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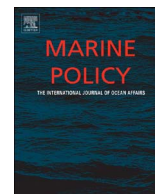
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The implementation of Marine Stewardship Council (MSC) certification in Russia: Achievements and considerations



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A B S T R A C T

The Marine Stewardship Council (MSC) certification program in Russia is now well established and, in addition to fishery clients and stakeholders, involves environmental NGOs and experts familiar with the local management system. The present study aims to analyze the current status of the program and constitutes the first study covering all Russian MSC certifications. Based on certification reports and twenty semi-structured interviews with stakeholders, it was shown that problems with certification vary among fisheries. The most advanced in terms of management are the Barents Sea codfish fisheries, which are co-managed by Russia and Norway. The main concern of these fisheries is the use of bottom trawls, which may seriously affect bottom communities. The Alaska pollock fishery in the Sea of Okhotsk experienced serious pressure from rival fisheries during the certification process. In the Far East, interviewees dealing with the salmon fisheries note a high level of illegal, unreported and unregulated (IUU) fishing and insufficient scientific data for comprehensive stock assessment. For small-scale inland perch fisheries from the central part of the country, recreational and illegal fishing are important problems that are difficult to quantify. Many interviewees repeatedly mentioned communication issues, difficulties with access to scientific and management information, and the overall complexity of the MSC certification process. The study shows that important preconditions to expanding certification are making the process manageable for export-oriented companies and developing a national market for sustainable seafood.

1. Introduction

Marine Stewardship Council (MSC) certification is a forerunner in the certification of sustainably harvested marine products. Based on third party assessments, the process awards the right to brand seafood products that meet certain ecological criteria with the MSC label. In many markets certification has become a requirement [1]. The independent Conformity Assessment Body (CAB) performing the assessments is responsible for the correct application of standards developed by the MSC. Three principles inform these standards: 1) sustainability of the target stock, that is, fisheries should not contribute to overfishing or severe depletion; 2) minimal environmental effects, that is, fisheries should function in ways that maintain the structure and function of aquatic ecosystems; 3) effective management, that is, adequate management response to social and environmental changes so as to successfully implement principles 1 and 2.¹

The MSC program currently certifies 312 fisheries from 30 countries, and 68 more are in assessment.² In total, this represents almost ten percent of the global harvest of wild capture fisheries. However, the MSC has increasingly been criticized for its focus on larger fisheries and fisheries in Europe and North America, while assessing relatively few small-scale fisheries or fisheries in the developing world [2,3].³ The lack of detailed empirical analyses of certification processes under a variety of social and political conditions has also been noted [4,5]. With civil society and expert structures that differ from those prevalent in North America and much of Europe, Russia falls in the under-represented category.

Analyses of the outcomes of voluntary ecological certifications are especially important for Russia because it is grounded in a political tradition different from those in most Western countries [6]. So far, there exist two studies of MSC certification in Russia [3,7], primarily addressing the situation in the Russian North, and to a much lesser

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¹ MSC Structures: The Marine Stewardship Council Structure and Governance, 2000. [web.archive.org/web/19990125101405/ http://www.msc.org](http://web.archive.org/web/19990125101405/http://www.msc.org).

² The MSC website, [msc.org](http://www.msc.org), was last accessed on July 13, 2017.

³ Now the MSC has a program for increasing the participation of fisheries in the developing world: <https://www.msc.org/about-us/credibility/working-with-developing-countries/about-the-developing-world-programme/?searchterm=developing%20world>.

extent that in the Far East. In contrast, this research considers all Russian certifications, covering fisheries in the Barents Sea, the Russian Far Eastern Seas, and inland waters. As of July 2017, a total of eighteen fisheries in the program operate in Russian waters (Appendix 1). The aim of this study is to document and analyze the achievements and considerations of the MSC certification process in Russia by examining, for the first time, the wide diversity in certifications of both marine and inland fisheries in all parts of the country. Results show that, after ten years of operation in Russia, the MSC program has become well established in the country, although the situation varies quite a lot from fishery to fishery depending on type and region. Yet, problems related to language and fisheries culture in Russia, which differ from those in the West, and difficulties accessing scientific and management information that limit certification. In the short-term, further progress in the program may be facilitated by open discussions among export-oriented companies of their perspectives and experiences with certification, and in the long-term, by the creation of an internal market for certified seafood.

2. MSC certifications in Russia

Among the eighteen Russian fisheries in the MSC certification program in July 2017 (see Appendix 1), ten hold active certificates, four are undergoing full assessment and four fisheries left the certification process. Based on target species, fishing technique and location, certified Russian fisheries can be subdivided into four groups: 1) trap net Pacific salmon fisheries; 2) bottom trawl cod, haddock and saithe fisheries; 3) the pelagic trawl fishery for Alaska pollock; and 4) the inland perch fishery. These groups are described below.

The first Russian fishery to receive MSC certification was the Iturup Island pink and chum salmon fishery in 2009.⁴ Two more Pacific salmon fisheries were certified in 2012: the northeast Sakhalin Island trap net pink salmon fishery and the Ozernaya River sockeye salmon fishery. The total capacity of certified Pacific salmon fisheries is about 60,000 mt, about one-fifth of the total salmon catch in Russia (2014). Most of the salmon are caught with trap nets as they approach their spawning rivers, although a small portion are caught by beach seines within the rivers. These fishing methods are very selective for salmon and by-catch of non-target species is low. Ease of catch and high market value encourage illegal fishing and make it difficult to control. The MSC prohibits hatchery-raised salmon from interfering with natural production, which causes problems with certification in Sakhalin Island and the Kuril Islands.

Russian codfish fisheries in the Barents and Norwegian seas received certificates from 2010 to 2016. They target northeast Arctic populations of Atlantic cod, haddock and saithe in Russian and Norwegian waters. In this area, about 90% of the codfish is MSC certified [3]. Because codfish stocks in the Barents and Norwegian seas are trans-boundary, they are managed by the Joint Norwegian Russian Fisheries Commission, which has set high standards for fishery-related research and management [8–10]. Bottom trawls, the main fishing method in these fisheries, involves active fishing gear designed and rigged to contact the bottom during fishing. Trawls can cause serious damage to bottom communities, and catches of non-target species are comparatively large. One important problem is the absence of measures, yet to be designed, to protect vulnerable habitats or species. For example, juveniles of commercially important fish and crab species are taken in the Russian zone.

The biggest fishery in Russia is for Alaska pollock in the Sea of Okhotsk. The Association of Pollock Catchers obtained MSC certification in 2013. With a total catch of 840,000 mt, the fishery provides more than half of the total Alaska pollock catch in Russia. This fishery

deploys mid-water trawls, active fishing gear that are more selective and less ecologically destructive than bottom trawls because they don't contact the bottom all the time. At the same time, by-catch of under-sized immature fish is rather high in some cases and can exceed established limits. Pelagic trawls may also unintentionally catch vulnerable species.

