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Regime interplay in Arctic shipping governance: Explaining regional niche selection

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Abstract: Distinctive institutional features can make a regime particularly suited for conducting one or more generic tasks of governance: building knowledge, strengthening norms, enhancing problem-solving capacity, or enforcing rule compliance. Each of those governance tasks constitutes a potential "niche" that a regime can specialize in within a larger institutional complex. Applying this niche-oriented approach to the case of Arctic marine transport helps to explain the emerging division of labor between regional and global institutions in an issue-area marked by rapid change. Drawing on earlier regime-effectiveness research, the article examines the potential of regional institutions, especially the Arctic Council, to contribute to strengthening the international governance system for shipping, based on the UN International Maritime Organization (IMO). Although the Arctic Council is not well-positioned to regulate regional shipping activities, it may facilitate regulatory advances in the IMO, in part by knowledge-building and in part by helping Arctic states to find common ground on matters of controversy. The Council is also well equipped to enhance regional maritime infrastructure, like capacities for responding to oil spills, and search and rescue operations. Should binding region-specific international rules on Arctic shipping be adopted, Arctic institutions could play a role in coordinating port-state enforcement measures – but existing institutions with broader participation are better suited and will probably remain dominant. The larger question of achieving cross-institutional interplay that can promote effectiveness is relevant in any region or issue-area, because efforts to solve specific problems usually involve more than one institution.

Keywords: governance, international regimes, institutional interplay, shipping, Arctic

1 Introduction

How can regional institutions help to make marine transport in the Arctic less dangerous for seafarers, vessels, and the environment? Rising temperatures, albedo-reducing black carbon, and other large-scale changes are making the Arctic Ocean ice-free during summer, drastically altering the conditions for shipping. The retreat of multi-year ice has fueled expectations of wider resource-based extraction and industrial activity in the region, growth in polar cruise tourism, and commercial use of short trans-Arctic transport routes between Europe, North America, and Asia. This article examines the contributions Arctic institutions can make to improve international shipping governance, centered on a UN specialized agency, the International Maritime Organization (IMO). Institutions are "sets of rules, decision-making procedures, and programmatic activities that serve to define social practices and to guide

the interactions of those participating in these practices" (see Young 1997, p. 4, and in this issue); international regimes are institutions that involve states as main actors and address specific issue-areas.

Scholarship has focused on the drivers of change in Arctic marine transport and the adequacy of existing governance structures, with scant attention to the *interplay* between regional institutions and the global shipping regime. Climate change, rising prices in petroleum and mineral markets due to steep economic growth in some regions (China in particular), and aspirations among Arctic states to capitalize on natural resources are all key factors driving the ongoing increase in Arctic shipping (see PAME 2009; Borgerson 2006; Brigham 2011; Lasserre 2011). Corresponding regulatory gap analyses have been provided by Holland (2002), Jensen (2008), Chircop (2009), Koivurova and Molenaar (2009), and Molenaar (2009). These contributions highlight the special challenges facing Arctic marine transport, notably the combination of harsh weather conditions, pervasive ice, poor hydrographical and bathymetrical charting, seasonal darkness and remoteness from emergency response centers, as well as a sensitive marine environment. Although these authors often recommend region-specific, stricter rules for vessel safety and environmental protection, they rarely relate the analysis to features that distinguish Arctic institutions within the larger complex of regimes relevant to shipping in the region, or the implications for the division of labor with global institutions.

This article diverges from earlier work by focusing on *interplay management* between regional institutions and the global shipping regime: that is, deliberate efforts by states and others to shape the effects of one institution on the contents, operation, or consequences of another (Oberthür and Stokke 2011). In contrast to those who recommend the negotiation of a new circumpolar, legally binding treaty for protection of the Arctic environment (Verhaag 2003; Pietri et al. 2008; Koivurova and Molenaar 2009), I start out from the observation that certain features may make a given institution particularly fit to conduct one or more generic governance tasks: generating knowledge, strengthening norms, enhancing problem-solving capacity, or enforcing rule compliance. Each of those tasks constitutes a potential governance niche that a regime can specialize in within a larger institutional complex. This niche-oriented approach to regime interplay can help to explain why, as regards shipping, the main circumpolar institution—the Arctic Council—has focused on knowledge-building and is moving into capacity-enhancement. Its distinctive combination of limited membership, soft-law basis, and ability to extract funding for cross-boundary program activities makes it particularly well suited for those two tasks, as its member states have recognized. In contrast, the division of legal competence between coastal states, port states, and flag states makes certain broader institutions more potent as venues for strengthening international rules or as means for enforcing such rules.

The next section elaborates on the concept of governance niches, then pinpoints certain conditions proven conducive for exercising the tasks associated with such niches in a way that maximizes contributions to overall problem solving. On this basis, the article examines whether distinctive features of the regional institutions set up by Arctic states over the past two decades equip them particularly well for bringing about those conducive conditions, within the larger complex of institutions governing marine transport.

2 Institutional interplay and niches of governance

The interaction between regional and global institutions has received scant attention in debates over shipping governance, but is an essential point (Ringbom 2011; Boyle 2000). Regional institutions nest within the global shipping regime whose key parameters are defined generally in the 1982 UN Law of

the Sea Convention and specifically in a range of IMO treaties. Other global institutions relevant to maritime safety or marine environmental protection include the International Hydrographical Organization, the World Meteorological Organization, and the International Labour Organization, while numerous and diverse regional organizations deal with matters like maritime infrastructure, prevention of vessel-based pollution, and port-state control of international rules. Given the existence of such complexes of institutions co-governing an area of international relations (Young 1996 and in this issue; Raustiala and Victor 2004; Oberthür and Stokke 2011), actors aiming to strengthen governance in the issue-area should address not only the micro-question of regime effectiveness (an institution's contributions to solving the problem addressed by it; see Young in this issue), but also the corresponding macro-question: what is the optimal division of labor with other institutions relevant to such problem-solving? The niche-oriented approach to this macro-question identifies governance tasks in particular need of strengthening and examines whether the given institution has distinctive features that make it particularly suited to provide such strengthening.

