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Norway and Russia: Bargaining Precautionary Fisheries Management in the Barents Sea

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Abstract: The Barents Sea contains some of the most valuable fish resources in the world, including the world's largest cod stock. Since the mid-1970s, Norway and the Soviet Union/Russia have managed the most important stocks in the area together, through the Joint Norwegian–Russian Fisheries Commission. During the 1990s, the precautionary approach was adopted as the leading device for global fisheries management, introducing a requirement for additional precaution when scientific evidence is uncertain, as well as a number of practical regulatory measures related to scientific research, regulation and enforcement. Since the late 1990s, the Joint Commission has gradually adopted a number of measures required by the precautionary approach. Russia has never formally introduced the principle in its own fisheries legislation, but by and large employed regulatory measures in line with it. The article presents the major precautionary regulatory measures adopted by the Commission, including precautionary reference points for spawning stocks and fish mortality, a harvest control rule for quota settlement and various enforcement initiatives. A particular focus is on Norwegian–Russian collaboration and how Norway has bargained with Russia for precautionary management measures.

Key words: Barents Sea, fisheries management, precautionary principle

1. Introduction

Since the 200-mile exclusive economic zones (EEZs) were introduced in the mid-1970s, Norway and the Soviet Union/Russian Federation have managed the major fish stocks in the Barents Sea together, through the Joint Norwegian–Russian Fisheries Commission. Most importantly, the two parties in 1975 agreed to treat the commercially most important fish stocks in the area, cod and haddock, as shared stocks, and divide the quotas 50–50 between them. This article takes us through Norwegian–Russian fisheries relations since the turn of the millennium, focussing on matters where Norway has expressly taken a precautionary stance and then attempted to convince Russia to follow suit, notably the introduction of the precautionary approach and its operationalization, but also issues related to overfishing and scientific methods.[1] A chronological presentation of each thematic case is provided first. Then a section on bargaining dynamics follows. Here the focus is not on the outcomes, but on the processes that led to them. What form did Norway's negotiation efforts take? How were the Norwegian initiatives perceived by the Russians? What was eventually achieved?[2]

Although the article is empirical rather than theoretical in nature, the discussion is situated within the literature on state compliance with international agreements and post-agreement bargaining. In realist and institutionalist literature, state compliance is, broadly speaking, viewed either as the reflection of state interest (it would have complied in any event, or forced by a stronger state to comply), or as the result of the design of the regime.[3] Realists have not regarded state compliance with international obligations as a particularly interesting issue, since it is assumed that states generally comply with such obligations. The argument is that states accept treaties only when their governments have concluded that they are in their interest.[4] According to institutionalists, the picture is more complex. It is argued that a regime can be designed so as to enhance compliance, and that negotiation does not end with the conclusion of a treaty. Disputes can be resolved, ambiguities in the treaty text clarified, and compliance induced

1. The article builds on Hønneland (2013), but is significantly shortened, revised and updated.
2. The empirical presentation builds mainly on protocols from the Joint Commission and its Permanent Committee, and my own (participant) observation in the Norwegian Coast Guard, the Joint Commission and the Permanent Committee during the period 1988–2000, as an interpreter and fishery inspector. I also build on interviews carried out for my anniversary publication for the Joint Commission on its 30th anniversary (Hønneland, 2006), for a research project on knowledge disputes in Russian fisheries science (Aasjord and Hønneland, 2008), and post-agreement bargaining in the Barents Sea (Hønneland, 2013).
3. See Burgstaller (2005) for an overview of this literature.
4. See, for instance, Morgenthau (1948) or Henkin (1968).

through negotiations *after* the treaty has been concluded (Mitchell, 1994; Chayes and Chayes, 1995; Weiss and Jacobsen, 1998). Jönsson and Tallberg (1998) attempt to bridge the gap between the compliance literature and bargaining theory in IR by introducing the concept of 'post-agreement bargaining'. The literature has seen compliance either as an enforcement problem (realist or neoclassical theory), or a management problem (institutionalist theory), while negotiation theory has been preoccupied with the processes leading up to the signing of an agreement. The literature on compliance focuses on member-state actions in the post-agreement phase, while neglecting dynamic processes like bargaining. Negotiation theory, on the other hand, emphasizes processes, but fails to extend this attention to the post-agreement phase. The post-agreement bargaining concept hence bridges these two approaches. As Spector and Zartman (2003) state, post-agreement bargaining is all about 'getting it done'. In this article, we ask how Norway has gone about getting it done in its attempts to encourage Russia to agree on new precautionary management principles and practices in the Barents Sea fisheries.

2. The precautionary approach and quota settlement

In the latter half of the 1990s, cod quotas in the Barents Sea were at an all-time high, peaking with a TAC (total allowable catch) of 850,000 tonnes in 1997 – following a gradual increase since the all-time low of 160,000 tonnes in 1990. At the time, marine scientists suspected that their models implied inflated estimates of stock size, and reduced their estimate of total stock size by 200,000 tonnes. In the following two years, the TAC was reduced to 654,000 tonnes and 480,000 tonnes, respectively.

At the same time, the precautionary approach was adopted by both ICES (the International Council for the Exploration of the Sea) and the Joint Commission. This principle emerged in various regional environmental agreements during the 1980s and became established at the global level in the 1992 Rio Declaration,[5] and subsequently in fisheries-related declarations and treaties such as the UN Fish Stocks Agreement[6] and the FAO (Food and Agricultural Organization of the

5. It was also included in new global environmental treaties adopted in Rio, such as the Biodiversity Convention and the Climate Convention; see Andresen et al. (2012).

6. "Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks", New York, 4 August 1995, *International Legal Materials*, pp. 1547–1580.

United Nations) Code of Conduct for Responsible Fisheries[7], both from 1995. The essence of the precautionary approach is that lack of scientific knowledge should not be used as a reason for failing to undertake management measures that could prevent the degradation of the environment or the depletion of common-pool resources. Whereas it was once considered reasonable to take such measures only when it was established with a high degree of certainty that the environment or resource basis would be seriously threatened without such interference, the introduction of the precautionary approach turned the burden of proof upside-down: preventive measures should be postponed or omitted only when there was full scientific certainty that they were *not* necessary.

