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## Fishing

In this chapter, we describe Sami fishing in interior lakes, streams, and rivers in detail. We look closely at Lule lappmark and include information about neighboring areas. Fishing has specific characteristics for various species and seasons, depending on how and when they spawn and how they behave. The waters in interior Fennoscandia generally are considered low in productivity, but waters in the two regions, forest and mountains, differ. The waters in the boreal forest are nutrient rich and high yielding and have many fish species compared to the nutrient-poor fishing waters in the mountains, which are populated by only a few fish species. The main argument put forward is that users who had access to rivers, lakes, and streams in the boreal forest thus had better possibilities to create a livelihood based on fishing compared to those who lived in or closer to the mountains. To create social and economic stability for the household, fishing was organized as an exclusive right, resembling private property. Rules were necessary because households had to optimize the catch to survive on fishing, and were only achievable if there was some kind of institution in place that regulated each household's access to fishing. At the end of the early modern period, these areas became smaller and it became harder to survive on fishing.

## Strategies for Fishing

In the early modern period, many Sami households were fishers as their main occupation. An intriguing question is how it was possible to support a household on fishing in an area with low-productivity waters given the existing, relatively inefficient fishing methods, especially when the catch was not enough for households to be self-sufficient. They also had to amass a surplus of dried fish for paying taxes and trading. What strategies, and thus institutions, did households need to secure a satisfactory fish harvest from year to year?

Despite the fact that water and fishing have been at the forefront of discussions about the management of CPRs since the 1950s,<sup>1</sup> relatively little attention has been paid to inland, or freshwater, fishing. Most research about fish as a CPR has been concerned with large-scale fishing in the open seas. The start of the modern debate about collective-action problems and overharvest of commonly used resources was H. Scott Gordon's seminal work about the fishing industry in 1954.<sup>2</sup> He argued, fourteen years before Hardin made the concept "tragedy of the commons" widely known,<sup>3</sup> that resources will be depleted when "natural resources are owned in common and exploited under conditions of individualistic competition."<sup>4</sup> While open-sea fisheries still face many challenges and the depletion of vital resources is an imminent threat, research about inshore fisheries has shown that in many cases collective-action problems have been solved. One example is James Acheson's studies that show how fishers in Maine, USA, managed to devise institutions for a sustainable inshore lobster fishery.<sup>5</sup> Another example is Ostrom's meta-analysis of CPRs that led to her widely known design principles for sustainable use.<sup>6</sup>

Even though the large-scale fishery has attracted most attention in fisheries science and policy, worldwide small-scale fisheries actually have

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<sup>1</sup> Gordon (1954). See also Acheson (2003) and Basurto et al. (2013).

<sup>2</sup> Gordon (1954).

<sup>3</sup> Hardin (1968).

<sup>4</sup> Gordon (1954, p. 124).

<sup>5</sup> Acheson (1988, 2003).

<sup>6</sup> Ostrom (1990, p. 90).

many more practitioners and half of the world's wild-caught fish production.<sup>7</sup> In research on fishing, focus has generally been on the harvest, but to understand and analyze the complexity of a fishery, one needs to include all the work that precedes and succeeds harvest: negotiations of access rights, maintenance of gear, preservation of fish, taking fish to markets, etc.<sup>8</sup> All of these activities include more people than those taking part in the harvest and have an impact on a fishery.

Research about CPRs also has generally paid less attention to freshwater fishing than sea fishing. One reason might be that excluding users in sea fishing is harder than in lakes. Nevertheless, harvests of fish in lakes and streams have been very important for people around the world, especially many indigenous groups who depend on freshwater fishing. For them, the household's subsistence has often revolved around strategies to secure fish harvests.<sup>9</sup> In order to analyze fishing strategies and who had the right to harvest fish, one also needs to understand more about the rules and norms that regulated fishing and how they changed. The rules and the ability of households to rely on fishing were, for example, influenced by the composition of fish species, the conditions in the waters that fisher households had access to, and the processes of fishing as a livelihood. Which species of fish were caught? Which methods were used? Who was fishing? Where and when did they fish? What did they do with the fish they caught?

In a Sami context, research has primarily focused on sea fishing along the coast in northern Norway.<sup>10</sup> Fishing in lakes and streams differs in many ways from fishing in the open sea, yet parallels can be drawn between the two due to certain cultural factors that are shared among Sami households. Some anthologies by anthropologists that describe freshwater fishing by Sami focus mainly on methods and gear from

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<sup>7</sup> Smith and Basurto (2019).

<sup>8</sup> Basurto et al. (2020).

<sup>9</sup> Bennett et al. (2018), Needs-Howarth and Cox Thomas (1998), and Rapalje Martin (1989).

<sup>10</sup> Some examples are Bjørklund (1991), Brattland (2010), L. Hansen (2006), and Nielssen (1986). Detailed early modern rules about fishing are known from Sea Sami along the Norwegian coast (Bjørklund 1991).

prehistoric time to the twentieth century.<sup>11</sup> However, they only discuss fishing as an economic strategy in general terms and do not try to define any rights to fish. Hultblad reviewed land use and users' rights to resources in Lule lappmark based on court records from the same time period as our research.<sup>12</sup> Nils Arell did the same for Torne lappmark a decade later.<sup>13</sup> In the last decade some new research has emerged about Sami inland fishing that provides a discussion of fishing as an ecologically strategic resource in pre-colonial households.<sup>14</sup> In these studies, historical and ecological methods are combined to describe the environmental settings for pre-colonial Sami land use. Environmental data were used to learn more about what roles different natural resources played in the inhabitants' sustenance. For us, the results chiefly contribute useful knowledge about the historical-ecological frames for inland fishing.

Fishing can be described as a social-ecological system where users interact with nature.<sup>15</sup> The need for institutions, i.e., rules that regulate access to fishing waters, is necessary, and defined rules are especially important in an environment with low-productivity waters. Rules also were necessary because, in these waters, households had to optimize the catch in order to survive on fishing, and maximum sustainable yields were only achievable if there was some kind of institution in place that regulated each household's access to fishing. Some of these rules were nested in national legislation and, regarding fishing, the most important link was established between taxes and fishing rights.<sup>16</sup> The state had connected the right to use specific land and water to the tax and, as long as the tax was paid, users had the right to fish in certain lakes within these *skatteländ*.<sup>17</sup> However, even though the state was authorized to tax the inhabitants, the actual use (proprietorship) of land and water and the rules for and practice of everyday fishing in interior northern Sweden

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<sup>11</sup> See, for example, Phebe Fjellström (1986).