2.1 Governance niches and problem-solving effectiveness

In ecology, a "niche" denotes the position of a species or population in an ecosystem, notably that segment of a resource domain where it out-competes other local populations. Used as a metaphor in organizational analysis, the niche concept highlights the relationship between institutional features and the ability to extract the resources necessary for organizational survival (Hannan and Freeman 1977; Aldrich 1999, p. 226). Elsewhere I have distinguished four generic tasks of governance, each indicating a particular institutional niche those operating a regime may seek to occupy (Stokke 2011a). First, effective governance requires knowledge about the severity of the problem addressed by the regime and the effects of various options for dealing with it. A second governance task is elaboration of behavioral norms, whether soft-law instruments or binding rules. Third, multilateral institutions frequently provide means for facilitating the implementation of such norms if some participants would otherwise be unable to heed them, for instance through funding or specific capacity-building programs. A fourth task, rule enforcement, is often a weak point in international governance, since structures for behavioral monitoring, compliance review, and response to rule violation may be weak or non-existent.

Within an institutional complex, some organizations may attend to a broad range of governance tasks, as the IMO does in shipping, whereas others specialize in one or a few tasks. The IMO engages in knowledge-building and norm-development within five separate committees and nine sub-committees, open to maritime-agency representatives from all member states and involving around 80 industry and civil-society associations. Jointly, these states and associations mobilize considerable technical expertise, and numerous legally binding treaties and non-binding resolutions have been adopted under the auspices of the IMO. Capacity-enhancement is the task of a Technical Co-operation Program, while rule-enforcement is to be promoted by a Sub-Committee on Flag State Implementation. In contrast, an international institution of far more modest scope, specializing in a single governance task, is the UN Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, which builds relevant knowledge through periodic assessment of the state of the marine environment and may provide specific advice, including on marine transport (Campe 2009, p. 147).

According to the principle of competitive exclusion, no two species can occupy the same niche for a long time: competition between species or populations will force the weaker party either to adapt by carving out another niche, or to abandon the ecosystem. However, to assume that this competitive exclusion principle operates as powerfully in the realm of social institutions as in natural ecosystems would be ill-advised, for several reasons (Aldrich 1999, 301–306). Co-governance by several

institutions can be mutually supportive: each institution may bring distinct capacities to bear on the overall problem-solving effort, enabling more forceful conduct of the governance task in question. Even when the institutions pull in different directions – as the World Trade Organization and some multilateral environmental regimes do on trade-related enforcement of environmental rules – tense co-existence is more common than one institution driving the other completely out of a governance niche (Stokke 2011b).

In short, a governance niche is a governance task perceived as being in need of improvement. The process of niche selection involves numerous collective decisions within an institution on what activities to engage in within a policy area – and among the factors influencing such niche selection are decision-making rules, the level of agreement on the need for stronger governance, and states' perceptions of how well equipped each institution is to contribute to each governance task.

2.2 Conditions for effective niche selection

Effective niche selection maximizes the contribution a regime can make to overall problem-solving within an institutional complex (Stokke 2011a). What features will make an institution especially well fit to perform each of the four governance tasks examined here?

As to knowledge-building, most international environmental institutions include, or link up to, a scientific body responsible for evaluating various kinds of data that inform risk and option assessment. Regime effectiveness research has indicated at least three factors that influence the problem-solving potential of such activities: credibility, legitimacy, and saliency (Mitchell, Clark and Cash 2006, pp. 314–324). Credibility denotes the perception among decision-makers that scientific input reflects the best available knowledge, in terms of expert consensus and certainty, concerning the problem in question (Haas 1989; Andresen et al. 2000). Legitimacy in this context refers to user perceptions that scientific input reflects serious consideration of their concerns, values, and data provision (Mitchell, Clark, and Cash 2006, p. 320). Broad involvement in the process of developing input is one important way to support such perceptions, and may prove decisive for generating normative commitment to the measures that scientists advise (Stokke and Vidas 1996). The third factor, saliency, concerns the extent to which scientific input is directly relevant to users by responding to urgent policy concerns or clarifying the costs and benefits of the available policy options (Mitchell, Clark, and Cash 2006, pp. 314–317; see also Underdal 1989, pp. 264–265). Accordingly, a collective decision to opt for a knowledge-building niche is likely to prove effective if the institution is better placed than others to produce scientific input to decision-making that can combine credibility, legitimacy, and saliency.

Turning to norm-building, three aspects of international norms are crucial for advancing problem-solving: applicability, actor coverage, and substantive strength. Applicability combines two of Franck's (1990) "building blocks of due process:" external coherence with other norms acknowledged by the international community, and internal determinacy deriving from textual precision or agreed procedures for interpreting rules (Stokke and Vidas 1996). Determinacy enhances a norm's compellingness by communicating clearly what is expected of those addressed by the rule: a vague or non-binding norm fails to direct behavior unequivocally and may indicate disagreement among those who created it—which may in turn be taken to justify non-adherence (Franck 1990, pp. 53–54; Mitchell 1998). The second aspect of an institution that influences its ability to occupy the norm-building niche effectively is actor coverage: whether it involves those states whose participation is most important for solving the problem at hand (Barrett 2003, p. 356). Inadequate coverage is frequently a severe constraint in environmental governance. International institutions seeking to maximize actor

coverage sometimes cede on the third aspect, substantive strength, thereby weakening the contribution that norm-building can make to problem-solving. If broader coverage is pursued by lowering the standards, the net effect on environmental problem-solving will be uncertain. Other things being equal, opting for a norm-building niche makes good sense in effectiveness terms if an institution provides a more promising venue than others for raising the applicability, actor coverage, or substantive strength of normative commitments.

Means for capacity enhancement in international institutions typically require acknowledgement among leading members that, for some states, effective implementation will require the transfer of technology or other resources. At least three factors situate an institution well for promoting such transfer: differentials, commitments, and funds (Stokke 2011a). Differential capacities among regime members, providing models that others may learn from and apply adaptively, are a basic requirement for occupying this particular governance niche. A second factor is the normative commitment to engage cooperatively in capacity enhancement. The third factor is perhaps the most important, since the essence of capacity enhancement is resource transfer: willingness among at least some regime members to finance program activities, also when the primary beneficiaries are foreign states. As noted by Barrett (2003, p. 355), resource transfers can help restructure incentives to participate in and comply with international regimes, thus improving their effectiveness. Therefore, selecting a capacity-building niche is likely to raise the overall effectiveness of the complex if the institution is better placed than others to provide model cases of how to solve the problem, to obtain commitments among leader states to contribute to practical problem-solving beyond own borders, or to raise the necessary funding.