Both the FAO Code of Conduct for Responsible Fisheries and the UN Fish Stocks Agreement prescribe the use of stock-specific reference points as a tool to deal with matters of risk and uncertainty in fisheries management. The latter defines a precautionary reference point as 'an estimated value derived through an agreed scientific procedure, which corresponds to the state of the resource and of the fishery, and which can be used as a guide for fisheries management.'[8] Two types of reference points are singled out: limit reference points and target reference points. While the former set absolute limits to what is considered to be acceptable, the latter imply management goals to aim at. Management strategies are expected to seek to maintain or restore stocks at levels consistent with the agreed-upon target reference point, and to include measures that can be implemented when reference points are approached. It should be a goal for fisheries management systems to ensure that, on average and over time, target reference points are not exceeded. Precautionary reference points are normally set for the size of the spawning stock and for fishing mortality, i.e. the share of the stock that perishes for natural reasons or is caught.

In 1996, ICES started work on elaborating reference points for the commercially exploited fish stocks in the northeast Atlantic. Two years later, reference points were set for the Northeast Arctic cod stock: the target reference point for the spawning stock was set at 500,000 tonnes, the limit reference point at 112,000 tonnes (which was the lowest observed in the 53-year time series). For fishing mortality, the target reference point was identified as 0.42, the limit reference point as 0.70. This implied that the management of the Northeast Arctic cod was held to be in accordance with the precautionary approach only as long as the stock's spawning mass was greater than 500,000 tonnes and the fishing mortality lower

7. *Code of Conduct for Responsible Fisheries*, signed in Rome, 28 September 1995, Rome: UN Food and Agriculture Organization.
8. Ibid., Annex II, Para. I.

than 0.42 on average over an unspecified number of years. Crisis level was reached if the spawning stock fell below 112,000 tonnes or if fishing mortality reached 0.70.

In Norway, the precautionary approach was incorporated in official fishery policy through a White Paper in 1997;[9] in Russia, this principle is still not found in fisheries legislation or policy documents.[10] The Joint Commission never explicitly adopted the precautionary approach as such, but gradually introduced it around the turn of the millennium by adapting its policies to ICES recommendations and technical (if not declaratory) terminology. In the protocol from its 1997 session, the Commission noted:

> The parties agreed on the need to develop further long-term strategies for the management of the joint stocks of the Barents Sea. Until such a strategy is available for cod, the parties agreed that the annual total quota is to be established so that the spawning stock is maintained above 500,000 tonnes at the same time as the fishing mortality in the next years is reduced to less than […] 0.46.[11]

The same paragraph was used in the protocol from the 1998 session, with the specification that fishing mortality should be reduced to no less than 0.46 by no later than 2001. In the protocol from the 1999 session, the old technical term F_{med} (safe biological limit for fishing mortality) was replaced by F_{pa} (fishing mortality precautionary – i.e. target – reference point) and the aimed-at catch-rate level was reduced from 0.46 to 0.42, i.e. brought into accordance with the precautionary recommendation from ICES. In 2000, the Commission requested ICES to reconsider the precautionary reference point for the spawning stock in light of the dynamics of the cod stock over the preceding 30 to 40 years. Although the wording of the letter urged the scientific body to 'reconsider' the reference point, it is clear that both the Russian Government and the Joint Commission were in fact calling for a reduction. In 2001, ICES complied with this request and lowered the target reference point for the spawning stock to 460,000 tonnes. At the same time, however, the limit reference point was increased to 220,000 tonnes. Further, the target reference point for fishing mortality was reduced to 0.40, which meant that requirements to precaution became stricter. On the other hand, the limit reference point was raised to 0.74, so here the room for manoeuvre became wider.

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9. St.meld. nr. 51 (1997–98) Perspektiver på norsk fiskerinæring, Oslo: Stortinget, 1997.
10. See Jørgensen (2009) for overviews of Russian fisheries legislation. The 2004 Federal Fisheries Act defines the concept of 'protection and rational use' of aquatic biological resources as the main goal of Russian fisheries management.
11. Protokoll for den 26. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 1997, p. 2.

As we have seen, there was a significant downward trend in the Barents Sea cod quotas in 1998 and 1999, but quotas were still at a reasonably high level. Then in autumn 1999, ICES sounded the alarm: not only had their models shown inflated estimates of the Barents Sea cod stock; the stock had actually dropped to an alarming level. Spawning stock biomass was believed to be down at 222,000 tonnes, less than half that prescribed by the target reference point and approaching the limit reference point. (This was practically at the new limit reference point established two years later, which by implication is an extremely serious situation for the fish stock.) Seen from the outside, if there ever was a time to make use of the precautionary approach, it was now. ICES' primary TAC recommendation for 2000 – intended to restore the spawning stock to acceptable levels within three years – was 110,000 tonnes, nearly five times less than the 1999 quota. The Joint Commission arrived at 390,000 tonnes, almost four times above scientific recommendations. The following statement is found in the protocol from this session: "The Norwegian party notes that the level of the cod quota is alarmingly high in consideration of the available stock assessments and the recommendations from ICES. Taking into account the difficult conditions of the population of northwestern Russia […], Norway has nevertheless found it possible to enter into this agreement."[12] It was clear that precaution had not prevailed in the Joint Commission, and that the Norwegian side was disappointed. Details follow in the section on bargaining dynamics below.

The next year, the Joint Commission made an unexpected move: it established a TAC for three years ahead. This quota was slightly above the quota for 2000 (395,000 tonnes) and was to be applied for 2001, 2002 and 2003, unless the stock situation became worse than expected (in which case the TAC could be reduced) or the precautionary (target) reference points for spawning stock and fishing mortality were reached before the end of 2003 (then the TAC could be increased). The three-year element was obviously intended to provide greater predictability. The fishing industries of Norway and Russia were given better opportunities to plan for the immediate future, and those who feared for the health of the cod stock were given assurances that the TAC would not increase even further unless management objectives had been achieved. Judged by the standards of the precautionary approach, however, much was left to be desired. ICES had recommended a TAC of 263,000 tonnes, and in summer 2001 it declared that fishing mortality of the Barents Sea cod stock could have been as high as 0.9 in 2000.[13] Even the most pes-

12. Protokoll for den 28. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 1999, Art. 5.1.

13. *Nordlys*, 6 June 2001.

simistic estimates during the Joint Commission's session in November 2000 did not go beyond 0.5.

