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Stakeholder Perceptions of Landscape Justice in the Case of Atlantic Salmon Fishing in Northern Finland

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Abstract: Atlantic salmon fishing in northern Fennoscandia is part of controversial ecological, sociocultural, legal, and political questions. This paper presents a study of landscape justice as perceived by stakeholders who practice, manage, and govern traditional, household, and recreational salmon fishing on northern Finland's border rivers, Tornio (Torne) and Teno (Tana). The concept of landscape justice is analysed through the lens of distributive, substantive, procedural, and recognition forms of justice. The data are based on semi-structured stakeholder interviews (N = 15). A qualitative content analysis of the data based on the forms of justice reveals that salmon are associated with diverse environmental, economic, and sociocultural values of the landscape. The study results show the current state governance mode of salmon fishing causes landscape injustice manifesting, in particular, as an unequal distribution of risks and benefits regarding fishing governance and its challenges. There is unclear legislation for Tornio. Landscape justice is violated by regulations causing unclear case law for Teno on the ownership of land or water and related fishing restrictions, as well as a lack of possibilities for local tourist entrepreneurs and household fishermen to participate in decision making. Governmental decisions are mainly based on the overall ecological status of salmon populations at the expense of local variations or the recognition and systemic evaluation of sociocultural and local economic values of the landscape. The results indicate a need for national and cross-border policy decisions to include sociocultural and economic aspects of Atlantic salmon fishing to guide movement towards more just environmental governance.

Keywords: Salmonidae; environmental governance; Indigenous peoples; nature-based tourism; outdoor recreation; commons

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1. Introduction

1.1. Conceptual Background

Salmon fishing has been a way of life as an important part of the environmental, social, and cultural landscapes in Fennoscandia for centuries, and entire families across generations have been practising traditional and recreational forms of salmon fishing. However, due to rapid Arctic changes, for nature-based livelihoods and related activities, such as salmon fishing, equitable access to landscapes and rights with a view to securing the continuity of these practices is becoming more difficult to guarantee and uphold.

This paper about salmon fishing on the rivers Teno (Tana) and Tornio (Torne) in northern Finland contributes to existing scientific knowledge concerning what constitutes just environmental and participatory governance and includes landscape aspects [1–3]. Furthermore, this study increases knowledge about local residents' views on just transition and ethical consequences in the governance framework by using the concept of "landscape justice", which encompasses both the environmental and social justice elements [4,5].

John Rawls's theory of justice [6] has widely affected the meaning of the societal components of justice that encompass the fair distribution of resources and harms, the equality of opportunity, and the protection of plural interests. These are the core elements of the present study. According to the theory of justice, every person should have an equal right to fundamental freedoms. Furthermore, social and economic inequalities should be arranged equally. Moreover, in politics, the principle of equal freedoms turns into the principle of equal participation, according to which all citizens have the right to participate in the processes by which laws are made.

However, this theory has been criticised because some scholars argue that it is too similar to utilitarianism or that it is simply too difficult to apply in practice [7] . Therefore, the concept of landscape justice in this study is utilised in an applied form of justice to expand Rawls's theory. Additionally, Dalglish [8] stated that "*Landscape justice is a matter of equitable access to the potential benefits of landscape and of meaningful participation for all those with sufficient interest in plans, decisions and actions relating to a landscape*" (p. 328). Furthermore, Pediaditi and Moquay [9] considered landscape justice to be "…*understood as the fair treatment of respective interests in landscape planning, which requires full understanding of the needs and aspirations of different groups or people in the community*" (p. 2). Therefore, the analysis of landscape justice in this case study is operationalised through four analytical categories of forms of justice (see Table 1) that have been commonly used in such applied studies of justice (e.g., [9]): distributive justice, procedural justice, substantive justice, and recognition justice. Attention is also paid to different justice realms: temporality, scale and scope, locus of concern, and source of harm, as well as the questions of who, what, where, when, and how, as different aspects of justice [10].

Table 1. Forms of justice as four analytical categories in studying landscape justice.

Form of Justice	Definition [Ref.]
Distributive justice	Fair allocation of resources, risks, or benefits [11].
Procedural justice	Fairness of social decision-making procedures [12].
Substantive justice	Justice of the rules of law, "principle of decision making in a juvenile court" [13].
Recognition justice	Respecting cultural differences and minor groups [14].

1.2. Landscape of Salmon Fishing in Teno and Tornio Rivers

The case study focuses on Atlantic salmon (*Salmo salar*) fishing as practised on two border rivers, Teno and Tornio (Figure 1), in northern Fennoscandia. Both river landscapes provide important habitats for salmon and possess not only unique ecological characteristics but also bear diverse societal, cultural, and economic values. The ecological value of Atlantic salmon is internationally recognised [15]. Salmon fishing is a core part of local culture and traditions and has a high recreational value not only for tourists but also for local residents. Salmon fishing activities are benefiting the local fishing tourism businesses [16]. However, the life history of Atlantic salmon populations has been characterised by environmental changes, the pressure of changes to fishing, and industrial development. Salmon populations' feeding, spawning, and overwintering grounds have been changing [17–19].

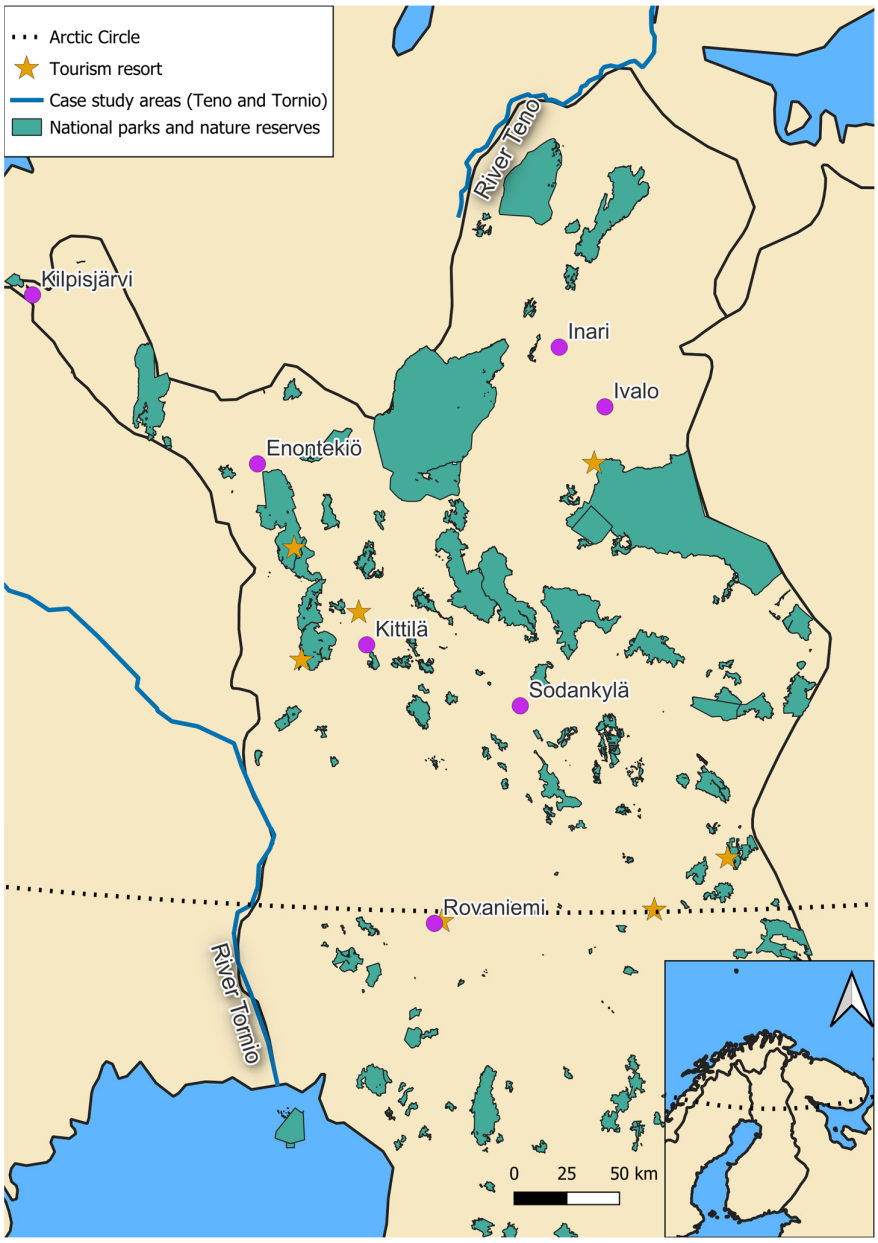

Figure 1. The case study area: the border rivers, Tornio (Torne) and Teno (Tana), in northern Finland. Design: Henri Wallén 3/2023.

Because salmon fishing has become a popular nature-based tourism activity, it has created opportunities for the local service sector[20]. By virtue of the diverse environmental, societal, cultural, and economic values associated with salmon, livelihoods [1] based on salmon fishing have played a role in keeping these rural areas inhabited (e.g., [22]). The multiple benefits and values of salmon reflect the idea put forward by Jorgensen [23] (p. 2) that no landscape is neutral, but is always shaped by the plurality of interests in utilising it:

> *An enduring problem, in the context of landscape, is that whereas landscape may seem to be a neutral, even a natural environment, within which human activities occur, it is of course shaped continuously by those activities. Thus, it is inevitable that political, economic, social and cultural inequalities become enshrined in landscape itself, creating*

unequal access not only to natural goods and resources, but also to the embedded processes that determine how landscape is shaped and represented.

