

# **International Governance of Oil Spills from Upstream Petroleum Activities in the Arctic: Response over Prevention?\***

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## **ABSTRACT**

The discovery of the petroleum resources in the Arctic waters and the rapid loss of sea ice raise concerns over environmental risks of oil development in the Arctic waters. One of the biggest threats to the marine environment from offshore oil production is a large-scale oil spill, akin to *Deepwater Horizon*. The challenging operating conditions, lack of infrastructure and effective clean-up techniques in the Arctic conditions exacerbate the need to ensure robust regulation of petroleum activities in the region. Whereas national laws vary extensively across the Arctic States, international law does not offer a uniform approach to prevention of and response to oil spills. This paper examines the scope and application of the relevant treaties and argues that a regulatory gap exists in the prevention of oil spills and addressing the challenges of response in Arctic conditions. It further suggests that there is an increasing role for soft-law regional cooperation in addressing these gaps.

Keywords: Arctic Ocean – Oil Spills – Arctic Governance – Marine Environment – Offshore Energy Sector

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\* The paper is partly based on the author's PhD thesis submitted to the University of Aberdeen in 2017. The author is grateful to her supervisors Professor Tina Hunter and Dr Catherine Ng, and her examiners Professor Elizabeth Kirk and Professor Timo Koivurova for their time and comments.

## Introduction

In 2008, the United States Geological Survey discovered potentially vast petroleum resources in the Arctic waters.<sup>1</sup> Despite the relatively low activity at present,<sup>2</sup> a number of exploration licenses have been granted in all of the Arctic coastal States and it is expected that the production levels will increase with time, especially with the receding sea-ice and easier navigation through the Arctic shipping routes.

It is generally agreed that petroleum development in Arctic waters is associated with elevated risks compared to more conventional locations. Potential oil spill recovery presents a bigger challenge due to the climatic conditions and the lack of infrastructure.<sup>3</sup> In the Arctic, any response operation would have to be delayed by the time needed to gather assets and personnel. The environmental destruction caused by an oil spill could have more severe effects than in temperate climates due to the lower rate of oil biodegradation;<sup>4</sup> if spilled, oil

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<sup>1</sup> Around 22% of the world's undiscovered oil and gas resources, with about 85% occurring offshore. P Stauffer, 'US Geological Survey Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle', available at <http://library.arcticportal.org/1554/>; accessed 29 June 2018.

<sup>2</sup> As of August 2018, there are only three producing fields in the Arctic waters: Prirazlomnoe (oil) in the Russian Arctic, and the Snøhvit (gas) and the Gølliat (oil) in Norway.

<sup>3</sup> DNV GL, *Challenges and Best Practice of Oil Spill Response in the Arctic* (DNV GL, Harstad, 2014) at p. 28; AO Kokorin, DV Karelin and AV Stetsenko (eds), *The Impact of Climate Change on the Russian Arctic and Paths to Solving the Problem* (WWF 2008) at p. 15, available at [http://assets.panda.org/downloads/wwf\\_arctica\\_eng\\_1.pdf](http://assets.panda.org/downloads/wwf_arctica_eng_1.pdf); accessed 6 November 2018.

<sup>4</sup> EPPR, *Field Guide for Oil Spill Response in Arctic Waters* (Environment Canada 1998), at pp. 5–68, available at <https://oaarchive.arctic-council.org/handle/11374/109>; accessed 6 November 2018.

could persist in the Arctic environment for decades, as demonstrated by the lasting consequences of the 1989 *Exxon Valdez* spill.<sup>5</sup> Oil from a spill at the end of the drilling season could get trapped in or under the ice and thus be impossible to clean up or even detect.<sup>6</sup> The Arctic is home to over 4 million people, approximately 10% of whom are indigenous.<sup>7</sup> The oil contamination of the coastal waters might bring devastating effects to the livelihoods of the communities that depend on their lands and waters for subsistence.

To avoid catastrophic consequences, the Arctic States should establish an effective and coherent regulatory framework for the prevention of and response to oil spills, and the operators should be willing to conduct their activities under such an effective framework and with full cooperation. Although the national petroleum regulatory frameworks are quite disparate,<sup>8</sup> the international legal framework does not offer a comprehensive treaty specifically regulating offshore petroleum development. The broader-in-scope UN Convention on the Law of the Sea (LOSC) consolidates international customary law on, *inter alia*, maritime delimitation, rights and duties of States in different maritime zones, and the

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<sup>5</sup> R Steiner, 'Risks to Arctic Ecosystems' (2010) 3 *The Circle* 13-16, at p.16.