The new invention announced at the Commission's session in 2002 had far wider implications for the further work of the Joint Commission: a harvest control rule for cod and haddock. The rule consisted of three elements: i) average fishing mortality should be kept below the target reference point for each three-year period; ii) the TAC should not change by more than 10 per cent from one year to the next for cod and 25 per cent for haddock; but iii) exceptions could be made when the spawning stock was below the target reference point. Again we see both biological viability and economic predictability addressed: fishing mortality should be within the precautionary reference point on average for any three-year period, and the fishing industry was secured against large fluctuations in the TAC as long as the spawning stock was above the precautionary reference point. The harvest control rule changed the working form of the Commission. Previously, delegation leaders had spent nearly all their time during sessions negotiating the TACs, and agreement was normally reached only at the very end of a session. Now setting the TAC became more of a technical matter, which could be dealt with sooner rather than later. Perhaps to demonstrate the usefulness of the harvest control rule, the Commission now made a habit of announcing the next year's TAC just a day or two after it convened. As a result, delegation leaders could devote more time and energy to other pressing issues, up till then largely taken care of by the Commission's working groups. The harvest control rule was evaluated by ICES in 2005 and found to be in agreement with the precautionary approach. A precondition was that fishing should be brought to a halt – not just reduced – if the spawning stock fell below the limit reference point of 220,000 tonnes.

The cod stock recovered well and the TAC increased gradually during the 2000s, exceeding 600,000 tonnes at the end of the decade. The Joint Commission stuck to its harvest control rule until 2009, when it decided to increase the cod quota by more than 10 per cent and justified the move by referring to the satisfactory state of the stock. The spawning stock was actually above one million tonnes at the time.[14] Simultaneously, the Commission added to the harvest control rule that fishing mortality should not be *below* 0.30. Implicitly it should be possible to increase the cod TAC by more than 10 per cent if a quota change within 10 per cent would imply fishing mortality below 0.30. In 2010, ICES evaluated the revision

14. *ICES Advice 2010. Book 3: The Barents and the Norwegian Sea*, Copenhagen: International Council for the Exploration of the Sea, 2010, p. 6. Spawning stock biomass had been above the target reference point (460,000 tonnes) since 2002. Fishing mortality had been reduced from well above the limit reference point (0.74) around the turn of the millennium to well below the target reference point (0.40) since 2006.

of the harvest control rule and deemed it to be precautionary. The same year the Joint Commission declared that the revised harvest control rule would be used for setting the TAC five years ahead, and then re-evaluated. The cod TAC continued to increase to 724,000 tonnes for 2011 – again an increase beyond 10 per cent, but now in compliance with the revised harvest control rule approved by ICES. For 2013, TAC for the first time exceeded 1 million tonnes.

3. Overfishing

Disagreement between Norway and Russia around the turn of the millennium about the level of TACs was solved more easily than both parties had probably feared in 1999. With that problem out of the way, however, a new one emerged, at least seen from the Norwegian side. Ever since the enforcement cooperation between the two countries had been established in 1993 as a response to Russian overfishing in 1992–93, there had been little attention to possible discrepancies between the established TAC and actual catches. The Joint Commission seemed to assume that overfishing had been eliminated once the Norwegian enforcement authorities started to submit data about Russian landings in Norway to their Russian counterparts. The established routines for enforcement cooperation were codified in a memorandum signed at the Commission's session in 2000,[15] but new challenges were underway. At the meeting of the Permanent Committee under the Joint Commission in October that year, the parties noted that "an extensive transhipment [of fish] takes place at sea and agreed that this activity is not subject to sufficient control by the parties."[16] While most northwest Russian vessels had been bringing their fish to Norwegian ports since the early 1990s, the old Soviet practice of transhipping fish to transport vessels at sea was resumed. Only now the transport vessels did not go to Murmansk with the fish (as they had in Soviet times), but to other Western countries, like the UK, Denmark, the Netherlands, Portugal and Spain. This was made possible by the gradual upgrading of the northwest Russian fishing fleet to factory trawlers. While fresh fish needs to be landed relatively often – and implicitly to a port close to the fishing ground – frozen products can be kept on board for months, and transported over long distances.

After the Permanent Committee had first pointed at this possible new enforcement challenge in 2000, it was instructed by the Joint Commission to investigate

15. Protokoll for den 29. sesjon i Den blandede norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2000, Art. 13.2.1.
16. Protokoll fra møte i Det permanente utvalg for forvaltnings- og kontrollspørsmål på fiskerisektoren i Henningsvær 16.–20. oktober 2000, Bergen: Directorate of Fisheries, 2000, Art. 5.1.

the possibilities for further harmonization of the parties' reporting routines, including exchange of data about their deliveries of fish to third countries. Little came out of this. In 2002, the parties to the Commission declared that they would "cooperate to produce complete information about landings in third countries".[17] Further, the protocol said that "the Norwegian party requested such information from the Russian party" and that "the Russian party informed that it will continue work to produce data about landings in third countries".[18] The following year, the parties "discussed information about unregistered catch of cod in the Barents Sea and the Norwegian Sea".[19] By 2004, the wording had become tougher: "With both parties acknowledging that a considerable unregistered catch takes place in the Barents Sea, it is a prioritized goal to use all possible means to reveal and prevent these illegalities."[20] Following up proposals from the Permanent Committee, the Joint Commission adopted a number of measures that would intensify reporting and control requirements related to transhipment at sea: among other things, the obligation for fishing vessels to submit specific reports about all such transhipments, the obligation of transport vessels to have satellite tracking devices on board if they receive fish through transhipments at sea, and the prohibition against transhipment of fish to transport vessels sailing under flags of convenience.[21] At the Commission's session in 2005, the parties agreed to "continue and ensure the full implementation of measures adopted at the [2004] session",[22] indicating that implementation so far was less than satisfactory. In 2006, the Commission reported that some of the measures agreed upon the previous year had been implemented, others not. Perhaps most ominously, "the [joint Norwegian–Russian] analysis group that is to put together information at vessel level to reveal possible violations of fisheries regulations has not met during 2006."[23] And further, "the sub-committee [on enforcement challenges] under the Permanent Committee […] has not functioned according to its purpose as there has not been participation

17. Protokoll for den 31. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2002, Art. 4.
18. Ibid.
19. Protokoll for den 32. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2003, Art. 4.
20. Protokoll for den 33. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2004, Art. 4.
21. Ibid., Art. 12.5.
22. Protokoll for den 34. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2005, Art. 12.5.
23. Protokoll for den 35. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2006, Art. 12.1.

from all relevant authorities on the Russian side."[24] The same formulations appear in the protocol from 2007, with the additional information that the Russian side had failed to appoint a leader to the Permanent Committee's sub-committee on enforcement (which, therefore, did not meet that year either). There was, however, some good news too: "the parties are pleased to observe indications that the amount of overfishing has been reduced in 2007, among other things as a result of the introduction of the NEAFC port state regime from 1 May 2007".[25] The same formulation is found the two following years, while in 2010 overfishing seems to have been brought to a halt: "The Russian party noted that official fishery statistics show that no overfishing has taken place of Russian quotas of cod and haddock in the Barents Sea and the Norwegian Sea in 2009."[26] At its session in 2009, the Commission agreed on a joint Norwegian–Russian method for estimating the total catch in the Barents Sea, based on data from satellite tracking and information about transport and landings of fish products.