For example, in response to declining salmon populations, the government of Finland has intervened in fishing practices through specific regulations (see Supplementary Material S1). This has caused conflicts at the local level [24]. The decision to protect wild salmon populations from coastal fishing at the beginning of fry migration has been a significant and effective measure in maintaining the salmon stock of the river Tornio [25] (p. 50) and has increased the number of recreational fishers in the area. In contrast, on the river Teno, although salmon fishing has been restricted since 2017 and is currently strictly banned, it has not been possible to maintain the salmon stock at a sustainable level [26,27]. The fishing restrictions have caused a sharp decline in the number of fishing tourists to Teno. The distribution of salmon fishing rights has been a matter of much controversy [24]. The strict fishing ban has been effective since 1 May 2021 and is ongoing [28,29]. On 3 March 2023, the president of Finland confirmed the law instituting the temporary ban on salmon fishing in the Teno watershed, which entered into force on 1 May this year. This is causing concerns among the representatives of the Utsjoki municipality and local entrepreneurs about the future because salmon fishing has a central position in the local economy and is an integral part of Indigenous culture and landscape [30,31]. Additionally, according to the former studies, we are in a field of many voices, matters, and actors. The findings from former studies advise policymakers that effective collaboration in managing salmon fishing and conserving salmon stocks must be founded on an awareness of the varied goals of the diverse group of landowners [32]. In addition, many anglers share the belief that fishing should be available to everyone and should be reasonably priced [32]. What is rarely discussed is what it means to share the effects of maintaining and restoring habitats in the ocean and rivers for preserving and reviving the salmon population [33,34].

1.3. Aim of this Study and the Research Questions

In this case study, landscape justice in relation to salmon fishing in the context of environmental governance [35,36] is the core of inquiry. How the current regulatory steering of salmon fishing influences stakeholder perceptions of landscape justice is investigated to understand the complexity of changes in salmon fishing. Additionally, the causes of the changes are studied more broadly to provide scientific evidence. This work is expected to reveal the plurality of interests among state and non-state actors practising, managing, and governing traditional, household, and recreational salmon fishing. This can, in turn, explain varying perceptions of landscape justice. Therefore, the research questions are closely related to the understanding of human perceptions of environmental attitudes, livelihoods, and activities within the landscape [3]. This paper deals with the following questions:

1. What kinds of socioeconomic and cultural benefits, risks, and impacts are associated with salmon fishing and its governance, based on stakeholder perceptions, to answer to the aspect of distributive justice?
2. How does the regulatory steering of salmon fishing affect landscape justice, according to the stakeholders, to bring about procedural and substantive justice?
3. Are the various values, needs, and worldviews considered in the implementation of a salmon fishing policy affecting the landscape? If so, how can recognition justice be brought forth?

This article provides local and key informant knowledge to be considered in national and cross-border policy decisions concerning the future of salmon fishing in northern Finland. It contributes to justice research from socioeconomic, cultural, political, and legal perspectives. Human perceptions of just environmental governance have been rarely considered in legal developments or in the implementation of laws to reveal potential landscape injustices in the Arctic. In jurisprudence, the only decision made is whether a case has been processed according to the law. Here, however, our focus is on examining

whether the procedure and the outcome are considered just. It is about seeking to understand human perceptions of the matter. This perspective has not been considered in contemporary legal research, but the views and perceptions given anonymously by the parties involved are very important when trying to develop legislation. The concept and the method of analysis are applicable to other studies focusing on landscape justice. However, caution should be exercised when generalising the results of this qualitative case study.

2. Materials and Methods

2.1. Case Study Description

2.1.1. Case Study Area

The study area encompasses two internationally recognised salmon fishing rivers. The first, Teno, runs along Finland's northern border with Norway, and the second one, Tornio, forms part of the border between Sweden and Finland (Figure 1). Both watersheds are located in the Finnish Sámi homeland as well. Teno is one of northern Europe's most productive wild salmon rivers and attracted the most tourists for recreational wild salmon fishing before the fishing restrictions were implemented [37]. The Tornio River is among the largest rivers in northern Fennoscandia [38] (p. 297).

2.1.2. Governance of Salmon Fishing in Finland, and on the Rivers Teno and Tornio

For the case study design—preparation of the interview protocol and data analysis—we first reviewed the main rules and regulations that steer the administration and use of land and water areas and the rights of minorities in the area in question. These primary and secondary legal sources relevant to salmon fishing in Finland are summarised in this section as background information for presenting the case study. The details can be found in Supplementary Material S1.

The protection of salmon is driven by the goal of Finland's Nature Protection Act §5, which is to maintain biodiversity and ensure what is termed "favourable conservation status", according to the Decree on the Implementation of the United Nations Convention on Biological Diversity (CBD). An essential purpose of Finland's current Fishing Act is, therefore, "*based on the best available information … to organise the ecologically, economically and socially sustainable use and management of fish resources in such a way as to secure the sustainable and versatile yield of fish resources, the natural life cycle of fish stocks, and the diversity and protection of fish resources and other aquatic life*" (§1). The Finnish state regional administrative authority (i.e., Centres for Economic Development, Transport, and the Environment, ELY) is responsible for the regional implementation and development tasks of the central government (i.e., the Ministry of Agriculture and Forestry), including fishing and related permits. In the case of the Rivers Teno and Tornio, salmon fishing is based on rules and laws that deviate slightly from the general fishing regulations.

The management of the river Tornio is shared between Sweden and Finland. The use of Finnish–Swedish border waters was agreed upon in 2010 in the Border River Agreement. The primary purpose of the agreement is to safeguard the opportunities for mutual use of the rivers in the water management area within the scope of the agreement in a manner that promotes the interests of the border region, along with cooperation in water and fisheries matters. According to the agreement, special attention must be paid to nature conservation, environmental protection, and conservation, and the sustainable use of fish stocks. The current Border River Agreement established the Border River Commission, which is a body focused on cooperation between the two border states, Sweden and Finland, and has decision-making power over the border river use. According to Finland's Fishing Act, the right to fish belongs to the owner of the water area. This general rule does have a few exceptions, however, with one being what is called the royal salmon prerogative (lohiregaali). This stipulates that, based on the salmon prerogative, while the right to fish for other fish species belongs to the owner of the water area, the right to fish for salmon and trout (*Salmo trutta*) in rivers, such as the Tornio, that run into the Gulf of Bothnia

belong to the state under an exclusive right [33]. The salmon prerogative is a very significant fishing-related rule (or an exception to the rule, you might say). The state's right to salmon fishing is based on the regal doctrine [39–44], which is based on the feudal concept that the crown is the original owner of all land via the salmon prerogative and that also means the right to salmon fishing. This doctrine came from Italy across Central Europe to Sweden in the Middle Ages, and it influenced the administration and use of laws in Sweden until the 19th century. The Finnish state, represented by the Ministry of Forestry and Agriculture, considers that because salmon fishing has long been considered to belong to the state, this perception is established and should be followed, although that premise is debatable, particularly in the watershed of the Tornio River [33].

The salmon prerogative does not apply to Teno, which runs into the Tanafjord in Norway. The first Teno fishing rule was issued as early as 1873 and already included restrictions with regard to rest periods, gear mesh size, and salmon size. The current fisheries agreement with Norway dates from 2017. This agreement divides those entitled to fish in the waters into four distinct categories in which fishing rights differ. The right is determined by whether the person lives permanently in the Teno River valley and whether they are the owner of the water area (Teno fishing rule §2, see Joona [39] (pp. 212–223)). According to Finnish fishing legislation, the right to fish belongs to the owner of the water area. And, in turn, according to the main rule, the ownership of the water area belongs to those who own land in the area, i.e., estate or private property owners. For this reason, the matter is often expressed as the right to fish is based on the right to own land.

However, it can be stated that it is not clear how the Sámi rights should be treated regarding Teno salmon fishing. For example, in 2022, the Supreme Court (KKO) dismissed previous charges brought for fishing violations in two cases concerning the right of local Sámi to fish in Utsjoki and Vetsijoki, which are part of the Teno watershed. The Supreme Court, thus, kept the decisions previously reached by the district court of Lapland unchanged, and the charge of fishing violations was dismissed [45]. KKO considered that the fishing restrictions violated the Sámi people's right to enjoy their culture. In addition, the question was about Sámi's traditional fishing right, which the Constitutional Committee of the Finnish Parliament has referred to on several occasions. However, the KKO's decisions leave several related questions open. For example, what does Sámi mean in relation to the rights of fishing? The question is not about what Sámi means in common parlance, but the question is about who they are in this context. The problem is that the legislator and the KKO have not defined in those preliminary decisions which persons are meant when they talk about the Sámi in connection with fishing. It is unclear who KKO's decisions concern, i.e., who can fish and who cannot. This is not a political issue but a legal one, which makes it practically challenging to decide fairly who is affected by this fishing right.

2.2. Data Collection, Processing, and Analysis

In-depth semi-structured stakeholder interviews (Figure 2) were conducted between 2021 and 2022 to gain information about 15 key informants' [46] perceptions and values related to social and environmental justice—the main elements of landscape justice studied here. The selection of the key informants was made based on a review of their professional background, position, and leadership responsibilities or if they had a particular personal experience of salmon fishing. This means that the group of interviewees consisted mainly of people who had first-hand knowledge about the communities and specific knowledge about salmon fishing. The selection was made across different levels of governance, research, and planning, as well as including views of local communities: local residents and local residents practising salmon-based tourism businesses (local tourism entrepreneurs). The interviews were mainly conducted via Microsoft Teams or via telephone. Due to the COVID-19 pandemic, only a few interviews were conducted on-site in northern Finland. Each interview took approximately one hour. The interviewees were invited by phone, email, or face to face. The interview questions focused on salmon fishing

on the Teno and Tornio Rivers (see Supplementary Material S2). The topics encompassed questions on the interviewee's background; their relationship to salmon fishing; societal questions (related to recognition justice); questions about regional characteristics; steering mechanisms regarding livelihoods (related to substantive justice); decision-making and planning processes (related to procedural justice); quality and quantity of knowledge available; distribution of risks, benefits, and costs (related to distributive justice); the importance of nature and ecosystem services; and future perspectives. Upon request, the interview questions were sent by email to the interviewee in advance. Representatives from all of the invited stakeholder groups (Figure 2) agreed to be interviewed.

