed their concerns that the MSC-certified tuna has not been certified Dolphin Safe. The EII Dolphin Safe label came about in the 1980s when attention was drawn to the practice of setting purse seine nets on dolphins, which, in the Eastern Tropical Pacific Ocean, are known to associate with tuna. In the 1970s and 1980s there were hundreds of thousands of dolphin deaths associated with this fishing practice (Hall and Boyer, 1986; Baird and Quastel, 2011). In response, the environmental NGO EII, launched negative publicity campaigns and create consumer momentum and a global awareness of their Dolphin Safe label. Although the dolphin controversy was rooted in the USA, the EII expanded their network to include environmental groups around the world. Further downstream, major retailers were also displaying logos ensuring tuna was 'dolphin safe' or 'dolphin friendly' (Brown, 2005). This meant the certification had gone beyond the canned tuna product to encompass the entire supply chain providing EII with a high degree of network power. To date, over

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450 companies are certified dolphin safe, which accounts for 90 per cent of the market and covers 65 nations (EII, 2007, 2011). Relative to the MSC, the Dolphin Safe label is therefore a highly inclusive standard for fisheries in both developed and developing countries.

The market dominance of the Dolphin Safe label indicates it has become institutionalised within the tuna production network. EII first made enormous consumer-based headway with their negative publicity campaigns in the 1980s and 1990s, about global industrial fishing practices, forcing the industry to engage with their Dolphin Safe labelling programme. This started when, in response to the negative publicity they were receiving, StarKist, Bumble Bee and Chicken of the Sea – the world's largest tuna canners at the time – pledged to stop sourcing tuna caught in association with dolphins and to put the Dolphin Safe label on their cans (Shabecoff, 1990). From an industry perspective, the ease with which they could replace dolphin unsafe tuna with dolphin safe tuna caught primarily in the Western Pacific and Indian Oceans, which together account for more than 30 per cent of total canned tuna on the world market, meant they were able to minimise costs associated with meeting EII standards. The result was that tuna production networks were transformed, or at least appeared to be, in accordance with the standard of Dolphin Safe as defined by EII (Baird and Quastel, 2011). This made the dolphin safe label a mainstream industry standard in tuna production networks, described by one industry representative as "settled law" and providing EII with enormous symbolic power.

When the dolphin issue was at its peak in the 1980s and 1990s, research on the dolphin-tuna interaction and the impact of tuna fisheries (Hall and Boyer, 1986; Hall, 1998) provided a credible basis from which the Dolphin Safe ecolabel was developed. However, with ecolabels like the MSC that assess fisheries based on environmental sustainability at the ecosystem-level, the necessity of the Dolphin Safe label has come under question. This, coupled with the lack of a coherent and consistent system of standards and criteria for what the assessment procedure is for gaining Dolphin Safe certification has undermined the overall credibility of this label (Ward, 2008). The process by which a tuna fisher, processor, or canner can become certified "Dolphin Safe" is also not entirely clear, raising questions about the transparency of the certification procedure. On their website, EII provides their Dolphin Safe tuna policy signed by each company, which defines that Dolphin Safe means: (1) no intentional chasing, netting or encirclement of dolphins during an entire tuna fishing trip; (2) no use of drift gill nets to catch tuna; (3) no accidental killing or serious injury to any dolphins during net sets; (4) no mixing of dolphin safe and dolphin-deadly tuna in individual boat wells (for accidental kill of dolphins), or in processing or storage facilities; and (5) each trip in the Eastern Tropical Pacific Ocean (ETP) by vessels 400 gross tons and above must have an independent observer on board to attest to compliance with the standards (EII, 2012a). Since their inception, these criteria have been updated and also include a ban on illegal, unreported and unregulated vessels and that companies "should not engage in shark finning" (EII, 2011, p.5). While providing a classification of what constitutes Dolphin Safe, no procedural information on the certification process itself is given.