<sup>12</sup> Hultblad (1968).

<sup>13</sup> Arell (1977).

<sup>14</sup> Norstedt et al. (2014) and Norstedt and Östlund (2016).

<sup>15</sup> Ostrom (2009). See also McGinnis and Ostrom (2014).

<sup>16</sup> Norstedt et al. (2014).

<sup>17</sup> Arell (1977, pp. 67 and 129).

were decided by local users. Even changes in users and new boundaries for fishing districts were made by the local users. Any changes in these rules mainly reflected changes in the households' economy and new power dynamics in the local community.

## Lakes, Rivers, Streams, and Fish

There are countless lakes and streams in Lule lappmark, and much of the water begins its journey in the mountain ridge that separates Sweden from Norway before it runs east via streams, lakes, and eventually rivers, to the Gulf of Bothnia. Seventeenth- and eighteenth-century accounts retrieved from different parts of interior northern Fennoscandia mention in total twelve fish species that were caught by the inhabitants: northern pike (*Esox lucius*), European perch (*Perca fluviatilis*), common roach (*Rutilus rutilus*), European whitefish (*Coregonus lavaretus*), grayling (*Thymallus thymallus*), salmon (*Salmo salar*), brown trout (*Salmo trutta*), Arctic char (*Salvelinus alpinus*), whitefish (*Coregonus albula*), burbot (*Lota lota*), ide (*Leuciscus idus*), and common bream (*Abramis brama*).<sup>18</sup> In Ume lappmark, all species but burbot were eaten by the inhabitants<sup>19</sup> (Fig. 5.1).

In Lule lappmark, it was possible to live quite well by fishing in the eighteenth century if the fisher also hunted, according to Högström.<sup>20</sup> At the same time, fishing and hunting seem to have been serious businesses only for households that were “poor in reindeer.”<sup>21</sup> Ehrenmalm described in his travel account of Åsele lappmark how fish were plentiful in the lakes and that they were fatter and better than he had seen anywhere else. However, not all species were available in all fishing waters, and some lakes offered no fish at all.<sup>22</sup> Moreover, fishing was generally described as very poor in the mountains, with catches predominantly consisting of

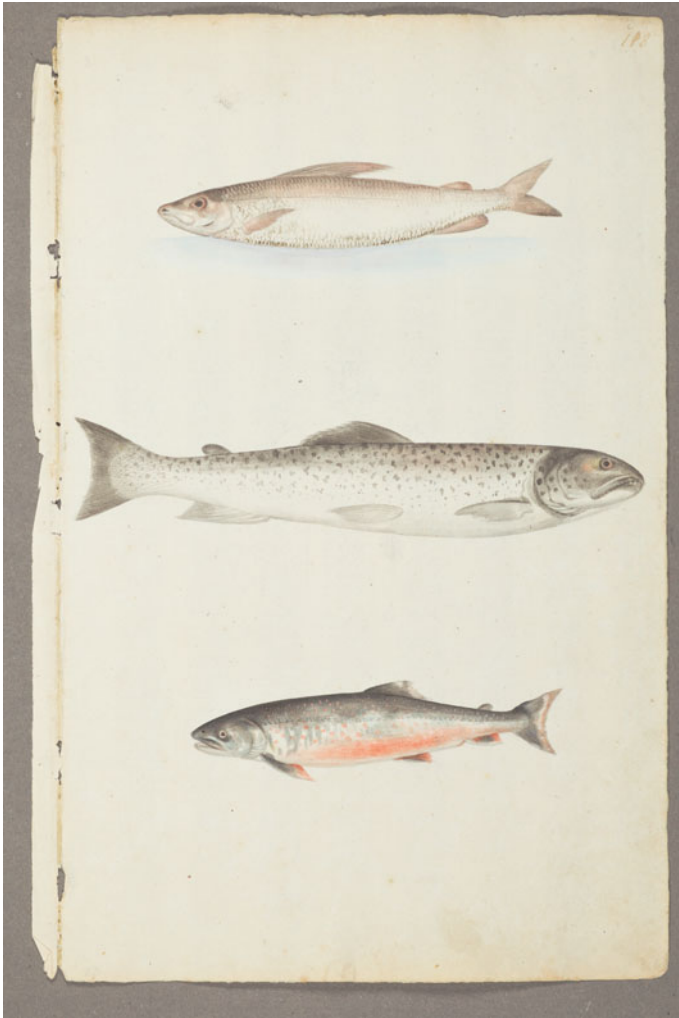
<sup>18</sup> Bergman and Ramqvist (2017), Ehrenmalm (1743, p. 127), Graan (1899, p. 36), Norstedt et al. (2014), Rheen (1897, p. 53), and Törnæus (1900, p. 61).

<sup>19</sup> Norstedt et al. (2014).

<sup>20</sup> Högström (1747, p. 85).

<sup>21</sup> Graan (1899, p. 35) and Högström (1747, p. 85).

<sup>22</sup> Ehrenmalm (1743, p. 127).