All the interviews were audio-recorded and transcribed. The qualitative content of the transcripts was coded in NVivo qualitative analysis software (QSR International, Burlington, MA, USA). The data were analysed by means of qualitative content analysis [47] in descriptive and interpretative ways but not in any quantitative manner. The deductive coding categories were based on the justice literature and focused on the four forms of justice—distributive, procedural, substantive, and recognition—to seek answers to our research questions in the transcribed texts.

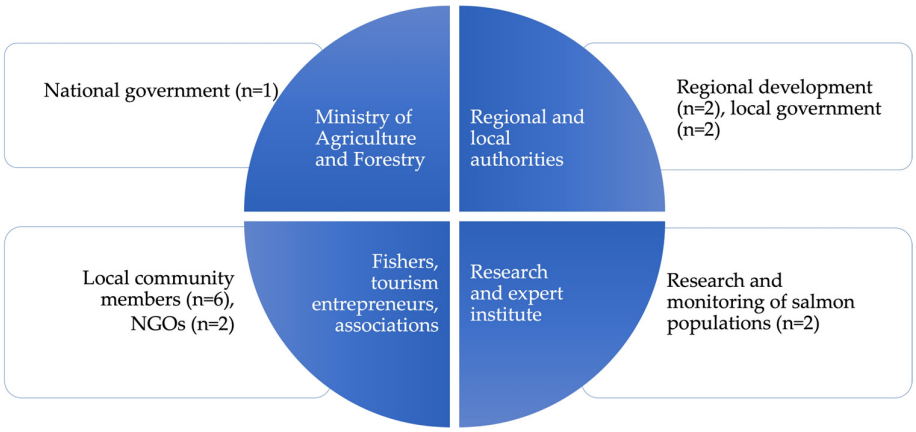

Figure 2. Types of stakeholders participating in the interviews (n = 15). There were seven interviewees from Teno and six from Tornio. Two governmental administrative representatives provided their views of both rivers.

The data analysis process included the following steps: (1) become familiar with the salmon fishing governance context by reviewing the main rules and regulations; (2) deductively generate initial codes based on the four forms of justice; (3) review the content of the interview transcripts; and (4) analyse how the four forms of justice are reflected in the interview responses in the context of landscape justice.

The research project included an ethical review conducted by the University of Lapland based on the Finnish National Board on Research Integrity (TENK): Securing ethics clearance was part of a coordinated effort pursuant to the ethics requirements under the project's grant agreement and in accordance with the project's protection of personal data and data management plans. For this case study, in Finland, participants were asked to sign a written form for the purpose of confirming the recording of the interviews and GDPR, but according to the university's rules, no ethical approval statement was required.

3. Results

3.1. Overview of Stakeholder Perceptions of Main Governance Issues and Consequences for the Teno and Tornio

Based on the qualitative content analysis coded according to the four forms of justice (distributive, procedural, substantive, and recognition justice), we studied the main benefits, risks, and impacts associated with salmon fishing and its governance, along with

how these affect landscape justice. We paid particular attention to the views of those who bear the consequences, i.e., those who practise and manage salmon fishing on the Teno and Tornio. Although there seems to be a consensus among all stakeholders that if salmon populations are declining, then fishing must be restricted, we found very heterogeneous preferences regarding how, when, why, and by whom salmon fishing should be regulated. As state governance plays a significant role in the formation of social, cultural, and economic risks, it became evident from the interviews that the state has a great responsibility to manage these risks in a participatory manner by addressing local concerns in decision making and planning.

It also became evident that *local residents* who fish on the Teno or Tornio are particularly concerned about the fishing restrictions and bans because a break in the continuity of practice—and learning—of traditional fishing methods is bound to have cultural impacts. While extreme possibilities, such as a complete loss of salmon, cannot be ruled out, even conservation measures, such as a salmon fishing ban, can severely affect age-old fishing traditions, causing them to disappear from the cultural landscape, language, and lives of future generations. Further, *local residents* state that the close relationships with nature that have historically characterised life in the north would lose an important sociocultural component. As a consequence, they fear that the discontinuation of salmon fishing as a recreational activity might even cause physical and mental health impacts.

On the Teno, the interviewees agreed that determining the drivers of the salmon population decline would require more scientific research. Banning fishing completely for the time being without knowing the root causes of the decline (which might be, for example, overfishing elsewhere) is not considered acceptable by *local residents*, particularly those residents practising salmon-based tourism businesses (i.e., local tourism entrepreneurs). This is because, in the long term, fishing bans will inevitably have social, cultural, and economic impacts. The economic losses of local tourism tend to increase immediately after a fishing ban becomes effective.

Table 2 provides a summary of the main governance challenges that, based on stakeholder perceptions, cause landscape injustice. In particular, the questions of water area ownership on the Tornio and fishing bans on the Teno, as well as the lack of participation possibilities, cause concerns among *local residents and tourism entrepreneurs*. In the following sections, we delve into the details of the findings, divided into the different forms of justice, and highlight practical examples of these from both rivers.

Table 2. Summary of main governance challenges for the Tornio and Teno Rivers discussed in stakeholder interviews.

Tornio River	Teno River
The dual role of the state as the holder of the salmon fishing rights and drafter of salmon fishing legislation.	Lack of influence of the state of Finland over cross-border fishing regulation.
Lack of opportunity for water area owners and holders of fishing rights to participate in and influence the preparation of the Border River Agreement and fishing regulations.	Lack of opportunity for local people to participate in decision making.
Lack of clarity about whether the state or owners of water areas should hold salmon fishing rights.	Previously unfair distribution of fishing licences. The ongoing fishing ban not considering the root causes and long-term consequences of the decline in Atlantic salmon populations.

3.2. Different Forms of Justice that Explain Landscape (In)Justice

3.2.1. Distributive Justice

In this section, the findings based on the first analytical category, distributive justice, are presented regarding how the interviewed stakeholders perceive the distribution of the social and economic benefits and risks driven by salmon fishing governance to understand how the implementation of law affects landscape justice. The results reveal that regarding the distribution of benefits, the *local residents* see salmon as contributing to diverse ways of promoting sustainable development in the form of, for instance, local food production. However, residents argued that fishing rights are not equally distributed among different types of fishers (recreational and household/traditional), although the restrictions on the right to fish laid out in the Fisheries Act should apply uniformly to all types of fishing. Regarding the sociocultural benefits of salmon fishing in the case study areas, the mental health benefits brought by recreational activities such as salmon fishing, via enjoying the landscape and peace and being connected with nature, were mentioned by the *local residents*. Furthermore, salmon fishing in northern Finland is also considered an essential part of an individual's or region's cultural identity, Indigenous culture, and traditions, including the Sámi languages. It is also an important leisure time recreational activity for many. Thus, the diverse social, economic, and cultural bonds in this landscape are related to it. However, according to the legal practice regarding Teno, the current fishing restrictions conflict with the Constitution of Finland §17, which includes the right to enjoy culture, as also stated in the Supreme Court decision [45].

According to both *local residents and local tourism entrepreneurs*, salmon fishing tourism in northern Finland provides local income possibilities but also opportunities for seasonal workers from other regions. Likewise, a representative of a *local governmental authority* sees that it offers economic diversification possibilities and generates tax income for municipalities. Lively tourism helps maintain services in the area, such as restaurants and grocery stores that sell food, as well as handicrafts, fishing licences, or boat rental and rowing services. A *local tourism entrepreneur* on the Teno pointed out that salmon fishing creates potential for local businesses through, for example, holiday apartment construction in Lapland. Given the seasonality of activities, such as fishing in summer and chasing northern lights in winter, the interviewee stated that these rural areas could remain attractive for tourists year-round. However, the fishing restrictions enacted in recent years have led to a stagnation of salmon-fishing-based tourism development in the area, according to a representative of the *local government authority*. The *local tourism entrepreneur* also sees a distributional injustice in the land property regulation because it can be difficult, especially for young people, to establish entrepreneurship if the land is not for sale, is owned by inheritance, or is subject to an awkward state pricing policy.

Furthermore, on the Tornio, *a regional non-governmental organisation (NGO)* representative argued that while fishing is still allowed, the distribution of fishing permits is unfair because it is not based on the place of residence (i.e., locality). It is also considered unfair if fishing is allowed only on the other side of the border river, in Sweden, but not on the Finnish side. The *local residents* considered the salmon prerogative beneficial for one reason: the supervision and permit system is more uniform. However, some of them believe that the state pursues its own interest, not the common interest. They also argued that reporting the catch should be a prerequisite for managing salmon fishing. Additionally, the *regional government authority* representative noted that supervision must be at a sufficient level if instructions and laws are to be followed and called for international regulation for salmon fishing, along with cross-border cooperation.