Whereas capacity-building fosters problem-solving by lowering the barriers to compliance, rule enforcement aims to deter violation by raising the risks of exposure and sanctions (Barrett 2003). Key requirements for achieving such deterrence, and thus for effectively occupying the rule-enforcement niche, are capacities and incentives for verification, review, and response (Hovi, Stokke and Ulfstein 2005, p. 2). Verification entails an assessment of the completeness and accuracy of compliance-related information and its conformity with pre-established standards for reporting. Such assessment is easier for institutions that have access to sources of information besides parties' self-reports; the latter typically form the backbone of verification systems in international governance. The second factor is competence to review such factual information against a state's commitments and to pass a compliance judgment. The third factor affecting the potential of an institution's rule-enforcement contribution is readiness among participants to bear the political and other costs of administering punishment in cases of deliberate non-compliance. Accordingly, selecting a rule-enforcement niche is likely to prove effective if an institution is particularly capable of obtaining independent information about compliance behavior, preventing parties from obstructing compliance review, or inducing states to punish non-compliance.

In summary, regime-effectiveness research has identified certain conditions that favor successful conduct of four governance tasks. Here I have used those conditions to identify institutional features that make a regime particularly well-suited for occupying the corresponding governance niches in ways that can promote problem-solving. Unless powerful regime members openly oppose strengthening of the governance system, such considerations of fit also help to explain the niche selection made collectively within each elemental institution. Hence, those advocating a focus on knowledge-building are more likely to succeed if they can show that the institution in question is better placed than others to promote the credibility, legitimacy, or saliency of scientific input to decision-making on the matter. Conversely, states and other actors proposing a norm-building focus will face an uphill battle if other institutions appear to be more conducive for achieving rules that combine applicability, actor coverage,

and substantive strength. Those favoring a focus on capacity-enhancement activities are more likely to be heard if resource-pooling synergies are evident or if major differentials among members in the ability to implement regime provisions coexist with commitments to improve foreign infrastructures as well. Finally, a collective decision to opt for rule-enforcement is more likely if the institution in question is better equipped than others as regards the ability to generate independent behavioral information, acceptance of compliance review, or incentives for punishing violators.

Are regional Arctic institutions especially well placed to bring about these conditions? Let us begin by reviewing the contours of the larger institutional complex for governing shipping activities.

3 A regionally sensitive global regime

Marine transport is a global industry, and leading actors have been eager to avoid spatially-fragmented regulation—especially for aspects that are costly or difficult to modify, like vessel design, construction, manning, or equipment. This quest for universalism has constrained the regulatory leeway that coastal states have in waters under their jurisdiction. Many of the central provisions of the Law of the Sea Convention (LOSC) reflect customary law binding on all states, including the right to establish 200-nautical-mile exclusive economic zones (EEZs). The EEZ concept has placed coastal states in control of most activities, including resource utilization, environmental protection, and scientific research—but not navigation, which remains a high-seas freedom within EEZs. This functional differentiation reflects the balance struck during negotiations that pitted numerous coastal states, which argued that multilateral resource management had failed to conserve living resources, against major maritime states like the USA, the Soviet Union, and the UK, which were determined to retain navigational rights and freedoms for commercial and naval vessels (Stokke 2007).

In some issue-areas, such as transboundary fisheries resources or marine pollution, the LOSC encourages regional management regimes or defines global minimum standards. Shipping is treated quite differently: the LOSC sets *maximum* standards for what states may request of a vessel flagged by another state—and those regulatory ceilings become lower, the further away from the coastline a vessel operates. In ports and internal waters, coastal states have the same monopoly on regulation and rule enforcement as on land (LOSC, Art. 211, para 3). In the territorial sea, they may "adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels" as long as they do not impede "innocent passage" or go beyond "generally accepted international rules and standards" as regards "the design, construction, manning or equipment of foreign ships".[1] In their EEZs, however, coastal states are not allowed to set any rule beyond those "conforming to and giving effect to generally accepted international rules and standards established through the competent international organization" (LOSC, Art. 211, para 5) – meaning the IMO. These constraints on coastal-state regulatory action, whether unilateral or regional, mean that IMO-based treaties form the backbone of the global shipping regime.

Despite the universalist bent of this regime, certain features reflect sensitivity to the particular needs of regions like the Arctic. In the LOSC, special rules apply to areas with certain physical or socio-

[1] LOSC, Art. 211, para 4 (providing for innocent passage) and Art. 21, para 2 (restricting rules on design, construction, manning and equipment). Passage is "innocent so long as it is not prejudicial to the peace, good order or security of the coastal State;" among the acts considered as prejudicial in those respects are "wilful and serious pollution contrary to this Convention" (Art. 19, paras 1 and 2(h)).

economic characteristics, such as areas that are ice-covered for most of the year and straits used for international navigation.[2] Regional sensitivity is also hardwired into some of the 50-odd IMO conventions, most explicitly in the Special Area provisions of the MARPOL Convention on vessel-source pollution which imply stricter discharge and emissions standards. Other IMO instruments have been tailored for polar waters, including regulations under the Safety of Life and Sea (SOLAS) Convention on meteorological and ice-patrol services, as well as guidance under the Standards of Training and Certification of Watchkeeping (STCW) Convention on the training of masters for ships operating in polar waters (Deggim 2009). Moreover, negotiations on an international instrument that would specify and harmonize construction, design, equipment, and other requirements concerning vessel operations in partly ice-covered waters began within the IMO in 1991 (Brigham 2000), triggered by the disastrous grounding of the oil tanker *Exxon Valdez* off Alaska. The first output of these negotiations was a set of non-mandatory Guidelines for Ships Operating in Arctic Ice-covered Waters, approved in 2002 and intended to complement generally applicable rules in the SOLAS Convention. Important here are the standards for classifying ice- and wintering capabilities of vessels (polar classes), specified further by the International Association of Classification Societies (Jensen 2008). The IMO Assembly revised in 2009 the Arctic shipping guidelines, extended their applicability to cover also Antarctic waters, and endorsed a proposal to negotiate a binding instrument (Deggim 2009).