**Fig. 5.1** From the top, European whitefish (*Coregonus lavaretus*), salmon (*Salmo salar*), and Arctic char (*Salvelinus alpinus*), depicted in 1695 (Source *Iter lapponicum*, Luefsta MS 92, Uppsala University Library, Sweden. Public domain. <https://www.alvin-portal.org/alvin/imageViewer.jsf?dsId=ATTACHMENT-0117&pid=alvin-record:162152>)

Arctic char and brown trout,<sup>23</sup> albeit Linnaeus and Rheen recorded that harvests in mountain lakes occasionally were considered very good.<sup>24</sup>

Salmon, and northern pike and Arctic char to lesser degrees, were explicitly mentioned in Lule lappmark court cases regarding rights to fish. Two other species were mentioned indirectly as names of lakes—Lake Abborrträsk (European perch) and Lake Mörtsjön (common roach). Lundius wrote that salmon swam up Lule River all the way to Jokkmokk, approximately 170 km from the coast, and that they continued even farther when water levels were higher than normal.<sup>25</sup> We conclude, based on evidence from contemporary accounts, that salmon was an important species in Lule lappmark. Each salmon fishing site along Lule River was listed in an account from the seventeenth century by priest Samuel Rheen.<sup>26</sup> Tornæus stated that salmon were also important in Torne lappmark and that users there primarily fished for salmon in northern Norwegian rivers.<sup>27</sup>

According to Lundius, salmon fishing was not an option in Ume lappmark, because the salmon swam no more than about 30 km up Ume River.<sup>28</sup> In their research on Ume lappmark, Norstedt et al. listed the fish species commonly harvested in the 1670s: northern pike, European perch, common roach, and European whitefish.<sup>29</sup> Additionally, Bergman and Ramqvist, when comparing the share of each species in the harvests, showed that northern pike made up 67 percent of the catch, European perch 14 percent, and European whitefish 12 percent.<sup>30</sup> The percentages were based on information from 1550s tax records from all parishes in Västerbotten County.

In Lule lappmark, both reindeer pastoralist and fisher households were mobile during the seventeenth century, moving between temporary settlements to optimize their access to natural resources. Reindeer

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<sup>23</sup> Norstedt et al. (2014).

<sup>24</sup> Linnaeus (2003, p. 103) and Rheen (1897, p. 54).

<sup>25</sup> Lundius (1905, pp. 18–19).

<sup>26</sup> Rheen (1897, pp. 64–65).

<sup>27</sup> Tornæus (1900, p. 61).

<sup>28</sup> Lundius (1905, pp. 18–19).

<sup>29</sup> Norstedt et al. (2014).

<sup>30</sup> Bergman and Ramqvist (2017).

pastoralist households moved seasonally to find good grazing, often over long distances between the mountains in summer and the boreal forest in winter. Fisher households, on the other hand, moved over shorter distances between lakes and streams in the boreal forest.<sup>31</sup> According to the sources, their precise routes were decided by when and where certain species of fish spawned, which could vary in space and time between populations, species, and fishing waters. Moving was thus a way for fisher households to try to optimize their harvests. According to Graan, only exceptionally poor fisher households stayed in the same place year-round.<sup>32</sup>

Some sources described fishers' homes as somewhat permanent hexagonal huts with walls made of boards, brushwood, or peat.<sup>33</sup> These huts were built in abundance, especially along the shores of regularly visited fishing waters. Although permanent buildings were common in some places, Högström, who was especially familiar with Lule lappmark, only encountered fishers in moveable tents with canvases made of frieze, similar to those used by reindeer pastoralist households.<sup>34</sup> He, however, described how fisher households sometimes erected temporary shielings alongside far-off lakes. These shielings were made of peat or brushwood, short-lived construction according to him, and were probably only used to give shelter to a couple of household members for a few days while they fished in the lake.

Sometimes more permanent storage buildings were erected along the households' moving routes, where fishing gear and equipment could be stored.<sup>35</sup> A *stabbur* or *ájtte* (small log building for storage) was, for example, mentioned in a court ruling from Lule lappmark.<sup>36</sup>

Fishing with available methods likely only rendered plentiful catches when the fish were spawning. Accordingly, Linnaeus described that fish harvests were especially good in spring and early summer when northern

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<sup>31</sup> Graan (1899, p. 35), Högström (1747, p. 98), Rheen (1897, p. 14), and Tornaeus (1900, p. 61).

<sup>32</sup> Graan (1899, p. 35).

<sup>33</sup> Graan (1899, p. 46) and Rheen (1897, p. 15).

<sup>34</sup> Högström (1747, p. 103).

<sup>35</sup> Niurenus (1905, p. 14).

<sup>36</sup> HRA (1710, p. 457).



pike spawned.<sup>37</sup> He described, for example, that no Sami were present in the church town of Lycksele in Ume lappmark at Pentecost since it coincided with spawning, the Sami's prime harvest time. Lundius indirectly corroborated the importance of spring fishing as he stated that the fishing in Ume lappmark was severely hampered in years when spring floods ran extraordinarily high, which, according to him, happened every 4 to 5 years.<sup>38</sup>

The importance of spring fishing in the northern lappmark is linked to the fact that northern pike made up the bulk of the catch for households engaged in freshwater fishing.<sup>39</sup> Consequently, a poor harvest was probably economically devastating. In years when the conditions for spring fishing were unusually difficult due to high water, the households' harvests of the three economically most important fish species (northern pike, European perch, and common roach) were jeopardized. In Lule lappmark, a poor spring harvest could have been somewhat balanced by good harvests of salmon in summer and fall. Linnaeus described that salmon, starting in the beginning of May, progressively wandered west in Lule River to spawn before returning, often emaciated, to the Gulf of Bothnia in late fall.<sup>40</sup> Summer and early fall were hence the best times for salmon fishing. Another recuperative strategy was probably fishing for European whitefish, which spawned in various rivers and lakes between September and February.

## Available Technology

Few descriptions of fishing methods exist in the contemporary sources. Lundius described how all Sami, both poor and rich, had nets for seining (using vertical, weighted nets).<sup>41</sup> And according to Tornaues, household members in northernmost Kemi and Torne lappmark carried their

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<sup>37</sup> Linnaeus (2003, p. 45).

<sup>38</sup> Lundius (1905, p. 29).

<sup>39</sup> Bergman and Ramqvist (2017) and Norstedt et al. (2014).

<sup>40</sup> Linnaeus (2003, pp. 86, 158).

<sup>41</sup> Lundius (1905, p. 19).