<sup>6</sup> WWF, 'Modeling Oil Spills in the Beaufort Sea Exploring the Risk: What Would Happen if Oil Spills in the Beaufort Sea?' (2014), available at [http://awsassets.wwf.ca/downloads/wwf\\_beaufort\\_sea\\_oil\\_spill\\_modelling\\_summary\\_report.pdf](http://awsassets.wwf.ca/downloads/wwf_beaufort_sea_oil_spill_modelling_summary_report.pdf); accessed 6 November 2018; JR Payne, GD McNabb and JR Clayton, 'Oil Weathering Behavior in Arctic Environments'

<sup>7</sup> G Fondahl, V Filippova and L Mack, 'Indigenous Peoples in the New Arctic' in B Evengård, JN Larsen and Ø Paasche (eds), *The New Arctic* (Springer, Cham, 2015) 7-22.

<sup>8</sup> See *e.g.*, C Pelaudeix and EM Basse, *Governance of Arctic Offshore Oil and Gas* (Routledge, Abingdon, 2018).

protection and preservation of the marine environment.<sup>9</sup> Furthermore, there are two multilateral treaties specifically relevant to oil spill response in the Arctic.<sup>10</sup>

The Arctic Council, a high-level intergovernmental forum of the Arctic States, serves as a venue for cooperation and knowledge-generation on various issues, including offshore petroleum and environmental protection. The Council is usually described as a ‘soft law regime’,<sup>11</sup> as it does not possess international legal personality and hence the power to take binding decisions. The work of the Council is carried out on three levels: ministerial, senior Arctic officials (SAOs) and the science-based groups: six Working Groups, Task Forces and Expert Groups. Its non-binding documents might provide complementary action to treaties and fill the lacunae when it comes to oil spill prevention and Arctic-specific response governance. The Council has also hosted the adoption of three binding agreements under its auspices in the recent years.<sup>12</sup>

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<sup>9</sup> United Nations Convention on Law of the Sea (Montego Bay, 10 December 1982, in force 16 November 1994) 1833 *UNTS* 396 (LOSC).

<sup>10</sup> International Convention on Oil Pollution Preparedness, Response and Co-operation (London, 30 November 1990, in force 13 May 1995) 1891 *UNTS* 51 (OPRC); Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic (Kiruna, 15 May 2013, in force 25 March 2016) available at <https://arctic-council.org/eppr/agreement-on-cooperation-on-marine-oil-pollution-preparedness-and-response-in-the-arctic/>; accessed 29 June 2018 (MOSPA). Both are analysed in the third section.

<sup>11</sup> DR Rothwell, ‘Polar Opposites: Environmental Discourses and Management in Antarctica and the Arctic’ in B Jessup and K Rubenstein (eds), *Environmental Discourses in Public and International Law* (Cambridge University Press, Cambridge, 2012) 355-374, at p.367.

<sup>12</sup> Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (Nuuk, 12 May 2011, in force 19 January 2013) available at <https://oaarchive.arctic-council.org/handle/11374/531>; accessed 6 November 2018; MOSPA (n 10); Agreement on Enhancing International Arctic Scientific Cooperation

International and national legal regimes for offshore oil development in the Arctic have been the subject of a number of studies in the recent years,<sup>13</sup> but the regulation of prevention and response to oil spills in the region have mostly been considered in general or from the national perspectives.<sup>14</sup> Legal scholars highlighted the general lack of upstream oil spill prevention regulation in international law compared to response regulation and stringent prevention regulation in the international shipping sector.<sup>15</sup> The questions of State responsibility for potential environmental damage from offshore petroleum activities in the Arctic have been examined in depth by Johnstone, who reviewed the applicability of general international law, treaties, and case law, and *inter alia* highlighted the potential difficulties in invoking State responsibility if the harm is inflicted on the areas beyond national

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(Fairbanks, 11 May 2017, in force 23 May 2018) available at <https://oaarchive.arctic-council.org/handle/11374/1916>; accessed 6 November 2018.

<sup>13</sup> RL Johnstone, *Offshore Oil and Gas Development in the Arctic under International Law: Risk and Responsibility* (Brill Nijhoff, Leiden, 2015); Pelaudeix and Basse (n 8); D Shapovalova and K Stephen, 'No Race for the Arctic? Examination of Interconnections between Legal Regimes for Offshore Petroleum Licensing and Level of Industry Activity' [2019 forthcoming] *Energy Policy*.

<sup>14</sup> See *e.g.*, N Belkina and O Sarkova, 'Regulatory Approaches to Oil Spill Response in Norway and Russia' (2015) 38 *Polar Geography* 1-21; N Liu, 'Protection of the Marine Environment from Offshore Oil and Gas Activities' in R Rayfuse (ed), *Research Handbook on International Marine Environmental Law* (Edward Elgar, Cheltenham, 2015) 190-205. Liability regimes for oil spills are examined in Johnstone (n 13); K Svendsen, *Compensable Damage Ex Delicto of Harm in the Barents Sea Caused by Petroleum Spills from Offshore Installations* (PhD Thesis, University of Tromsø, 2015).