In addition to marine fisheries, two inland European perch fisheries obtained certifications in 2016. These are small-scale fisheries of a few hundred metric tons located in reservoirs in the southern Ural region and East Siberia in central Russia. Perch are caught using gillnets and traps. The main problems during certification were associated with lack of information on stock status and non-commercial removals due to recreational and illegal, unreported and unregulated (IUU) fishing.

3. Methodology

3.1. Material and methods

The main sources of information were twenty semi-structured interviews and the MSC's Public Certification Reports (Appendix 1). The semi-structured interview method is ideal for studies focused on a strategic selection of interviewees. It lets the interviewees describe and identify the most important information in their own words. Thus, it is oriented toward eliciting a deep understanding of the facts in question [11]. The interview guide focused on four main topics: 1) Company background: the structure of the certified company, its size and its connections to other companies; 2) Certification process: the main problems and management decisions arising during the certification process; 3) Interaction with stakeholders: how stakeholders were involved in, and influenced the certification process; and 4) Fishery sustainability: how certification of the fishery may influence its sustainability. The interview guide was adjusted for each category of participant based on their experience and knowledge of the process. In addition to the interviews and reports, we drew from the experience of one author (D.L.), who participated in certifications during 2007–2017.

Interviewees were selected from five different groups of stakeholders: fisheries and fishery associations, scientific experts in fishery research institutions, environmental non-governmental organizations (eNGOs), governmental agencies, and CABs (Table 1). To ensure maximal representation, individuals with broad knowledge of conditions and situations were approached. Eight fisheries client representatives out of the nine certified fisheries were interviewed during the field period (one opted out from participation due to time constraints). All eNGOs actively participating in certification took part in the study: the World Wildlife Fund (WWF), including regional organizations in Murmansk and Kamchatka; the Wild Salmon Center (WSC)/Ocean Outcome (O2); the MSC; the Sakhalin Environmental Watch; and the Sakhalin Salmon Initiative. One government representative (who had also worked in an eNGO during certification) and two representatives from the CABs were interviewed. A co-author of this paper (D.L.) served on the certification of three fisheries as an assessment team member (responsible for analyzing fishery management - Principle 3). He also provided technical support to three fisheries during certification, collaborating with all the eNGOs involved in the project. His experiences helped gain access to interviewees.

The interviews took place in Moscow, Saint Petersburg, Murmansk, Petropavlovsk-Kamchatsky, Yuzhno-Sakhalinsk and Washington D.C. between March 2015 and August 2016. They lasted from 45 min to 2 h, and were conducted in Russian ($n = 17$) and in English ($n = 3$). All were fully transcribed. Transcript lengths typically ranged from 6000 to 12,000 words. Responses were coded using Atlas.ti (version 5.0) qualitative data analysis software [11–13]. Coding focused on the different themes discussed by participants in the interviews, e.g. how their organizations implemented long-term policies, and how problems arising in the process of certification could be solved. The categories in our coding scheme were grouped according to the factors summarized in

⁴ Information on all completed assessments, including full reports, is available on the MSC web site. <https://fisheries.msc.org/en/fisheries/>.

Table 1
List of interviewees.

Type of organization	Acronym
Fishery Client	FC1 – FC8
Scientific experts in fishery research institutions	FR11 and FR12
eNGO	NGO1-NGO7
Governmental agency	GA1
CAB	CAB1 and CAB2

the Analytical framework section. Interviewees reviewed the text in the final draft of the manuscript.

3.2. Analytical framework

The analyses were structured after those in previous MSC certification studies. In total, six key groups of factors influencing a company's decision to enter the certification program were identified.

- 1) Market characteristics. Certification is more attractive to companies oriented to international markets, where eco-labeled products are more in demand than in domestic markets [14,15].
- 2) Civil society characteristics. Strong societal concerns for sustainability are usually associated with the presence of advocacy groups that use adverse campaigns and negative publicity targeting unsustainable practices to pressure fisheries to enter the certification program [14].
- 3) Regulatory and management characteristics. Well-regulated fisheries – supported with scientific information, co-managed by governments, scientists and fishers, reflecting high levels of both fisheries participation in the management system, and rule enforcement – are usually the first to enter certification [2,16].
- 4) Target species. Distribution of commercial stock within national boundaries, with limited access of other nations, usually facilitates certification [3,16].
- 5) Level of integration of fishing companies. Vertical integration and strong fisheries industry associations facilitate sharing the cost of certification among participating companies [14].
- 6) Company characteristics. Described by interviewees in the greatest detail and considered more often than the other categories, large consolidated companies with good informational support may be more likely to support third party certification. Large size facilitates certification due to reduced transaction costs associated with economies of scale [14,17,18], and their visibility and public presence expose them to more pressure from advocacy groups [14,19,20]. Companies that were highly selective of their target species were also more successful at certification [1].

Later, this framework focused on common constraints and enablers was used to examine how different factors influence the introduction and establishment of marine certification in Russia.

4. Results: Factors supporting and discouraging the certification process in Russia

All the factors that were seen to influence certification in the literature analysis were relevant to MSC certification in Russia, and are discussed below in Sections 4.1–4.6. One additional factor that was often mentioned in the interviews, but not directly addressed in the literature, is described separately in Section 4.7.

4.1. Market characteristics

All certified fisheries are export-oriented. Fisheries entered the certification process for two main reasons: first, for direct commercial

benefit, and second, to improve their reputations. Seven of the nine studied fisheries already exported their products before certification, and were being pushed by their buyers to enter the process. Eight of the nine fisheries indicated that having an MSC certificate is not merely a competitive advantage, but a must in foreign markets.

For instance, FC7 stated that one cannot get into French markets without MSC certification. Furthermore, the price difference between certified and non-certified products is about 15–20%. This alone motivates fisheries to obtain certification. In addition, retailers ask first for certified fish. Only when amount of certified product is insufficient, they are ready to buy non-certified fish. Conversely, NGO6 believed that Russian markets are not interested in certification at all. The respondent's organization had communicated with large distributors like Metro or Auchan in Russia, which had expressed their interest in certified fish, but these are not Russian companies. According to NGO8, not all fisheries in Russia even know what MSC certification is. Therefore, consumers are simply not ready for certified fisheries products. FC6 agreed with the above interviewees, reporting that there is virtually no demand for eco-labels in Russian markets, not only MSC labels, but eco-labels in general. Only price and quality matter to customers, although some large retailers such as Metro are attempting to sell labeled products. This means that the Russian market for sustainable seafood is underdeveloped.