*nootredskap* (seining tools) from one lake to the next, depending on where the fish were spawning.<sup>42</sup> A more detailed description is given by Lundius from Ume lappmark, where he recorded that fisher households prepared to *draga not* (seine) in the evening and fished until sunrise (around 2 a.m. in summer).<sup>43</sup> When they came home in the morning, they hung their fishing gear to dry. Thereafter, they boiled and ate the largest fish in the catch. The rest were, according to Lundius, dried to be eaten when they traveled to “church days,” which took place in July each year.<sup>44</sup>

Throughout history, seining has been a fishing technique worldwide. The net is dragged through the water from either the shore or a boat and put together to form a bag-like container where the fish are caught. The net could also be extended across a narrow waterbody such as a creek, stream, or bay and dragged along the shores from both sides. Based on the sources, the term *not* (seine) was apparently used throughout the lappmark in the seventeenth and eighteenth centuries, but in specific cases it is uncertain whether *not* actually meant seine hauling or fishing with stationary gillnets. The terminology seems a bit inconsistent here, albeit stationary gillnets were probably also used extensively during this time. According to a 1709 court case, two users from Sjokksjokk had fished *både med noot och näth* (both with seine and gillnets) when they illegally fished in a lake.<sup>45</sup> In accounts written by priests and travelers, the use of *ljuster* (fish spears) is not mentioned explicitly, but in a court ruling dealing with the distribution of an inheritance from a settler who had been married to a Sami woman, various fishing gear were listed, including *36 famnar* (the equivalent of 64 m) of seine, sixteen nets, one fish spear, and one boat.<sup>46</sup>

Fisher households needed boats to fish. In an account about Ume lappmark, Lundius recorded that boats were both constructed and used by the inhabitants.<sup>47</sup> According to him, the typical boat was light enough

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<sup>42</sup> Tornaeus (1900, p. 61).

<sup>43</sup> Lundius (1905, p. 10).

<sup>44</sup> Phebe Fjellström (1986).

<sup>45</sup> HRA (1709, pp. 343–344).

<sup>46</sup> HRA (1701, p. 417).

<sup>47</sup> Lundius (1905, p. 9).

for one man to carry on his shoulders. It was made of spruce and jointed by threads from fine spruce roots with a minimum number of nails to keep the weight down. Lundius only mentioned that the boats were used for transport, not for other purposes. However, it seems reasonable to say they also were used extensively for fishing. According to him, the light weight was crucial because the boats had to be carried past rapids. Based on the mobile lifestyle of most fisher households, the light weight was just as important for carrying them to remote fishing waters.<sup>48</sup>

Boats that were left unsupervised sometimes were used illegally by others. In one court ruling from Lule lappmark, a boat left on the south shore of a lake had been used unlawfully by a man traveling to Norway. He had left it on the western shore of the lake, which made it impossible for the boat's owner to harvest gillnets that he had set in the lake. When the owner finally got the boat back, after seven days, his ten old nets had been ruined, together with 20 Arctic chars rotting in them.<sup>49</sup> Nets were made of delicate materials, i.e., hemp and flax, and to last they had to be maintained properly.

From Åsele lappmark, Ehrenmalm described three kinds of fishing gear: (1) *ryssjor* (fish traps), (2) gillnets in four mesh sizes, and (3) three types of seining gear.<sup>50</sup> According to him, fishing with hooks and lures were unheard of there.

There are few descriptions of winter fishing in the early modern sources, although fishing probably was a recurring activity for fisher households year-round. Winter fishing was especially strategic if users wanted to catch European whitefish, which spawn from September to February. Lundius wrote in one account of ice fishing, without going into detail, that fisher households in Ume lappmark caught enough fish throughout winter to survive.<sup>51</sup> In Lule lappmark, Linnaeus described, possibly from hearsay, how *isnot* (ice fishing with nets) was implemented between Andersdagen (Saint Andrew's Day) on November 30 and Christmas.<sup>52</sup> He described how the fishers first made holes in the ice

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<sup>48</sup> Graan (1899, p. 52).

<sup>49</sup> HRA (1699, p. 75).

<sup>50</sup> Ehrenmalm (1743, p. 128).

<sup>51</sup> Lundius (1905, p. 12).

<sup>52</sup> Linnaeus (2003, p. 152).

and then pulled the net with a rod under the ice, primarily to catch European whitefish. In Åsele lappmark, Ehrenmalm described how the winter fishing poles were somewhat longer and much thinner than the ones he had seen in Stockholm, a statement that indirectly gives proof that Sami fished during winter. Also, several court rulings mention fishing during winter.

## Labor Division

There is sparse information about who in a household did what with regard to fishing. Nevertheless, many of the work tasks related to reindeer husbandry, such as milking, guarding, and gathering the reindeer, were performed by both men and women. This was true also for many of the household chores, such as food preparation and cooking. Therefore, it seems reasonable that fishing was also carried out by both men and women. Concurrently, at the end of the seventeenth century, the provincial governor of Finnmark, Norway (now part of Troms og Finnmark county), described that one difference between Norwegian and Sami fisher households along the northern coast was that Sami women took an active part in fisheries.<sup>53</sup>

Also, two court rulings in Lule lappmark indicate that fishing was a task that could be performed by women. In the first case, from 1701, a settler was using fishing waters belonging to a peasant in Luleå parish without his permission.<sup>54</sup> The peasant had given a Sami household permission to fish there. When the wife in the Sami household was net fishing in the lake, the settler had assaulted her with a stick and a horse rein resulting in bloody wounds. Afterward, he had taken her nets; when she found them fourteen days later, they were destroyed. A maid who had accompanied her to the lake had witnessed the assault according to the court ruling.

In the second case, from 1712, a man, Olof Andersson, accused a woman, Karin Andersdotter, in Jokkmokk of not letting him use fishing

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<sup>53</sup> L. Hansen (2006).

<sup>54</sup> HRA (1701, pp. 411–412).

waters that he claimed he had the right to use. Additionally, he accused her of having removed four of his nets from the water.<sup>55</sup> These two examples show that the gender division of labor was not as apparent among Sami fisher households as it was among non-Sami households. Seemingly, a woman could go fishing with her maid, as well as remove nets that she saw as an intrusion on her fishing rights. An opportunistic strategy for households to optimize their harvests probably was to engage as much of the available workforce as possible during the peak fishing seasons.