The results from the Teno revealed that the long-term goals for natural resource management are needed to sustain resources for future generations and ensure intergenerational equity and attention from tourism entrepreneurs is required, as well. However, particularly in this matter, the regulatory steering should play a major role in ensuring that

distributive justice takes place, as stated by a representative from a *local government authority*:

> *In my opinion, in a way, the task of public authorities is, of course, to eliminate the disadvantages … and distribute the disadvantages more fairly … but we should think about what legislative means can be used to prevent or eliminate these, that is, to support, say, our responsible tourism. We have highlighted very strongly how the Utsjoki tourism companies and the community and industry work to support all the tourism that develops here to develop … responsibly, so to speak, in the widest sense of [the term] … starting from issues of cultural responsibility. So I think it would be up to the legislature to support it.* The local government authority.

The *local government representative* stated that it is necessary to consider what constitutes a fair distribution of potential harm in law making. It has happened in the past that too many fishing permits have been sold to tourists, and nothing was left for the locals. This distributive injustice finding addresses the necessity to include local voices in decision making, which builds a bridge to the findings on procedural and substantive forms of justice presented in the next section.

3.2.2. Procedural and Substantive Justice

This section combines the results based on the content analysis of the second and third analytical categories, procedural and substantive justice. The findings show how the implementation of the regulatory steering of salmon fishing affects stakeholder perceptions of landscape justice and causes confusion. The findings also reveal how the processes of implementing laws and decision making concerning the development, use, and enjoyment of the landscape are perceived. The results address governance gaps based on stakeholder perceptions related to justice from a dual viewpoint: first, related to whether the law itself is considered just, and second, whether the law implementation procedure is considered just.

We find it necessary to note as background information that the river Tornio has two controversial issues regarding fishing rights. The first is related to the salmon prerogative. The state (Metsähallitus) and the local bodies of joint water area owners (osakaskunnat) are on opposite sides regarding the question of who owns the right to salmon fishing. The second issue is that of the designated rapids property, in Finnish called "koskitila". In the 1910s and 1920s, the designated rapids property was purchased by power companies or the state with the intention to build hydropower plants. They were planned for the Tornion–Muonionjoki watershed as early as the 1960s. Later on, this was made impossible as these rivers (Tornion–Muonionjoki and Könkämäeno) were included in the European Union Natura 2000 network at the beginning of the 21st century [48,49]. Although the construction of hydropower plants on the river Tornio could not be realised, the rapids remained in the possession of private power companies or the state. A dispute remains regarding whether the fishing right was transferred to the current owners of the rapids property or whether it remained with the local bodies of joint owners (i.e., the original owners) of the water area. The question is one interpretation of the agreements made, according to the interviewed stakeholders.

The problem is that neither the matter of who has the right to fish for salmon, nor the matter of who has the right to fish in the area of the rapids has been legally resolved. According to *the local residents* interviewed for this study, the authorities misinterpret the law. Furthermore, they state that there is no definition in the law that separates the local from the tourist; the fishing permit fee is the same and permits are sold without limit, which is not considered just. While some traditional methods to catch fish, such as dam fishing, are prohibited, some others, such as drift net fishing "kulkutus", are not. The *local residents* from the Tornio region strongly feel that it is salmon fishing at sea that should be restricted and not fishing on the river, independent from the type of fishing. Furthermore, in terms of management, they argue that there should be a spatial division of areas where

fishing is allowed. The authorities should also strictly control potential illegal fishing. The core question according to the locals is how to manage salmon fishing fairly, but there seems to be no clear answer to this:

> *"Yes, I think it's really in the fishing rules these days, so they [the state] have ways to intervene. It's not about the means … but how to do it fairly and equitably. And then … one thing is, of course, whose fish it is, the salmon. It is, of course, another matter then, who governs it. Does the fish belong to the state and the state then distributes some of it [of this natural resource] to others?"* A local resident from the body of joint water area owners (osakaskunta).

In the matter of the salmon prerogative on the river Tornio, there are questions of the legal interpretation of the substantive law, such as who owns and/or manages the salmon—is the state or the local body of the joint water area the owner? What is considered unfair and attitudinal according to a local resident by the representative of "osakaskunta", an interviewee from the local body of the joint water area owners is that, despite the highly controversial nature of the rapids property issue, the officials (the Border River Commission and local fisheries authorities) have not started to clarify these questions even though this is part of their duties. Negotiations with the Ministry of Agriculture and Forestry have not been successful either. What the *local residents* find problematic is that the ministry regards the right to salmon fishing as belonging to the state and the ministry does not want to give it up, while the matter concerning the rapids property should be resolved in the courts.

According to the *local residents*, cooperation would be necessary in order to reduce conflicts between different fisher groups on the river Tornio, but local tensions prevent it. The local residents feel that the voice of fishing rights holders should be heard in decision making, too, and local tourism entrepreneurs should cooperate with the fishing rights holders. Furthermore, *a regional government representative* states that Finland has been able to present its position in international negotiations on the significance of the River Tornio fry production to the conservation of salmon and, therefore, considers international cooperation—in particular, between Finland and Sweden—as an absolute prerequisite.

The *local tourism entrepreneurs* of the River Teno area argue that if fish farming and coastal fishing in the marine areas cannot be influenced and regulated together with international actors, particularly Norway, the salmon problem of the River Teno cannot be overcome. They mention that the entrepreneurs do not dare to raise their voices and state that the European Union should be a negotiator in these matters. Information on salmon stocks is available through national research institutes, but this knowledge does not always serve its purpose. According to a *local tourism entrepreneur*, the ELY has the latest information because they are involved in the negotiations, but the information they have provided for entrepreneurs has been too short-sighted and not applicable to preparing for fishing restrictions. They point out that excessive bureaucracy hinders rather than helps decision making. As there are many controversial issues related to unclear rights and responsibilities and knowledge gaps, a representative of a leading *research organisation* mentioned that the research sector has taken steps towards participatory management approaches to increase knowledge co-production, which integrates scientific knowledge with local knowledge.

A representative of a regional *NGO* considered that the Teno fishing rule was unjust in determining salmon-catch quotas when it previously allowed the state to sell an unlimited number of tourist fishing permits without a proper legislative basis. The interviewee points out that limitations to the use of certain areas, for instance, due to nature conservation requirements, should follow a sustainable legislative basis instead of being treated as a problem between individuals. The interviewee also expressed the view that everybody should take responsibility for environmental protection:

> *It's an interesting question, indeed, to what extent these restrictions are about the protection of the law and to what extent about the distribution of justice. In my opinion, it*

> *should be made clear that the Teno fishing rule should also be drawn up in accordance with the Constitution and fundamental rights and legislation of Finland. And then this protection of wild salmon: The Constitution also states that the responsibility for environmental protection lies with every citizen. So, then everyone's fishing rights must be equally limited [by law] … if the salmon [populations] are declining.* The regional NGO representative.

The same interviewee further argued that some local young people are not interested in staying in the area or going fishing, and the right to fish should, thus, be extended also to those who do not live there. However, the ongoing fishing ban has kept salmon fishers off the river. Regional economies, especially local businesses based on salmon fishing tourism, are suffering from fishing restrictions, although there would otherwise be high demand for recreational fishing. *The regional NGO representative* pointed out that the owners of the water area who consider themselves the fishing rights holders criticise that the Teno fishing rule prioritises the residents in terms of fishing rights. According to the NGO representative, the regional regulation of fishing conflicts with the general law, which constitutes a clear procedural injustice. It has happened to many that despite buying a cottage with water areas for fishing in Utsjoki, they are not able to fish because fishing is now completely banned, although, in general, all water area owners have fishing rights, but not all landowners have fishing rights.

The contemporary top-down governance is still considered old-fashioned and inefficient, especially among the *local residents* in the Teno area, to be able to regulate the local livelihoods in a just and sustainable way. The interviewees pointed out that people are not given enough decision-making power at the local level, nor do they have the power to take action to influence fishing restrictions. A *local tourism entrepreneur* stated that the main problem is decision making has been taken too far from the local level; there is no common language, and there is a lack of trust between the parties. The *local residents* hold the view that if new rules are introduced, their implementation should be controlled. Transparent participatory processes are considered to be of utmost importance for local livelihoods, especially from the *local residents*' point of view, to gain and provide reliable information and guidance. Furthermore, the role of the municipality is seen as crucial for improving dialogue in the Teno area, as pointed out by the *NGO representative*:

> *In my opinion, the municipality should play a neutral role in the sense that all municipal residents must be listened to and attempts should be made to bring them to the same table and make the municipality develop. In my opinion … if the municipality had a more active role … then it could be a positive thing in the municipality's economy and everything else, too.* The regional NGO representative

A representative of the *local government authority* of the Teno area stated that the task of public authorities is to eliminate the occurrence of harm through legislative means, including cultural responsibility issues and environmental protection. The interviewee pointed out that the task and obligation of the municipality are to increase awareness of the different means of influence to be taken into account in decision making: Municipalities have been criticised for not always being active when it is time to exert influence, and the media sometimes intentionally bring contradictions to the surface, even age-old disputes and disagreements, thus fuelling the confrontation. The interviewee made the critical comment that the municipality's stance should, in principle, represent all municipal residents in Teno's rule negotiations, but in practice, it is contradictory from the point of view of the different types of fishing groups. The *local government authority* further stated that the rights of Indigenous peoples were still not sufficiently taken into account in fishing on the Teno, and they are not in a position to influence decision making. With the help of economic political programmes and land use plans for tourism, attempts have been made to invite representatives of different livelihoods to a shared table to express their views, ask questions, and engage in dialogue. The municipality's role should be that of a

developer, negotiator, guide, and carer. The *local government authority* sees that citizen influence is generally increasing.