Once a company has signed up to become Dolphin Safe certified it falls under the surveillance of EII's International Monitoring Program. This employs 12 staff members in seven countries around the world to "regularly inspect tuna in canneries, at dockside, and aboard fishing vessels in order to assure consumers that the tuna they buy is truly dolphin safe" (EII, 2012b). The details of what information is collected under this monitoring programme and the extent to which it covers a representative sample of the 300 companies which they currently certify remains unclear. Additionally, their credibility has been brought further into question with one environmental NGO stating that EII's main strategy for monitoring is through "self-reporting skippers". This was supported by EII who explained that certified companies are requested to produce monthly procurement reports and evidence to show a vessel has not been setting nets on dolphins. The lack of transparency under which certifications are made, mean it is difficult to see what certification itself entails, how decisions are made within the EII, and whether the facility for contesting a certification can be made. This in turn leads to questions of accountability to consumers as well as the tuna industry.

Because there is little reference to or continued monitoring of specific performance indicators, the Dolphin Safe certification also appears to engender limited innovation towards improvement within the fishery as a whole. In fact, it could be argued that in terms of sustainability, it is a victim of its own success. As the most widely recognised ecolabel in fisheries to date, many companies have adopted the Dolphin Safe standard as a sufficient indication of sustainability. For reasons unknown to scientists, the dolphin–yellowfin tuna association, exploited by purse seine fisheries, primarily occurs in the Eastern Tropical Pacific Ocean. It is therefore much less of an issue for companies sourcing tuna from other regions of the world (Hall, 1998; Constance and Bonanno, 1999). One industry certification expert stressed this stating "in the West and Central Pacific and Indian Oceans they just don't catch dolphins with tuna, it just doesn't happen, it's a non-issue". In addition to this, much of the world's canned tuna is skipjack tuna, which has shown to only rarely associate with dolphins (Hall, 1998; Fréon and Dagorn, 2000; Brown, 2005). Therefore, complying with the Dolphin Safe standard represents the lowest common denominator of sustainability and does not require a company to make any improvements to their practices to achieve certification. This creates what Mueller et al. (2009) term a 'legitimacy front' and requires no real changes in practice. While the expansion of the EII Dolphin Standard criteria to include a prohibition on shark finning and IUU fishing inclusion does reflect an adjustment of the over-arching environmental ambitions, the inclusion of these issues is a relatively *ad hoc* improvement to the Dolphin Safe label. According to more than one respondent from the industry, this is regarded as a strategic move to underline the ongoing relevance of EII rather than a clear strategy for promoting sustainable tuna fisheries.

4.3. Label authority

In spite of the limitations of the Dolphin Safe standard with regards to credibility and improvement towards sustainability goals, its inclusiveness and network power have allowed EII to become an ecolabelling authority within the tuna GPN. This can be seen in the role they have played in the MSC PNA certification. Following the assertions by the certifiers that under MSC Principal 2 the fishery has "negligible interaction with dolphins" (MSC, 2012c), Pacifical elected not to submit to EII's Dolphin Safe label in addition to MSC. This is a significant departure from practice in other tuna fisheries, which despite not engaging in purse seine fisheries have applied for both certifications. For example, the American Albacore Fishing Association have had both their north and south Pacific albacore tuna fisheries MSC certified but are still paying to retain their Dolphin Safe status as well. This, in spite of the fact that albacore rarely associate with dolphins and pole and line fisheries have no dolphin bycatch (Gilman, 2011). However, for EII to keep their Dolphin Safe label as the industry standard, they need to retain this authority despite the more credible claims made by the PNA MSC certification.

Following Pacifical's decision not to go for both certifications, EII issued a reminder to the tuna companies in their extensive network that Pacifical "is not part of Earth Island's Dolphin Safe program,

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and cooperating tuna companies should not consider products from Pacifical or its affiliates as Dolphin Safe" going on to say that "Under terms of the Dolphin Safe Policy, companies should purchase tuna products only from companies that are approved and monitored Dolphin Safe companies on the list" (EII, 2012c). This approach implies that blacklisting companies that affiliate with Pacifical and with 90% of the market covered by the Dolphin Safe label poses a serious threat to Pacifical getting their chain of custody certified. For the certification to be made, tuna that has been caught in compliance with the certification standard has to have passed through each stage of the supply chain. Therefore, until a processor and retailer signs up to buying and selling this tuna, it will remain uncertified.

