



**Transatlantic Policy Options for Supporting
Adaptations in the Marine Arctic**

SUMMARY FOR POLICY MAKERS



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“Transatlantic Policy Options for Supporting Adaptations in the Marine Arctic: Summary for Policy Makers”. 15
June 2009.



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The Adaptation Challenge and the Need for Policy Action

Climate change is occurring more rapidly in the Arctic than in any other region of the world, with sea ice retreating at a pace exceeding even the most dramatic predictions of scientists. Access to newly opened waters is creating new economic opportunities for the fishing, energy, shipping, and tourism industries, which are expected to expand in both scope and intensity. These changes bring with them new challenges. The increased activity in the Arctic marine area will require effective policies and international cooperation if the world hopes to protect fragile Arctic ecosystems and safeguard the rights and interests of indigenous peoples.

The Arctic TRANSFORM project, funded by the European Commission's Directorate General of External Relations, engaged experts in a transatlantic discussion of five Arctic-related thematic areas: indigenous peoples, environmental governance, fisheries, offshore hydrocarbon activities, and shipping. Expert working groups addressed each thematic area with the goal of developing policy options for the Arctic marine area. This policy brief draws upon a series of background papers, expert meetings, and interviews to provide an overview of the international and EU governance options for addressing the rapid changes underway in the region. While reflecting the opinions of its authors, this policy brief benefits from the opinions and insights of the experts participating in the five thematic working groups of Arctic TRANSFORM.

Policy Overview

The Arctic marine area is currently governed by a complex array of legal instruments, including bilateral and multilateral agreements, supra-national, national, and subnational legislation, and soft-law arrangements. Likewise, the institutions involved in Arctic governance

may be national, regional or global in scope, and possess mandates that range from the provision of scientific advice and issuance of recommendations to the prescription of legally binding obligations. Most of these instruments and institutions do not target the Arctic marine area specifically, but rather govern issues of more global relevance that also apply to the Arctic marine area.

International Agreements

The law of the sea regime is an international regime governing maritime activities and is widely considered as the starting point for any future governance framework for the Arctic marine area. The five Arctic Ocean coastal states reaffirmed their support for the law of the sea in their Ilulissat Declaration of 28 May 2008. The **United Nations Convention on the Law of the Sea (UNCLOS)**, which is the most important treaty in the law of the sea regime, creates a legally binding framework for matters of jurisdiction and resource control for the entire marine environment, specifying rules for coastal, flag and port states, and prescribing principles for major ocean uses and marine environmental protection. Included in the UNCLOS framework are the two Implementation Agreements – the Part XI Deep-Sea Mining Agreement and the Fish Stocks Agreement. There are also a number of other treaties relevant to the Arctic marine area, including:

- **MARPOL.** The International Convention for the Prevention of Marine Pollution from Ships (MARPOL) is the main treaty governing ship-based pollution. All eight Arctic states are party to it and many of its Annexes.
- **OPRC.** The International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) prescribes principles for responding to oil pollution accidents. With the exception of the Russian Federation, all Arctic states are parties.

Arctic sea ice retreated to its lowest extent on record in September 2007.

Image from NASA



- **Espoo Convention.** The Espoo Convention requires parties to integrate potential trans-boundary pollution from certain proposed activities into the emitting state's environmental impact assessment procedure. This Convention is currently binding for only five of the Arctic states (as Iceland, the Russian Federation and the U.S. have signed but not yet ratified the Convention).
- **Biodiversity Convention.** The Convention on Biological Diversity (CBD) not only applies to the terrestrial environment but also to the entire marine environment, both areas within and beyond national jurisdiction. It has been ratified by all Arctic states other than the U.S.
- **POPs Convention.** The Stockholm Convention on Persistent Organic Pollutants (POPs Convention) aims to protect human health and the environment from certain harmful substances, and specifically acknowledges the threat they pose for Arctic ecosystems and indigenous peoples.
- **Polar Bear Agreement.** The Polar Bear Agreement *inter alia*, aims at coordinating research activities, preserving habitat, and prohibits the "taking" of polar bears except for scientific and indigenous subsistence purposes.

At the regional level, the **Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR)** utilises an ecosystem-based approach for the management of the North-East Atlantic marine environment, including the Atlantic section of the Arctic Ocean. **Regional fisheries management organisations (RFMOs)** provide another example of regional cooperation, with several applying either to the entire Arctic marine area or portions thereof.

A number of non-legally binding instruments complement the foregoing legally binding instruments, including the **International Maritime Organization (IMO) Guidelines for Ships Operating in Arctic Ice-Covered Waters (Arctic Shipping Guidelines)** and the **Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries**. There are also numerous informal initiatives with a lesser degree of institutionalisation and mostly ad-hoc cooperation that have emerged in the Arctic marine area.