## Importance of Resources

Fishing was carried out for many reasons, but perhaps the most important motive was that it was an accessible way to get fat and proteins. Sources describe how fish was the most important foodstuff for users along rivers and lakes in the lappmark. Ehrenmalm wrote, for example, that fisher households in Åsele lappmark got almost all of their nourishment from fish, and that fishing was their only occupation.<sup>56</sup> Furthermore, Linnaeus wondered how the Sami he met outside Lycksele in Ume lappmark could eat just fish and nothing but fish.<sup>57</sup>

Until the end of the seventeenth century, it was important for households to have a surplus of dried fish, especially pike, since it was a tax good.<sup>58</sup> Ehrenmalm described that some of the fish was boiled and eaten fresh, some was dried to support the household during winter, and the rest was sold *till sina utskylders betalande* (to pay their debts).<sup>59</sup> Besides the state tax, inhabitants also paid tax to the church, and this was continuously paid in kind with products like dried fish. Additionally, fisher households preferably wanted a surplus of dried fish to use for trade and exchange as a means to obtain goods that were needed in the

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<sup>55</sup> RA SH (1712, pp. 505–506, § 11). See also Hultblad (1968, p. 423 case 1067a).

<sup>56</sup> Ehrenmalm (1743, p. 127).

<sup>57</sup> Linnaeus (2003, p. 55).

<sup>58</sup> Lundmark (1982). See also Niurenien (1905, p. 15).

<sup>59</sup> Ehrenmalm (1743, p. 128).

household. Fisher households exchanged, for example, dried fish with reindeer pastoralist households for reindeer calves, meat, and cheese.<sup>60</sup> There was also an annual winter market in Jokkmokk, where households could trade dried fish for consumer products or money from external tradesmen.

## Property-Rights System

The rights to use fishing grounds were put forward by users and the local court during court proceedings. As pointed out in Chapter 2, we use the words *right* and *access* interchangeably, as an ability to legally derive benefits, and does not presuppose property.<sup>61</sup> In an early modern indigenous setting, the ways users could get access to fishing waters were complex.

In the mid-seventeenth century, land within Sami villages in Lule lappmark was by and large divided among households into defined *skatteländ*.<sup>62</sup> They were fairly large and contained fishing waters, hunting grounds, and grazing land for one to a few households. In discussions about early modern Sami property rights, focus has been on how to interpret rights associated with these *skatteländ* and how these rights developed over time.<sup>63</sup>

Strong land tenure usually indicates the right to sell land and water. We have not found any cases where fishing rights were sold between Sami users. Only one record mentioned someone selling fishing waters: a case from 1699 stated that two Sami had sold a salmon fishery in Lule River in the 1670s to a farmer in Lule parish.<sup>64</sup>

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<sup>60</sup> Rheen (1897, p. 19).

<sup>61</sup> Ribot and Peluso (2003).

<sup>62</sup> Hultblad (1968, pp. 85, 90).

<sup>63</sup> Holmbäck (1922), Korpijaakko-Labba (1994), and N.-J. Päiviö (2011).

<sup>64</sup> HRA (1699, pp.86–89).

## Inheritance

Inheritance of property is another land right, although not as strong as the right to sell. In most court rulings from Lule lappmark, inheritance is merely implied and is clearly mentioned in only a few of them. However, a popular argument among users was that a close relative had used the fishing waters in question.

Only one court record explicitly mentioned inheritance in relation to legal inheritance in Swedish law. In 1692, four large lakes and a few small ones were divided between two siblings. The brother inherited two-thirds (“brother’s share”) and the sister one-third (“sister’s share”) of the fishing waters. In 1705, a man in Tuorpon, who had obtained the “brother’s share,” complained that three users in Jokkmokk, who were in charge of the “sister’s share,” used more fishing waters than they had the right to. The court decided to delineate the borders between them by placing marks in nature that distinguished who had the right to what (user rights). Moreover, the court appointed two trusted men from Sirkas to organize the demarcation in collaboration with the involved users the upcoming summer.<sup>65</sup> A year later, back in court, the agreement was recorded with a description of the borders.<sup>66</sup>

Aside from inheritance, fishing waters could also be divided and transferred to relatives while landholders were still alive. An example of this was when a man in Sjokksjokk in 1754 divided his land, including fishing waters, between his son and his daughter’s son.<sup>67</sup>

A strong argument for a person to continue using specific fishing waters was that it had been used by him or her for a long time. In 1774, two users were in a conflict over the right to fish Arctic char.<sup>68</sup> In the verdict, the court denied the plaintiff the right to fish at the same site as the defendant, the principal argument being that the defendant, and his

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<sup>65</sup> HRA (1705, pp. 972–973).

<sup>66</sup> HRA (1706, pp. 56–57).

<sup>67</sup> Hultblad (1968, p. 398, evidence 736a).

<sup>68</sup> HRA (1774, February 7).

relatives before him, had used the site for several generations. Additionally, it was put forward that the plaintiff had access to other sites in the same river where he could fish instead.

Inheritance was a valid argument for users who wanted to gain fishing rights in court, but interestingly this claim became weaker if the court knew that the fishing waters had not been frequently used by its holder. In such a case, the court sometimes argued that the waterbody would be of better use for someone else, and therefore assigned it to a user who needed it more. A court case from 1770 illuminates how the court considered inheritance with regard to fishing rights. The dispute concerned two lakes in Sirkas that had been co-owned by several people. Two sons of one of the landholders had forwarded the right to fish in the lakes to another man, Anders Nilsson Skubb. The court decided that as long as the rightful proprietors did not use the lakes, Skubb could continue using them. A third lake, for which the sons had not forwarded rights to Skubb, was also discussed in the court case. There the court decided that Skubb had no right to use the lake, since he had never had an interest in it before.<sup>69</sup>

The case highlights that the court could accept arguments to do with both inheritance and necessity for survival as grounds for giving someone access to fishing. It also shows that a lake could be split among users.

## Limited Access to Resources

In court, previous use by close relatives was usually a strong argument for giving a user access to fishing waters. However, inheritance was not always enough to gain fishing rights, which the following court case exemplifies. Two users from Jokkmokk, shared the right to use certain land.<sup>70</sup> However, Lars Knutsson from Sjokksjokk claimed that he too could use the land since his relatives had done so before him. In court, the lay-judges stated that the land, with its fishing waters, could sustain only two users and therefore his claim to it had to be discarded. The court thus took limited resources as grounds for rejecting Knutsson's use of the

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<sup>69</sup> HRA (1770).

<sup>70</sup> Hultblad (1968, p. 418, evidence 1026a).



land even though he seemingly had valid arguments based on inheritance of rights. What counted most for the court in this case was that the land did not have the capacity to support three users' livelihoods.