One retailer that has experienced the negative campaigning style of EII and has been mentioned as a potential Pacifical tuna retailer is German supermarket EDEKA. In 2011, EDEKA were targeted for selling yellowfin tuna quoted to be 'dolphin deadly' by the German counterpart to EII, Gesellschaft zur Rettung der Delphine (GRD) (GRD, 2012). They were targeted on multiple levels through the German television and online campaigns and included celebrity endorsement, with Rick Barry, director of film The Cove, on dolphin slaughter, posting a video on YouTube and on the EII website condemning EDEKA and urging a consumer boycott (BuzzMedia Network, 2012). By adopting a mediagenic online campaign strategy, GRD was able to push the issue beyond German consumers. As a result, in 2012 this supermarket changed their buying policy to stop sourcing any yellowfin tuna to avoid further dolphin deadly claims. The symbolic power of the Dolphin Safe label, has afforded EII a position of authority within tuna networks, which appears in turn to have conferred legitimacy on their labelling programme, as industry and consumers continue to support it. With the threat of EII exposing Pacifical as dolphin deadly, there would be understandable reticence from companies like EDEKA, who have experienced the full impact of negative campaigning on the dolphin issue, to commit to buying Pacifical tuna. One industry specialist explained that this threat has contributed to putting up blockages to the chain of custody certification and demonstrates the influence EII has on a chain that they are not directly involved with. While EII stated that they are not "fighting against MSC" adding that it is feasible to gain both MSC certification and sign up to the Dolphin Safe, they have also come out questioning MSC credibility in relation to the Pacifical certification, stating that "MSC doesn't have a dolphin policy, they don't have standards for dolphin safe" (Palmer, cited in ABC Radio Australia, 2012). This negative publicity they are drawing to the MSC certification reflects their efforts to remain active within tuna the production network and retain their position of authority when faced with more 'credible' forms of certification.

For there to be a fundamental shift towards more robust labelling like MSC throughout the tuna GPN, EII would have to lose their position of authority. This would require wider network actors to move away from their current position of accepting the Dolphin Safe label as "settled law" and act on the questions that are being raised around credibility of the label. The reluctance of companies to reject Dolphin Safe stems from the threat of negative publicity, but also from a reluctance to change the status quo from which they benefit. The narrow framing of sustainability, and widespread redundancy of 'Dolphin Safe' in most part of the globe means that the cost of remaining 'ecolabelled' is minimal as companies do not have to alter their fishing practices in order to meet EII standards. In contrast, the broader, ecosystem-level requirements of the MSC certification has prompted innovation on the part of the PNA, to shift away from the common practice of FAD fishing and back to setting on free schools of tuna. However, the merits of the broader definition of sustainability under MSC are constrained by the reputational risk to companies not additionally supporting EII.

5. Discussion: the 'innovation stalemate'

The MSC certification of PNA's skipjack tuna stands as a landmark case, legitimising FAD-free fishing in an industrial tuna fishery. Clear differences in the credibility of the MSC and EII Dolphin safe standards can be observed when analysed in terms of inclusiveness, transparency/openness, scientific rigour, and impartiality/independence (see Table 2). The MSC is deemed credible because: (1) it has a transparent system of assessment and a well-defined internal governance structure; (2) promotes traceability of fishing operations through the chain of custody certification; and (3) certification is awarded based on rigorous scientific assessments from third party, independent auditors. While more broadly, the MSC remains problematic in terms of inclusiveness for developing world fisheries, the PNA certification has seen the inclusion of small island developing countries. In contrast, EII has demonstrated that their Dolphin Safe label is more inclusive, but is widely questioned for: (1) its weak scientific basis when applied outside the context of the Eastern Tropical Pacific Ocean; (2) the lack of transparency over and impartiality of the certification assessment and monitoring procedure; and (3) the transparency of EII's internal governance structure; and (4) for promoting limited innovation for broader sustainability practices. The MSC certification of FAD-free fisheries in the PNA could therefore pose a serious threat to the EII Dolphin Safe label, leading to rapid uptake of the MSC-labelled fish within the production network. However, this has not immediately eventuated and EII appears to maintain the greater level of authority within the tuna production network.