Arctic Institutions

While there are many institutions that are involved in the governance of the Arctic marine area, the most important among these is the **Arctic Council**. Created in 1996 by the eight Arctic nations, the Arctic Council is an inter-governmental forum for discussions on sustainable development and environmental governance in the Arctic. It also serves as a monitoring body that tracks Arctic policy initiatives and environmental and development trends. In 2004, the Arctic Council, together with the **International Arctic Science Committee (IASC)**, compiled the **Arctic Climate Impact Assessment (ACIA)**, the seminal policy document on the effects of climate change in the Arctic.

To support its work, the Arctic Council can draw upon the expertise of a number of Working Groups focused on specific topic areas. While it is an influential contributor to policy making in the Arctic, the Council's mandate does not include the power to adopt legally

binding rules. Instead, it has a more limited role of issuing non-legally binding guidelines and recommendations. In addition to the Arctic Council, a number of other international bodies are engaged in work relevant to the Arctic, usually with a highly specific mandate and substantive focus.

Shortcomings of the Current Policy Framework

It is unlikely that the current governance framework of the Arctic marine area is adequate to address the rapid changes underway in the Arctic. The combination of economic expansion and mounting environmental stress poses novel management challenges for the entire Arctic region. As mentioned above, no governance body currently possesses a mandate to adopt and enforce a comprehensive set of legally binding rules for the entire Arctic marine area. UNCLOS sets up a general governance framework, but generally stops short of providing specific regulatory guidance, instead relying on global and regional sectoral institutions to implement its provisions. Thus there is a lack of integrated governance and regulatory systems within and between states in the Arctic region.

In addition to regulatory gaps between different sectoral governance regimes, there are also many gaps *within* these regimes as they apply to the Arctic.

Regarding fisheries:

- New bilateral arrangements between the relevant Arctic Ocean coastal states are needed for the conservation and management of shared fish stocks.
- A large part of the Arctic marine area is not covered by any RFMO or arrangement with competence over target species other than tuna and tuna-like species and anadromous species.

Regarding offshore hydrocarbon activities:

- There are no internationally binding rules for the prevention, reduction and control of pollution caused by offshore hydrocarbon activities.
- The emergency response infrastructure is inadequate for quickly responding to incidents caused by offshore hydrocarbon activities in order to protect the marine environment and to ensure human safety.

Regarding shipping and tourism:

- There are no discharge, emission or ballast water exchange standards specifically adopted for the Arctic marine area.
- Key navigation controls are missing (e.g. routing systems and traffic separation schemes, especially for key straits).
- There are no international legally binding construction, design, equipment and manning standards specifically tailored to the Arctic marine area.
- A regional agreement on search and rescue has yet to be adopted by all participating states.
- Existing agreements on monitoring, contingency planning and preparedness for pollution incidents do not cover the entire Arctic marine area or do not include the participation of all Arctic Ocean coastal states.

Complicating matters further, even where sectoral and regional forms of cooperation exist, not all Arctic states are parties to the relevant instruments. Moreover, many of these instruments are voluntary in nature or merely require parties to provide information.

The political body with the broadest reach and legitimacy, the Arctic Council, does not have the authority to adopt and enforce legally binding rules. While it has adopted guidelines relating to offshore hydrocarbon activities, compliance is voluntary. In other

areas, such as fisheries management, the Arctic Council does not have an explicit mandate.

Relevant regional data and scientific knowledge suffer from similar gaps, owing to both the complexity of Arctic marine ecosystems, as well as inadequate coordination among relevant actors. In addition, most scientific efforts have been directed toward specific issues, with comparatively little attention paid to the interdependencies and cause-and-effect relationships present in Arctic ecosystems.

Policy Options for Environmental Governance

The Arctic is currently undergoing rapid environmental change, with uncertain implications for the region's ecological and climatic systems. Given this state of affairs, the fundamental environmental governance challenge is to build resilient and adaptable governance regimes capable of protecting fragile Arctic ecosystems.

Regional and Global Policy Options

Cross-sectoral governance strategies, which take into account both natural systems and human activities in a holistic and integrated manner, should be used whenever possible. Cross-sectoral policy options can be distinguished from those of more limited focus by their substantive scope, their binding force, and their level of participation. There are four main ways by which a cross-sectoral system of governance in the marine Arctic could be implemented, each carrying various degrees of political support from the different Arctic players.

- (1) Relevant actors could establish new complementary issue- or sector- specific instruments and institutions.
- (2) Relevant actors could engage in multilateral negotiations within the context of existing institutions and instruments in order to modify them in a coordinated fashion.
- (3) The Arctic Council could serve as a coordinator in an effort to supplement or modify existing frameworks so that they function in a more integrated and comprehensive fashion.
- (4) State actors, with the involvement of relevant actors, could negotiate an overarching legally binding regional instrument specifically tailored to address the unique conditions of the Arctic.