In the case from 1712 described earlier, Karin Andersdotter had removed four nets from a lake that belonged to Olof Andersson.<sup>71</sup> Andersson argued that his right to fish there was "ancient" and that part of the lake was included in his *skatteländ*. However, Andersdotter could show records from 1708 and 1711 that showed how her household had paid tax for land that included rights to fish in the lake. A settlement was made in which Andersson got the right to fish in one part of the lake, while Andersdotter and her husband got rights to the rest of the lake with their four fishing grounds.

Almost 50 years later, the same lake was again involved in a conflict. In 1761, three users went to court to prohibit two brothers from fishing in the lake.<sup>72</sup> The plaintiffs' main argument was that the defendants had access to another fishing water with a good supply of fish. The defendants could, however, show from a 1712 court record that their father had had the right to fish in the southwestern part of the lake. According to that same record, the rest of the lake had belonged to the plaintiffs' father, who had paid tax for it. The 1761 court ruling prohibited the defendants from fishing in the lake on the grounds that they had access to good fishing elsewhere, which in this case, evidently took precedence over inherited rights.

Since it was most rewarding to fish during spawning, it is no wonder that some court cases dealt with intrusions during the spawning period. In one such case, the plaintiff was a widow who complained that the defendant had been fishing unlawfully at a spawning site that belonged to her family during spawning in spring and fall.<sup>73</sup> She testified that her family had always used the fishing site, while the defendant claimed that he too had a right to fish there during spawning. The court, however, denied the defendant any rights to fishing at the particular site, arguing

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<sup>71</sup> RA SH (1712, pp. 505–506, § 11). See also Hultblad (1968, p. 423, evidence 1067a).

<sup>72</sup> HRA (1761, February 16).

<sup>73</sup> HRA (1775, February 8).

that he had access to other fishing sites that he could use *mest alla årstider* (practically all seasons).

## Users' Obtaining Access to Fishing Waters

In some cases, Sami households that did not have access to fishing waters could obtain user rights by the court. In one such case, a man, Per Jönsson in Jokkmokk, who did not have access to land or fishing waters, was granted access to two *sel* (still waters) in Lule River by the court.<sup>74</sup> Although, the two river stretches already had rightful holders, the court's argument for granting Jönsson access to them was that they were not directly attached to the holders' main property. In fact, they were closer to a land that belonged to Jönsson's father-in-law, and had *av gammalt* (since ancient times) been associated with that property.

Another argument for why the court granted Jönsson access was that he needed the fishing sites more than the holders did. A third argument might have had to do with the collective-tax system that was established in 1695, when Sami villages became responsible for paying state tax instead of the individual households.<sup>75</sup> For the Sami village, it thus became advantageous to have as many members as possible with good incomes that could contribute to the total tax levy. Users without land, or with too little land to support their households, could therefore be granted land or water, assuming of course that the resources were available. Hence, a new user could contribute to the collective tax that the village had to pay.<sup>76</sup>

## Delineation of Boundaries Between Users

A common way to resolve disagreements regarding fishing was to determine which waters belonged to whom, and mark the boundaries. In 1732, the plaintiff, a man in Tuorpon, complained in court that two

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<sup>74</sup> HRA (1767, p. 179).

<sup>75</sup> Kvist (1990, p. 266. See also Chapter 4).

<sup>76</sup> Arell (1977, p. 63).

users had been fishing illegally in a lake belonging to him.<sup>77</sup> He argued that it was particularly troublesome that the defendants had used a spawning site. Since the court could not easily resolve the matter, two of the lay-judges were assigned to investigate the matter further. They were instructed to visit the lake with the plaintiff and the defendants to gather as much information as possible. Since the court only convened once a year, the plaintiff had to wait a year for the court ruling; meanwhile, the users were told to carry on as before. In the next year's court, the lay-judges reported what they had learned so the court could make its final ruling. According to the court ruling, the plaintiff and the defendants agreed upon a division of the lake based on a solution that had been suggested by the lay-judges. A border was set between the two parties, stretching from the inflow of a creek to an island in the lake. The plaintiff got the right to fish on the south side and the defendants on the north side.

Another example of how land could be divided between users comes from 1726, when two lands in Tuorpon were divided among twelve users.<sup>78</sup> Judging by their names, some of them were probably related. In court, the hostility among them was described as a “slowly growing” conflict and that it was about time each of them got his or her share. The court appointed four trusted men to delineate land and fishing waters and emphasized that it was important that they carefully consider how land and water had been used by the twelve users' ancestors.

The trend in the court rulings was that the division of lands, and thus fishing waters, continued throughout the 1700s and became even more prevalent in the second half of the century.<sup>79</sup> The result of this process was that more households obtained access to fishing waters but the water area per household decreased, which implies that the subsistence base for each household decreased.

Nevertheless, it is important to keep in mind that not all conflicts resulted in division of lands or fishing waters. Often the court had no

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<sup>77</sup> HRA (1732, February 8; 1733, February 10). This case is also mentioned in Chapter 3 under the section heading “Solving Conflicts in Practice” as an example of involvement of lay-judges.

<sup>78</sup> HRA (1726, February 7, pp. 409–410). See also Hultblad (1968, p. 356, evidence 18a).

<sup>79</sup> Hultblad (1968) and Arell (1977).

problem deciding who was the rightful user, and the intruder could be fined and prohibited from fishing. For example, the court decided in 1700 that a man had to pay 40 silver coins (*dalers*) if he continued to encroach on the plaintiff's fishing waters.<sup>80</sup> According to an older court ruling, from 1696, the defendant was the sole user of the lake. Another example comes from 1702, when the plaintiff, a man in Jokkmokk, complained that another man, from Sjukksjokk, had spent the last two summers fishing in a lake on the plaintiff's tax land.<sup>81</sup> He argued in court that this had impaired his livelihood. The defendant was not present in court, but his son was. He had accompanied his father when they had fished in the lake and he claimed that his father had some sort of inherited right to the lake, but that he did not know any more details about it. When asked if his father had paid tax for the land, he admitted that he had not. The defendant was sentenced to pay 40 *dalers* and was prohibited from returning to the lake until he could prove that he had a right to be there.