<sup>15</sup> R Dopplick, 'Multilateral Regional Oil Spill Preparedness and Response Agreements: Lessons for the Arctic' (2012) 10 *OGEL* 1-92; C Redgwell, 'Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector' (2014) 29 *The International Journal of Marine and Coastal Law* 600-621, at p. 619.

jurisdiction.<sup>16</sup> Finally, the important role of the Arctic Council soft-law documents in the prevention of and response to oil spills in the Arctic has been examined.<sup>17</sup> This paper builds on these contributions by analysing treaties relevant to oil spill prevention and response in the Arctic in light of their scope and application. It argues that the treaty regulation of the offshore petroleum activities in the Arctic leaves gaps in the prevention of oil spills and well control while focusing on international cooperation in response operations. It further suggests that the Arctic Council governance of oil spills through non-binding norms and facilitating cooperation between regulatory agencies and non-State actors could be instrumental in improving offshore safety in the region. To this end, the next section outlines the meaning of prevention and response oil spills and specific Arctic challenges, and the third section analyses the regulatory scope of the relevant treaties. The fourth section then analyses the Arctic Council actions in governing oil spill prevention and response in the region and suggests that it could prove a useful regulatory tool, especially with the lack of binding international obligations.

### **Defining oil spills, prevention, and response in the Arctic**

Large-scale marine oil spills can result from oil tanker accidents and offshore petroleum activities. This paper focuses on the latter and this section clarifies the scope by examining

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<sup>16</sup> Johnstone (n 13), in particular at pp. 189-267; Johnstone, 'Invoking Responsibility For Environmental Injury in the Arctic Ocean' (2014) 6(1) *Yearbook of Polar Law* 1-35; See also, M Byers, *International Law and the Arctic* (Cambridge University Press, Cambridge, 2014) at pp. 209–212.

<sup>17</sup> HM Osofsky, JM Shadian and SL Fechtelkötter, 'Preventing and Responding to Arctic Offshore Drilling Disasters: The Role of Hybrid Cooperation' in J Peel and E Fisher (eds), *The Role of International Environmental Law in Disaster Risk Reduction* (Brill Nijhoff, Leiden, 2016) 392-419.

the meaning and challenges of prevention, preparedness and response to oil spills from offshore petroleum development in the Arctic. This differentiation is imperative for the further examination of the regulation in sections 3 and 4.

The main three sources of oil spills from offshore petroleum production are the loss of well control, platform failure, and operational discharges.<sup>18</sup> The operational discharges from routine operations, such as drill cuttings, might have damaging cumulative effects and are regulated at the national and regional level.<sup>19</sup> However, the biggest risk to the marine environment is arguably posed by a possible large-scale oil spill in the Arctic waters, resulting from a loss of well control.<sup>20</sup> Such accidental spills are the focus of this paper.

Loss of well control (such as a well blowout) occurs when ‘formation pressure exceeds the pressure applied to it by the drilling column of drilling fluid’.<sup>21</sup> A blowout can be caused by a pocket of oil under high pressure, human error, a technical failure, or a combination of all of the above.<sup>22</sup> Well blowouts are responsible for the two biggest known oil spills resulting from

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<sup>18</sup> JG Speight, *Handbook of Offshore Oil and Gas Operations* (Elsevier, Waltham/Oxford, 2015) at pp. 257–303.

<sup>19</sup> M Knol, ‘The Uncertainties of Precaution: Zero Discharges in the Barents Sea’ (2011) 35 *Marine Policy* 399–404; SV Vinogradov and JP Wagner ‘International Legal Regime for the Protection of the Marine Environment Against Operational Pollution from Offshore Petroleum Activities’ in Z Gao (ed), *Environmental Regulation of Oil and Gas* (Kluwer, London, 1998) 93–143.

<sup>20</sup> R O’Rourke, ‘Changes in the Arctic: Background and Issues for Congress’ (Congressional Research Service 2014) at p. 30; AMAP, ‘Arctic Oil and Gas 2007’ (2007) at pp. 24–25.

<sup>21</sup> Speight (n 18) at p. 402.

<sup>22</sup>., at p. 275.

offshore petroleum development activities - *Deepwater Horizon* and *Ixtoc 1*.<sup>23</sup> Closer to the Arctic, the *Ekofisk Bravo* blowout in 1977 resulted in 80,000 to 126,000 barrels of oil spilled into the Norwegian waters.<sup>24</sup>

Platform failures relate to incidents occurring on the platform itself that can lead to a fire, explosion, and subsequent loss of well control. One example is the 1988 *Piper Alpha* disaster on the UK continental shelf leading to the explosion that took 167 lives.<sup>25</sup> The enquiry following the incident found that the operator was not adequately prepared for an emergency and the regulator was criticised for carrying out ‘superficial’ inspections and not assessing the management of safety.<sup>26</sup>

Most measures directed at minimising the risk to human health and environment can be divided into prevention of, preparedness for, and response to oil spills. Prevention measures are designed to avoid the incident before it happens and response operations are aimed at containing the spill, recovering as much oil as possible. Measures aimed at controlling the

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<sup>23</sup> T Hunter, ‘Offshore Oil Spill Contingency Planning and Response: The International Legal Regime’ (forthcoming, on file with author).