Given the need for a flexible governance regime, the utility of soft-law instruments should not be underestimated. Existing international bodies such as the Arctic Council and other legal instruments with institutional components may be well situated to create and update guidelines and best practices for the region, although the non-legally binding nature of soft-law instruments presents its own set of problems. Regardless of the steps taken, the following could be strategies for the foundation of any resulting governance framework:

- **Ecosystem-Based Management (EBM).** EBM is widely regarded as a best practice of international environmental governance and comprises an important component of the EU Commission's Arctic Communication and the U.S. Presidential Directive on



Polar bears are among the Arctic species most threatened by the loss of sea ice.

Photo by Scott Schliebe, U.S. Fish and Wildlife Service

Arctic Region Policy. Arctic ecosystems often span national boundaries, so many EBM regimes would need to be implemented at the regional or international level. While coordination among Arctic states is necessary for this type of approach, it is not clear who would take the lead in the effort. The Arctic Council, with its network of research-based Working Groups, is a strong potential candidate for filling the role of coordinator.

- **Marine Protected Areas (MPAs).** MPAs are often an important component of EBM and can be an important tool for implementing the precautionary principle. Very little of the Arctic marine area is currently designated as a MPA; perhaps less than one percent by some estimates. Arctic coastal states should designate MPAs in the Arctic, either independently or as part of a larger EBM framework, before the scramble for resources leads to the entrenchment of interests in certain areas.
- **Research and monitoring.** A commonly identified problem among Arctic policy makers is the lack of information. Arctic states, via the Arctic Council and other international scientific institutions as well as non-Arctic states and other entities, should continue to improve coordination among research initiatives. Additional research is needed on Arctic systems to inform EBM initiatives, as most Arctic research has had a narrow issue-based focus so far. Traditional knowledge of indigenous communities should be incorporated into these efforts.

A potential legal basis for a more comprehensive regional agreement might be found in UNCLOS. Article

123 calls on states bordering enclosed or semi-enclosed seas to cooperate through an “appropriate regional organisation” regarding marine resources, preservation of the environment and scientific research. This could provide a starting point for Arctic Ocean coastal states to develop a regional agreement for the governance and regulation of the Arctic marine area.

EU Policy Options

While the EU is not an Arctic Ocean coastal state, it is collectively among the largest maritime powers in the world. As such, it can significantly contribute to the discussion on environmental governance in the marine Arctic. The high seas enclave at the centre of the Arctic Ocean, an area where the EU has a clear interest, should also not be overlooked. The EU released its Integrated Maritime Policy in October 2007. The Integrated Maritime Policy outlined principles and action items for maritime governance. Many of these items would be relevant to discussions on governance of the marine Arctic.

In particular, the EU could also take the lead in pushing for an Arctic Ocean Assessment. Several Arctic Ocean coastal states, notably the Canada, Norway and the U.S. have begun organising their national Arctic governance regimes around the concept of large marine ecosystems (LMEs). However, LMEs often cross national borders, and there is as yet no established framework for coordinating LME regulatory activities at the bilateral or international level. The EU could contribute with lessons from its own experience coordinating maritime management policy of multiple sovereign nations, including the utility of ocean assessments. An Arctic Ocean Assessment could complement the LME work already taking place and better harmonise governance approaches to issues common to multiple ecosystems.

Transatlantic Policy Options

The EU and the U.S. both recently released important statements regarding their Arctic policies. In November 2008, the European Commission issued its Arctic Communication, which laid out EU policy objectives in a number of different areas, including environmental

protection, indigenous peoples, sustainable use of resources, and international governance options. The January 2009 Presidential Directive on Arctic Region Policy outlined a similar set of issues, with the notable addition of U.S. security interests. The policy statements were remarkable in their level of agreement, with clear areas for potential policy cooperation. Areas of agreement include the following:

- Both affirmed their commitment to the extensive law of the sea framework already in place.
- Both indicated a preference for working within existing institutions and frameworks rather than creating a new overarching governance regime, though they both indicated a willingness to modify some of these frameworks to fit the unique conditions in the Arctic.
- Both recognised the threats posed to indigenous communities by rapid environmental change and poorly regulated economic expansion, and supported efforts to include them in the decisions that affect them.
- Both indicated a commitment to greater cooperation in scientific research and monitoring.
- Both highlighted the need for greater coordination on matters of safety and emergency response.