## Sharing of Fishing Waters

Fishing waters were not always divided among users; some conflicts were solved in other ways. Users sometimes agreed to share waters, while details of the agreement had to be clarified in court. In February 1731, discord arose between two users, Nils Nilsson and Pål Jonson Stoorropare in Sjukksjokk, concerning the right to use certain fishing waters.<sup>82</sup> In court, Nilsson and Stoorropare agreed to share the fishing waters, but *vara råddande över halva noten var* (each would be in charge of half of the seine). In addition, one of them was allowed to use the other's seine in return for a small remuneration. More importantly, neither was allowed to invite others, not even relatives, to fish in the lake.

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<sup>80</sup> HRA (1700, p. 261).

<sup>81</sup> HRA (1702, pp. 536–537).

<sup>82</sup> HRA (1731, pp. 88–89).

In 1737, a new argument for not dividing fishing lakes between users was put forward in court.<sup>83</sup> This case also involved Nilsson and Stoorropare from the case above, but included one more person and two additional lakes. As established in court earlier, the first lake was to be used jointly by the two aforementioned users and a second lake was to be used only by Stoorropare. The third lake belonged to a third user, and when Stoorropare fished there, he was sued. In court, Stoorropare claimed that this lake had more fish than the other two lakes, which was confirmed by other rightsholders, and by some of the lay-judges who had knowledge about these lakes. All three users agreed that their ancestors had used the lakes together and that the lakes belonged to a property that their ancestors had held in common. The court therefore decided that all three lakes should be used jointly by the rightsholders, in part because the land had been used in common in the past, but more importantly because the lakes contained unequal amounts of fish. It was thus impossible to divide the fishing rights in these waters in a just way.

## Temporal Division of Fishing Rights

Most divisions of fishing waters were made through spatial delineation between users. However, the right to fish could also be divided temporally; users could, for example, be given the right to fish only during a limited period. In 1773, a court case between a settler and a Sami man from Tuorpon regarding fishing in a certain bay resulted in time-based delimitations of their access to fishing there.<sup>84</sup> The court gave the Sami the right to fish in late fall and spring, when it was possible to *racka* (ice fish with gillnets). In practice, this probably meant that he targeted European whitefish, which commonly were caught via ice fishing during the spawning season.<sup>85</sup> In late spring, the right to fish passed to the settler. It meant that he most likely targeted northern pike, which spawn after the ice melts.

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<sup>83</sup> Hultblad (1968, p. 413, evidence 959d).

<sup>84</sup> HRA (1773, February 10).

<sup>85</sup> Linnaeus (2003, p. 152).

In this case, the temporal division of fishing rights was an interaction between a settler and a Sami. However, there are at least two examples of temporal division between Sami users. In a case from 1714, two users in Jokkmokk had a conflict over fishing rights in a creek at the western shore of a lake.<sup>86</sup> During the court proceedings they agreed, with a handshake, to share the creek by dividing the use temporally. One of them could fish in the creek from Christmas to mid-February (the end of the market season), and the other could fish there for the rest of the winter, for as long as he could use his *våner* (fish traps). In another case, from Sjokksjokk, a dispute had been developing over time between two users on one side and three users on the other side.<sup>87</sup> The dispute revolved around the division of land as well as *rättigheter* (rights) to two fishing waters. The dispute regarding land was settled by defining an exact border between the users. Regarding the fishing, the users decided to divide the access to the water temporally so that each party could fish every other year. The exception was one particular bay, which the first two users got the right to use exclusively.

## Fishing Rights Decoupled from Grazing Rights

From the mid-eighteenth century, court cases show how fishing rights could be separated from rights to use land for grazing. For example, two users, Henrik Jansson and Pål Eriksson Tulpa from Tuorpon, had owned grazing land together that included one larger lake and a few smaller lakes for fishing.<sup>88</sup> In 1756, the court awarded the lakes to Eriksson. Two years later, the court changed that decision so Jansson got the right to fish in the larger lake, with the restriction that he could not allow others to fish there.

In 1771, the court decided that two users in Tuorpon would lose their rights to use land for grazing because they had no reindeer. Nevertheless, they could continue to use the fishing waters.<sup>89</sup> Instead, the grazing

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<sup>86</sup> HRA (1714, § 10, pp. 1058–1059).

<sup>87</sup> HRA (1726, February 7, pp. 411–412).

<sup>88</sup> Hultblad (1968, p. 372, evidence 297a).

<sup>89</sup> Hultblad (1968, p. 369, evidence 252a).

rights went to another user, but the court emphasized that he *fick ej tränga dem i fisket* (could not intrude in the fishing). The notion that one property should offer both grazing and hunting lands and fishing waters for a household had obviously disappeared by then. The right to fish was still a defined right, but it could be decoupled from other rights on a particular property.

## Survival on Fishing

It is evident from the sources that *skatteländ* (the tax lands) in the boreal forest in Lule and Ume lappmark were relatively large in the second half of the seventeenth century, and that they included various sizes of hunting grounds, grazing land for reindeer, and fishing waters.<sup>90</sup> They were fairly large because they roughly comprised the resources a village of households needed to make ends meet in an economy that mostly depended on fishing. Norstedt et al. have shown that the water bodies associated with tax lands in Ume lappmark in the late seventeenth century contained on average five fish species per territory and that the mean was thirteen fishing waters per territory.<sup>91</sup> The mean area per water body was 36 km<sup>2</sup>. Since different populations of the same fish species can spawn at different times in different places, their conclusion is that it was beneficial for fisher households to have access to as many fishing waters as possible and to move from one to another. The organization of territories was moreover recognized by the state through taxation. However, *skatteländ* gradually became divided among individual users during the eighteenth century. With smaller lands, and thus fewer and smaller fishing waters, it became harder for households to make a living on fishing. The difference in living standards between reindeer herder households and fisher households that existed in the seventeenth

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<sup>90</sup> Hultblad (1968, pp. 85, 90), Norstedt (2011), and Norstedt et al. (2014).