A majority (thirteen out of the twenty interviewees) mentioned that improving a company's reputation by showing aspirations regarding sustainability was an important reason for entering the certification process. For instance, according to FC1, a company that notices the growing market demand for eco-friendly products is concerned about its future and the future of the resource, fish in this case. Similarly, FC6 noted that having the 'right' ecological image is absolutely necessary for international trade.

Therefore, most interviewees representing all fisheries agreed that direct or indirect market demands represent a very important motivation to enter certification. As a market for sustainable seafood is nearly absent in Russia, all certified fisheries engage with international markets.

4.2. Civil society characteristics

The role of advocacy groups, which in the West may incite consumers to boycott non-certified products, damaging a supplier's reputation, is different in Russia. Most (fifteen of twenty) interviewees talked about the support provided by eNGOs such as WWF, Wild Salmon Center and O2 during their certification process, rather than their critiques. eNGOs implemented projects to promote certification or provided information about the process. In the Far Eastern fisheries, where the availability of information was the most difficult problem to solve, fisheries participants considered support from eNGOs to be very important. Only in one case did the relationship between a fishery and an eNGO appear to be negative.

In salmon fisheries in the Far East, certification was initiated by an eNGO, which funded its early stages. This was true for Kamchatka and Khabarovsk Kray (Tugur River). Since 1990s eNGOs, WWF and WSC, received funding within the framework of the Wild Salmon Ecosystem Initiative of the Gordon and Betty Moore Foundation for protecting Pacific salmon populations. The funding was partly used to start the process of MSC certification, which was eventually successful in the 2010s.⁵

Earlier certification efforts started in 2008, however, when four salmon fisheries in Kamchatka and Khabarovsk Province performed pre-assessments under the initiative of WWF-Russia. The Kamchatka fisheries did not continue with the program, partly because of state

⁵ <https://www.moore.org/article-detail?newsUrlName=russian-salmon-and-the-growing-sustainable-seafood-market>.

reform in fisheries management that year. The Khabarovsk Province fishery on the Tugur River continued its involvement in the sustainable fisheries program,⁶ but did not formally enter MSC assessment. According to NGO6, at that time it was not easy to find interested fisheries. Many of them were skeptical about the process. A similar situation occurred on Sakhalin Island under the initiative of the Wild Salmon Center/O2, which received funding from other sources.

Regarding current relationships between fisheries and eNGOs, FC6 reported that in the Barents Sea region, for instance, they actively communicate with WWF and continue to do so. This communication started from a misunderstanding, but now they communicate often and positively via several joint projects, collaborating on modernizing fishing gear and marketing eco-labeled products. Another fishery operating in the Far East, represented by FC8, worked closely with the WSC. WSC helped this fishery a great deal with compliance and communication with the MSC. WSC also worked with another fishery represented by FC7. In that case, WSC initiated certification and recommended a certifier. Later, WSC provided considerable help to that company by organizing a seminar to discuss methods of monitoring spawning escapement. Similarly, FC1 also mentioned positive communication with eNGOs, indicating that NGO representatives are very motivated to help during the certification process. The eNGO did not criticize the company because MSC is new to Russia and not everyone understands what it is.

In contrast, WWF actively criticized the certification results of the Alaska pollock fishery in the Sea of Okhotsk by submitting an official objection. WWF required an increase in the level of observance on fishing vessels. Finally, the parties found a compromise and the fishery was certified. No eNGO has expressed interest in certifying inland fisheries.

In summary, eNGOs were positive and helpful in most cases, promoting the development of certified fisheries in Russia. Yet for a time, one eNGO (WWF) opposed the certification of Russia's largest fishery of Alaska pollock.

4.3. Regulatory and management characteristics

This section addresses the level of fishing companies' participation in management, cooperation with governmental agencies, and access to scientific data.

With regard to current *participation*, most (eighteen out of twenty) interviewees considered cooperation between the fisheries and governmental organizations and research institutions to be weak during the certification process. This included representatives from both the fisheries and the government agencies. The fisheries and eNGOs believed that Russian fisheries research institutes are narrowly focused on their own tasks, and do not get involved in the certification process. All fisheries noted that governmental structures are neutral to certification: they neither provide support nor put up any obstacles. However, six interviewees mentioned a negative attitude among government participants, who may consider certification as an attempt to put pressure on the existing system of fishery management, or as an obstacle to the development of internal markets.

One researcher representing the Barents Sea region, FRI2, recalled that certification appeared to be a useful idea in the beginning. But after a while, his institute understood it as an attempt to introduce different approaches to the system of management, reducing catches and making management more precautionary. The institute did not agree with the recommended changes because the state's goal is to protect fishermen's interests. At the same time, the interviewee recognized that certification improves organization in the entire management system, from scientific research to decision-making.

⁶ http://fisheryimprovementprojects.org/wp-content/uploads/Tugur-River-Salmon-FIP-Action-Plan_June_2010.pdf.

Similarly, NGO6 reported little interaction between fisheries science and fishing companies in Kamchatka. Theoretically, fisheries research institutions should conduct research that addresses the needs of fishermen, but in fact science does research for itself. Nevertheless, while the government does not support certification, it does not prevent it either. The eNGO represented by the respondent conceived an idea to certify all Kamchatka salmon fisheries, which are key to Russian salmon production. However, they rejected the idea, because the fisheries would never receive government support, and without government support such large-scale certification would be impossible. Neither did FC8 from the Far East observe any support or obstacle from governmental structures. They simply do not accept the idea of certification. In some cases, however, FC8 felt arrogance on the part of the authorities dealing with salmon fisheries.

All companies noted that they are limited in their *input into management*, although the degree of limitation is different. Larger companies have good contacts with authorities on the federal level, frequently visiting the Federal Agency of Fisheries in Moscow, and therefore may have better opportunities to participate in fisheries management at the highest level. Small companies have only limited regional contacts and no influence over federal authorities.

FC3 imaginatively expressed this as follows: "Today only Gazprom can get access to the governor, or I don't know who else does..."

Enforcement of regulations is a very important issue in Russia, where IUU fishing is still quite common. Interviewees from the Barents Sea region (FC4, FC5, FC6, SE1, NGO3) considered the surveillance system of fisheries in the Barents Sea, where joint management of resources is performed by Norway and Russia, to be more developed than in the Far East. This is because the Russian management system harmonizes with the Norwegian system. Some fisheries representatives said that this was important in facilitating the certification process.

According to FC4, management systems are very different in the Barents Sea and in the Far East Seas. In the Barents Sea, violation can result in confiscation of the boat and arrest of the crew, which is not the case in the Far East.⁷ SE1 added that the monitoring system in the Barents Sea is one of the best, and has existed since the Soviet era. Any enterprise or boat must report many details about its fishing activities on a daily basis – where they fished, who fished, how long they fished, what they caught, etc.⁸ It is clear that the system has developed and changed with new realities, but it was generally maintained. When Russian fisheries began collaborating with Norway, the Norwegians found that the Russian system was more comprehensive, and partially adopted it.