What is the story behind these protocol formulations? In 2002, the Norwegian Directorate of Fisheries stepped up its efforts to estimate actual Russian catches in the Barents Sea. This unilateral move was the result of what was perceived as lack of interest on the Russian side in the new enforcement challenges (see section on bargaining dynamics below). An entire new section was built up at the Directorate, recruiting new personnel among experts on economic crime. The section worked systematically on mapping all activity by Russian fishing and transport vessels in the Barents Sea, availing itself of catch reports, satellite tracking data and observations of Russian landings in various third countries.[27] On the basis of this information, ICES estimated unreported catches of Northeast Arctic cod as follows: 90,000 tonnes in 2002, 115,000 tonnes in 2003, 117,000 tonnes in 2004, 166,000 tonnes in 2005 and 127,000 tonnes in 2006.[28] These figures implied an annual overfishing in the range of 25–40 per cent of the TAC during the period. In other words, the Russians had been overfishing their national cod quotas by 50 to 80 per cent annually. The Russian fishery authorities, however, did not accept Norwegian assertions that the problem was so severe. In autumn 2006, they ad-

24. Ibid.
25. Protokoll for den 36. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo. Ministry of Fisheries, 2007, Art. 5.1.
26. Protokoll for den 39. sesjon i Den blandete norsk-russiske fiskerikommisjon, Oslo: Ministry of Fisheries, 2010, Art. 5.
27. The reports of the Norwegian Directorate of Fisheries about Russian catches in the Barents Sea from 2002 to 2008 are available on the Directorate's website www.fiskeridir.no.
28. *ICES Advice 2010. Book 3: The Barents and the Norwegian Sea*, Copenhagen: International Council for the Exploration of the Sea, 2010, p. 12.

mitted not knowing how much fish was actually transferred at sea and delivered to third countries, but estimated Russian overfishing to be around 20,000–30,000 tonnes annually.[29] According to the Norwegian estimates, overfishing was significantly reduced in the following years: to approximately 41,000 tonnes in 2007 and 15,000 tonnes in 2008.[30]

While in the protocol from its 2010 session, the Joint Commission indicated that overfishing was eradicated through the joint efforts between Norway and Russia, there is general agreement – among experts and in the Norwegian public – that the solution of the problem to a larger extent can be ascribed to the 2007 NEAFC (North East Atlantic Fisheries Commission) port state regime (Stokke, 2009, 2012).[31] Under this regime – to which both Norway and Russia are parties – members are not to allow an NEAFC vessel to land or tranship frozen fish in its port unless the flag state of the vessel confirms that the vessel has sufficient quota, has reported the catch and is authorized to fish in the area, and that satellite tracking information data correspond with the vessel report. Fifteen per cent of all landings are to be checked physically. NEAFC has also created black-lists of vessels not flying the flag of a state participating in the port-state regime that have been observed fishing in the NEAFC Convention Area (including the Barents Sea) without certain evidence that the fish were caught in compliance with NEAFC rules. Such vessels may not land fish to member states or tranship fish to vessels from member states.

Hence, around the turn of the millennium, Russian fishers were, to an increasing extent, delivering their catches to transport vessels at sea. The transport vessels largely landed the fish in third countries, in the UK and on the European

29. This rough number figured in conversations with Russian fishery bureaucrats and in Norwegian media at the time. According to the protocol from the Joint Commission's session in 2006 – the only protocol during the 2000s where the *amounts* of overfishing are mentioned – the Russian side estimated the Russian overfishing in 2005 to have been 26,000 tonnes. Russia subsequently supplied ICES with estimates of Russian overfishing during the years 2002–2007. According to these figures, overfishing ranged between 20,000 and 30,000 tonnes the first three years in this period, peaking at 41,000 tonnes in 2005, before it was reduced to 28,000 tonnes in 2006 and 8,757 tonnes in 2007. See *ICES Advice 2010. Book 3: The Barents and the Norwegian Sea*, Copenhagen: International Council for the Exploration of the Sea, 2010, p. 12.

30. *ICES Advice 2010. Book 3: The Barents and the Norwegian Sea*, Copenhagen: International Council for the Exploration of the Sea, 2010, p. 12. See also the reports of the Norwegian Directorate of Fisheries about Russian catches in the Barents Sea from 2002 to 2008 at www.fiskeridir.no.

31. See also Statusrapport for 2008: Russisk uttak av nordøst arktisk torsk og hyse, Bergen: Directorate of Fisheries, 2008.

continent. At least in theory, they could now escape the established enforcement routines between Norway and Russia, as there were no agreements on exchange of landing data with the third countries in question. While such agreements gradually emerged during the 2000s – especially between Norway and various third countries – enforcement of Russian quota regulations ultimately rests with the Russian authorities. The Norwegian authorities can punish a Russian vessel for underreporting catch (i.e. for having more fish on board than indicated in the catch log at the time of inspection), but not for overfishing its annual quota. During the 2000s, the Joint Commission had difficulties agreeing on measures to close the window of opportunity that had opened for fishers to land fish above quota levels; not least, it had difficulties implementing the measures once they were adopted. The enforcement problem was finally solved through multilateral action in NEAFC, with both Norway and Russia on board.

4. New Russian methods for estimating fish stocks

The collaboration between Norwegian and Russian marine scientists is often referred to as the core of the bilateral regime. For one thing, the scientific component of the Norwegian–Russian partnership on fisheries management is the one with the longest history.[32] While collaboration on fisheries regulation started in 1975 and on enforcement in 1993, the first steps towards scientific cooperation had been taken as early as in the late nineteenth century.[33] However, it was only in the 1960s that the Norwegian–Russian/Soviet marine scientific cooperation was formalized.[34]

Around the mid-2000s, a schism in Russian fisheries science became evident, through attacks by the federal fisheries research institute, VNIRO, on ICES and the regional institute in the Russian northwest, PINRO. Russia's regional fisheries research institutes became formally independent of VNIRO in the early 1990s, though their scientific work is still reviewed by the federal institute. At the same time, PINRO's relations with the Norwegian Institute of Marine Research expanded, in line with relaxed East–West relations in the European Arctic more widely – and substantial Norwegian funds to support a 'starving' bureaucracy in Russia's northwest. VNIRO had not become part of the international scientific community in ICES to the same extent as PINRO (and had not received financial support from Norway as the regional institute had), and now VNIRO scientists be-

32. See Jakobsen and Ozhigin (2011) for an overview of the Norwegian–Russian fisheries research cooperation.
33. Serebryakov and Solemdal (2002).
34. Røttingen et al. (2007).

gan to question the scientific credibility of the models ICES employed in assessing fish stocks of the Barents Sea. The schism is not mentioned in the protocols from the Joint Commission, but from the early 2000s complaints by VNIRO scientists about ICES models became "annual performances" at the plenary sessions of the Commission, as expressed by one member of the Norwegian delegation. At first, VNIRO seemed to lack legitimacy in the Russian delegation, at least in its upper echelons, but by the second half of the 2000s Norwegian scientists started to fear that VNIRO's approach would actually prevail on the Russian side.