<sup>24</sup> EU Offshore Authorities Group, ‘Landmark Incidents’ available at <http://euoag.jrc.ec.europa.eu/node/41>; accessed 29 June 2018.

<sup>25</sup> J Paterson, ‘Health and Safety at Work Offshore’ in G Gordon, J Paterson and E Üşenmez (eds), *Oil and Gas Law: Current Practice and Emerging Trends* (2<sup>nd</sup> ed, Dundee University Press, Dundee, 2011) 187-230, at p. 204.

<sup>26</sup> The Hon Lord Cullen, ‘The Public Inquiry into the Piper Alpha Disaster (Vol 1)’ (Department of Energy 1993) at pp. 238, 253, available at <http://www.hse.gov.uk/offshore/piper-alpha-public-inquiry-volume1.pdf>; accessed 6 November 2018.

source of the spill may be classified in both the prevention and response categories,<sup>27</sup> but will be treated as prevention measures for the purposes of this paper.<sup>28</sup>

The Emergency Prevention, Preparedness and Response Working Group of the Arctic Council (EPPR) defines prevention systems as ‘prescriptive hardware requirements for safe operations, [and] implementation of robust management systems with regulatory accountability criteria, etc’.<sup>29</sup> Thus, all prevention measures could be generally divided into two groups: requirements for materials and processes in the construction and operation of a well, including safety management systems. Well standards are requirements for the materials and practices used in the construction and operation of the well, such as the requirements for the steel and cement, cement evaluation tool (cement bond log), and the blowout preventers (BOPs).<sup>30</sup> The Arctic conditions warrant additional prevention requirements as they might compromise the performance of certain materials and processes.

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<sup>27</sup> Dopplick (n 15) at p. 8.

<sup>28</sup> The Arctic Council followed a similar distinction. EPPR, ‘Overview of Measures Specifically Designed to Prevent Oil Pollution in the Arctic Marine Environment from Offshore Petroleum Activities’ (2017) available at <https://oaarchive.arctic-council.org/handle/11374/1962>; accessed 6 November 2018, focuses on drilling and well technologies and spill containment, and specifically excludes response measures; the MOSPA (n 10) focuses on cooperation in clean-up operations and oil spill preparedness plans.

<sup>29</sup> EPPR, ‘Recommended Practices for Arctic Oil Spill Prevention’ (2013) at p. 12, available at <https://oaarchive.arctic-council.org/handle/11374/614>; accessed 6 November 2018.

<sup>30</sup> BOPs come in a variety of styles, but the basic principle is that they act as a valve or set of valves on top of the well. Schlumberger, ‘Oilfield Glossary’ available at <http://www.glossary.oilfield.slb.com>; accessed 29 June 2018.

For example, the cement might freeze before establishing sufficient compressive strength;<sup>31</sup> the use of high-quality low-temperature suitable steel might be required.<sup>32</sup>

The safety management systems (SMS) are a crucial element of oil spill prevention. The analyses of *Deepwater Horizon* and the *Montara* blowouts identified failures in the SMS or ‘safety culture’<sup>33</sup> of the operators.<sup>34</sup> The SMS vary between operators, but all contain basic elements such as hazard analysis, training, investigation of incidents, auditing, reporting, and safe work practices.<sup>35</sup> Arctic conditions warrant additional requirements to be adopted for the training of personnel working in extreme weather conditions and limited/extensive daylight, establishing shorter working shifts.<sup>36</sup>

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<sup>31</sup> Pew Charitable Trusts, ‘Arctic Standards: Recommendations on Oil Spill Prevention, Response, and Safety in the U.S. Arctic Ocean’ (2013) at p. 82, available at <https://www.pewtrusts.org/-/media/assets/2013/09/23/arcticstandardsfinal.pdf>; accessed 6 November 2018.

<sup>32</sup> *Ibid.*, at p. 61.

<sup>33</sup> Safety culture is described as ‘attitudes, values and behaviours shared within (and across) a company or organisation aimed at minimising risk and maximising safety’. PAME, ‘Systems Safety Management and Safety Culture: Avoiding Major Disasters in Arctic Offshore Oil and Gas Operations’ (2014) at pp. 16–17, available at <https://oaarchive.arctic-council.org/handle/11374/418>; accessed 6 November 2018.