3.2.3. Recognition Justice

This section presents the results of the content analysis of the fourth analytical category, recognition justice. It shows whether, and if so, how, the various needs and worldviews have been taken into account in the implementation of salmon fishing policy and whether those affected the most negatively have been given a voice. The core recognition justice disputes among the interviewed stakeholders were related to the following questions: Who owns the salmon? Who is allowed to fish for salmon? Additionally, how much are they allowed to fish? These questions refer to the tragedy of the commons [50–52], which was also indicated in our results.

A representative of the *regional government*, which is the regional development authority, pointed out that the sustainability of fish stocks should be prioritised over cultural rights if biodiversity or fish stocks are threatened. This means that fishing restrictions should apply to everyone in the same way, as another *regional government* representative stated. This is in line with the view expressed by a representative of an *NGO* that if fishing is regulated, it is necessary to consider the special cultural characteristics of the area to sustain traditions and prioritise the sustainability of fish stocks, referring here to the necessity of maintaining the favourable conservation status for salmon.

At this point, we find it necessary to highlight that this is particularly topical in Teno, where fishing has had to be heavily restricted due to weakened salmon stocks. In 2021, 2022, and also in 2023, salmon fishing on Teno has been banned. When all fishing is banned, it would be expected for the ban to affect everyone in the same way. In practice, however, the question has arisen as to whether it was necessary to have started from the fact that not all types of fishing are in the same position, i.e., whether certain fishing practices should place others in a better position.

The interviewed stakeholders raised further questions, such as whether the salmon fishing rights should be seen as related to water area ownership or to cultural/Indigenous bonds. According to Finnish legislation, the right to fish is primarily based on the ownership of the water area. Water area owners who live not in the Teno River valley but elsewhere in Finland appeal to this main rule of fishing rights, such as the regional *NGO* representative interviewed in this study. They perceive injustice because the Teno fishing rule supersedes their rights. Based on the Teno fishing rules, people living in the Teno River valley seem to be in the best position for fishing rights. Some of them are Sámi, and some of them are not. However, in terms of fishing rights, they are in the same position because the Teno fishing rule does not place the Sámi in a special position, but both groups are considered equal. However, the interviews did not clearly address whether residents of the area should be placed in different positions based on their ethnic status. This issue came up in the discussions about the Sámi people who have moved out of the region: One of the *regional government* representatives noted that, on the Teno, "Sámi have the right to develop and practice their culture", but stated that people cannot be put in a position of inequality based on their place of residence when fishing rights are considered. As one of the interviewees, *a research expert*, also pointed out, the people involved could be, for example, former Sámi residents of the area who have moved away. According to a *local resident*, because a person's status as an Indigenous person is not used as a criterion for the right to fish for salmon, but rather their status as a local resident is instead, when Indigenous youth or anyone who would otherwise have similar inheritance rights, emigrate from the area, they lose their fishing rights.

Regarding the Teno fishing rule, this is not a question of the right of the Sámi people. The issue at stake is that a person loses the favourable fishing right if they move out of the Teno River valley area. According to an analysis of this study, the fact that the person is Sámi or has a fishing right based on the ownership of the water area does not affect the matter. Therefore, those *local residents* who consider themselves Sámi criticise the fact that

even for them and their children, etc., the fishing right is determined by the person's place of residence, even though they are Indigenous peoples who live elsewhere.

Article 17(3) of the Constitution contains the constitutional basis for the status of the Sámi. According to the provision, the Sámi Indigenous peoples have the right to maintain and develop their language and culture, as also highlighted by *the regional government* representative referred to above. The Constitution's provision protects the Sámi's cultural form, including their traditional livelihoods such as fishing. However, in the case of salmon fishing, the *NGO* representative highlighted the gap in regulations, considering the definition of Sámi and their rights:

> *And anyway, this is kind of a problem with the regulation of fishing on the Teno. I see two big background problems there as well. One [thing] is that we talk about the Sámi and the culture of the Sámi, but no one knows who is Sámi. Such register information does not exist. Thus, in the legislation, it has been written as a "local [resident]". And it does a huge injustice in the sense that if the practice of the Sámi culture [their salmon fishing tradition] were accepted, but if you don't know who is Sámi, then you must write that 'a local [resident]' can fish.* The regional NGO representative

Hence, legal practice tends to create injustices, as revealed by many examples in this study. The *regional NGO* representative saw the two decisions issued by the Supreme Court [45] that put the Sámi people in a special position as unfair because the persons in question have been given the right to fish despite the restrictions, while tourists have not. The restrictions undermine salmon-based local livelihoods (tourism), and the situation does not improve when fishing can still be practised by some, which is considered a recognition injustice. It is considered unfair that the decisions do not make it clear whom they are concerned about, how much the people concerned can fish despite the restrictions, etc. Criticism is, therefore, aimed at the legislator, the law enforcer (the Supreme Court), and those locals who have broken the regulations and gotten away with it. The Teno's fishing case, in particular, reveals many kinds of legal issues, but the results also reveal the extent to which identities, cultural differences, and ethnic groups can be recognised and, especially, how they should be identified, as highlighted by *the local government authority*:

> *It is precisely the Sámi reindeer herding culture and the bonds with the Indigenous culture, so, if it is for some reason discontinued, it would be a loss. The loss would, of course, be that, well, there would no longer be reindeer herding, but what it would really mean is that the entire culture and everything it is bonded with would disintegrate. Because the fact is that River Sámi-ness, salmon fishing and reindeer herding are the things here that are strongly linked to it, the way of life, language, culture, and cultural orientation. Then tourism, tourism in the most traditional sense [nature-based tourism] is, after all, something that offers some kind of support to this. If tourism disappeared from it [the region], it still wouldn't mean that the traditional way of life and Sámi identity would disappear. What I'm looking for is that I don't take a value stance on, say, how important they are economically, but now this base to which I'm comparing [them] is my view of it, the effects it would have on the traditional way of life and culture of the region and the prerequisites for living [in the region as an] Indigenous peoples.* The local government authority

The examples from both rivers presented here reveal that there are many opportunities for sociocultural and economic development in the region, but implementing the law should take into account and respect the cultures, professions, and livelihoods of the local and Indigenous peoples.

4. Discussion

Traditional livelihoods and nature-based tourism can generate well-being through engagement in social activities and traditions as sources of shared communal identity and through livelihood diversification strategies, such as in the tourism sector [53]. However, there are many legal, political, environmental, and economic aspects involved in the

landscape where traditional livelihoods are practised, as shown by our case study from the Teno and Tornio, two border rivers in northern Finland.

We investigated the environmental governance of Atlantic salmon (*Salmo salar*) fishing in the rivers in question. By analysing perceptions of stakeholders practising, managing, monitoring, and governing salmon fishing, landscape justice was examined through the lens of distributive, procedural, substantive, and recognition forms of justice in a qualitative case study context. The starting point for fishing rights in Finland is that, regarding the challenges of the legislation, the right to fish belongs to the owner of the water area. However, there are several exceptions to this rule, which relate especially to the distributive and procedural injustices presented in this case study.

An examination of the key informants' perceptions of landscape justice provided insights into land and water management issues and revealed the need for participatory management approaches in the case of Atlantic salmon, which should be further developed. This is because participatory management approaches have shown potential across Europe and beyond to foster mutual understanding and increase local knowledge to inform decision making on the sustainable management of river catchments, including Atlantic salmon fishing activities [54,55]. We found that state governance affects the formation of, but is, therefore, also responsible for managing, the social, cultural, and economic risks. However, if this is not conducted in a participatory manner by addressing the local concerns and providing locals a voice in decision making and planning, just environmental governance cannot be achieved.

This study identified distributive justice issues that were manifested in the empirical material as an uneven distribution of environmental, sociocultural, and economic benefits, risks, and impacts around salmon fishing related to both rivers. The main task of the government has been to remedy the situation of threatened salmon populations through strict fishing rules or fishing bans. Ultimately, this is because fishing pressure has been increasing, especially in the Teno, as the report "*Salmon fishery in the Finnish tributaries of the river Teno*" reveals [56]. However, local residents practising salmon fishing and local tourism entrepreneurs criticise that too little is known about the real impact of local fishing restrictions on salmon populations: For instance, in the Teno, the size of salmon populations has been declining, despite the strict local fishing restrictions. In contrast, in the Tornio, they have remained more stable due to salmon fishing restrictions in the Baltic Sea main basin [19], but similar issues regarding top-down governance were found.

On both the studied rivers, salmon fishing continues to be governed mainly from the top down, which directly affects the landscapes socially, culturally, and economically. Our case study reveals many types of controversy and open questions about fishing rights, such as ones related to land and water area ownership, local tourism development, Indigenous rights, and the role of local communities and traditions. The current mode of governance undermines traditional ways of living by hindering access to a particular natural resource—the salmon—and the area (the rivers) where it can be found. Thereby, this further diminishes the economic diversification possibilities based on salmon fishing, such as tourism—a distributive injustice. The local people feel that they are heard but not listened to in the governmental planning and decision-making processes, clearly revealing a procedural injustice. From the recognition justice point of view, the plural interests around salmon fishing, especially the cultural values and meanings associated with it, would require a law that considers these in order to improve substantive justice. Legal–historical research has revealed that the Sámi had a right comparable to land ownership as early as the mid-18th century [57] (pp. 362–370). In Finland, salmon fishing is part of Sámi culture, and the culture and traditions of Sámi should be protected according to the Constitution and the human right to culture, as stated in the International Covenant on Civil and Political Rights (ICCPR), Article 27. However, it is not clear how this right of the Sámi should be understood in modern times. For instance, regarding the Teno, the current legislation does not recognise the Sámi as a separate group of salmon fishers. The Teno agreement and the Teno Rule do not regulate salmon fishing belonging to the Sámi in any

way, although Teno traditional fishing is considered a prominent part of Sámi culture in the region and cultural impacts are expected due to fishing bans [58] (p. 511).