The global shipping regime, therefore, seeks to balance the quest for universal participation and regulatory harmonization with attention to the special needs of certain regions for substantively stronger norms. Concerning the Arctic, however, instruments adopted at the IMO level have so far been mostly non-binding.

4 Regional niche selection

International institutions focusing on the Arctic are relatively recent, and their emergence in the context of East–West thaw and rising interest in Arctic natural resources has implications for the governance tasks for which they are particularly well-equipped. This section outlines certain distinctive features of Arctic institutions and relates them to the requirements for effective knowledge-building, norm-making, capacity enhancement, and rule enforcement concerning marine transport in the Arctic.

4.1 Distinctiveness of Arctic institutions

Throughout most of the post-war period, there were few international regimes across the East–West divide in the Arctic region (Young 1985; Stokke 1990). Relations were marked by the strategic sensitivity of the region, stemming from the role of nuclear submarines deployed in Arctic waters to maintain military deterrence between the two superpowers: the Soviet (later Russian) Northern Fleet is based in Murmansk on the Barents Sea. In 1987, the Soviet leader Gorbachev launched an initiative for broader and deeper collaboration with Arctic neighbors, triggering various collaborative initiatives in the North (Stokke and Tunander 1994; Young 1998; Stokke and Hønneland 2007). Governmental and other players now saw improvements in East–West relations as a window of opportunity for creating a regional institutional infrastructure.

One major result has been the Arctic Council, a high-level forum for addressing a range of circumpolar matters. Its membership comprises the eight states with territory within the Arctic Circle: Canada,

[2] See LOSC Arts. 34–36 (straits) and 234 (ice-covered areas).

Denmark (Greenland), Finland, Iceland, Norway, Russia, Sweden, and the USA. In addition, several transnational associations of Arctic indigenous peoples have status as Permanent Participants, implying "active participation and full consultation" (Arctic Council 1998a, Art. 5). Established in 1996, the Arctic Council soon incorporated an older and more specialized intergovernmental vehicle, the Arctic Environmental Protection Strategy (AEPS), with its string of permanent working groups tasked with various program activities. The Arctic Council's ministerial meetings, held every other year, produce non-binding declarations that direct future work. Consensual decision-making means that any member state may block an initiative to engage in particular activities. The rotating Council chairmanship is responsible for driving cooperation further; greater institutionalization was achieved with a 2011 decision on a permanent Secretariat. Day-to-day governmental oversight of Council operations is conducted by the members' Senior Arctic Officials. As the Arctic Council does not have a program budget, substantive work under the Council depends on direct national financial contributions and willingness to act as lead country for specific projects.

Several sub-regional initiatives relevant to Arctic shipping exist alongside this circumpolar process. The Barents Euro–Arctic Region (BEAR) emerged in 1993 (Stokke and Tunander 1994; Young 1998): its Barents Council brings together, on a regular basis, representatives of the governments of the Nordic states and the Russian Federation, as well as the EU Commission. A Steering Committee for the Barents Euro-Arctic Transport Area has focused on improving the integration of road, railway, and port systems in the region, including development of coastal shipping and sea safety (Fauchald 2011) and aims to work closely with the new EU Northern Dimension Program on Transport and Logistics (BEATA 2011). Foreign-ministerial meetings are held every second year. Also sector ministers meet regularly within the BEAR framework, as does a Regional Council involving counties and indigenous-peoples' organizations (Hasanat 2010). A bilateral Norwegian–Russian Environmental Commission has been operational since the late 1980s; its portfolio includes protection of the marine environment from maritime and other operations (Norway 2011).

At least three distinctive features of these various Arctic institutions merit attention as regards their potential to strengthen Arctic shipping governance. First, they are explicitly soft-law based and cannot make legally binding decisions. Second, they were all set up in response to the window of opportunity of the late 1980s to improve East–West relations and were fuelled in part by the desire of Western Arctic states to involve Russia in robust cooperative structures to build confidence and reduce tension in the region. For many years, these security side-benefits generated significant willingness to pay for program activities, including assessment work and various environmental capacity-enhancement initiatives, especially in Russia. That financial muscle has enabled a third distinctive feature: a strong programmatic bent, backed up by participatory heterogeneity in working groups involving relevant expertise and administrative competence in the issue-areas covered. These features set Arctic institutions apart from others and influence their potential to contribute to the four governance tasks relevant to regional shipping, to which we now turn.

4.2 Groomed for knowledge-building

Producing shared knowledge about opportunities and challenges deriving from the climate changes underway in the Arctic is a major activity under the Arctic Council. This institution seems particularly suited to produce knowledge relevant to Arctic shipping that is credible, legitimate, and salient – and thus capable of triggering political action.

The Arctic Council Working Group on Protection of the Arctic Marine Environment (PAME) has produced several evaluations of policy priorities regarding the environmental hazards of increased regional shipping, the most ambitious being the 2009 Arctic Marine Shipping Assessment. This report presents the history, current use, and future scenarios of Arctic shipping in view of the challenges posed by geography, climate, and sea ice. It also describes and evaluates national and international governance structures and examines likely consequences of increased shipping for local populations and the environment. Emphasized is the need for better maritime infrastructure, such as hydrographical charting, weather and ice information systems, and emergency preparedness (PAME 2009). The assessment includes recommendations on how Arctic states individually and jointly may contribute to marine safety, the well-being of local populations, environmental protection, and the improvement of the marine infrastructure (for a review, see Koivurova 2010).

As regards credibility, the first factor influencing the persuasiveness of scientific input, collaborative knowledge-building has emerged as the "specialization of the Arctic Council" (Stenlund 2002, p. 837). Central here are a series of assessment reports published since the late 1990s on sources and pathways of Arctic pollution, the state of the Arctic environment, as well as thematically focused reports like the 2005 Arctic Climate Impact Assessment and the 2007 Arctic Oil and Gas Assessment (see also Hoel et al. in this issue). Funding for these various reports and the underlying environmental monitoring activities has been forthcoming in part because research activities were originally seen as the least controversial among the possible activities the new Arctic institutions could engage in (Stokke 1991); and practical contributions like assessment reports have been important for justifying continued investment in these processes (Stokke 2011a). The resulting collaborative assessments have nurtured the creation and maintenance of circumpolar expert networks that can be mobilized for producing new reports, such as the Arctic Marine Shipping Assessment, and they reinforce perceptions among decision- makers that the findings constitute the best available knowledge about the matter at hand.