Existence and *availability of relevant scientific data* was one of the key issues that repeatedly appeared during the certification process. Difficulty with access to scientific information, which is crucial to certification, was mentioned by most of the interviewees (eighteen out of twenty interviewed, all except the scientific experts). Interviewees more often explained this in terms of bureaucratic difficulties, rather than the actual absence of data. Six of twenty participants reported problems with obtaining information from supervisory authorities.

For instance, FC2 believed that information is mostly open in the West. This is not the case in Russia. Fisheries management organizations are not supposed to disseminate such information. They have never had a role in informing people, in making information open and available. In this tradition, all discussions take place inside the management system. Today, public involvement is possible. But if anyone can participate as a stakeholder abroad, in Russia only public organizations that are interested in the process become involved. A CAB

⁷ The rules of enforcement of the harvest of aquatic biological resources are same throughout the Russian Federation, yet in the case of the Barents Sea, where fishing occurs in both Russian and Norwegian waters, differences in the rules may occur.

⁸ According to the fishing rules, information provided by commercial fishing vessels is the same for all ocean basins. These rules are implemented everywhere in the same way, including the Far Eastern seas.

representative, CAB2, agreed that there are differences between Russian and Western fisheries management systems. One is in their approach to data transparency.

Yet in terms of the availability of scientific information, there was no consensus among interviewees regarding the scale of the problem. FRI1 considered the lack of availability to result from fishing companies' misunderstanding of requests made by auditors. Such requests are often made without a detailed description of the necessary information, although the requested data can usually be obtained free from open sources. In addition, public hearings are obligatory in the Russian Federation as a part of fisheries management. Scientific recommendations on stock assessment, the ecosystem effects of fishing, or technical measures are published and widely discussed among fishers and stakeholders. The same can be said about the availability of information on fishing rule violations. Enforcement agencies hold special meetings, open to the public, for fishers, scientific and social organizations and mass media, where they report and discuss the current situation. Moreover, on at least a biannual basis, special meetings of managers, fishers, scientific and public organizations and enforcement agencies are organized to discuss fishery-related problems. However, the experience of one of the co-authors suggests that MSC certification usually requires much more information than is freely available from open sources.

Most interviewees (e.g. FC8, FRI2, NGO2, NGO7, GA1) saw MSC certification as a comprehensive audit of fishery management from the local to the federal level. Closely related to problems of transparency in particular, it provides public access to scientific and management data. For NGO7, “[t]he best thing about MSC for me is transparency, so there is a lot of focus on providing information publically, and you know, in Russia fisheries resources are considered to be a sort of strategic resource. And hence normally information has tended to be closed.”

Summing up, most fisheries and eNGO representatives noted insufficient involvement of governmental agencies in certification, which sometimes slows down the process. In many certifications, lack of access to scientific information can cause serious problems, although these can be partly solved by contracting researchers to prepare special reports. The problem seems to be more significant for Far Eastern and inland fisheries, than for Barents Sea fisheries where researchers have more experience with MSC certification.

4.4. Target species characteristics

Fish stock characteristics may be particularly important to certification processes dealing with trans-boundary stocks, where the distribution of commercial species covers the jurisdictional territories of more than one country. Effective management requires close collaboration between neighboring countries. The co-management of cod-fish fisheries in the Barents Sea, implemented jointly by Norway and Russia, was considered a positive factor in successful certification, according to obtained materials. This is because co-management is implemented effectively and follows Western standards. Introduced in 1976, the Joint Norwegian-Russian Fisheries Commission introduced a quota on cod and harmonized fishing rules [20]. FC6 believed that the co-management of Norway and Russia simplified the process of certification for local fisheries. Although some Russian elements were not in accord with certification standards, it was possible to harmonize them with the Western system and therefore with MSC standards. Likely, the respondent meant regulating operations with by-catch.

All other certified Russian fisheries are managed nationally (although salmon are subject to international management during the marine phase of their life cycle and are protected from fishing outside Exclusive Economic Zones). This provides both advantages and disadvantages for the certification process. Disadvantages are Russian fisheries management traditions that differ notably from those in the West, on which MSC standards are built. For instance, in Russia less attention has traditionally been paid to the ecosystem effects of

fisheries and to public involvement in management. These conditions are addressed repeatedly in almost all certifications. But obvious advantages accrue because national management does not require continuous negotiations with foreign partners. All elements are integrated in one management system.

Analyses of interviews illustrated that where fishing occurs – offshore, inshore or inland – is an important factor influencing certification. This factor was not mentioned in the literature. As this is defined by the biology of a target species, it is considered in this section. Location of target species determines the level of public access to the resource. Salmon and perch, in coastal and inland waters, are easily accessible to local people using simple fishing gear, whereas the offshore cod and Alaska pollock fisheries require large vessels equipped with sophisticated apparatus. Certainly, codfish and pollock can be fished inshore with simpler gear, but “shore” catch is insignificant compared with commercial landings. In contrast, the amount of perch and salmon caught by local people (either legally or illegally) can be comparable to commercial landings. Easy local access to fish resources makes organizing effective regulatory enforcement more difficult than on the high seas, since at present regulations oblige fishing vessels to use a vessel monitoring system (VMS). As a result, companies targeting salmon and perch in coastal and inland waters often actively cooperate in enforcement activities with state fish inspectors and police.

FC8 considered such activities critical for sustainability, given the large scale of illegal fishing at present. Such cooperation should be a necessary component for the successful certification of salmon fisheries in Russia. All companies participating in salmon fishery certification undertake considerable efforts to protect salmon populations. This is reflected in the interviews and certification reports. One Sakhalin Island company's anti-poaching efforts are described as follows: “... in 2001 when the Plavnik Fishing Company assumed control of a fishery in the Smirnykh District, 32 people were required for protection patrols on the Langeri River. With the effectiveness of this effort, only 12 people were required by 2007. Jobs are offered to former poachers to bring them out of that life style”.⁹

It is important to understand that, in inland fisheries, an entire stock may be controlled by one client. This makes certification easier. FC3, representing one of two companies fishing in a reservoir, noted that the most important question related to their certification concerned management on the reservoir. Some years ago, the reservoir supported fifty harvesters. It was impossible to coordinate resource use. After the management system in Russia was reformed, redistribution of fishing rights resulted in two remaining users. Yet it took four additional years to convince the second user to collaborate. Only after the company completely controlled the situation did they enter the certification process.