According to VNIRO, the relationship between recruitment to the stock and the size of the spawning stock was given too much weight in ICES models; environmental factors such as natural fluctuations caused by swings in temperature and ocean currents were considered to be far more important. Hence, there is no need to be so preoccupied with keeping the spawning stock at a specific level. In the preface to a report from a joint Norwegian–Russian scientific workshop in 2006, VNIRO's director stated: "[the] use of completely unreal models which are based on recruitment dependence on abundance of the spawning stock could be treated as *prophesying voodooism* rather than developing scientifically-based assessments of the state and dynamics of the fish stocks".[35]

A central point in VNIRO's criticism of ICES is found in the latter's own figures of the catch pressure on (or fishing mortality of) Northeast Arctic cod. Except for a very short period around 1990, fishing mortality since the 1950s has been well above the level that ICES has defined as necessary to stay below in order to secure long-term viability of the stock, i.e. the target reference point. Since the 1970s, fishing mortality has largely been on or above the limit reference point, which according to ICES would represent danger of total collapse of the stock (admittedly only for one in twenty theoretical runs of the entire existing time series for the stock). Well, the stock hasn't collapsed. "If the reference points and ICES models had been correct, there wouldn't have been any fish in the Barents Sea today", one VNIRO scientist noted in an interview.[36] And he went on: "The only logical explanation of the divergence between ICES' models and the fact that we still have fish in the Barents Sea is that the estimates are wrong. We underestimate the [cod] stock, and the reason is to be found in the traditional methods."[37]

VNIRO has presented three models as alternatives to the traditional model used by ICES, among them the 'synoptic' model. These base estimates on catch reports

35. *On Necessity of Improvement of the Russian–Norwegian Management Strategy for Cod in the Fisheries in the Barents Sea*, Workshop for Discussion of the Joint Management of the Barents Sea Cod Stock, Nor-Fishing 2006, Moscow: VNIRO Publishing, 2006, p. 4 (emphasis added).
36. Interview in Moscow, December 2007.
37. Ibid.

from the fishing fleet, rather than on data from scientific cruises. Neither catch reports nor cruises cover the entire ocean, so the various models contain different techniques for generalizing from observed amounts of catch to the prevalence of fish in the entire ocean.[38] While the alternative models are familiar to ICES, they yield significantly higher stock estimates than the traditional model when applied to Northeast Arctic cod. This is the crux of the matter for VNIRO: ICES systematically underestimates the cod stock; as a result, the fishing industry loses access to significant amounts of fish.

The alternative models were promoted in a draft protocol presented by the Russians at a meeting between the Norwegian Minister of Fisheries and the leader of the Russian Federal Fisheries Agency in March 2006,[39] as well as the Joint Commission. The big question was to what extent VNIRO represented the official Russian point of view. The leader of the Norwegian delegation to the Commission has repeatedly said that his Russian counterpart has assured him that the new methods will not be applied before they have been thoroughly assessed and accepted by ICES. Norwegian scientists, however, have been more concerned. In May 2006, scientists from the Norwegian Institute of Marine Research told Norwegian media that they felt far from sure that the Russians would not officially promote the new methods at the coming session of the Joint Commission: "We've been given assurance that they will only be used in connection with symposia, but I feel far from sure."[40] In our interviews with Norwegian scientists (Aasjord and Hønneland, 2008), similar concerns were expressed: "The alternative analyses become more and more prevalent. They're like a many-headed ogre. They appear in ever-new variants", one of them said (ibid., p. 303).

In a letter dated 13 October 2006, the Russian Federation requested ICES to re-evaluate its Northeast Arctic cod assessment in view of new information that had become available since ICES last evaluated the stock a few months earlier.[41] This information included data on Russian transhipments at sea – and the synoptic method for estimating the stock size. A group of scientists from Poland, the Netherlands and France was appointed for the task, with designated Norwegian

38. I do not provide further technical details here, as this would have brought us well into the natural sciences, and is not necessary for my present argument. For such a presentation, see Aasjord and Hønneland (2008) and *ICES AFWC Report 2008*, Copenhagen: International Council for the Exploration of the Sea, 2008, Section 3.9.

39. See Aasjord and Hønneland (2008, pp. 300–301). The draft protocol is on file with my co-author Bente Aasjord.

40. *Fiskeribladet*, 23 May 2006.

41. *ICES Advice 2006. Book 3: The Barents and the Norwegian Seas*, Copenhagen: International Council for the Exploration of the Sea, 2006, p. 28.

and Russian scientists available to assist. According to *ICES Advice 2006*, there was "good agreement between the reviewers", and they "supported the ICES June 2006 advice as they did not find the basis for the 'new' stock estimate sufficiently strong to reject the [Arctic Fisheries Working Group] assessment".[42]

The most outspoken criticism, however, has come not from Norway nor from ICES, but from VNIRO's own former daughter institute in Murmansk, PINRO. In their response to a VNIRO report that presented the synoptic method,[43] a group of PINRO researchers[44] more than hinted that VNIRO has promoted the method for financial rather than scientific reasons: "The alternative method for estimation of stock size has, even if it was conceived by good intentions, in certain cases been used as an instrument to redistribute research quotas within the framework of existing legislature".[45] The scientific criticism from PINRO is directed mainly at VNIRO's preoccupation with absolute rather than relative figures:

> One has to remind them that what it is important to know, with respect to rational use of a stock, is not the absolute size of the stock, but how it reacts to the intensity of the fishery. It is not so important whether the absolute size of the stock is 1 million or 10 million tonnes – what is important is how the stock reacts to a certain catch under specific conditions. For example, if an annual catch of 800,000 tonnes from a stock of 1 million tonnes makes it possible to maintain a positive tendency in stock dynamics – without displacing the structure of the stock – then such a catch level can be acceptable. And conversely, if a catch of just 100,000 tonnes from a stock of 100 million tonnes leads to a strong displacement in the stock's structure, then one has to consider this catch level as too high.[46]

The PINRO scientists presented their Moscow colleagues as rank amateurs, incompetent in quantitative analysis:

> Until the authors begin to add maximum values of biomass found for different 'synoptic periods' […], it seems as if one can at least observe a simple logic in their reasoning. […] But when one comes to the addition of the different maximum biomasses emerging from different time periods, this reminds too much of a pupil's attempts to fit the response to the standard answers in the back of the exercise book. […] One is amazed at the authors' lack of logic or sophisticated reasoning.[47]

42. Ibid.
43. Borisov et al. (2007).
44. Berenboym et al. (2007).
45. Ibid., p. 28.
46. Ibid., p. 27.
47. Ibid., pp. 25–26.

5. Bargaining dynamics

During the 1990s, working relations between Norway and Russia in the Joint Commission had been exceptionally good. After the two countries in 1993 had agreed to include enforcement in the Joint Commission's area of work, a number of technical regulations were coordinated and new ones jointly introduced, among them the introduction of mandatory use of selection grids and satellite tracking. Proposals came from Norway and were accepted by the Russian side, and the working atmosphere was good. Around 1998, a small change became evident. The Russian delegation leader would now routinely open the meetings with a diatribe: the Norwegians were discriminating against Russian fishers in their inspection activity. Russian fishers were inspected more frequently than fishers from other countries and more severely punished when violations were revealed. The content of these accusations was unexpected for the Norwegian side (although later evidence showed they were not completely unfounded),[48] but most of all it was the form that puzzled the Norwegians. Once the accusation had been delivered, the Russians would return to the 'good working relations' in the Committee, without further mention of the alleged discrimination against Russian fishers. A general assumption emerged in the Norwegian delegation that the Russian delegation leader had been 'instructed by Moscow' to take a tougher stance in the Permanent Committee.

The Norwegian delegation leader to the Joint Commission at the time explained work in the Commission in an interview with me:[49] up until 1997–98, negotiations with the Russians were rather easy. The scientific recommendations allowed for generous TACs, the achievements of the Permanent Committee were considered a feather in the hat also for the Joint Commission, and the Russians were generally flexible at sessions in the Commission. From 1997–1998, the Russian delegation leader's mandate became more restricted; the Russian delegation was controlled by the fishing industry; and it became more difficult for the Norwegian to get the Russian party to agree on quota levels in accordance with the scientific recommendations.[50] My interviewee emphasized the enforcement cooperation and coordination of technical regulation measures as the most important achievements during his time as head of the Norwegian delegation (1989–98). He also underscored that the Norwegians always sought to make the Russians feel ownership to the measures adopted by the Commission on Norwegian initiative: "The good stock situation and the fact that we could set so high TACs gave us *time* to work with other things than quota issues. In order to make the Russians feel ownership

48. *Aftenposten*, 18 November 2002.
49. Interview in Kirkenes, June 2006.
50. Ibid.

to the measures it was important that things were taken in several rounds: first in the [Permanent Committee] and then in the Commission."[51] He mentioned the introduction of compulsory selection grids in cod trawls as particularly challenging: "The Russians understood the Norwegian intention that the selection grid should compensate for the minimum mesh size that we had never succeeded in getting them to accept"[52] Asked why the Russians accepted the cod selection grid at all, he replied: "Well, they'd probably 'come too far'". They had already agreed to so much. They were still in the game, but more hesitant.'[53] Another member of the Norwegian delegation's 'inner circle' at the time also emphasized the *gradual* introduction of selection grids: the selection grid for shrimp came in the early 1990s, and Russian scientists came on board in the preparation of introduction of grids in the cod fishery, which increased their sense of ownership to the issue.[54]

These interviewees admitted that for Norway the selection grids were a way to circumvent Russian reluctance to increasing the minimum allowable mesh size and length of fish or shrimp. They also described the introduction of mandatory grids in cod trawls in 1997 as the final step in a process that had started with the introduction of grids in the shrimp fishery in the early 1990s (allegedly a hassle primarily for Norwegian fishers since there were more Norwegians than Russians involved in this fishery) and which gradually bound Russia – if not formally, then in practice – since Russian experts became enthusiastic about grid technology, originally a Norwegian invention. The introduction of grids in the cod fishery was prepared by the Permanent Committee, where the Russian grid experts participated. When the proposal reached the Joint Commission for approval, the process had allegedly come too far for the Russian delegation leader to say no – again: not formally, but in practice. It had become standard operating procedure for the Commission to process – and accept – relatively quickly the proposals that came from the Permanent Committee.

The introduction of grids in cod fishery was soon drawn into emerging Russian complaints that too much had happened too fast in the management of the Barents Sea fisheries. As expressed in a newspaper commentary by a former Soviet delegation leader to the Joint Commission in 1999, the Norwegians had taken advantage of the temporary weakening of the Russian fisheries bureaucracy following the dismantling of the Soviet Union, in order to force new technical regulatory measure in the Barents Sea that would hit the Russian fleet hardest.[55]

51. Ibid.
52. Interview in Kirkenes, June 2006.
53. Ibid.
54. Interview in Bergen, May 2006.
55. *Murmanskiy vestnik*, 18 September 1999.

The Norwegian delegation leader during most of the 1990s (including 1998) referred to this period as "good times in the Commission".[56] His successor had a rude awakening in 1999: not only did ICES recommend a fivefold reduction in the TAC for cod; the Russians now declared that they had "not a single fish to give away".[57] For the first time in the Commission's history, the session was temporarily interrupted. As we saw above, the agreed TAC was closer to the Russian than to the Norwegian preference, but the difficult situation at the 1999 session paved the way for new departures: first a three-year quota in 2000 and then the harvest control rule in 2002. The head of the Norwegian delegation stressed the connection between what happened in 1999, 2000 and 2002 in an interview with me several years later:

> In 1999, we gave rather much on the Norwegian side in order to get a solution. It wasn't irresponsible, but we had wanted a lower quota. […] The Norwegian goal was already then to achieve long-term management strategies, to get the setting of the TAC 'automatized'. This first led to the three-year quota; the Russians accepted that, we had a good discussion about it. In order to move forward from there we established the Basic Document Working Group, which was given a concrete assignment [in 2001]. Their report [from 2002] gave indications, but no answers. [The Norwegian Director of Fisheries] and I decided to give it a try. We made the formula and spent several hours talking with [the Russian delegation leader]. He eventually succeeded in getting [the harvest control rule] anchored in the [Russian] group. He gave [a prominent Russian scientist] credit for this.[58]