<sup>34</sup> National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, ‘Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling: Report to the President’ (2011) at pp. 223–224, available at <https://www.gpo.gov/fdsys/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf>; accessed 6 November 2018; ‘Report of the Montara Commission of Inquiry’ (2010) at pp. 343–350, available at <http://www.iadc.org/wp-content/uploads/2016/02/201011-Montara-Report.pdf>; accessed 6 November 2018.

<sup>35</sup> IS Sutton, *Offshore Safety Management* (2<sup>nd</sup> ed, Elsevier, Waltham/Oxford, 2014) table 1.2.

<sup>36</sup> PAME (n 33).

The analyses of the previous blowouts<sup>37</sup> demonstrate that failures at the prevention stage were among the root causes of the incidents. Arguably, much of the regulators' attention should be devoted to tailoring existing well standards and management systems to the Arctic conditions.

After a blowout, the priority is to regain control of the well as soon as possible to stop the flow of hydrocarbons. However, during the past blowouts it took months to cap the wells.<sup>38</sup> Thus, well control plans should be in place to identify site-specific source control methods.

If the blowout occurs, external equipment, such as capping stacks and containment domes, can be used to stop or divert the hydrocarbon release. The requirements for such well control equipment (including availability and location) are usually determined by the national authorities. Thus, Norwegian and US legislation requires all operators to have the necessary contingency plans and agreements with suppliers in place to be able to deploy capping stacks for Arctic drilling.<sup>39</sup> In the Arctic conditions, the deployment of such equipment on site is more challenging due to the lack of natural light, low temperatures, and strong winds, as well as the lack of infrastructure capabilities.<sup>40</sup> Furthermore, the use of well control equipment also requires taking into account subsurface conditions such as permafrost and the

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<sup>37</sup> National Commission on the BP Deepwater Horizon (n 34); 'Report of the Montara Commission of Inquiry' (n 34) at pp. 343–75; The Hon Lord Cullen (n 26).

<sup>38</sup> Over two months for *Montara*, over five months for *Deepwater Horizon*. Hunter (n 23).

<sup>39</sup> Norway: Petroleum Safety Authority Norway, Regulations Relating to Conducting Petroleum Activities sec 86; US: 30 CFR §250.471.

<sup>40</sup> DNV GL (n 3) at p. 28; Kokorin *et al.*, (n 3) at p. 15.

presence of offshore methane hydrates.<sup>41</sup> This external equipment is used to restore well control, but is considered a temporary fix until the well can be permanently controlled.<sup>42</sup>

To permanently kill the incident well a relief well is required to be drilled to stabilise the pressure.<sup>43</sup> In the Arctic, one of the biggest concerns is an end-of-season blowout, which would require response operations to be conducted in the presence of autumn and winter ice. For this reason, the requirement of a same-season relief well (SSRW) is instituted in some jurisdictions, including Canada,<sup>44</sup> Norway,<sup>45</sup> and Greenland.<sup>46</sup> The requirement entails the operators having to demonstrate the capability to drill a relief well during the same drilling season, which might increase costs for the operator as a separate rig is needed on stand-by.

If the incident occurred and oil entered the marine environment, the operators and the State response systems must be prepared to contain the spill promptly and recover as much oil as possible. Response plans typically list the plan of response actions, equipment needed and

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<sup>41</sup> Pew Charitable Trusts (n 31) at p. 35.

<sup>42</sup> Wood Group Kenny, 'Subsea Capping Stack Technology Requirements' (2016) at pp. 27–28, available at <https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program/756aa.pdf>; accessed 6 November 2018.

<sup>43</sup> *Ibid.* at p. 43.

<sup>44</sup> Canadian National Energy Board retains the right to consider other options if they achieve the goal to 'kill an out-of-control well during the same drilling season.' Canada National Energy Board, 'The Past Is Always Present: Review of Offshore Drilling in the Canadian Arctic' (2011) at p. 39, available at <https://www.neb-one.gc.ca/nrth/rctcfffshrdrlngrvw/2011fnlrprt/2011fnlrprt-eng.pdf>; accessed 6 November 2018.

<sup>45</sup> 'NORSOK Standard D-010 Well Integrity in Drilling and Well Operations' sec 4.8.2 available at <http://www.standard.no/pagefiles/1315/d-010r3.pdf>; accessed 29 June 2018.