Our findings show that landscape injustices at the local level can be socially constructed (e.g., perceptual differences) or physically present (e.g., operational or spatial) in the landscape. Some consequences of injustices can be quantified, such as the distribution of impacts of the salmon population decline, whereas others require an in-depth understanding of the more subjective elements, such as different worldviews and cultures and "wicked problems", as presented by Thompson et al. [59].

There is a consensus among the stakeholders that salmon fishing must be restricted if the fishing pressure is too high (to increase distributive justice), which is in line, for instance, with the results of the Evaluation of the National Salmon and Sea Trout Strategy 2020 for the Baltic Sea Region [60]. However, as a consequence of declining fish populations, fishing rights have been reduced, which has caused dissatisfaction among the owners of the water area, the residents, the holders of fishing rights, and local tourism entrepreneurs. Although the life history of Atlantic salmon populations is affected by environmental changes, changing fishing pressure, and industrial development [17–19], it is still not completely clear what the root causes of the salmon population decline in the area are. This would require further examination, as revealed by our interviews. It became evident from our results that scientists are putting much effort into trying to understand the complexity, interactions, and causes of these changes. As the habitats and behaviours of salmon species are changing, the provisioning, regulating, cultural, and supporting ecosystem services utilised as traditional, household, and recreational salmon fishing practices continue to change, too.

The findings show that the goals of the national government are not fully in line with local government stakeholder perceptions and preferences regarding how salmon fishing should be regulated and by whom. For instance, a local government representative from Tornio argues that the state governance in Finland cannot alone solve problems driven by cross-border and complex environmental and climatic risks and impacts. The local residents and tourism entrepreneurs argue that more scientific and local knowledge is needed to be able to evaluate and communicate the long-term consequences of fishing restrictions. According to Brattland and Mustonen [61], it is challenging for projects to balance scientific credibility with legitimacy among local and Indigenous rights holders, which would be, however, required to be able to achieve social robustness. Furthermore, a regional economic perspective should also be considered because salmon fishing plays a crucial role, especially in the Teno region's nature-based tourism, indicating an issue of procedural justice. If the fishing rights of fishing tourists are strictly curtailed, this will also have a direct impact on the activities of local tourism businesses in the area. If also considering local perceptions and preferences on desirable future directions and choices regarding rural development, then tourism can ideally increase the social and economic well-being of rural areas, prevent outmigration from northern Finland [62], and increase distributive justice.

Some of the recognition injustices related to the use of land and water areas might be related to the fact that the legal–historical status of northern Finland (especially Lapland) differs from the situation elsewhere in Finland or in other Nordic countries. As early as in the mid-18th century, the Sámi were considered to have a legal status comparable to land ownership in case law. How and when these rights disappeared remains an open question. In Norway, which has ratified the International Labour Organization Convention No. 169 (ILO 169), the Sámi have special rights to use land and water areas. This is not the case in Finland and Sweden, which have not signed ILO 169, although they are the same Indigenous peoples, and all three states belong to the same Western legal culture. The Finnish state has not provided clarification regarding these issues, but the Sámi Parliament has also not demanded an official clarification of issues related to the use of these land and water rights. The current study indicates that a further ambiguous dilemma related to substantive justice is how the Sámi fishing right should be treated. For instance,

the decision of the Supreme Court of Finland in 2022 [45] was based on the right to enjoy Sámi Indigenous culture (cf. the Constitution) but was not explicitly able to define in this court case on salmon fishing exactly who Sámi is. The fact that the Finnish Fisheries Act does not recognise a special right of fishing for Indigenous peoples is an unresolved question.

In recent years, the owners of the River Tornio water area, most of whom are local residents, have accused the salmon prerogative of (substantive) injustice. The issue is the uncertainty of the underlying legal basis for it, i.e., how the state obtained the right to salmon fishing in the rivers of the Gulf of Bothnia. The validity of the rule has been questioned [63]. The deniers of the states' right to salmon fishing consider that it was only a matter of historical doctrine based on the feudal concept that the crown is the original owner of all land, and this also means the right to salmon fishing. Swedish and Finnish law does not recognise such state-owned fishing rights.

Since the salmon prerogative is considered to apply only to rivers that run into the Gulf of Bothnia, the dispute regarding the salmon prerogative does not concern Teno. However, two things make the governance of salmon fishing on the Teno also problematic. First, Teno salmon fishing is co-agreed in the Teno Fisheries Agreement and regulations with Norway. This means that both Finland and Norway must agree on how to manage fishing. According to the interviews, the constitutional legal basis of the agreement has not been checked, which indicates substantive injustice. This rule should guarantee the local population a favourable right to fish for salmon. It appears in the interviews that the fishing rights have been taken away from the property owners of the local communities, prohibiting practising both fishing-based tourism and traditional fishing in the area. Second, the Teno is a major recreational fishing river, and the agreement stipulates that part of the fishing rights will be reserved for fishing tourists. Local tourism entrepreneurs, whose livelihoods are primarily based on summer tourism, would also like fishing tourists to have a sufficient share of salmon fishing. The local residents criticised the price of fishing permits and the functioning of the fishing permit system. It is obvious that these issues also contribute to the decline in the number of fishing tourists coming to the area, an issue of distributive justice.

In particular, the problems behind salmon fishing on the River Teno exist because different stakeholders compete for a large percentage of salmon fishing. The demands are often justified by arguments of fairness, which were also raised in the interviews. Another question is that even if a position is justified by fairness, it may also be a matter of a person's own interest (i.e., the tragedy of the commons) [50–52]. The total economic losses due to the ongoing salmon fishing ban in the Utsjoki municipality are expected to reach roughly 15 million euros within the next few years [30]. The local tourism entrepreneurs argued that to at least reduce local economic losses, decisions on fishing permissions should be published well in advance to provide time to prepare for upcoming fishing seasons and adjust to any limitations. This measure could be amongst those that could increase distributive justice. At the moment, this question is not relevant because salmon fishing is entirely banned.

5. Conclusions

Research on landscape justice in northern Fennoscandia has been scarce, despite the rapid transformation in the Arctic. We studied stakeholder perceptions by means of semi-structured interviews to evaluate how the environmental governance of Atlantic salmon and related fishing regulations affects landscape justice. The units of the qualitative analysis were stakeholders practising, managing, monitoring, and governing salmon fishing. We used four forms of justice as analytical categories—distributive, procedural, substantive, and recognition forms of justice—to study landscape justice.

According to the findings based on the analysis of the four forms of justice, the current centralised governance of salmon fishing affects landscape justice considerably while creating distributive and procedural injustice, in particular. The interviewees were aware that changing environments, such as climate change and environmental degradation,

cause biodiversity loss and threaten salmon stocks on both rivers. Environmental risks, such as pollution due to industrial development, were also mentioned as threats to the lives and livelihoods based on salmon. Indeed, government decisions are mainly based on the overall ecological status of salmon populations, but according to the results, at the expense of considering local variations or recognising and systematically evaluating sociocultural and local economic values of the landscape.

Procedural and substantive justice is violated due to fishing restrictions and a lack of clarity regarding the ownership of land and water, which, in turn, deteriorates distributive justice while leading to uneven distribution of risks and benefits. Furthermore, local residents' ability to participate in decision making is limited, which is considered a procedural injustice. In other words, local residents argue that the allocation of fishing rights should be based on the principles laid down, for example, in the Constitution and elsewhere in the legislation. So far, it has been the practice for everyone to receive something, regardless of how fishing rights are generally understood, which is causing confusion. On the other hand, if it can be established on scientific grounds that a fish stock cannot be harvested sustainably, fishing should be limited for all parties to increase distributive justice.

Considering recognition justice, we identified a plurality of interests of those whose lives and livelihoods are based on salmon. These include Indigenous needs, although they are not limited to those. This study revealed that the cultural value of the landscape of salmon fishing covers broader cultural meanings. It is critical to understand how the various needs and worldviews could be taken into account in the implementation of a just salmon fishing policy and legislation to increase recognition justice.

More research data and data collected from fishers are already being used to help research experts with the regional planning and monitoring of Atlantic salmon, but our results showed that more cooperation is needed to increase procedural justice in the form of such participatory management approaches. More empirical data are needed to make cross-border comparisons and compare different stakeholder groups regarding these issues, as well as to understand stakeholder preferences for future changes, particularly in the long term.

Our examination of distributive justice revealed various unevenly distributed socioeconomic and cultural benefits, risks, and impacts that are associated with salmon fishing and its governance. The results of this case study provide a Fennoscandian angle to the landscape justice research and should not be generalised. The results highlight the need for further research to understand whether the stakeholders consider the old land and water rights as still relevant today, and if so, how. Additionally, what level of significance should be given to these rights in different local contexts, particularly from the landscape justice point of view, and across a larger geographical scope?

Due to the temporary ban on salmon fishing in the Teno watershed that came into effect on 1 May 2023, Atlantic salmon will be protected in this area, and Atlantic salmon fishing is prohibited until at least the end of the year. The social, cultural, and economic consequences of such a ban are unclear and should be studied systematically because this information could also be valuable for the environmental planning of other regions, such as the Tornio watershed and other Arctic landscapes.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/land12061174/s1, Supplementary Material S1. List of the main rules and regulations that steer the administration and use of land and water areas and the rights of minorities in the area in question. Supplementary Material S2. Stakeholder interview questions divided into 11 thematic categories, 1A–11B, on Atlantic salmon fishing in northern Finland 2021–2022.