4.5. Fisheries sector characteristics

This factor refers to the structure of the fisheries sector, i.e., whether it is characterized by separate fisheries or fisheries organized through professional associations. Fishermen point out that industry associations often strengthen voting rights at the state level. For some companies, association provides an opportunity to share certification costs and a solution to managing the certification processes.

Some interviews confirm this. For instance, NGO3 believed that it is easier to get certified if a company belongs to an association, because an association agent communicates with the certifier, makes decisions and then informs the member fisheries. Moreover, individual companies only contribute some of the funds. FC2 emphasized that the Russian management system prefers collaborating with an association

⁹ Public Certification Report NE Sakhalin Island Pink Salmon Fishery Nogliki & Smirnykh Districts. MRAG Americas 12 June 2012. https://fisheries.msc.org/en/fisheries/northeast-sakhalin-island-pink-salmon-trap-net/@assessments_p_41.

to working with a single fishery. In contrast, NGO5 noted that the power of associations to participate in management is quite limited. It is lobbying, not partnership. Lobbying is also difficult because the Russian Federation's Federal Antimonopoly Service controls the activities of associations to avoid market monopolization. The risk from monopolies is now minimal, however. Currently, specialized associations only lobby for changes in fishing rules, or increase in anti-poaching activities. Decisions are made by the state alone, and some decisions simply ignore the opinions of fisheries associations.

4.6. Company characteristics

Company characteristics may differ in a number of ways. Below we describe the association between certification success and the following characteristics, which emerged inductively from the interview data: the company level of vertical integration, its size (which determines the relative cost of certification), selectivity of target species, and level of participation in enforcement.

All interviewees agree that the *level of vertical integration* is an important factor in effecting the profitability of certification for a company. This integration means not only a well-organized management based on effective communication across different layers of the organization. It also means combining fishing, processing (including value-added processing) and trading in one company, which becomes completely independent of processors. For instance, NGO7 reported that a company that considers certification to be a good investment knows how to sell its product abroad. It is well organized and vertically integrated. FC8 was sure that companies that add value to their products via processing have market advantages. In this case eco-labeling is more profitable than for more specialized companies. The respondent added that fisheries that own processing facilities are easier to certify. There are fewer problems with chain of custody certification, and certification brings higher economic benefit.

Another important characteristic is company *size*. Yet, no clear correlation between company size and certification success was observed in the data. Both large and small companies successfully became certified. The size of a company may influence certification in different ways, however. It is more difficult for small-scale fisheries exert influence at the governmental level, to get information from research institutions, and to pay certification fees. As certification fees do not directly depend on a fishery's scale, relative certification costs are higher for small companies.

According to FC6, certification costs are reasonable for a large company. The interviewee added that cost can be an issue for a smaller fishery with a total catch of 3–5 thousand mt. This is true not only for oceanic fish, but for salmon and freshwater fish as well. FC2, representing a large association, considered certification cost to be a definite problem for some fisheries. It is not the expense of certification itself, but rather various overhead costs plus the cost of preparing for certification. Respondents believed this to be a problem for small-scale fisheries, such as salmon fisheries. One participant knew a Kamchatka fishery that refused certification because of the costs. FC8, representing a salmon fishery in the Far East, agreed that cost is sometimes the main obstacle. That fishery withdrew from certification because of the costs.

FC5, representing a large client in the Barents Sea, presented the opposite opinion. There, money is not the main problem. Excessive certification bureaucracy constitutes a bigger challenge. For business, exporting your product is more important than the money spent on certification. To NGO7, one problem is that fisheries consider certification too costly and simply do not like it when money flows into someone else's pocket. But the cost is reasonable. It's just a very tough and expensive standard.

Two certified fisheries, both in the Sakhalin region, left the program with no plans to re-enter. The first withdrew before completing certification because of the critical decrease in pink salmon catch in southern Sakhalin after 2010 (FC7, NGO2). The second withdrew after

the certification process had been completed. This was due to the lack of commercial benefits from certification in a place where processing facilities and foreign buyer networks were absent. This certification was complicated because the client had not understood the effect of high continuing costs, implied by the certifier, and because of the absence of independent processing companies, which is economically important for small-scale fisheries. In this case, FC8 did not understand why an auditor wanted to come after the fishing season closed, at the cost of 15,000 USD. He thought, there is nothing to see at a fishing location when the fishery is closed. Documents can be sent much cheaper via electronic mail. Certification fees would be easier to afford if the company had its own processing facility, adding more revenue per kilo of fish. Other interviewees reported that during the long process of certification (usually lasting more than a year) clients lost interest in it (NGO7, GA1, FC7). NGO8 recalled that, when they started certification, they had to tag the enhanced pink salmon. This was a long, expensive process, requiring contracting with a research institute. After learning that obtaining the tagging results would take five years, the fishery lost interest in certification.

Therefore, for a number of fisheries, direct or deferred costs were a crucial factor in determining the success of certification, although without clear correlation to the size of company.

Selectivity of target species relates to the number of species a company targets. According to Kvalvik and co-authors [14], focusing on one species facilitates the certification process. However in this case, the Barents Sea fisheries encompass several groundfish populations and certification went smoothly, whereas companies targeting one species, such as Alaska pollock, experienced more difficulties. Thus, we have no evidence suggesting that the number of target species has any effect on the certification process, although this may be due to insufficient sample size in this study.

4.7. Communication issues

Almost half (nine out of twenty) of respondents reported communication problems with non-Russians in assessment teams. To some extent, they are caused by the additional time required for translating documents during remote phases of the certification process. However, problems become much more serious during oral communication and site visits as it reduces effectiveness of the face-to-face communication so important for the process.

For instance, FC4 noted that Russian assessment team members are easier to communicate with, not only because there is no language barrier, but because of similar mentality. FC4 said that Russians understand humor in the same way, and foreigners understand it differently. Thus it was easier for fisheries clients to explain to Russian experts what is needed and why. FC2 also mentioned problems of communication and felt that it was the most important problem associated with certification.

In some cases, assessment team members may not be sufficiently prepared for site visits. They may lack familiarity with local fisheries and practices. FC5 recalled communications with auditors in which the client company received a million questions. For example, the certifier asked them to prove that they did not bring up large amounts of corals in their trawls. When the participant passed this question to the captain, he answered: "Are you really crazy? If I got corals in my trawl, I'd destroy the trawl and I wouldn't be able to sell the fish because they would be seriously damaged." In another example, FC5 mentioned an occasion when auditors ask how fishermen distinguish cod from haddock in practice. Fishermen were really baffled by such questions and replied that they define them externally. When certification team members visited the fishing vessels, they were surprised that they were so modern. For some reason, they thought that the company fished from crates instead of ships. The interviewee believed it might be more effective to start the certification process with a site visit.