The EU and U.S. also seem to agree that marine Arctic governance should be informed by the principles of ecosystem-based management. The Arctic Communication states that “holistic, ecosystem-based management of human activities” should complement any efforts to mitigate and adapt to the changes in the Arctic caused by climate change. Similarly, the U.S. Presidential Directive states that the relevant executive agencies should “pursue marine ecosystem-based management in the Arctic.” Both the EU and the U.S. have experience with ecosystem-based management regimes within their own maritime zones and could push for their wider application in transboundary Arctic marine governance.

Policy Options related to Indigenous Peoples

Indigenous communities are extremely vulnerable to climate change due to the dependence of their livelihoods on Arctic ecosystems. Their interests are often neglected in current Arctic governance institutions. Where they are included in the policy making process, for example at the Arctic Council, their views are often marginalised due to a lack of adequate resources. Having inhabited the Arctic for thousands of years, indigenous residents are not only stakeholders in the Arctic, but also rights holders, and deserve a special status in the decision making process.

One political strategy that indigenous communities have used to press for stronger climate change mitigation measures has been litigation in domestic and international courts. Legally binding human rights instruments provide opportunities for treating climate change issues as human rights violations before the

courts (as shown by the petition of the Inuit against the U.S. government). The use of litigation is not limited to pushing for stricter CO₂ emission targets, but can also be used for obtaining compensation and developing adaptation strategies. Furthermore, this strategy can also raise overall awareness about the negative impacts of climate change and the urgency of taking adaptation measures, as evidenced by the petition of the Inuit against the U.S. government.

Another possible strategy for indigenous communities would be to seek special recognition under the United Nations Framework Convention on Climate Change (UNFCCC) similar to that under the POPs Convention, which acknowledges their unique vulnerability. Such recognition under the UNFCCC would give indigenous communities the opportunity to influence the debate on adaptation and shed light on sensitive social and cultural elements that are often not considered. Furthermore, there are many practical benefits; for instance, access to various adaptation funds

established under the UNFCCC, which are only open to especially vulnerable groups. This might be an opportune time to seek recognition, given that the current round of climate-change negotiations is scheduled to conclude in December 2009 in Copenhagen. Indigenous communities could also seek a similarly enhanced role in other relevant governance frameworks, such as the Polar Bear Agreement.

EU Policy Options

Until recently, EU policy on indigenous peoples has focused on regions of the world outside the Arctic, although the Northern Dimension policy only addressed the issues concerning the Saami and other Arctic indigenous peoples in passing. This is changing, with the more recent EU policy statements indicating an increased sensitivity to its relationship with indigenous communities and the local effects of its policy choices.

For instance, the October 2008 resolution of the European Parliament emphasised that the involvement and active participation of indigenous peoples, especially in issues related to climate change, is essential to supporting measures in the region. The European Commission's Arctic Communication operationalises the EU's policy towards Arctic indigenous communities in general and the Saami people in particular. The Commission recognises that Arctic indigenous communities are "particularly vulnerable to the increasing pressures of climate change and globalisation", and proposes several actions in this regard.

Interestingly, the Arctic Communication addresses two contentious policy issues – whaling and sealing – and it indicates a desire on the part of the EU to "[e]ngage Arctic indigenous peoples in a regular dialogue" regarding these issues. The Communication states that subsistence hunting of both seals and whales should be protected, indicating that the two sides may share some common ground. With respect to these particular issues, though, the EU's stance is ambiguous at best, with potentially conflicting policy objectives in the areas of animal welfare and whale conservation. The EU import prohibitions for these species have often impeded the adaptation efforts of Arctic indigenous peoples. This potential conflict is exhibited in the European Parliament's recent decision on 5 May 2009 to ban the import of seal products. One policy suggestion would be for the EU to grant more control over adaptation decisions to indigenous communities, which may be the most viable policy in the long-term. However, the EU first needs to decide how much value it should accord to the traditional knowledge and cultural identity of indigenous peoples.

The EU could also become active in facilitating the conclusion of the Nordic Saami Convention, which would also further the goals outlined in the Communication to promote further integration within the Scandinavian Saami community and to "[p]rovide opportunities for self-driven development and the protection of their lifestyle." The Arctic Communication also urges "[s]upport in particular [for] the organisations and activities of the Saami".

Transatlantic Policy Options

The EU and the U.S. have both recognised the particular vulnerability of indigenous communities in their recently

released Arctic policy statements. The best forum for them to support the adaptation of indigenous communities in the marine Arctic is the Arctic Council. The Arctic Council affords indigenous groups special status as permanent participants, empowering them to influence the debate on climate change-related issues and include their perspectives in the ACIA.

The ACIA was a groundbreaking report that assessed climate change impacts in the Arctic. The EU and U.S. should propose that the ACIA be updated in a process similar to that used by the IPCC for its assessment reports. This would enhance the importance of ACIA and help policy makers stay abreast of the constantly evolving circumstances in the region. These updates should retain the ACIA's unique incorporation of traditional knowledge of Arctic indigenous peoples and include a chapter on the impacts of climate change on traditional livelihoods.