The broad transnational networks of experts involved during five years of producing the Arctic Marine Shipping Assessment are also highly relevant for legitimacy, the second factor enhancing the persuasiveness of scientific input. Further, more than fifty outreach events have been arranged in Arctic capitals, town halls, and professional venues, allowing stakeholders of many kinds to offer feedback on assessment foci and preliminary findings (PAME 2009, p. 11). In addition comes the fact that the lead countries – Canada, Finland, and the USA – represent small as well as large states and differ in their views on the main geopolitical issue involved in Arctic shipping: whether certain segments of trans-Arctic shipping routes should be considered as being under coastal-state sovereignty (as internal waters or territorial sea) – as argued by the states with the longest Arctic coastlines, Canada and Russia – or as straits used for international navigation, as held by others; see below. The participatory inclusiveness that has marked the preparation of the Arctic Marine Shipping Assessment, involving leading circumpolar expertise and a broad range of stakeholders with partly complementary and partly competing perspectives, has served to enhance the legitimacy of its policy recommendations.

Saliency too has been high, due more to contextual factors that have increased the demand for policy-relevant knowledge on Arctic shipping than to institutional features of the Arctic Council. The publication of the Arctic Marine Shipping Assessment in 2009 coincided with news, circulated worldwide, that the Arctic Ocean is expected to be ice-free during summer much sooner than previously estimated (see e.g. Richter-Menge and Overland 2010). World attention to the potentials of Arctic transport was further enhanced by the 2009 transit of two German heavy-lift vessels through the Northern Sea Route, shaving off 3,000 miles and ten days (about a fourth) of the journey from Europe to South Korea compared to the Suez Canal route. Despite heavy transit fees to Russia, the vessel

operator claims that savings up to $600,000 per vessel trip can be achieved by using the Northern Sea Route in the future (Beluga Shipping 2010). A 2010 transit by a Hong-Kong flagged vessel with iron ore concentrate bound for China halved the Suez-time and saved around $300,000 (Wergeland 2011, p. 420). Political stability along the entire route and the absence of piracy risks add to its attractiveness. Commercial interest is on the rise: the number of transit passages soared to 34 in 2011, including liquid cargo, refrigerator vessels, and dry bulk carriers, all escorted by Russian icebreakers.[3]

High saliency of Arctic Council outputs has also been driven by the political attention accorded to Arctic affairs by all Arctic states, including the emphasis on international cooperation in the region. Canada, Russia, and the USA launched new Arctic strategy documents more or less simultaneously with the finalization and publication of the Arctic Marine Shipping Assessment (Stokke 2011b), indicating that national bureaucracies throughout the region were highly alert to the issues taken up in the report. At the international level, moreover, the Arctic states had defined as a priority issue the combat of short-lived climate forcers such as black carbon (soot), with marine transport as a major source (PAME 2009). Those states had also played central roles in the revision and transformation of the IMO Arctic shipping guidelines into the 2009 Guidelines for Vessels Operating in Polar Regions. A range of climatic, commercial, national, and international developments thus merged to boost the saliency of the Arctic Council's knowledge-building on regional shipping.

As regards marine transport, therefore, the Arctic Council is particularly well placed to occupy a knowledge-building niche, as it did when deciding to develop an ambitious shipping assessment with clear policy recommendations. Arctic states have had broader political reasons for investing in Council-based research, and the Council's track record in large-scale collaborative assessment, the transnational expert networks it supports, and its pattern of involvement all support the credibility and legitimacy of findings and recommendations. Those general drivers of influence are especially strong when an assessment report, such as the Arctic Marine Shipping Assessment, concerns a salient policy issue facing Arctic decision-makers at domestic and international levels.

4.3 Fit for norm-building?

A niche-oriented analysis of the institutional complex reveals that the Arctic Council is better placed to *support* regulatory advances in broader institutions than to provide venue for such negotiations. That is so because the member-states of the Council do not make up the most conducive grouping for negotiating international rules on Arctic shipping.

Arctic shipping is predominantly destinational, involving the transport of natural resources out of the region, and commodities or tourists into it (PAME 2009, p. 91). One consequence is that port-state jurisdiction can in theory be a powerful basis for strengthening regulatory measures. Major exporters of Arctic natural resources, like the USA, Russia, and Norway, may use their sovereignty over ports and internal waters to obtain compliance with stricter rules than those agreed globally, also with respect to the design, construction or manning of vessels. A prominent example of such port-sovereignty based unilateralism is the US Oil Pollution Act of 1990, adopted shortly after the *Exxon Valdez* accident. It phased in double-hull requirements for oil tankers, as subsequently adopted by the IMO as well. Should one or a subset of Arctic coastal states wish to flex their port-state muscles, however, they can do so effectively without obtaining agreement among all the members of the Arctic Council. Sub-regional agreement among the subset of Arctic states with major commercial ports in the region would suffice.

[3] *World Maritime News*, 29 November 2011 (http://worldmaritimenews.com/archives/40275).

Conversely, for marine transport conducted independently of Arctic ports, shipping norms based solely on the Arctic Council would be inadequate in actor coverage and applicability. Coverage would be poor because only eight of the world's maritime states are members of the Arctic Council. Applicability would be questionable, partly because the soft-law Council cannot adopt binding commitments. Its member states can, of course, but the need for coherence with the LOSC implies narrow or contested regulatory competence beyond internal waters. Whether acting alone or through regional regimes, in its EEZ a coastal state must generally seek IMO approval even for relatively modest interventions like compulsory pilotage or requirements to use particular sea lanes to reduce the risks of grounding or collision (LOSC, Art. 211, para 6). For "ice-covered areas within the limits of the exclusive economic zone", the LOSC ice Article 234 modifies this situation by granting coastal states "the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels" provided those rules "have due regard to navigation". Ambiguity as to whether these rights apply also landwards of the EEZ, and therefore might restrict the right to unimpeded transit passage that foreign vessels have in straits used for international navigation, renders Article 234 contestable as a basis for ambitious coastal-state regulation of Arctic shipping (Bartenstein 2011, p. 45). Canada and Russia have adopted standards on vessel discharges and design, construction, equipment, and manning in Arctic waters adjacent to their coasts stricter than those agreed in IMO instruments (Pharand 2007; VanderZwaag et al. 2009, p. 67). Rather than relying primarily on Article 234, however, both states claim that parts of the shipping lanes in question are internal waters—claims explicitly contested by the USA, and in the case of Canada also by the EU (Brubaker 2001, p. 277; Bartenstein 2011, p. 35).