Analysing certification systems in terms of credibility alone, fails to draw out the importance that the authority of standard setters plays in promoting the uptake of different sustainability certification systems. The competition and discursive conflict among these standard setters, and the strategic ambitions of other actors in the tuna GPN, such as fishing and processing firms, indicates that authority is the dominant quality behind the application of environmental standards, and can be maintained independent of credibility. The implication is that while private or market-based forms of regulation such as certification draws upon the credibility of the content and organisation of their standards, they are ultimately granted authority by those with a vested interest in the supply chains they govern. Credibility does not therefore always translate into authority if there are fundamental conflicts with the

Table 2
Summarising the differences between MSC and EII Dolphin Safe.

Criteria	Marine Stewardship Council	EII Dolphin Safe
Scientific rigour	• Three level of analysis: principles, criteria and performance indicators	• Lack of coherent and consistent system of standards and criteria for assessment
Inclusiveness	• The high cost of certification and developing country fisheries only 7% of certified fisheries	• More than 450 companies certified Dolphin Safe
Transparency/ openness	• Certification methodology made public • Open public objections procedure • Chain of custody certification for product traceability	• Poor communication about assessment methodology • No opportunity for objection
Impartiality/ independence	• Third party certification with independent auditors	• 'Self-certifying skippers' monitoring conducted internally
Impact	• Promote innovation and improvement	• High market impact • Do not promote improvement or innovation

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interests of those being governed. As Kalfagianni and Pattberg (2013) argue, a certification system like the MSC may rank well on most credibility criteria, but can continue to struggle in mainstreaming their success in relevant markets. If a certification system is unable to appease the interests of a wide group of actors, and therefore gain a requisite level of market coverage, they remain vulnerable to existing dominant claims. Alternatively, standards can be deemed to have low credibility, but are able to retain a high degree of network power and control if they maintain sufficient authority.

In support of Boström (2006a), the case also highlights that credibility is both relational and dynamic. The organisation of the MSC certification procedure, with its public formal objections procedure continually seeks approval from a broad audience – including NGOs, academics, governments and consultants. However, while there is ongoing debate over the effectiveness of this procedure (Christian et al., 2013; Gutierrez and Agnew, 2013), it is dominated by actors with non-commercial interests. Credibility is therefore generated in a general sense, but does not necessarily help to extend authority of the MSC label over the industry as a whole. In contrast, EII's Dolphin Safe certification illustrates that authority can be maintained independently of credibility in production networks if the interests of commercial actors, ultimately those-to-be-governed, are of primary concern. This happens if a combination of the following occurs. First, those involved in the production network must maintain some benefit from being certified. Cited benefits for changing behaviour include improved market access or a price premium (Roheim et al., 2011). But as illustrated in this paper, benefits can also include extending narrow claims such as 'Dolphin Safe' to the overall sustainability of their fishing practices; allowing a continuation of existing practices rather than change towards sustainability. Second, there no inclusive alternative scheme that allows them to meet or maintain their commercial interests. As a result, commercial actors who have invested in the narrative and organisation of a label with poor credibility may still grant authority through their commercial strategy. Third, there may be a short-term incentive to cooperate with the label, and therefore reinforce the authority of schemes with weak credibility, outweighing the long-term benefits of defecting to an alternative label and therefore retracting authority.