The story of how the harvest control rule came about says a good deal about the dynamics both within each national delegation and between them. In Norway, there was growing awareness of the need for long-term sustainable management practices. The context was the emergence of precautionary management guidelines in ICES and a 'tougher climate' in Russia, with the fishing industry acquiring control of the Russian delegation to the Joint Commission. Interacting with the scientific community, a top civil servant worked out a draft harvest control rule that would 'automatize' the TAC setting, paying attention to both biological sustainability and economic viability. He got the Norwegian delegation leader on board and they presented the draft rule to the Russian delegation leader in a smaller context than the Commission itself, at a preparatory meeting. The chemistry was allegedly very good between the two delegation heads at the time, which might have made it

56. Interview in Kirkenes, June 2006.
57. This became a slogan in the Russian fishery press at the time. See, for instance, *Rybnaya stolitsa*, 15 November 1999.
58. Interview in Oslo, June 2006.

easier to reach agreement than if the situation had been less advantageous in that respect. Obviously, the Russian delegation leader felt the need not only to secure legitimacy for the harvest control rule internally in the Russian delegation, but even to present the rule as a Russian invention – in itself arguably a sign that he did not feel convinced about the rule's legitimacy in his own delegation, or in the Russian fishery complex more widely.

So here we see a line from the Norwegian bureaucracy and scientific community up to the head of the Norwegian delegation, via him to the head of the Russian delegation and down to the Russian scientific community and possibly the rest of the Russian delegation. In technical regulation issues during the 1990s, we saw a different pattern: several issues were processed at the technical level in the Permanent Committee – and in ad hoc working groups set up by the Committee, such as on selection grids and satellite tracking – before being presented to the Commission for final approval.

In general, there seems to have been fundamental agreement between the leading scientific communities on both sides, and a tendency to steer towards agreement in the upper levels of the two delegations. The main obstacle seems to have been the Russian fishing industry and actors associated with it, as well as certain lower levels of the Russian bureaucracy. The most difficult TAC negotiations took place in the late 1990s, when the industry had allegedly taken control of the Russian delegation. At the most dramatic session, in 1999, the Russian delegation was headed by a young businessman without experience from the northern basin, who was later accused of economic crime. Here the federal Russian research institute VNIRO might fall into the category of "actors associated with the Russian fishing industry"; at least, that was PINRO's accusation. As to scientific methods, the established collaboration between PINRO and the Norwegian Institute of Marine Research functioned as a buffer against disagreement between the higher levels of the delegations to the Joint Commission. It would arguably have been more difficult for the head of the Russian delegation – to the extent he was subject to pressure from VNIRO – to stand up against arguments for a new method for estimating the cod stock if the leading Russian research institute on the stocks in question had not been wholeheartedly 'on the Norwegian side'. Russian support might not have been the result of strategic endeavours by the Norwegians to get the Russian scientists 'on their side', but more the consequence of Norwegian efforts to include the Russians in the multilateral scientific community.

The outcome was less favourable for the Norwegians in the overfishing issue during the 2000s. Here the good relations built up between the enforcement bodies of the two countries during the 1990s did not pay off in the form of Russian support for the Norwegian initiative to investigate the consequences of increased

transhipments at sea. Members of the upper levels in the Norwegian delegation tend to express themselves diplomatically, as the delegation leader did in an interview with me in 2006: "The Russians acknowledge the overfishing, but they don't present any figures. They're not aggressive or anything like that. They understand that there has been a Russian overfishing; they just don't know how large it's been."[59] Long-time members of the Norwegian delegation to the Permanent Committee expressed disappointment about Russian lack of initiative in revealing and punishing those who overfish.[60] The Norwegians gave top priority to the Commission's working group on enforcement, while the Russians sent low-level civil servants to the meetings. In the end the Russians decided not to follow up on suspicions of overfishing, so the Norwegians had to go it alone.

The Russian Federal Border Service started to cooperate actively with Norwegian authorities on the overfishing issue around 2005. A total of 53 investigated cases were forwarded from the Norwegian Directorate of Fisheries to the Russian authorities. All 24 cases originating in the Russian EEZ, where the Border Service is responsible, were followed up. However, there was no response on the remaining 29 cases.[61] These concerned violations outside the Russian EEZ, where the Russian civilian enforcement authorities were in charge. The latter even withheld data about landings in Norway from the Russian Federal Border Service. A civil servant at the Norwegian Directorate of Fisheries explained in an interview with me that neither the introduction nor the implementation of the joint Norwegian–Russian method for estimating the total catch, adopted in 2009, has been straightforward.[62] Norway and Russia interpret the method's provisions about transparency differently. The joint method requires each party to present 'prepared material' about transhipments, transport and deliveries of fish. The Norwegians interpreted this to the effect that there was to be full transparency in all basic documentation. The Russians, however, presented their final analysis and refused the Norwegians access to the basic documentation. The argument was that it contained restricted material from other state agencies, such as the customs authorities. As a conse-

59. Interview in Oslo, June 2006.

60. For example, in a newspaper interview the leader of the enforcement section at the Norwegian Directorate of Fisheries, who has been a member of the Permanent Committee since its establishment, complained that the Russians were not willing to share satellite tracking data with the Norwegians, as they had promised in the Joint Commission that they would do: "I have the impression that Russia doesn't prioritize this. I also think it's fair to say there's a lack of will on the Russian side. Instead of doing what we've agreed to do, there's unwillingness to implement measures." (*Nordlys*, 23 June 2006)

61. Interview in Bergen, June 2011.

62. Ibid.

quence, my respondent indicated, one cannot be 100 per cent sure that overfishing has in fact been eliminated.[63] The Norwegians thus had to detour through a multilateral organization (NEAFC) in order to get structures created that could eliminate the possibility for Russian fishers to deliver fish illegally. In this case, the lower levels of the Russian fisheries bureaucracy allegedly sided more with their own country's fishing industry (or corrupt elements in the fisheries administration) than with similar institutions in Norway. The upper echelons on the Russian side arguably lacked initiative, but enforcement is – unlike the setting of TAC – traditionally handled at lower administrative levels. This situation changed somewhat around 2007–2008, when the federal Russian authorities – up to the level of the president – started a campaign to combat illegal fishing activities in Russia (Jørgensen, 2009). This coincided with the elimination of overfishing in the Barents Sea, and was more directed towards the far eastern Russian fishery basin than the country's northwest.