The same interviewee said that once, after some time had passed

during the certification process, the ship owners asked: “What is happening here? For a year and a half, certifiers have been asking us questions that are absolutely senseless because the answers are obvious. We have to pay for this and spend lots of resources, and now they say that our fishery is not certifiable because we use bottom trawls [which was known from the very beginning].” The possibility cannot be excluded of misunderstandings of the MSC process on the part of the fishery client involved in the last two quotations. However, these statements illustrate genuinely different perceptions and assumptions about the processes and gear, which confuse the certifiers and companies, as well as perceived concerns with communication and clarity. All of these issues may impact attitudes toward the certification process.

5. Discussion

In 2008, the first Russian fishery officially entered the Marine Stewardship Council certification program. At that time, Russian perspectives on the program were unclear. Not all fisheries were interested in the program, even if eNGOs paid their initial fees. Today, eighteen fisheries are participating, and many others are interested in certification. This growth of MSC recognition in Russia was partly caused by eNGO activities in the country (including the MSC), and partly by increased recognition of the MSC among worldwide consumers, which increased the pressure of foreign importers on Russian wholesalers. Here, an analysis of the MSC process in Russia can be made using two lines of comparison: first, with other countries, and second, among various Russian fisheries. Based on the Results section, “Communication issues” has been added to the factors identified from the published literature, and “Target stocks” was expanded to consider the distribution of the stock (offshore/inshore/inland).

5.1. MSC certification implementation: Russian experiences in comparison with examples from other countries

The results presented here confirm some of the views of earlier authors, based on the experiences of other countries, regarding factors that discourage or support the certification process [14]. In other cases, however, the conclusions here differ, largely pertaining to the specific situation in Russia.

5.1.1. Market considerations

This study presents examples of companies entering the MSC process without clear market motivations. This is not typical of the West. In 2008, at the beginning of MSC program in Russia, and under the initiative of eNGOs, several salmon fisheries underwent the pre-assessment process and some later formally entered the MSC certification program. eNGOs used the MSC program as a tool for conserving salmon, an iconic fish. Few of the fisheries involved in the process at that time, however, had a clear notion of how to use certification. These fisheries left the program at different stages for different reasons: the high price of certification was mentioned as one reason.

In the literature on MSC certification, high prices are repeatedly mentioned as prohibitive for small-scale fisheries globally [16] and in Russia [3,7]. Certification costs may be separated into direct costs (i.e., site visits and salaries of the experts compiling the assessment report) and indirect costs (i.e., obtaining the necessary preparatory information, which sometimes requires expensive research, or fulfilling certification conditions). Indirect costs may also include consultants' expenses, and mediation between fisheries and certifiers.

The main reasons certification costs became an issue in this study derive from the unrealistic expectations of different parties operating within the underdeveloped market for MSC certification in Russia. Fisheries clients often underestimate the work involved in certification, as well as the professional qualifications required for such work. They look at salaries in Russian research institutions, which do not always adequately reflect the labor of researchers. Moreover, most experts in

the assessment teams come from countries where salaries are significantly higher. On the other hand, state fisheries institutions are the only source of the information necessary for certification. Because this information is not usually available to the public, research costs may be expensive if there is no public alternative. These issues create tensions between both parties when negotiating certification costs. It is important to note that high fish prices result from the high MSC certification standards that consumers recognize and trust. This creates high market value that benefits certified companies and allows them to pay certification fees. Such tensions have declined over the last few years, according to the observations. This trend is expected to continue as communication improves among different parties engaged in the MSC certification process.

The materials presented here offer no clear evidence that high costs were prohibitive for certification. For large fisheries like the Alaska pollock and cod fisheries, with landings in the hundreds of thousands of tonnes, cost is not a problem. The profit from selling certified products is quite high due to the value added to already considerable production quantities. For example, the Russian Federation Barents Sea cod and haddock fishery catches thousands of mt of fish annually (Appendix 1): cost was not an obstacle in certification. The same is true for the salmon fisheries, which usually land tens of thousands of mt. Landing a few hundreds of mt, the smallest fisheries are represented by the perch fisheries. MSC-certified perch are now in great demand in global markets, but non-certified fisheries can lose access to these markets. For this reason, none of the fisheries in the study considered cost alone to be a crucial factor in deciding whether to take part in the MSC certification process, and they accepted the certification decisions. This study covered only companies involved in the program, however. Cost may be an obstacle for companies that are not involved in certification.

5.1.2. eNGOs involvement

In Russia, eNGOs played roles that differ from those they play in the West. There eNGOs often criticize fisheries for practices perceived as unsustainable, motivating them to make management and scientific improvements that could lead to certification [15,21]. At present, ideas about sustainability – related, for instance, to an internal sustainable market – are not sufficiently prevalent in Russia to justify putting such pressure on businesses. Public education aimed at promoting sustainable seafood consumption in Russia was introduced only a few years ago by WWF-Russia, which published the first seafood guide for Russian consumers [22]. Other publications on sustainable fisheries in Russia were devoted to critical analysis of the current situation in the fisheries sector in relation to principles of the Code of Conduct of Responsible Fisheries [23], and analysis of fisheries-related threats to the Arctic ecosystem [24]. The lack of demand for sustainable seafood in Russia seriously limits fisheries' interest in MSC certification. WWF-Russia and Wild Salmon Center/Ocean Outcomes encourage companies to undergo certification to conserve target species and the ecosystem. They supported certification – particularly in the beginning of the process – so that, at a later stage, the benefits of access to export markets will provide further incentives for certification (see the previous section).

The effectiveness of such support is not easy to evaluate. Several fisheries that passed pre-assessment with the support of NGOs pulled out of the process before entering full assessment. One fishery that had been supported by WSC/O2 from the very beginning left the program less than two years after successful certification. It had no fish processing facility and was not able to find reliable partners abroad.¹⁰ Such withdrawals are unusual within the MSC process, although some took place in other fisheries as well.¹¹ Yet, participating in certification was a

¹⁰ See <http://www.oceanoutcomes.org/news/sakhalin-salmon-fishery/>.

¹¹ One example is the Sian-Ka'an-Banco Chinchorro spiny lobster fishery in Mexico: https://www.msc.org/track-a-fishery/fisheries-in-the-program/exiting-the-program/withdrawn/sian_kaan_banco_chinchorro_biosphere_reserves_spiny_lobster.

valuable experience for fisheries that remained involved. They proved to others that ordinary Russian fisheries can meet MSC standards. In this way, initial eNGOs efforts might have contributed to the successful development of the MSC process in Russia. Their involvement in Russia continues to support fisheries certification and to watchdog the process.¹²

5.1.3. Certification in the context of a management system

The role of government in fisheries certification is also different in Russia than in the Western examples. Governmental structures in Russia have not supported certification. In Norway and Iceland, the strategy for ecological certification of fisheries was discussed and developed at the state level and received governmental support [7,14]. In contrast, Russian regional and federal fishery authorities left this process completely up to the fisheries themselves, although they did not actively prevent certification. A number of stakeholders, however, mentioned the negative attitude of Russian governmental structures towards certification. Current management may feel pressure from increasing certifications, assuming that increasing exports inhibits development of internal seafood markets. The findings from this study are similar to what was reported in an earlier study of the Barents Sea cod fisheries [7].