The EU and U.S. could also jointly support the creation of an assessment on vulnerability and adaptation in the Arctic. Such an undertaking was originally proposed by the Arctic Council's project on Vulnerability and Adaptation to Climate Change in the Arctic (VACCA). This assessment could extend to cover issues and challenges associated with the implementation of adaptation policies.

Recently, there have been new developments in Arctic cooperation, particularly the meeting of the five Arctic Ocean coastal states in Greenland in May 2008 that culminated in the Ilulissat Declaration. It is too early to predict whether this or any other new governance initiative poses a threat to the Arctic Council as the predominant forum for Arctic cooperation, but it is important that the status of Arctic indigenous peoples remain strong in any new governance options as it is now under the Arctic Council. If this status were lost, it would result in less visibility for indigenous peoples' interests, and the use of traditional knowledge in adaptation-related work would likely disappear. Thus, a viable policy option for the EU and the U.S. could be to recognise and promote the importance and high-level status of indigenous participation in any future forum or mechanism.

Furthermore, across the Arctic, a number of national and subnational climate-change adaptation strategies have been developed. Such strategies have been launched by Canada, the State of Alaska and Greenland among others. Evaluating these existing adaptation strategies and their effectiveness could provide valuable information and best practices for wider use. Yet critical attention should be paid to the present and future social, cultural and economic consequences of the strategies and existing projects, as they sometimes may have unintended results; this could be achieved, for instance, by establishing a special working group under the Arctic Council. Such an evaluation and assessment exercise could be launched as a (pilot) project of the Arctic Council aimed at creating policy recommendations on adaptation, especially for the region's indigenous peoples; the initial proposal could come from the European Commission, EU Member States and the U.S.

Finally, the establishment of an Indigenous Rights Review Working Group under the Arctic Council could assist in analysing the legal and institutional barriers to adaptation. This could be important in the Arctic marine

area, since it is an area to which indigenous rights rarely extend, given that it is so heavily governed by the law of the sea and central governments.

Policy Options for Fisheries Management

While warmer areas of the Arctic Ocean have supported commercial fishing activities for decades, until recently, there had been little or no major fishing activity in the colder areas of the Arctic, with ice-covered regions completely cutting off access to fishing. The retreat of Arctic sea ice is opening up new parts of the Arctic Ocean to fishing vessels, and there are already signs that certain marine species are migrating north at a surprising rate.

Regional and Global

The expansion of marine capture fisheries in the Arctic may necessitate adjustments to the relevant international legal framework. Any such process would benefit from a needs assessment based on basic fisheries research and an evaluation of likely future scenarios regarding habitats, migration patterns, impacts on target and non-target species, fishing techniques, etc.

In addition to ensuring the availability of relevant scientific data, other potential policy options include:

- a freeze on the expansion of commercial fishing in the Arctic, such as the one enacted by the North Pacific Fishery Management Council (NPFMC), until adequate assessments of its potential impacts on target and non-target species and livelihoods of indigenous peoples have been carried out;
- a declaration that the relevant general principles of the Fish Stocks Agreement, the recent UNGA Resolutions in relation to vulnerable marine ecosystems and destructive fishing practices, and relevant conservation and management measures drawn from regional fisheries management organisations (RFMOs) would apply to new and existing fisheries in the Arctic marine area;
- individual or collective initiatives geared towards developing mechanisms or procedures similar to an environmental impact assessment (EIA) or a strategic environmental assessment (SEA) for new fisheries in the Arctic marine area; and
- one or more state-of-the-art RFMOs or similar arrangements for species other than tuna and tuna-like species and anadromous species, whether self-standing or as part of a legally binding framework instrument for the Arctic, and possibly in conjunction with adjustments in the competence of existing RFMOs or arrangements, in particular in geographical terms.

All of these options would entail bilateral or multilateral consultations with a number of relevant players, including other Arctic Ocean coastal states. In light of the discussion at the meeting of Senior Arctic Officials (SAOs) in November 2007, there is currently considerable opposition among members of the Arctic

Council to the Council becoming actively involved in fisheries management and conservation.

EU Policy Options

Vessels flying the flag of EU Member States (Community vessels) and natural and legal persons with the nationality of one of the EU Member States could be directed not to engage in fishing in certain parts of the Arctic marine area at all or only when certain conditions are met.

Such action could be complemented by action in a capacity comparable to that of a port state or market state, for instance by directing that certain catches in certain parts of the Arctic marine area are not landed, transshipped, processed or packaged in Community ports, and that vessels involved in these catches - including supporting vessels - are prohibited from using any services in Community ports, in particular refueling and resupplying.