These considerations of coverage and applicability can explain why the states that operate the Arctic Council have not attempted to negotiate among themselves binding and substantively stronger regulation of Arctic shipping. Global constraints on coastal-state jurisdiction over foreign vessels outside ports and internal waters mean that those seeking regulatory strengthening have more to gain by focusing on the ongoing IMO negotiations on a mandatory Polar Code. Those negotiations aim to harden the soft-law provisions in the current polar shipping guidelines and to consider substantive strengthening and the development of new rules, notably on environmental protection. As shown in the next subsection, Arctic Council activities appear to strengthen the ability of regional states to provide joint leadership in this process.

4.4 Energizing external regulation

The Arctic Council's combination of influential knowledge-building and a membership that includes all port states in the region allows provision of intellectual and structural leadership in the IMO negotiations of special rules for Arctic shipping—but only if those states can overcome or circumvent significant differences of interest concerning jurisdiction and regulatory ambition.

The specter of unilateral action is a general driver of regulatory progress in global shipping governance: skeptics to stricter IMO standards must weigh their worries over costly refitting requirements or the like against the risk that one or more major port states might respond to a bargaining deadlock by unilaterally adopting even more ambitious requirements (La Fayette 2001, p. 177). A spatially fragmented shipping regime is undesirable for operators that fail to meet the most ambitious standards, as it narrows down the range of freights they can ship. Industry associations therefore typically prefer any region-specific rules to be hammered out within the IMO, where their participation is well established, and not in numerous regional institutions dealing with environmental

protection. The risk of unilateral or regional action can therefore persuade laggards to accommodate regulatory requests, especially if articulated by major Arctic port states.

Evidence that Arctic institutions can help to energize broader regulatory processes is found in the IMO Polar Code process thus far. The initiative for special requirements to counter the additional stresses that ice and low temperatures pose for hull, machinery, operational equipment, and life-saving appliances preceded the creation of the Arctic Council. However, Canada led the IMO Outside Working Group of technical experts that drew up the guidelines, and six of the eight Arctic states were the founding members of the Circumpolar Advisory Group on Ice Operations, which supported the negotiations (Brigham 2000, p. 250). Although the Arctic Council and the IMO do not have observer status at each other's meetings, deliberations in these institutions are linked informally by the partially overlapping memberships and associated expertise (see, in general, Oberthür and Stokke 2011). Thus, the IMO decision to commence work on a mandatory Polar Code endorsed a joint proposal by three Arctic states (Deggim 2009, p. 7) and corresponded with a major recommendation in the Arctic Marine Shipping Assessment (PAME 2009, p. 6). The ongoing negotiations aim to make the Polar Code mandatory, and to complement it with other rules by amending conventions already in force, including the SOLAS and the MARPOL conventions (IMO 2011a). If the negotiations succeed, this approach will allow rapid entry into force of new standards for construction, design and equipment, due to the tacit-acceptance amendment procedure of these treaties.

The leadership provided by Arctic states in efforts to strengthen universally applicable standards for Arctic shipping is partly intellectual (on types of leadership, see Young 1991, and in this issue), by identifying in the Arctic Marine Shipping Assessment tangible proposals based on credible, legitimate, and salient knowledge-building. If the activities of the Arctic Council can also serve to harmonize US, Russian, and Canadian positions on matters that touch upon contested jurisdictional issues, this regional institution could help to mobilize *structural* leadership by bringing material and other capabilities, notably the specter of unilateral port-state measures, to bear on the negotiations. However, realizing such leadership potential is more difficult when the negotiations concern mandatory and not voluntary provisions.

The voluntary nature of today's polar shipping guidelines presumably facilitated their adoption. Non-binding instruments do not require the involvement of national legislatures and carry limited weight if invoked in domestic courts, and are therefore typically taken on more lightly than are mandatory rules (Thürer 2000; Skjærseth, Stokke, and Wettestad 2006). Moreover, the voluntary guidelines emerged after more than a decade of technical, expert-driven, and consensus-oriented negotiations within the IMO framework. Certain substantive limitations of the polar guidelines—excluding fishing and naval vessels, for instance, and defining the area of applicability in a way that excludes the extensive vessel traffic along the coastline westwards from Murmansk (which is not ice-covered but presents other cold-water challenges like icing)—avoid several potentially controversial issues, making the problem of reaching agreement far less malign (on problem malignancy, see Underdal 2002 and in this issue). All of these aspects helped to make the guidelines palatable to the full IMO membership, as which a mandatory and substantively stronger Polar Code might not be.

Also likely to complicate the provision of leadership by the Arctic Council in these negotiations is the fact that a mandatory Polar Code might touch on the underlying geopolitical controversies over coastal-state jurisdiction in Arctic waters. The Working Group charged with developing the Polar Code comprises 25 states, including the Arctic eight (IMO 2011b). States without an Arctic coastline might consider the Polar Code as a *maximum standard* for the special regulations that coastal states may

adopt within their EEZs under Article 234 of the LOSC on ice-covered areas (Fauchald 2011, pp. 82–83); such harmonization would be one major incentive for non-coastal states to accept the adoption of a binding Polar Code. That view might not be shared by Canada and Russia, whose shipping regulation in Arctic waters go beyond the generally accepted IMO standards, so they are likely to request provisions that safeguard their rights under Article 234. Alternatively, should those two states agree that a mandatory Polar Code would set the maximum for Article 234 measures, they would probably insist that any agreed multilateral standards be no less strict than the rules they have adopted unilaterally. Despite this potentially divisive relationship between a mandatory Polar Code and Article 234, however, various Arctic Council declarations have consistently backed the goal of a mandatory code (Arctic Council 1998b; 2000; 2009; 2011).