<sup>46</sup> 'Greenland Bureau of Minerals and Petroleum Drilling Guidelines' (2011) available at [https://www.govmin.gl/images/stories/petroleum/110502\\_Drilling\\_Guidelines.pdf](https://www.govmin.gl/images/stories/petroleum/110502_Drilling_Guidelines.pdf); accessed 29 June 2018.

techniques used to recover and contain an oil spill. Such plans need to be site-specific and be subject to rigorous oversight from the regulator. The *Deepwater Horizon* inquiry found that the response plan was in parts copied from other materials, ‘without any discernible effort to determine the applicability of that information to the Gulf of Mexico’.<sup>47</sup> In the Arctic conditions, the response operations might be challenging due to the short duration of the ice-free seasons, lack of infrastructure, and lack of proven methods of oil spill clean-up in the Arctic conditions.<sup>48</sup>

An effective response requires coordination between the industry and the local authorities. Exercises, including international ones, are essential to ensure that such cooperation and communication methods, including immigration and customs regulations, are effective. One of the issues revealed by the *Deepwater Horizon* investigation was the rejection of some international offers of assistance due to legislation in place preventing foreign vessels from participating in trade between US ports.<sup>49</sup>

Generally, the effectiveness rates of spilled oil recovery are low: only about 25% of oil spilled during the *Deepwater Horizon* blowout was recovered, burned or skimmed during the response operations.<sup>50</sup> Recovering oil from the water in the Arctic conditions presents

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<sup>47</sup> National Commission on the BP Deepwater Horizon (n 34) at p. 84.

<sup>48</sup> Response to oil spills in the Arctic is the subject of numerous studies and research projects. See *e.g.* EPPR, ‘Circumpolar Oil Spill Response Viability Analysis: Technical Report’ (2017), available at <https://oaarchive.arctic-council.org/handle/11374/1928>; accessed 6 November 2018.; EPPR, ‘Guide to Oil Spill Response in Snow and Ice Conditions’ (2015). See also APP4SEA – Arctic Preparedness Platform for Oil Spill and Other Environmental Accidents (<http://app4sea.interreg-npa.eu/about-the-project/>; accessed 29 June 2018).

<sup>49</sup> National Commission on the BP Deepwater Horizon (n 34) at pp. 142–143.

<sup>50</sup> *Ibid.*, at p.168.

additional challenges. The main techniques for the recovery of oil offshore are: mechanical recovery, *in situ* burning, and using dispersants. Mechanical recovery in the Arctic can be limited by weather conditions and ice presence, which all affect the functioning of response vessels, equipment, and personnel.<sup>51</sup> *In situ* burning is viewed as ‘especially suited when oil is spilled in an environment with the presence of ice’;<sup>52</sup> however, using it creates additional risks to life from secondary fires<sup>53</sup> and environmental effects from smoke and soot. The use of dispersants may be effective if applied soon after the spill,<sup>54</sup> but may be hampered by the absence of a streamlined pre-approval process in the Arctic States and the potential effects on wildlife and the fisheries industry.<sup>55</sup>

As demonstrated, both prevention and response measures in the Arctic present additional challenges and warrant additional regulatory attention. Due to the difficulties in response and to minimise the risk to human health and environment, prevention of oil spills should be addressed effectively by regional and international regulation. The next section examines the ways in which treaties regulate oil spill prevention, preparedness and response in the Arctic.

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<sup>51</sup> S Potter *et al.*, *Spill Response in the Arctic Offshore* (American Petroleum Institute and the Joint Industry Programme on Oil Spill Recovery in Ice, 2012) at p. 92, available at <http://www.dfdickins.com/pdf/Spill-Response-in-the-Arctic-Offshore.pdf>; accessed 6 November 2018.

<sup>52</sup> *Ibid.*, at p. 33.

<sup>53</sup> *Ibid.*, at p. 34.

<sup>54</sup> A Lewis and PS Daling, *A Review of Studies of Oil Spill Dispersant Effectiveness in Arctic Conditions* (Sintef, 2007) at p. 19, available at [https://www.sintef.no/globalassets/project/jip\\_oil\\_in\\_ice/dokumenter/publications/jip-rep-no-11-dispersant-effectiveness-in-arctic-conditions-150207.pdf](https://www.sintef.no/globalassets/project/jip_oil_in_ice/dokumenter/publications/jip-rep-no-11-dispersant-effectiveness-in-arctic-conditions-150207.pdf); accessed 6 November 2018.

<sup>55</sup> EPPR (2015) (n 48) at pp. 19, 29, 103.

## Treaty regulation of Arctic oil spill prevention, preparedness, and response

Offshore upstream petroleum development is not comprehensively regulated by treaties at the global level.<sup>56</sup> Although there are some regional legal developments in place,<sup>57</sup> the Arctic region remains under fragmented regulation. The adoption of an ‘Arctic Treaty’ has long been on the political and research agenda,<sup>58</sup> but in its absence the following agreements are the most relevant to the prevention and response to oil spills in the Arctic: the OPRC<sup>59</sup> and MOSPA,<sup>60</sup> and the LOSC. Furthermore, the OSPAR<sup>61</sup> and the MARPOL<sup>62</sup> are of relevance to

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<sup>56</sup> See L Chabason, *Offshore Oil Exploitation: A New Frontier for International Environmental Law* (Institute for Sustainable Development and International Relations, 2011), available at [https://www.iddri.org/sites/default/files/import/publications/wp-1111\\_chabason\\_offshore.pdf](https://www.iddri.org/sites/default/files/import/publications/wp-1111_chabason_offshore.pdf); accessed 6 November 2018. See also Liu for the comprehensive review of existing international rules (n 14).