Availability of information also reflects the attitudes of governmental structures towards ecological certification [25]. Earlier authors did not address this as a certification issue, but it was repeatedly discussed in the interviews. All stakeholders (except researchers) mentioned difficulties in obtaining data required by the certifier. In general, these data pertain to biological characteristics of target species and ecosystems, and information about management system performance – data on fishing rule violations, for instance. The problem partly reflects an absence of relevant data, but is mostly due to the fact that, in Russia, access to information is more limited than in the West. Fish are a strategic resource and the state protects strategic information, in line with Soviet era traditions. Because the MSC certification system requires transparency, and was developed and tested in political and social environments different from Russia [26], specifics of the Russian management system, where public access to information is limited, cause many problems for Russian companies desiring certification.

IUU fishing is a serious problem in many fisheries worldwide [27–29]. In Russia, it is not a problem for the well-policed Barents Sea fisheries, but becomes a serious issue for many others¹³ and is repeatedly flagged during certifications. Although it is addressed in the conditions of certification, in most cases, preventing IUU fishing clearly lies beyond the capacity of a single fishery, even if it is large and influential. The solution to IUU fishing in Russia, and in other countries [30], requires not only improved enforcement, but also addressing social issues. Increasing living standards and decreasing unemployment in remote settlements, where many inhabitants have access to fish resources, would help solve this problem. Most stakeholders, however, argue that the current scale of IUU fishing in Russia is considerably reduced compared to the 1990s and the early 2000s, when IUU fishing was a large part of the local economy, especially in the Far East [31–33].

5.1.4. Target species

According to Kvalvik and co-authors [14], transboundary shared stocks, and therefore, the involvement of different countries in the management, are expected to increase difficulties in certification because different management systems must be taken into consideration. In fact, the opposite is true for Russia. Co-management with Norway definitely facilitated certification, as has been mentioned above. This

was to be expected under the circumstances. Norway introduced their standards in co-management, which were closer to MSC standards than the Russian ones. This pre-adapted these fisheries for MSC certification. For other Russian fisheries MSC standards require more adaptation.

Another characteristic of target species affecting certification is its distribution (offshore, inshore or inland). Firstly mentioned in this study, it seems an important consideration. However, its significance may be related to specific Russian conditions: relatively high levels of illegal fishing and widespread recreational fishing, often without catch limitations. It is extremely difficult to obtain information about removals under these conditions, and this causes considerable difficulties for certification. Non-commercial removals are often addressed in the conditions of certifications.¹⁴ Offshore fisheries have very different certification problems, such as trawls affecting bottom communities or capturing more than the allowable proportion of juvenile fishes.

5.1.5. Company characteristics

As a whole, obtained results in this respect agree with much of the literature. Considering company size, it is assumed that eNGOs put more pressure on larger companies. This is partly the case in Russia, where WWF objected to the certification of Russia's largest fishery – the Alaska pollock fishery. However, in all other cases, including the large-scale cod fisheries and the smaller salmon fisheries, eNGOs were very helpful. eNGOs do not become involved with the certification of small-scale inland fisheries.

As expected, and discussed in literature describing smaller companies [14,19,20], certification costs were mentioned as an issue. This was not the case for larger companies. However, it seems that even for smallest companies, the inland perch fisheries, cost itself was not an obstacle to enter certification, because lack of an MSC certificate currently results in very serious market limitations.

5.1.6. Fisheries associations

In comparison with individual companies, no advantages for fisheries associations are evident in the material presented. Only two clients out of ten were represented in broad company associations – the Fishing Industry Union of the North (FIUN) in the Barents Sea, and the Pollock Catchers Association in the Sea of Okhotsk. These associations represent the two biggest clients in this study, and thus likely obtained the same advantages as larger companies. All other certifications were performed by individual companies or small groups of related companies.

5.1.7. Communication

In previous analyses of the MSC process, communication was not listed among the key problems associated with certification. Nevertheless, in Russia, this problem was frequently mentioned by respondents and had at least two interrelated aspects. The first was purely translation and interpretation problems. These resulted in increased costs and a longer certification process during both the face-to-face and remote phases of assessment. The second was cultural differences, and differences in the traditions of fishery management. One example of such a difference is the confusing translation of “Fisheries Improvement Project.” Instead of its intended focus on fisheries sustainability, the Russian translation means increasing productivity through technological improvements, e.g., advancing the catching capacity of fishing gear.

It is important to remember that Russian fisheries biology has rich traditions. Fedor Baranov's paper published in 1918 [34] remains one of the basic works for stock assessment and is widely cited even today in

¹² See, for example, http://www.wwf.ru/about/what_we_do/seas/history/eng.

¹³ Examples of fishing with low IUU components are the Alaska pollock fisheries in the Far East (FC2) and the Ozermaya river sockeye salmon fishery (see certification report).

¹⁴ Public Certification Report NE Sakhalin Island Pink Salmon Fishery Nogliki & Smirnykh Districts, MRAG Americas 2012; Public Certification Report for Irikla Reservoir Perch Gillnet Fishery, MRAG Americas, 2016; Public Certification Report for Bratsk Reservoir Perch Fishery, Marine Certification, 2016.

fisheries literature. Due to these rich traditions, the questions and recommendations during certification of those who are seen as Western experts are not always perceived positively. Misunderstandings can create tensions between Russian and foreign participants. Therefore, the MSC practice of having at least one local expert in the assessment team is especially important in Russia. Another way to mitigate communication problems may be through the recent establishment of the first Russian CAB – Marine Certification LLC. However, the Russian market still lacks enough qualified Russian experts to fully take advantage of this new CAB.

Communication issues are not only related to interactions between Russian and foreign participants. Interactions between parties discussing costs were taken up in the “Market considerations” section above. These issues also have a considerable communication component because the MSC process creates a new type of interaction between key participants – fishery clients, research institutions, governmental agencies, NGOs, and the general public. As in any new type of interaction, tensions are unavoidable because of lack of trust between stakeholders. The MSC plays a key role in resolving these issues by networking with participants [7].