Making the voluntary guidelines binding is certainly a challenging task, but is probably more conducive to political leadership by the Arctic states than are the most salient alternative area-based management instruments available under the IMO. One such alternative—to amend the MARPOL Convention so as to make the Arctic, or part of it, a Special Area with stronger-than-global standards regarding vessel discharges or emissions—is likely to affect the various Arctic states differently and thereby complicate the development of a common position. That is so partly because the technical standards of merchant vessel fleets vary considerably among the Arctic states, with corresponding differences in retrofitting and other investment costs for national industries. Further, not all of them currently provide adequate reception facilities in their Arctic ports for oil, noxious substances, and other wastes (DNV 2006), which Special Area designation under MARPOL would require. Even the busiest Arctic port, Murmansk, is unable to receive oily mixtures containing chemicals; likewise Archangelsk, which must also reject washing slops and sludge from fuel oil purifiers (DNV 2006, p. C-2). Such asymmetry in how Arctic states will be affected by stricter regulations makes the problem of reaching a common position more malign.

Proposals to establish one or more Particularly Sensitive Sea Area (PSSA) in the Arctic may prove politically challenging as well, although the nature and extent of asymmetry in affectedness depends on the associated regulatory instruments, which PSSA status facilitates. Among the Arctic states, Russia in particular has been wary of applying this concept to large marine areas and has ensured that the PSSA set up in the Baltic Sea does not include Russian waters (Chircop 2005, pp. 232, 242). As with the Polar Code, the Arctic Council provides a forum that allows familiarization with controversial measures and appears to support the development of a common position among Arctic states: focusing on areas outside national jurisdiction, the PAME working group is currently developing draft proposals for Arctic marine areas that may be considered for enhanced protection under the IMO (PAME 2011, p. 14).

In sum, whereas limited actor coverage and lack of legal competence make the Arctic Council ill-equipped to occupy a norm-building niche in this sector, it is well placed to support advances in global-level negotiations. Such contributions to date have involved generating knowledge that substantiates the need for stricter regulation and helping the Arctic coastal states, politically reinforced by their sovereignty over Arctic ports, to explore common ground in the IMO negotiations of a mandatory Polar Code and more specific area-based measures.

4.5 Enhancing regional maritime infrastructure

Scrutiny of the member-state interest constellation is helpful also as regards the potential of regional institutions to carve out a capacity-enhancement niche, especially in the crucial areas of search and

rescue (SAR) and oil-spill preparedness. Existing commitments to provide adequate resources for emergency response, differences among the regional states in existing capacities, and incentives to exploit synergies that can be achieved by regional action all make Arctic institutions well placed to deliver added value in these areas.

All the Arctic states have long been committed under international conventions to assist persons and vessels in distress, including under the IMO and the International Civil Aviation Organization (ICAO); and in 2009 Russia ratified (as the last among the Arctic states) the IMO International Convention on Oil Pollution Preparedness, Response, and Cooperation. These commitments highlight a rising infrastructural deficit in Arctic shipping governance, much due to rising bulk-carrier transport in connection with major resource-extraction projects and vessel-based tourism (PAME 2009, pp. 76–77, 172). Among the vessels operating in the Arctic, large bulk-carriers and tourist ships are most likely to use or carry heavy fuel oils, and it is these which pose the greatest risks if spilled into the polar environment (DNV 2011, pp. 38–42). Tourist vessels often go close to the high-risk ice edge in order to provide more spectacular sights; moreover, the frequently numerous middle-aged or elderly passengers have no special training for emergency situations, all of which accentuate the need for rapid response in cases of emergency. Response capacities like vessels, aircraft, and equipment are inadequate in large parts of the Arctic—especially on the coasts of Canada and Russia with respect to oil spills (AMAP 2007, p. 2_223) and around Greenland as regards search and rescue (PAME 2009, pp. 154, 171). These are also areas of increasing vessel traffic: Arctic oil-tanker transport is heaviest along the northern coast of Russia, especially towards the western and the eastern borders; in terms of passenger visits, the western coast of Greenland is second only to Svalbard in Arctic cruise tourism (DNV 2011, pp. 20–24). Thus, areas notably inadequate in emergency response capacities face substantial and rising shipping activities.

Despite the benign conditions for regional action inherent in existing commitments, differential capacities, and synergistic potential, capacity enhancement has until recently been a relatively weak point for the Arctic Council. Its Working Group on Emergency Prevention, Preparedness, and Response (EPPR) has produced certain helpful resources, like the Field Guide for Oil Spills Response in Arctic Waters, the Shore-Line Cleanup Assessment Technique Manual, and an Arctic Guide with information on national emergency systems and contact points. However, a recent survey among practitioners and observers of Council activities indicates that emergency training and capacity-enhancement is seen as the least effective area of cooperation (Kankaanpää and Young 2012, p. 4). One explanation is probably that the synergies achievable in these areas are greater among close neighbors than in the wider circumpolar area: international collaboration on SAR and oil-spill preparedness emerged first at the sub-regional level. Norwegian–Russian SAR collaboration dates back to the 1950s, and oil-spill preparedness cooperation began in the 1980s (Stokke 2000). Similarly, the member states of the Barents Euro-Arctic Region have arranged a series of Barents Rescue training exercises among the many relevant agencies on each side, and have adopted an international agreement that provides for points of contact and procedures for notification of emergencies, mutual assistance, and border crossings (Hasanat 2010). On the other side of the Arctic, Canada, Russia, and the USA have also created cooperative structures in these areas since the late 1980s.Until recently, therefore, the Arctic Council has left most of the capacity-enhancement niche concerning SAR and oil-spill preparedness to sub-regional institutions.

The Arctic Council is now stepping forcefully into these areas. Following a recommendation in the Arctic Marine Shipping Assessment, the Arctic states adopted in 2011 an Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic. This agreement, the first legally

binding instrument to be negotiated (but not adopted) under the Arctic Council, clarifies the spatial division of responsibility, improves lines of communication among relevant agencies, and sets procedures for border-crossing during rescue operations (for a review, see Kao, Pearre, and Firestone 2012). The agreement thus concerns provision of maritime infrastructure, not vessel operation (on the distinction between such programmatic regime functions and regulation, see Young in this issue). It may soon be followed by another infrastructure-oriented instrument: a new Task Force has been set up to negotiate a circumpolar instrument on oil-spill preparedness and response, aiming for conclusion in 2013 (Arctic Council 2011).