Last but certainly not least, the EU may wish to address the need for basic fisheries research and for the development of potential scenarios. This could be done by stimulating research by EU Member States individually or collectively, or jointly with non-EU Member States. Moreover, efforts could be made to ensure that the International Council for the Exploration of the Sea (ICES) addresses the abovementioned needs, for instance by adjusting the work plan and terms of reference of its Arctic Fisheries Working Group.

Transatlantic Policy Options

As diminishing ice coverage attracts fishing vessels looking for new fishing opportunities, Arctic Ocean coastal states will have to develop national regulation in order to discharge their obligations under international law. Arctic Ocean coastal states and other states can adopt individual regulations on fishing activities in the Arctic marine area within their own maritime zones and/or for their natural and legal persons. The EU and the U.S. could coordinate their efforts in this regard and thereby expand the geographic scope and relevance of any adopted regulations. Over time, such transatlantic regulations could serve as a model for international rule-making.

The U.S. Senate has adopted a joint resolution directing the U.S. to initiate international discussions and take steps to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. Thus far, however, no interstate negotiations have commenced.

The EU and the U.S. should consider cooperating by means of a joint and harmonised approach towards supporting or initiating the various individual, regional and global options mentioned earlier. Relevant international bodies in this regard include the Arctic Council, FAO, ICES and various RFMOs.

Policy Options for Offshore Hydrocarbon Activities

Though the Arctic holds a significant share of the world's oil and gas reserves, there is no instrument providing comprehensive global regulation of offshore hydrocarbon activities, nor is there any global regulatory or governance body with such a mandate. There are, however, a number of instruments with broader scope that also apply to offshore hydrocarbon activities, including those taking place in the Arctic.

Regional and Global Policy Options

Among global instruments, UNCLOS sets out the basic rules on access to and control over offshore hydrocarbon resources and the mandate of the International Seabed Authority (ISA). Other instruments with more limited applicability to offshore hydrocarbon activities include MARPOL, the OSPAR Convention, OPRC, and the Espoo Convention. There are also multilateral and bilateral agreements that deal with offshore oil and gas activities, yet none of them are comprehensive in their coverage. Nor are these specifically tailored to address the unique circumstances of the Arctic.

The existing Arctic Council's Arctic Offshore Oil and Gas Guidelines could go a long way toward addressing the current regulatory gaps if put into practice by the Arctic states. The Guidelines were adopted by the Arctic Council in 1997 and then revised in 2002. A third revision was released in 2008, and adopted in the Ministerial meeting in April 2009. The guidelines provide recommendations on standards, technical and environmental best practices, management policy, and regulatory control for Arctic offshore oil and gas operations. The Guidelines also recommend that regulation of offshore hydrocarbon activities utilises the precautionary approach, the polluter-pays principle and the principle of sustainable development. The Guidelines have separate chapters on EIAs, interests that are to be taken into account (e.g. indigenous communities, biodiversity), safety and environment management, monitoring, operating practices, emergencies and decommissioning and site clearance. Although providing an important step in the creation of a comprehensive regulatory regime, the Guidelines are not legally binding and leave the coastal states with a wide margin of discretion in their implementation.

Though no move has been made to pursue them, the following policy options are also available and could be explored:

- Develop legally binding regulations for offshore hydrocarbon activities in the Arctic marine area through a new regional treaty, drawing on the model of the foregoing Arctic Offshore Oil and Gas Guidelines, the OSPAR Convention, and the relevant acts of the OSPAR Commission;
- Ensure that the aforementioned regulations have an institutional component with the mandate to implement and update substantive standards when necessary. The spatial competence of this body should, at a minimum, complement that of the OSPAR Commission and the ISA, thus achieving full coverage of the Arctic marine area;
- Develop a regional agreement on contingency planning and emergency preparedness for incidents



OSPAR already covers portions of the Arctic and could serve as a governance model for other areas.

Adapted from OSPAR Commission

involving offshore hydrocarbon activities that (1) establishes a body mandated to implement and update the substantive standards, and (2) provides for adequate investments in infrastructure.

EU Policy Options

Once of peripheral importance only, the Arctic region has now become considerably more relevant for the EU in part due to its abundant offshore hydrocarbon reserves. The Arctic Ocean does not run to EU shores, so they cannot claim ownership over any of these reserves, but two of their major energy suppliers, Norway and Russia, can.

The EU Northern Dimension (ND) policy, adopted in 1999, created an institutional framework for cooperation and partnerships between the EU and its neighbours. Energy was identified as one of the key sectors in the EU's ND policy, including both energy efficiency and renewable energy. The ND policy identifies the Arctic and sub-Arctic areas, including the Barents region, as priority areas. EU energy security is inextricably linked to its regional supply networks. Therefore, it is in the strategic interest of the EU to ensure that its traditional energy suppliers in the north will be able to continue delivering in the future.