<sup>91</sup> Norstedt et al. (2014).

century gradually increased, and the eighteenth-century sources generally described fisher households as poor or very poor. The strategies used to survive on fishing were (1) a mobile lifestyle to optimize harvests, (2) pre- and post-harvest fishing activities that facilitated good harvests, and (3) well-defined institutions that regulated access to fishing waters.

## Fishing Strategies in Low-Productivity Waters

In the seventeenth and eighteenth centuries, most fisher households in interior northern Fennoscandia had a mobile lifestyle, which meant that they moved between fishing waters following a year-long route that probably was quite similar from year to year. In some regions, households erected more or less permanent huts to live in by lakes they visited regularly, while households in other regions often lived in moveable tents. All households but the poorest kept small herds of reindeer that they used mainly for transportation and milking. The crucial reason behind this fishing mobility was that it was an opportunistic strategy that allowed inhabitants to optimize resource utilization mainly from low-productivity fishing waters. The spawning periods were principally the only times when these waters had high yields, particularly in view of the available but not especially efficient fishing technics. By moving around, households could adapt their fishing schemes to different fish populations and lifecycles, which varied between different waters.<sup>92</sup>

Extreme spring flooding was an imminent risk that could be devastating for fishing.<sup>93</sup> It was additionally hazardous economically, since spring also corresponded with the spawning period for some of the most important fish species.<sup>94</sup> Spring was thus the only time of year when these species were high-yielding. If spring fishing failed, households undoubtedly had to put more energy into fishing for other species later in the year.

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<sup>92</sup> Norstedt et al. (2014).

<sup>93</sup> Lundius (1905, p. 29).

<sup>94</sup> An exception is the salmon that spawned later.



## Pre- and Post-Harvest Activities

To survive on fishing, most of a household's work had to revolve around this activity. Hunting was merely a complement, and households did not have large herds of reindeer. Studies of small-scale inshore fisheries in Mexico emphasize the importance of pre- and post-harvest activities.<sup>95</sup> This also was true for fishers of interior Fennoscandia to harvest enough fish in low-productivity waters. Gender division in the household was not strict, and both men and women could engage in fishing. The court rulings describe women fishing, rowing boats, and defending the household's fishing waters from encroachments. The sources contain less information about gender division in pre- and post-harvest activities. However, we know these activities took more time than the harvest, and in a household-based economy, all members needed to contribute. Only one court ruling regarding fishing mentioned a maid. Taking into account that most fisher households are described as poor, it seems likely to conclude that it was unusual for them to have servants and that most of the work was performed by family members. In large-scale reindeer herding, having servants was necessary.<sup>96</sup>

The crafting of fishing gear and boats was an important part of pre-harvest work, which included collecting or purchasing raw materials and constructing fishing equipment, such as binding nets. In the post-harvest phase, maintaining and mending equipment, such as nets and seines, was a time-consuming and ongoing task. Gear that was not properly handled and maintained could easily decay, which in turn would increase costs for the household. Moreover, post-harvest work included taking care of the harvest—preparation of fish to be eaten directly and drying of fish to be used for later consumption, trade/exchange, or paying taxes.

The pre- and post-harvest activities also included negotiations with neighbors about fishing rights, travel to fishing sites and markets, etc. Gathering more detailed descriptions of pre- and post-harvest activities is an important area for further research since they contribute to our

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<sup>95</sup> Basurto et al. (2020).

<sup>96</sup> Larsson and Päiviö Sjaunja (2020).

understanding of fishing strategies among Sami and in small-scale fishing communities around the world.

## Institutions for Management

Fishing waters are CPRs. Without rules about management, there is a risk of overutilization and fish depletions. The investigation of court rulings from Lule lappmark shows that the users in a self-governing context created rules for sustainable use of the fishing lakes by defining user groups and user areas. However, with access to only low-productivity waters and with low-yielding techniques, the real challenge for most households was to secure sufficient harvests for survival. The problem they had to handle was not primarily the risk of overharvest, but how to limit the number of users. Hence, policy discussions regarding fishing waters concerned boundaries of the resources and who had the right to harvest.<sup>97</sup>

In the eighteenth century, the population increased and most tax lands were divided into smaller units. When fishing waters were assigned to new rights holders, negotiations were made among all presumptive users. Advantageous arguments for users who wanted legal rights to specific fishing waters included inheritance or past use by their relatives. But claiming this was not enough; users also had to back up their arguments if contested. The most effective claim, then, was that he or she relied completely on fishing or lacked access to other fishing waters.

Because the right to use fishing waters could be negotiated in the local court, it became a collective-choice arena,<sup>98</sup> defining *who* could use a certain fishing area and sometimes *when* it could be used. Not only were the users defined, a lot of effort was put into defining the exact boundaries between users if a lake or river had to be divided.

Fishing waters in Lule lappmark became a collective resource in the sense that it was within the power of the local community to decide who had what rights. In this process, the lay-judges were important actors

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<sup>97</sup> Ostrom (2005).

<sup>98</sup> Ostrom (2005, 2009).

because they often were familiar with the area and its history. Users got well-defined areas where they could fish, and a household could have the exclusive right to fish in an area. In that sense, the territory used by an individual household had similarities to private property: users had strong tenure, and rights to fishing waters could be passed on to the next generation. Other users were not allowed to fish there unless an agreement was made between the parties. When a fishing area was shared between households, they could be forbidden to allow other people to fish.

This collective activity points to another important norm: trust-reciprocity/social capital within the society.<sup>99</sup> Absence of secure user rights would have undermined trust among the inhabitants and, in the end, trust in the local court as a collective-choice arena. The design of a sustainable fishing regime was to a large extent an internal question for the users. The local strategy consisted partly of excluding other users and defining boundaries between fishing waters, as well as having an arena for solving conflicts. The fishing resource system was under the control of the local users, and distribution of fishing rights was a collective responsibility. Social justice is important for effectiveness in governing CPRs and does not rely solely on distributive outcomes. It also includes institutions and governing, such as involvement in decision-making.<sup>100</sup> The court, as a collective-choice arena, where rules were crafted and enforced, was an important part of social justice. This type of involvement was lost in the late eighteenth century, when many decisions about land use were moved from the local court to a government agency.

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<sup>99</sup> McGinnis and Ostrom (2014).

<sup>100</sup> Jentoft (2013).

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Iter lapponicum, Luefsta MS 92.

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