In short, sub-regional institutions have predominated in the capacity-enhancement niche of Arctic shipping governance, but the Arctic Council is now carving out a circumpolar part. This development is precisely what we would expect from a niche-oriented analysis of its distinctive institutional features: emergency response presents Arctic states with a benign cooperation problem, where cost-saving synergies are achievable by pooling scarce, partly complementary resources and are reinforced by normative commitments to improve the overall regional maritime infrastructure.

4.6 Eclipsed by broader rule-enforcement regimes

As with capacity-enhancement, coordination of enforcement activities in shipping reaps synergies by achieving better verification and avoiding duplication of work. In the rule-enforcement niche, however, the Arctic Council faces existing institutions that have broader membership as well as procedures for review and response likely to be more potent than those of a circumpolar arrangement.

The IMO compliance system is decentralized, with verification, review, and non-compliance response left largely to member states. The emphasis has been on voluntary guidelines for harmonizing self-evaluation (La Fayette 2001, p. 223–225; Ringbom 2011, p. 367). The scarcity of mandatory verification and review procedures within the IMO has triggered the development of external compliance mechanisms. Responding to the 1978 *Amoco Cadiz* oil spill and frustrated with the highly varying implementation of existing commitments among flag-of-convenience states, the Maritime Authorities of 14 European states drew up the 1982 Paris Memorandum of Understanding (MOU) on port-state controls. This instrument, which now has 27 participants and has inspired similar arrangements in all major maritime regions, commits states to use their competence over vessels in their ports to conduct more numerous and higher-quality inspections and to respond effectively to sub-standard vessels (Molenaar 2007).

Coordination of port-state control is cost-efficient since a vessel will typically call at several ports in a region before embarking on the return voyage. If rule violations are perceived by the maritime authority of the port state to constitute a threat to the safety of the vessel, of the crew, or of the environment, the vessel is to be detained until corrective action has been taken.

Molenaar (2009) points to the possibilities of negotiating an Arctic MOU or adjusting the adjacent port-state control arrangements (the Paris and Tokyo MOUs) to account for vessels engaged in Arctic shipping. The latter option seems more realistic, because the existing MOUs are firmly established in the rule-enforcement niche and enjoy certain benefits resulting from a broader membership. The Paris MOU, for instance, publishes a targeting factor for each vessel, based on frequencies of inspection and detainment (Tan 2006, p. 91–92). A high factor increases the likelihood of subsequent inspection, which for sub-standard vessels raises the risk of costly detainment, repairs, or retrofitting. Public availability of this information exposes vessel operators to ship brokers, insurers, and charterers

worldwide, which might reduce their competitiveness. This targeting mechanism is dynamic and now also provides information on a vessel's classification society and, where appropriate, charterer, thus spreading the reputational cost among a broad set of actors capable of influencing the level of vessel compliance with international standards. Although the mechanism itself could be emulated within an Arctic MOU, narrower membership would probably reduce the costs incurred on rule violators.

Hence, Arctic states would not seem to have compelling reasons to seek a rule-enforcement role for an Arctic-specific institution in shipping, unless existing, better-placed MOUs for some reason fail to provide effective vehicles for verifying, reviewing, and responding to non-compliance with applicable rules.

5 Conclusions

Certain features of Arctic institutions equip them particularly well for knowledge-building and capacity-enhancement in the international governance system for Arctic shipping. Two other governance tasks – norm-building and rule-enforcement – are more effectively dealt with by broader international institutions, although Arctic institutions can support them. These findings derive from a niche-oriented analysis that helps to explain the division of labor between the range of institutions involved in international shipping governance.

The receptiveness of political decision-makers to many of the recommendations put forward in the Arctic Marine Shipping Assessment results in part from the Arctic Council's track record of producing large-scale, widely respected studies of the risks and challenges associated with Arctic warming. The Council has been well placed to extract the funding necessary for such endeavors because Arctic states were eager to obtain tangible and practical results from this East–West collaborative process, and knowledge-building was rapidly identified as a non-controversial way to do so. Previous assessments have generated networks of expertise and procedures for stakeholder-involvement that confer credibility and legitimacy on Council assessments. In the case of shipping, those drivers of knowledge-based influence merge with saliency, since regional and other interested states are currently grappling with domestic and international regulatory processes relating to marine transport in the Arctic.

One such process was recently initiated by the IMO decision to open negotiations on a mandatory Polar Code. The need for adequate actor coverage and applicability makes that global organization the most conducive norm-building venue: vessels allowed to operate in the Arctic may fly any flag, whereas the Arctic Council has only eight member states and lacks competence to adopt legally binding rules. Thus, the Council plays only a supportive role through its firm and repeated support for a mandatory code and by allowing those states most affected by Arctic shipping regulation to jointly examine the needs and modalities of various potentially divisive area-based measures for environmental protection.

Synergies achievable by coordinating efforts to enhance the regional maritime infrastructure, like capacities for search and rescue and oil-spill preparedness, have long been pursued within sub-regional institutions. The greater assertiveness of the Arctic Council in this capacity-enhancement niche, with a circumpolar SAR agreement already negotiated and an oil-spill instrument underway, shows that several international institutions can thrive within the same governance niche. The fact that geographic proximity is a crucial factor in emergency response further points up the continued centrality of sub-regional operations.

In the rule-enforcement niche, finally, Arctic regional institutions could in principle play a role in verification, review, and response – but in practice, Arctic states are more likely to employ existing and well-established port-state control arrangements that have greater potential to impose costly responses to rule violations.

This brief examination of the distinctive features and ongoing activities of Arctic institutions in the overall governance of regional shipping has brought out the fruitfulness of examining interplay within larger complexes of institutions. The division of labor evident in the shipping complex reflects niche-awareness among the states that operate the Arctic Council and also participate in relevant broader and narrower institutions. Findings reported here are therefore relevant beyond the region and sector in focus. States seeking to engage an international institution in one or more governance tasks within an issue-area are more likely to succeed if the institution's distinctive combination of membership, legal competence, and other capacities can make it better placed than others to move problem-solving forward.

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