The results also provide insights on how certification schemes operating within a defined GPN interact with each other, as well as the outcomes of that interaction. Previous observations of either a race-to-the-bottom, mutually cooperation, or ratcheting up associated with competing certification schemes do not appear to hold in this case. For instance, Bitzer et al.'s (2008) findings that newer coffee standards were less stringent but more pervasive than the original Fair Trade and organic standards does not hold in this case. The interaction between the MSC and EII has not seen a case of weakening a previously stringent standard to achieve greater market share. Instead, the market is already dominated by the weaker, less credible EII Dolphin Safe standard. It has also not been a complementary interaction, with EII benefiting from the new(er) MSC certification standards to broaden the scope of issues they address and lead to what Gulbrandsen (2010) calls "organizational homogeneity in the certification field" (p. 176). Finally, it has not led to a positive competitive environment, with both standards-setting bodies competing for the "high road" and fostering an improvement of standards (Cashore et al., 2007). Instead, this case illustrates a different interaction, whereby the less credible, yet incumbent certification system is resisting relinquishing their authority to a more credible 'competitor'. The outcome of this interaction is an active restriction on innovation towards more sustainable fishing practices in the wider tuna GPN, leading to what can labelled as an innovation stalemate. By retaining authority from a position of weak credibility, EII are in effect preventing firms from promoting non-'Dolphin Safe' sustainable certified tuna products in the market, and ultimately inhibiting any wider impact certification can have in tuna fisheries. Without a network-level change, that would see industry actors remove or substantially modify the scope of EII's authority, the impact of more credible labels that foster innovation such as the MSC may remain limited for tuna.

The limitations for overcoming the authority of EII stem in part from the position they hold within tuna GPNs as an environmental NGO, as well as Dolphin Safe certifier. As an NGO, EII has the capacity to lobby and campaign, while at the same time, promote their certification scheme. Whereas, the MSC is a standard setting body that regulates the wider global fisheries production network, it does not engage directly in advocacy. In the interests of maintaining their credibility the MSC has instead tended to focus indirectly on scientific channels, such as submitting papers and responses to peer-reviewed journals. When challenged by Dolphin Safe, MSC is faced with a credibility 'Catch-22': they maintain their credibility by keeping a distance from the debate, but continue to be undermined if they remain silent. In more direct terms, their remit is to promote sustainable fishing practice and ultimately encourage the certification of other tuna fisheries, but they are not in a position to advocate directly in response to the criticism received in the PNA beyond defending the robustness of their standard. They are therefore reliant on other actors within the tuna GPN invested in the promotion of sustainable practice – including NGOs, media and companies – to advocate on their behalf and thus put an end to the innovation stalemate.

Understanding this more nuanced role of authority, both with and without credibility, offers new insights into the wider dynamics that shape environmental regulation in GPNs. In the context of sustainability standards, this opens up an understanding of how, through differences in the extent to which actors hold authority and legitimacy, non-firm, non-chain actors can influence how these standards are accepted and taken up. Following Levy (2008) and others, the results also emphasise that GPNs are not simply arenas for market competition or chains of value-adding activities, but rather comprise complex political–economic systems in which competition and conflict amongst actors are playing a critical role in distributing authority and legitimacy. Literature on GPNs has covered the impacts of standards on network practices but this has been in the context of the implementation of social standards, for example labour standards and gender, where the focus has been on the role of women in production networks (Barrientos and Smith, 2007; Levy, 2008; Barrientos, 2012). To date, there has been a paucity of studies that have looked at sustainability standards in GPNs, let alone the interaction between them. Understanding the interaction between firm and/or non-firm actors engaged in production and consumption flows, provides a lens through which the interaction between standards might influence, both positively and negatively, innovation aiming at more sustainable practices. An interesting avenue for further exploration of sustainability standards in GPNs, would be to expand into wider analyses how watchdog NGOs, like Greenpeace that produce rankings of canned tuna, would compare the performance of certifications like the MSC and EII. This would provide another layer to our understanding of non-firm, NGO interactions and their impacts on GPNs.

Despite in many ways being an exceptional case, the MSC–EII interaction in the Western Pacific illustrates how the credibility of certification schemes is not only an internal process, nor a two-way competition, but rather dependent on actors throughout the whole tuna GPN. In this particular case, failure to reconcile the interaction between these two schemes has led to what we label an innovation stalemate. While the stalemate appears to be in the advantage of the EII Dolphin Safe label, the MSC face a difficult task in its

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resolution; they have to maintain the credibility of their standards, continue their independence, while at the same time remaining beholden to other actors in the tuna GPN to challenge the authority of the EII. Highlighting and resolving this stalemate places needed attention on how the governance of standards are a critical part of understanding, and ultimately measuring, the impact of private certification schemes. Understanding impact should therefore not only focus on the material improvement sustainability standards aim to achieve, but also how interactions and conflicts over the definition and implementation of standards hinders innovation towards sustainability.

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