<sup>57</sup> *E.g.*, the European Union Directive 2013/30/EU on Safety of Offshore Oil and Gas Operations and Amending Directive 2004/35/EC [2013] OJ L178/66.

<sup>58</sup> T Koivurova and EJ Molenaar, *International Governance and Regulation of the Marine Arctic* (WWF, 2010), available at [http://assets.panda.org/downloads/3in1\\_final.pdf](http://assets.panda.org/downloads/3in1_final.pdf); accessed 6 November 2018; European Parliament Resolution of 9 October 2008 on Arctic Governance, available at <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2008-0474+0+DOC+XML+V0//EN>; accessed 6 November 2018; DR Rothwell; MA Verhaag, ‘It Is Not Too Late: The Need for a Comprehensive International Treaty to Protect the Arctic Environment’ (2002) 15 *Georgetown International Environmental Law Review* 555-579.

<sup>59</sup> OPRC (n 10).

<sup>60</sup> MOSPA (n 10).

<sup>61</sup> Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris, 22 September 1992, in force 25 March 1998) 2354 *UNTS* 67 (OSPAR).

<sup>62</sup> International Convention for the Prevention of Pollution from Ships (London, 17 February 1973, in force 2 October 1983) (1973) 12 *ILM* 1319 (MARPOL).

the protection of the marine environment in general, but as demonstrated in this section, are of limited application to the prevention of and response to oil spills.

***International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and the Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic (MOSPA)***

The OPRC is currently ratified by all five Arctic coastal States.<sup>63</sup> It was adopted under the framework of the International Maritime Organization (IMO) with the objectives to ‘promote international cooperation and to enhance existing national, regional and global capabilities concerning oil pollution preparedness and response (...)’.<sup>64</sup>

The scope of the OPRC relates to incidental pollution, from both ships and offshore oil installations.<sup>65</sup> However, obligations in the OPRC are mostly related to the cooperation in response operations after the oil spill occurs rather than preventive measures. It does not set requirements for the design of the well, pipelines, installations, or safety culture.

With regard to the offshore installations, the OPRC requires that they have an emergency plan coordinated with the national system and approved by the relevant authority.<sup>66</sup> The OPRC further requires that all the States establish a ‘national system for responding promptly

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<sup>63</sup> IMO, Status of Multilateral Conventions as of 14 March 2017, available at <http://www.imo.org/en/About/Conventions/StatusOfConventions/Pages/Default.aspx>; accessed 6 November 2018.

<sup>64</sup> OPRC (n 10) preamble.

<sup>65</sup> *Ibid.*, Art. 2.

<sup>66</sup> *Ibid.*, Art. 3(2).

and effectively to oil pollution incidents'.<sup>67</sup> It sets minimum content requirements for such systems, such as the competent authority responsible for oil pollution preparedness and response; the operational contact point for the receipt and transmission of oil pollution reports; and an authority entitled to act on behalf of the State to request assistance or to decide to render the assistance requested.<sup>68</sup>

Additionally, the OPRC requires that each Party, 'within its capabilities' and 'as appropriate', establish: a minimum level of prepositioned oil spill combatting equipment, a programme for exercises and training, detailed plans and communication capabilities for responding, and a relevant coordination mechanism.<sup>69</sup> Although the requirement to have such equipment available is written into the legislation of the Arctic States examined here,<sup>70</sup> the proximity of such equipment to drilling sites, its transportation to the site in bad weather conditions, and its effectiveness in responding to large-scale oil spills in the Arctic are questionable. For example, in the US, the nearest Coast Guard base to the Arctic coast is in Kodiak, Alaska, about 900 miles away.<sup>71</sup> The proximity and availability of response equipment and personnel in the coastal settlements is also a concern in the Canadian Arctic.<sup>72</sup>

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<sup>67</sup> *Ibid.*, Art. 6(1).

<sup>68</sup> *Ibid.*

<sup>69</sup> *Ibid.*, Art. 6 (2).

<sup>70</sup> See *e.g.*, Russian Government Decree no. 1189 'On the Organisation of Prevention and Liquidation of Oil Spills on the Continental Shelf of the Russian Federation, in the Internal Waters and the Territorial Sea' (14 November 2014) 47 *Sobranie Zakonodael'stva Rossiiskoi Federatsii* 6549. US: US Arctic OCS Final Rule, 'Oil and Gas and Sulfur Operations on the Outer Continental Shelf—Requirements for Exploratory Drilling on the Arctic Outer Continental Shelf' (81 FR 46478 2016).