In order to progressively integrate the EU's neighbours into its internal energy market, the ND energy agenda focuses on three components: security of supply, competitiveness, and protection of the environment. Specific policy goals include the harmonisation of regulations governing energy trading and environmental requirements, the development of a stable framework for public and private investments in the energy sector, more efficient production and use of energy, and the development of a gas network that supports a sustainable supply and use of energy. To achieve these goals, the EU has developed a variety of instruments such as the Trans-European (Energy) Networks Programme, the Energy Framework Programme, and the TACIS project in north-west Russia.

On a longer time horizon, another strategic consideration is the potential for hydrocarbon reserves located at the centre of the Arctic beyond the national

jurisdiction of any Arctic state. Of course, the actual commencement of new hydrocarbon development in the Arctic will depend on a number of factors, notably the going price of oil.

Although the EU does not have direct access to offshore hydrocarbon development in the Arctic marine area, it could potentially influence these activities. The following policy options can be identified for the EU:

- strengthen cooperation within the existing ND policy framework related to sustainable offshore hydrocarbon activities in the Arctic;
- provide financial assistance and facilitate investment in the hydrocarbon infrastructure and development in the Arctic marine area with a view to ensuring best practice, use of modern technology and the security of supply chain;
- co-operate with the offshore oil and gas producing nations in the Arctic to adopt effective mechanisms for the implementation of the Arctic Oil and Gas Guidelines; and
- facilitate information sharing about best practises in developing offshore oil and gas resources between experience EU Member States and the five Arctic coastal states.

Policy Options for Shipping

With sea ice melting, new intra- and trans-Arctic shipping routes are opening to industry and tourism. The Intergovernmental Panel on Climate Change predicted that the Arctic Ocean would be ice free during summers before the end of the century; however, more recent studies suggest this might occur much earlier. It is important to address the numerous safety and environmental risks that expanded shipping will bring.

Regional and Global Policy Options

There are various options available for modifying the current international legal framework for shipping to account for the risks presented by Arctic shipping to Arctic marine ecosystems and human safety. While options for the Arctic Council are not separately identified, some of the following options could be pursued there as well.

Options to pursue within the IMO include making the IMO Arctic Shipping Guidelines mandatory, possibly by incorporating them into the **International Convention for the Safety of Life at Sea (SOLAS)** and aligning them with other important elements (for example, training for ice navigators, which could be incorporated in the **International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)**). Additionally, the IMO could pursue the adoption of special standards, including:

- special discharge or emission standards for all or part of the Arctic marine area under MARPOL;
- special fuel content or ballast water treatment standards;
- one or more mandatory ships' routing systems, possibly in the form of a comprehensive Arctic Sea Lanes proposal;
- ship reporting systems;

Transatlantic Policy Options

The positions of the U.S. and the EU in relation to offshore hydrocarbons activities in the Arctic are fundamentally different. As a coastal state, the U.S. represents one of the key actors directly involved in offshore hydrocarbon extraction, with significant reserves — possibly 30% of total Arctic reserves — off the coast of Alaska. By contrast, the EU does not have any coastal state jurisdiction in the Arctic Ocean. Given these differences, the most promising area for transatlantic cooperation lies in promoting best practices within, and uniformity between, coastal state maritime zones generally.

It is also important to note that several Member States of the EU possess offshore resources and have been involved in offshore activities for a number of years. Although these activities have not been conducted in the Arctic seabed, sharing related experiences, knowledge and other emergency measures in the event of pollution could help the EU and the U.S. engage in transatlantic cooperation. And finally, strengthening existing transatlantic dialogues and cooperation within the Arctic Council could be an additional platform for transatlantic cooperation aside from state-level bilateral cooperation.



Arctic coastal states should cooperate in the areas of maritime safety and emergency response.

Photo from NOAA

- compulsory pilotage and ice-breaker or tug assistance; and
- special anti-fouling standards.

Also, the IMO could designate the marine Arctic (or parts thereof) as a particularly sensitive sea area (PSSA), accompanied by a comprehensive package of associated protective measures (APMs) consisting of one or more of the above standards and other special standards such as ballast water exchange standards.

Options for Arctic states at the regional level, in their capacities as coastal states, include:

- entering into legally binding agreements on monitoring, contingency planning and preparedness for pollution incidents, as well as on search and rescue, including by designating places of refuge;

- agreeing on a harmonised approach on enforcement and ensuring compliance, *inter alia* by means of shared platforms (e.g. “shiprider agreements”);
- implementing the Convention for the Control and Management of Ships’ Ballast Water and Sediments (BWM Convention) individually or in concert; and
- taking other action under Article 234 of UNCLOS, especially if the IMO Arctic Shipping Guidelines are not made mandatory.