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Note:

[1] We used a broader definition for the term "livelihood". In addition to capabilities, assets such as social and material resources and activities required as means of living (Chambers and Conway 1991, quoted in [21], p. 1), we also considered traditional ways of life and culture, as well as a plurality of income sources as key elements of a traditional livelihood.

References

1. Bennett, N.J. Using perceptions as evidence to improve conservation and environmental management. *Conserv. Biol.* **2016**, *30*, 582–592. https://doi.org/10.1111/cobi.12681.
2. Gurney, G.G.; Mangubhai, S.; Fox, M.; Kiatkoski Kim, M.; Agrawal, A. Equity in environmental governance: Perceived fairness of distributional justice principles in marine co-management. *Environ. Sci. Policy* **2021**, *124*, 23–32. https://doi.org/10.1016/j.envsci.2021.05.022.
3. Soini, K.; Pouta, E.; Salmiovirta, M.; Uusitalo, M.; Kivinen, T. Local residents' perceptions of energy landscape: The case of transmission lines. *Land Use Policy* **2011**, *28*, 294–305. https://doi.org/10.1016/j.landusepol.2010.06.009.
4. Wylie, J.W. *Landscape*, 1st ed.; Routledge: London, UK, 2007.
5. Setten, G.; Brown, K.M.; Rørtveit, H.N. Landscape and social justice. In *The Routledge Companion to Landscape Studies*, 2nd ed.; Howard, P., Thompson, I., Waterton, E., Atha, M., Eds.; Routledge: London, UK, 2018; pp. 418–428. https://doi.org/10.4324/9781315195063-33.
6. Rawls, J. *A Theory of Justice*, 1st ed.; The Belknap Press of Harvard University Press: Cambridge, MA, USA, 1971.
7. Rogers, T.D. Rawls's theory of justice from a utilitarian perspective. *Macalester Journal of Philosophy*, **2004**, 13(1), 5.
8. Dalglish, C. Archaeology and landscape ethics. *World Archaeol.* **2012**, *44*, 327–341. https://doi.org/10.1080/00438243.2012.723320.
9. Pediaditi, K.; Moquay, P. Landscape injustices in polarised communities: Unearthing perceptions at Sitia UNESCO Geopark, Greece. *Landsc. Res.* **2021**, *47*, 1–16. https://doi.org/10.1080/01426397.2021.2000951.
10. Valentini, L. *Justice in a Globalized World: A Normative Framework*; OUP: Oxford, UK, 2011. https://doi.org/10.1093/acprof:oso/9780199593859.001.0001.
11. Cook, K.S.; Hegtvedt, K.A. Distributive justice, equity, and equality. *Annu. Rev. Sociol.* **1983**, *9*, 217–241.
12. Lind, E.A.; Earley, P.C. Procedural justice and culture. *Int. J. Psychol.* **1992**, *27*, 227–242. https://doi.org/10.1080/00207599208246877.
13. Horwitz, A.; Wasserman, M. Formal rationality, substantive justice, and discrimination: A study of a juvenile court. *Law Hum. Behav.* **1980**, *4*, 103–115. https://doi.org/10.1007/BF01040486.
14. Fraser, N. Re-Framing Justice in a Globalizing World. In *(Mis)recognition, Social Inequality, and Social Justice*; Lovell, T., Ed.; Routledge: London, UK, 2007, pp. 17–35.
15. Aas, Ø.; Klemetsen, A.; Einum, S.; Skurdal, J., Eds. *Atlantic Salmon Ecology*; John Wiley & Sons: Chichester, UK, 2010.
16. Lankia, T.; Venesjärvi, R.; Pouta, E. Importance-performance analysis of the fishing tourism service structure: Recreational anglers' preferences on the remote salmon river of Teno in Finland. *Fish. Res.* **2022**, *254*, 106425.
17. Vuori, K.; Kiljunen, M.; Kanerva, M.; Koljonen, M.L.; Nikinmaa, M. Stock-specific variation of trophic position, diet and environmental stress markers in Atlantic salmon *Salmo salar* during feeding migrations in the Baltic Sea. *J. Fish Biol.* **2012**, *81*, 1815–1833. https://doi.org/10.1111/j.1095-8649.2012.03386.x.
18. Erkinaro, J.; Czorlich, Y.; Orell, P.; Kuusela, J.; Falkegård, M.; Länsman, M.; Pulkkinen, H.; Primmer, C.R.; Niemelä, E. Life history variation across four decades in a diverse population complex of Atlantic salmon in a large subarctic river. *Can. J. Fish. Aquat. Sci.* **2019**, *76*, 42–55. https://doi.org/10.1139/cjfas-2017-0343.
19. Miettinen, A.; Palm, S.; Dannewitz, J.; Lind, E.; Primmer, C.R.; Romakkaniemi, A.; Östergren, J.; Pritchard, V.L. A large wild salmon stock shows genetic and life history differentiation within, but not between, rivers. *Conserv. Genet.* **2021**, *22*, 35–51. https://doi.org/10.1007/s10592-020-01317-y.
20. Niemelä, E.; Länsman, M., Hassinen, E., Brørs, S.; Sandring, S., Johansen, M.; Muladal, R. Atlantin lohi (*Salmo salar L.*) Tenojoen vesistössä II: Saaliin kilomääräinen ja kappalemääräinen vaihtelu pyyntitavoittain ja saaliiden määriin vaikuttavia tekijöitä

[Atlantic salmon *Salmo salar* L. in the Tenojoki watershed II: Variation of the catch in kilograms and number of fish according to fishing method and factors affecting the amount of catch]. Fylkesmannen i Finnmark, Miljøvernavdelingen, Rapport 6,. 2009. Available online: http://tanafisk.no/wp-content/uploads/2020/02/2009_6-Atlantin-lohi-Tenojoen-vesistossa-2.pdf (accessed on 29 May 2023).

21. International Recovery Platform (IRP); International Strategy for Disaster Reduction (ISDR); United Nations Development Programme (UNDP). Guidance Note on Recovery: Livelihood. Available online: https://www.unisdr.org/files/16771_16771guidancenoteonrecoveryliveliho.pdf (accessed on 29 May 2023).
22. Lundholm, K. Elinkeinojen kehitys. In *Tornionlaakson historia I: Jääkaudelta 1600-luvulle [The History of Tornio Valley I: From the Ice Age to the 17th Century]*; Hederyd, O., Alamäki, Y., Kenttä, M., Huuva, H., Eds. Tornionlaakson kuntien historiakirjatoimikunta: Tornio, Finland, 1991.
23. Jorgensen, A. Editorial: Landscape justice in an anniversary year. *Landsc. Res.* **2016**, *41*, 1–6. https://doi.org/10.1080/01426397.2016.1115187.
24. Hiedanpää, J.; Saijets, J.; Jounela, P.; Jokinen, M.; Sarkki, S. Beliefs in conflict: The management of Teno Atlantic salmon in the Sámi Homeland in Finland. *Environ. Manage* **2020**, *66*, 1039–1058. https://doi.org/10.1007/s00267-020-01374-6.
25. Palm, S.; Romakkaniemi, A.; Dannewitz, J.; Jokikokko, E.; Pakarinen, T.; Huusko, R.; Broman, A.; Sutela, T. *Tornionjoen lohi-, meritaimen- ja vaellussiikakannat–Yhteinen ruotsalais-suomalainen biologinen selvitys sopivien kalastussääntöjen arvioimiseksi vuodelle 2019 [Tornionjoki Salmon, Sea Trout and Migratory Whitefish Stocks–Joint Swedish-Finnish Biological Survey to Assess Appropriate Fishing Rules for 2019]*; Swedish University of Agricultural Sciences & Natural Resources Institute (LUKE): Uppsala, Sweden, 2019. Available online: http://urn.fi/URN:NBN:fi-fe20201221101727 (accessed on 31 May 2023).
26. Knuuttila, M.; Lankia, T.; Länsman, M.; Pouta, E.; Vatanen, E.; Venesjärvi, R. Tenojoen lohen aluetaloudelliset vaikutukset ja kalastusmatkailun kehittäminen [Regional economic effects of Teno salmon and the development of fishing tourism]. *Luonnonvara–ja biotalouden tutk.* **2020**, 8, 57. Available online: http://urn.fi/URN:ISBN:978-952-380-087-8 (accessed on 29 May 2023).
27. Tana/Teno Monitoring and Research Group. Status of the Tana/Teno River Salmon Populations in 2022. 2023. Available online: http://urn.fi/URN:NBN:fi-fe202301306407 (accessed on 29 May 2023).
28. Ministry of Agriculture and Forestry. Status of River Tenojoki Salmon Stocks Has Not Improved—Proposal to Ban Salmon Fishing in Fishing Season 2023.. Available online: https://mmm.fi/-/tenon-lohikantojen-tilassa-ei-parannusta-lohi-esitetaan-rauhoitettavaksi-kalastuskaudelle-2023?languageId=en_US (accessed on 29 May 2023).
29. Valtioneuvosto. Luonnos Tenojoen tulevan kalastuskauden kalastusmääräyksistä lausunnolla [Draft of River Teno fishing regulations for the coming fishing season under the statement process]. 8 March 2023. Available online: https://valtioneuvosto.fi/-/1410837/luonnos-tenojoen-tulevan-kalastuskauden-kalastusmaarayksista-lausunnolla (accessed on 29 May 2023).
30. YLE. Utsjoki haluaa lohenkalastuksen kieltämistä myös merelle ja Norjaan—Paikallisille kalastus pitäisi sallia kymmeneksi päiväksi [Utsjoki Wants to Ban Salmon Fishing Also in the Sea and in Norway - Locals Should Be Allowed to Fish for Ten Days]. 2 November 2022. Available online: https://yle.fi/uutiset/74-20003225 (accessed on 29 May 2023).
31. Abernethy, P.; Saijets, J.; Jokinen, M.; Knuuttila, M.; Hiedanpää, J. Tenojoen lohenkalastuskiellon yhteiskunnalliset vaikutukset ja niiden seuranta [Social effects of the Teno salmon fishing ban and their monitoring]. *Luonnonvara–ja biotalouden tutk.* **2022**, *103*, 76.
32. Stensland, S. Fishing rights and supply of salmon angling tourism in mid-Norway. *Scand. J. Hosp. Tour.* **2010**, *10*, 207–230.
33. Joona, J.T. Valtion lohiregaali: Tutkimus valtion erityisestä oikeudesta lohen ja meritaimenen kalastukseen Pohjanlahteen laskevissa suurissa virroissa [The Salmon Prerogative: A Study of the State's Special Right to Fish for Salmon and Sea Trout in the Large Streams Flowing Into Gulf of Bothnia]; *Jurid. Lapponica*, 2015; Volume 40. 225 p.
34. Kulmala, S.; Haapasaari, P.; Karjalainen, T.P.; Kuikka, S.; Pakarinen, T.; Parkkila, K.; Romakkaniemi, P.; Vuorinen, P.J. *TEEB Nordic Case: Ecosystem Services Provided by the Baltic Salmon: A Regional Perspective to the Socio-economic Benefits Associated with a Keystone Migratory Species*; Nordic Council of Ministers: Copenhagen, Denmark, 2013; pp. 266–276.
35. Carmin, J.; Agyeman, J., Eds. *Environmental Inequalities Beyond Borders: Local Perspectives on Global Injustices*; The MIT Press: Cambridge, MA, USA, 2011.
36. Mels, T. The trouble with representation: Landscape and environmental justice. *Landsc. Res.* **2016,** *41*, 417–424. https://doi.org/10.1080/01426397.2016.1156071.
37. Pokki, H.; Artell, J.; Mikkola, J.; Orell, P.; Ovaskainen, V. Valuing recreational salmon fishing at a remote site in Finland: A travel cost analysis. *Fish. Res.* **2018**, *208*, 145–156.
38. Petersen, R.C.; Gislason, G.M.; Vought, L.B.M. Rivers of the Nordic countries. In *River and Stream Ecosystems of the World*; Cushing, C.E.; Cummins, K.W.; Minshall, G.W., Eds.; University of California Press: Berkeley, CA, USA, 2006; pp. 295–341.
39. Joona, J. Pohjois-Lapin erityiset kalastusoikeuskysymykset [Northern Lapland's Special Fishing Rights Issues]. *Jurid. Lapponica* **2011**, Volume *36*. 286 p.
40. Hertting, W. *Rätten till laxfiske i vissa delar av Torne älvs vattensystem;* Utredning med särskild avseende å kronans fiskerätt *[The Right to Salmon Fishing in Certain Parts of the Torne River Water System; Investigation With Special Reference to the Crown's Fishing Rights]*: Luleå, Sweden, 1954.
41. Lagerlöf, E. *Kronans regalrättsanspråk och afvittringarna vid Lule älv [The Crown's Regal Rights Claim and the Clearances at Luleå River]*; Norstedt: Stockholm, Sweden, 1912.