5.2. Specifics of certification in different Russian fisheries

Most Russian certification processes face similar problems, such as limited access to scientific information, communication issues and insufficient support from governmental agencies. At the same time, obvious differences exist among them. The Barents Sea bottom trawl cod fisheries greatly benefit from joint management with Norway. Thus, they are closer to Western-type management than most of the other Russian fisheries. Certifications in the Russian Barents Sea are carried out more smoothly and predictably than in other parts of Russia. This is confirmed by numerical analysis of the adverse conditions associated with certification, which indicate how close a particular fishery comes to an “ideally” sustainable fishery. An average of 5.8 conditions were attached to each certification (ranging from 0 to 10) (Appendix 1). In the four salmon fisheries, the average number of conditions was 8 (7–9), in the Alaska Pollock fishery – 8, in the four Barents Sea cod fisheries – 3 (0–6), and in the two inland fisheries 6 (2–10). The cod fisheries exhibited the smallest number of conditions – 3; the numbers of the other fisheries ranged from 6 to 8. Its low number of conditions shows that the Barents Sea cod fisheries are closer to the (MSC standard of) “ideal” than other Russian fisheries.

The Barents Sea fisheries exemplify effective management in the literature [e.g. 35]. Because existing standards are higher than MSC standards, it could be argued that certifications do not improve their management [7]. However, the presence of conditions shows that management can improve even these fisheries, primarily in counteracting the negative effect of bottom trawls on bottom communities. Other threats to sustainability caused by this fishery are indicated in the WWF review [24]. As a result, the certified Barents Sea fisheries make considerable efforts to meet the MSC conditions via various collaborative activities with WWF and the Polar Research Institute for Fisheries and Oceanography.¹⁵

It is also important to note that populations of the major commercial species are currently responding positively to warming temperatures, which are very pronounced in the area. Thus it is not easy to adequately estimate the effectiveness of Barents Sea management. As the effects of warming and management on stock status are very difficult to separate, one cannot be sure that the Barents Sea fisheries flourish solely due to

effective management [36].

The Sea of Okhotsk pollock fishery also operates offshore, but employs pelagic trawls that only intermittently contact the bottom. This largest Russian fishery significantly influences both the ecosystem in the Sea of Okhotsk, where Alaska pollock play a key role, and the world market. Due to its dominance, the fishery faced serious resistance from rival companies in the USA (mentioned also by [3]) and also from WWF. These factors and lack of experience during the early stages of certification, resulted in a process that lasted five years – longer than of any other Russian fishery.

Pacific salmon fisheries in the Far East show specific patterns, not only due to their target species and fishing techniques, but also due to their regional history and fishery management system. In the 1990s - early 2000s, local fish populations experienced extremely high pressure from illegal fishing [27,32,37]. IUU fishing is notably reduced now, but state enforcement activities are not always sufficient for the effective protection of fish stocks. Therefore, fishing companies often support governmental agencies organizationally and financially, and by contracting experienced staff. Also, in comparison with large-scale codfish and pollock, local management authorities here play quite a significant role.

Inland freshwater perch fisheries in Russia are among the first such fisheries to be certified worldwide.^{16,17} These certifications were challenged by insufficient information about removals by recreational and unlawful fishermen. Moreover, perch is not considered to be a valuable fish in Russia, and fisheries are small-scale (amounting to a few hundred mt). Scientific support of these fisheries is weaker than for the fisheries discussed above. This also caused problems during certification. Management is mostly performed on a local level.

Comparing these four types of Russian fisheries shows that some important characteristics are clearly correlated. The larger the fisheries are, the farther offshore they fish, the greater the decline in public access to resources and the larger the role of federal authorities in management. These characteristics cause different issues during certification. Larger fisheries usually raise more questions regarding ecosystem effects, but are better supplied with scientific information. Also, they have fewer problems with IUU fishing because all fishing vessels are equipped with VMS systems. It is much more difficult to enforce coastal or inshore fisheries regulations. These findings may help predict what kind of certification problems will occur for particular fisheries.

6. Conclusion

Based on this analysis, three factors were identified in this study that shape the MSC certification process in Russia, and differentiate it from the general process and assumptions related to certification in the West: (i) linguistic and cultural differences between Russia and Western countries, where methods of assessing the sustainability of fisheries were developed, (ii) differences between the traditions of Western fishery management and Russian fishery management, which are adapted to situations in Russia, and (iii) the absence of an internal market for sustainable seafood, so that the only motivation for fisheries to obtain certification is to export their products.

The MSC certification process in Russia has existed for about a decade. During that time a number of failures and achievements have occurred. Participants in this process have had time to adjust to each other and they now have more realistic expectations. At present, several experts in Russia are familiar with the process and are ready to serve as a bridge between the MSC and CABs, on the one hand, and Russian fisheries and stakeholders, on the other. The MSC now has a special

¹⁵ See, for example: I. Vladimirov, Cod with white and blue emblem. Meeting in the Union of the Fishermen of the North on ecological certification of fisheries. Murmanskij Vestnik. Ezhednevnoe oblastnoe izdanie. 27 June 2017. <http://www.mvestnik.ru/fishmans/treska-s-belo-goluboj-emblemoj/>.

Murman fishermen will limit usage of the bottom trawl. SeverPost.Ru. Murmansk and Murmanskaja oblast. 15 November 2016. <http://severpost.ru/read/48213/>.

¹⁶ The Lake Erie yellow perch and walleye commercial fishery. <https://fisheries.msc.org/en/fisheries/lake-erie-multi-species-commercial/@/view>.

¹⁷ Lake Hjälmaren pikeperch fish-trap and gillnet fishery. <https://fisheries.msc.org/en/fisheries/lake-hjalmaren-pikeperch-fish-trap-and-gillnet/@/view>.

representative in Russia, and the first Russian CAB started working in 2015. While this does not guarantee that further certifications in Russia will go smoothly, there are still many non-certified fisheries with serious export potential.

How the MSC process will proceed depends primarily on the stability of the economic and political situation. At the same time, some actions by eNGOs and/or the state may facilitate MSC programs in Russia under any circumstance. Expansion of public education and information by eNGOs could promote the consumption of sustainable seafood. Such a process is now only in its initial stage (e.g., to expand the Russian-language part of the MSC site). MSC experts need to be trained to work both as members of CABs and as consultants for fisheries, thus bridging the gap between stakeholders. More and more fisheries will become involved in the process, understanding the market advantages of certification on the one hand and facing the need to meet the certification requirements, on the other. Eventually the role of fisheries in education will grow via cooperation with eNGOs. Educational seminars for representatives from fisheries participating in certification programs are a good example of such participation. Despite some differences between governmental agencies and participants in the certification programs about how to achieve the short-term objectives of Russian fisheries, their strategic goals are the same and directed towards sustainable fisheries. This means that their positions will gradually converge. In the present situation different parties – eNGOs, governmental agencies and fisheries – may complement each other's efforts in developing sustainable fisheries.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.marpol.2018.01.001>.

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