6. Conclusions

Norway tried to get Russia to take overfishing seriously on two occasions, first in the early 1990s, then in the mid-2000s. On the first occasion, the Russian side was quickly convinced that overfishing did in fact constitute a problem, and entered into new collaborative arrangements with Norway in the enforcement of the Barents Sea fisheries. In the 2000s, however, the Russian response was lukewarm. Nevertheless, agreement was reached in 2009 on a joint method for assessing the total catch from the Barents Sea. In the meantime, the 2007 NEAFC port-state control regime had largely solved the problem of overfishing in the Barents Sea, although Russia has remained unwilling to present the basic documentation about Russian transhipments to Norway, and there is uncertainty about Russian readiness to prosecute violators. Norway had more success in getting the Russians on board when it came to the coordination of technical regulation measures, the joint introduction of new regulations and the 'automatization' of the setting of the TAC. This was possible because Norway did not simply leave implementation of Russia's international commitments to Russia itself, but engaged actively in post-agreement bargaining.

As a point of departure, one might expect such bargaining to take place between the parties 'over the table' – in this case, at plenary sessions of the Joint Commission. In practice, I have identified two other main tracks of Norwegian negotiation efforts: from bargaining at lower levels to approval by the Commission;

63. Ibid.

and bargaining by the two heads of delegation, with decisions subsequently anchored in the respective delegations. Many issues have been negotiated and agreed upon in the Permanent Committee and its sub-groups before being presented to the Commission for final approval. This was the case with the joint introduction of new regulatory measures like selection grids and satellite tracking around the turn of the millennium, and with more recent initiatives like the joint method for estimating total outtake of fish from 2009. In these cases, the challenge of reaching agreement between the two states was in practice handed over to technical experts (civil servants at lower levels or scientists). If the role of the Commission was not formally reduced to rubberstamping, in practice at least the agreements reached at lower levels were routinely accepted by the Commission. In a somewhat related manner, the established scientific collaboration between PINRO and the Norwegian Institute of Marine Research functioned as a buffer against the introduction of the new Russian methods for estimation of fish stocks that were advocated by the federal research institute VNIRO but did not meet ICES standards for precautionary fisheries management. Here fundamental agreement on scientific principles had evolved over many years between Norwegian and Russian scientists under the auspices of ICES. Norway had intensified its support to PINRO, also financially, after the break-up of the Soviet Union. Whereas the Norwegian intentions were more altruistic – including Russia in the international scientific community – this investment could be 'cashed in' by leading Russian scientists showing support in the Joint Commission for Norway's position on new methods of stock assessment. But there were also risks associated with efforts to influence the lower levels of the Russian bureaucracy. The ease with which the Permanent Committee reached agreement allegedly led to suspicion in Moscow: were these scientists and civil servants defending Russian interests, or were they becoming too friendly with the Norwegians? Similarly, PINRO was, at least indirectly, suspected of running the errand of Western interests, and found itself squeezed financially and challenged scientifically by VNIRO.

The other main track of argumentation that I identified was direct communication between the two heads of delegation – mostly with their respective interpreters, or sometimes just the two of them, and on occasion in the Commission's 'inner circle'. The TAC has always been handled at this level, and not in plenary sessions. The same goes for many other important decisions, such as the introduction of new procedures – although, as we have seen, some new procedures were introduced through agreement at lower levels and then approved by the Commission. Around the turn of the millennium, the Norwegians worked consistently to prepare the ground for the 2002 harvest control rule. First, they yielded rather much in the difficult negotiations in 1999 in order to 'keep the Russians happy'. Next, they got the

Russians on board with a three-year quota in 2000, an arrangement that included elements of the ensuing harvest control rule. And we saw how, in the final stages before the harvest control rule was adopted, the Norwegian delegation leader and the Norwegian Director of Fisheries 'worked on' the Russian delegation leader, first at a preparatory meeting, then in the Commission itself, to get him to accept the new rule. Once the rule was adopted, the head of the Russian delegation credited it to his own scientists, presumably to reduce any impression of the harvest control rule as being a Norwegian invention.

My Norwegian interviewees, who were high-ranking members of the Norwegian delegation to the Joint Commission and the Permanent Committee, agreed that Norway had been the leading force in the collaboration, at least after the break-up of the Soviet Union. As a result, they saw the need to create ownership to the proposed measures on the Russian side. This was done by meticulous and persistent arguments, and by taking things 'in several rounds', from lower levels to the Commission itself. The introduction of selection grids was an example of a step-by-step process that gradually bound the Russians, if not formally, then in practice. First, selection grids were introduced in the shrimp fishery, which was mainly a nuisance to the Norwegian fishers, since they were more involved in that fishery than the Russians were. This, however, sparked the interest of Russian scientists and technical experts in the grid technology, and talks ensued about the possible use of grids also in the cod fishery. Practical exploration of the technology followed. By the time the technical experts had agreed first in a sub-group to the Permanent Committee and then in the Committee itself, the Russians had allegedly 'come too far' to pull out. This turn of events might have been unintended from the Norwegian side, but it serves to fill in the picture of negotiation dynamics in the Norwegian–Russian fisheries relations.

Post-agreement bargaining theory is not well refined, so the contribution of my study is mainly to provide empirical evidence and suggest pathways that such bargaining *might* follow, how Norway went about *getting it done* (Spector and Zartman, 2003). In the Joint Commission, Russia found itself in an institutional web of increasingly more elaborate decision-making procedures, geared largely towards compromise. Post-agreement bargaining was the practical tool employed by Norway to get new measures and procedures implemented. In line with Chayes and Chayes,[64] instances of apparent non-compliance were regarded as 'problems to be solved, rather than as wrongs to be punished'. The overfishing of the early 1990s was halted after only a few years. Technical regulations were coordinated between the two countries, and selection grids and satellite tracking were jointly intro-

64. Chayes and Chayes 1995, p. 109.

duced. TACs were brought closer to ICES scientific advice through Norwegian bargaining, and the harvest control rule was adopted. Russian overfishing was most probably discontinued towards the end of the first decade of the twenty-first century. And the alternative models for stock estimation never even made it to the protocols of the Joint Commission, although it was more a long-term effect of Norwegian politics that reduced the need for more immediate post-agreement bargaining. While we cannot say for certain that these decisions were 'right', at least they brought the management of the Barents Sea fisheries closer to the standards around which international science – and politics – converge.

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