42. Prawitz, G. *Ett bidrag till fiskeregalets historia i Sverige: Sötvattensfisket i de norrländska kustlandskapen [A Contribution to the History of the Fishing Regime in Sweden: Freshwater Fishing in the Norrland Coastal Landscapes]*; Almqvist & Wiksell: Uppsala, Sweden, 1952.
43. Lewenhaupt, S. *Historik rörande det regala laxfisket i Torneå elf. [History Concerning the Royal Salmon Fishery of River Tornio]*; Beckman: Stockholm, Sweden, 1892.
44. Andreasson, K.; Dahlin, J. *Allmänt Vatten—Ett Grumligt Ämne [Public Waters—A Murky Subject]. LM-Rapport 2012:1*. Lantmäteriet: Gävle, Sweden, 2012.
45. KKO. Korkein oikeus hylkäsi syytteet saamelaisten kalastusoikeuksia koskevissa asioissa [The Supreme Court Rejected the Charges in Matters Concerning the Sami's Fishing Rights]. Supreme Court Decisions: KKO:2022:25 and KKO:2022:26 (R2019/424 and R2019/425, 13 April 2022). Available online:https://korkeinoikeus.fi/fi/index/ajankohtaista/tiedotteet/2022/korkeinoikeushylkasisyytteetsaamelaistenkalastusoikeuksiakoskevissaasioissa.html# (accessed on 29 May 2023).
46. UCLA Center for Health Policy Research. Health DATA Program—Data, Advocacy and Technical Assistance. Health Data Training Documents: Section 4: Key Informant Interviews. Available online: https://healthpolicy.ucla.edu/programs/health-data/trainings/Documents/tw_cba23.pdf (accessed on 29 May 2023).
47. Selvi, A.F. Qualitative content analysis. In *The Routledge Handbook of Research Methods in Applied Linguistics;* McKinley, J., Rose, H., Eds.; Routledge: London, UK, 2019, pp. 440–452.
48. European Environment Agency. Natura 2000—Standard Data Form. Available online: https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=FI1301912 (accessed on 29 May 2023).
49. Natura 2000—verkoston valmistelu [Natura 2000—Preparation of the Network]. Valtiontalouden tarkastusviraston tarkastuskertomus 140/2007, p. 97. Available online: https://www.vtv.fi/app/uploads/2018/07/04081234/natura-2000-verkon-valmistelu-140-2007.pdf (accessed on 29 May 2023).
50. Sinden, A. The tragedy of the commons and the myth of private property solution. *U. Colo. L. Rev*. **2007**, *78*, 533.
51. Finlayson, A.; McCay, B.J. Crossing the threshold of ecosystem resilience: The commercial extinction of northern cod. In *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*; Berkes, F.; Folke. C., Eds.; Cambridge University Press: New York, NY, USA, 1998.
52. Hardin, G. The Tragedy of the Commons. *Science* **1968**, *162*, 1243–1248.
53. Leu, T.C. Tourism as a livelihood diversification strategy among Sámi Indigenous people in northern Sweden. *Acta Boreal*. **2019**, *36*, 75–92. https://doi.org/10.1080/08003831.2019.1603009.
54. Stosch, K.C.; Quilliam, R.S.; Bunnefeld, N.; Oliver, D.M. Catchment-scale participatory mapping identifies stakeholder perceptions of land and water management conflicts. *Land* **2022**, *11*, 300. https://doi.org/10.3390/land11020300.
55. Alexandre, C.M.; Silva, S.; Mateus, C.S.; Lança, M.J.; Quintella, B.R.; Belo, A.F.; Domingues, A.; Rato, A.S.; Oliveira, R.; Moreira, A.; et al. Living on the edge: Management and conservation of Atlantic salmon at the southern limit of the species distribution. *Biol. Life Sci. Forum* **2022,** *13*, 107. https://doi.org/10.3390/blsf2022013107.
56. Länsman, M.; Niemelä, E. Lohenkalastus Tenojoen sivuvesissä [Salmon Fishery in the Finnish Tributaries of the River Teno]. Riista–ja kalatalous selvityksiä. Riista–ja kalatalouden tutkimuslaitos: Helsinki, 2010. Available online: https://jukuri.luke.fi/bitstream/handle/10024/531220/rks2010_2.pdf?sequence=1 (accessed on 29 May 2023).
57. Joona, J. Ikimuistoinen oikeus: Tutkimus Lapin alkuperäisistä maa- ja vesioikeuksista. Doctoral Dissertation. Northern Institute for Environmental and Minority Law; Arctic Centre, University of Lapland: Rovaniemi, Finland, 2019.
58. Kuokkanen, R. The Deatnu Agreement: A contemporary wall of settler colonialism. *Settl. Colon. Stud*. **2020**, *10*, 508–528.
59. Thompson, M.; Ellis, R.; Wildawsky, A. *Cultural Theory*; Routledge: London, UK, 1990.
60. Hietanen, S.; Valli, R.; Vatanen, S.; Karppinen, P. 2021. Kansallisen Itämeren alueen lohi-ja meritaimenstrategian 2020 arviointi [Evaluation of the National Baltic Sea Region Salmon and Sea Trout Strategy 2020]. Available online: https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163667/MMM_2021_6.pdf (accessed on 29 May 2023).
61. Brattland, C.; Mustonen, T. How traditional knowledge comes to matter in Atlantic salmon governance in Norway and Finland. *Arctic* **2018**, *71*, 375–392.
62. Komu, T. Pursuing the Good Life in the North: Examining the Coexistence of Reindeer Herding, Extractive Industries and Nature-Based Tourism in Northern Fennoscandia. Ph.D. Thesis, Acta Universitatis Ouluensis B Humaniora 177, Faculty of Humanities, Cultural Anthropology, University of Oulu, Oulu, Finland, 2020.
63. Huhtala, P. Pohjois-Suomen erityisperusteiset kalastusoikeudet ja lohiregaali. Nykytilanne ja mahdollisten muutostarpeiden arviointi [Fishing rights resting on special grounds and the royal salmon prerogative in Northern Finland – current situation and assessment of possible needs for amendments]]. *Maa- ja metsätalousministeriön Julk.* **2019**, *23*, 9–77. Available online: https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161889/MMM_2019_23.pdf (accessed on 29 May 2023).