Options for Arctic states and other states at the regional level, in their capacities as port states, include:

- developing a strategy for port state control in the Arctic, for instance by establishing an Arctic Memorandum of Understanding (MOU) on Port State Control or by adjusting the Paris and Tokyo MOUs on port state control to ensure that proper account is taken of intra-Arctic and trans-Arctic marine shipping;
- implementing Article 218 of UNCLOS in concert; and
- exercising port state residual jurisdiction in concert – relying in part on Article 234 of UNCLOS – in case the IMO Arctic Shipping Guidelines are not made mandatory.

Other options for Arctic states in particular, individually or collectively, are:

- addressing the need for hydrographic surveying and charting;
- considering the need to develop a regional liability regime;
- encouraging self-regulation by the shipping industry – for instance the cruise industry – by means of positive and negative incentives (e.g. positive discrimination and limiting landings and access to ports to cooperating players);
- urging the International Association of Classification Societies (IACS) to restrict the margin of discretion that individual members have in relation to the IACS Unified Requirements concerning Polar Class, which set out criteria for the operational capability and strength of steel ships; and
- requiring the marine insurance industry to promote compliance with the IACS Unified Requirements concerning Polar Class, for instance by linking the level of compliance to the height of premiums.

Other options for all states, individually or collectively, in their capacities as flag states, include imposing standards on their vessels that are more stringent than generally accepted international rules and standards (GAIRAS), for instance special discharge, emission and

ballast water exchange standards or by implementing the IMO Arctic Shipping Guidelines into their legislation.

EU Policy Options

In the area of shipping, the EU could unilaterally promote a number of measures outlined in the earlier section on global and regional policy options, including:

- hydrographic surveying and charting within areas of national jurisdiction and beyond, possibly through the International Hydrographic Organization (IHO);
- encouraging self-regulation by the shipping industry;
- imposing standards on vessels registered with EU Member States that are more stringent than current GAIRAS, for instance special discharge, emission and ballast water exchange standards; and
- implementing the IMO Arctic Shipping Guidelines in EU legislation.

Many of the observations made in relation to fisheries management apply to shipping as well. In considering the suitability of regional and global options in the sphere of shipping vis-à-vis individual options, particular account should be taken of the function of competent international organisations like IMO and the need for uniformity in the international regulation of shipping.

Transatlantic Policy Options

In the area of shipping, the EU and the U.S. could cooperate to promote the shipping policy options already described (hydrographical surveying, industry self-regulation, and more stringent standards). Were the EU and the U.S. to both implement the IMO Arctic Shipping Guidelines in domestic legislation, this could catalyse action by other states and industry.

Even though the EU and the U.S. cannot have coastal state concerns in common, they share an interest in the protection and preservation of the marine environment and marine biodiversity, as well as in the continued exercise of navigational rights and freedoms for their flagged vessels.

The EU and the U.S. should consider coordinating through a joint and harmonised approach towards supporting or initiating the various unilateral, regional and global shipping options outlined above. Relevant international bodies in this regard include the Arctic Council, IHO, IMO and the Paris and Tokyo MOUs on port state control. The EU and U.S. could also consider opening a dialogue with Canada and the Russian Federation regarding the Northwest Passage and the Northern Sea Route.

About Arctic TRANSFORM

The goal of the Arctic TRANSFORM project was to develop transatlantic policy options for supporting adaptation in the marine Arctic environment. It placed a special emphasis on involving a broad range of stakeholders to address the major climate issues facing the region. Key project objectives included:

- To promote mutual exchange among EU and U.S. policy makers and stakeholders on policies and approaches in the Arctic in the stakeholder working groups;
- To provide a comparative analysis of existing policies and make recommendations with substantial buy-in as to how to strengthen co-operation between the EU and U.S.; and
- To encourage dialogue and thus improve conditions for further transatlantic policy development and more effective protection of the Arctic marine environment.

The project also convened a dialogue among key EU and U.S. stakeholder representatives with expertise in Arctic natural sciences, international law and U.S. and EU marine and Arctic policy. Several stakeholder workshops took place during the course of the project, and a final conference in Brussels presented the policy options. Project reports (including this concise summary for policy makers) were disseminated via the project website and to decision makers on both sides of the Atlantic.

Arctic TRANSFORM was funded by the European Commission (DG External Relations) and led by four institutes: Ecologic (Germany; project lead), the Arctic Centre (Finland), the Netherlands Institute for the Law of the Sea (Netherlands), and the Heinz Center (USA).