<sup>71</sup> Pew Environmental Group, 'Oil Spill Prevention and Response in the U.S. Arctic Region: Unexamined Risks, Unacceptable Consequences' (2010) at p. 22, available at

In relation to international cooperation, the OPRC requires reporting any incidents affecting or likely to affect another State.<sup>73</sup> It further stipulates that States ‘subject to their capability and availability of the relevant resources’ shall cooperate and provide advisory services, technical support and equipment for the purposes of oil spill response, if the severity so justifies.<sup>74</sup>

The Arctic coastal States comply with the main provisions of the OPRC. Legislation in all five States requires each offshore petroleum development unit to have an emergency plan.<sup>75</sup>

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[https://www.pewtrusts.org/~media/legacy/oceans\\_north\\_legacy/page\\_attachments/oil-spill-prevention.pdf](https://www.pewtrusts.org/~media/legacy/oceans_north_legacy/page_attachments/oil-spill-prevention.pdf); accessed 6 November 2018. The issue of equipment availability and deployment is addressed in the US Arctic OCS Drilling Rule (n 70).

<sup>72</sup> WWF, ‘Oil Spill Response Capacity in Nunavut and the Beaufort Sea’ (2017) at pp. 3–4, available at [http://awsassets.wwf.ca/downloads/170405\\_\\_\\_oilspillresponsecapacitynunavut\\_web.pdf?\\_ga=1.229131932.1829272820.1475691822](http://awsassets.wwf.ca/downloads/170405___oilspillresponsecapacitynunavut_web.pdf?_ga=1.229131932.1829272820.1475691822), accessed 6 November 2018 .

<sup>73</sup> OPRC (n 10) Art. 5(1). If the severity of the incident justifies so, the States shall also report such incidents to the IMO directly, Art. 5(3).

<sup>74</sup> *Ibid.*, Art. 7(1).

<sup>75</sup> Canada: Oil and Gas Drilling and Production Regulations SOR/2009-315 sec 6(j). Greenland: ‘Mineral Licence and Safety Authority Guidelines for Application, Execution and Reporting of Offshore Hydrocarbon Exploration Activities (Excluding Drilling) in Greenland’ (2016), available at <https://naalakkersuisut.gl/~media/Nanoq/Files/Publications/Raastof/ENG/UK%20MLSA%20Guidelines%202016.pdf> accessed 6 November 2018. Norway: Act no 6 Concerning Protection against Pollution and Concerning Waste (13 March 1981) (Pollution Act) sec 40. Russia: Government Decree no 1189 ‘On the Organisation of Prevention and Liquidation of Oil Spills on the Continental Shelf of the Russian Federation, in the Internal Waters and the Territorial Sea’ (14 November 2014) 47 *Sobranie Zakonodael’sstva Rossiiskoi Federatsii* 6549. US: 30 CFR § 254.5. Additional requirements for Arctic operations, *e.g.*, consideration of ‘human factors, (...) associated with oil spill response activities in adverse weather conditions and their impacts on decision-making and health and safety’. 30 CFR § 254.70.

National emergency response systems, consistent with the OPRC requirements, are also present in the Arctic States' regulations.<sup>76</sup>

However, for the purposes of prevention of and response to oil spills in the Arctic, the OPRC requirements might be too broad and insufficient. They leave out preventive measures and do not address Arctic-specific challenges in response, such as the climatic conditions and the lack of infrastructure. This is understandable, given that addressing regional specificities is outside the scope of the OPRC. Instead, the OPRC promotes the conclusion of further 'bilateral and multilateral agreements for oil pollution preparedness and response'.<sup>77</sup> It is in accordance with this provision that the MOSPA<sup>78</sup> was adopted by the eight Arctic States,

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<sup>76</sup> Canada: Coast Guard prepares and maintains an emergency management plan. Canada Emergency Management Act SC 2007 c 15 sec 6(1). Greenland: under sec 80 of the Greenland Mineral Resources Act, the Mineral License and Safety Authority develops an 'Emergency Management Programme for Hydrocarbon Activities in Greenland', available at [https://www.govmin.gl/images/stories/faelles/mineral\\_resources\\_act\\_unofficial\\_translation.pdf](https://www.govmin.gl/images/stories/faelles/mineral_resources_act_unofficial_translation.pdf); accessed 6 November 2018. Norway: State and separate municipalities must have contingency plans for response to acute pollution. Pollution Act sec 43-4. Russia: Government Decree no 794 establishes the 'Unified State Emergency Preparedness and Response System' and tasks the Ministry of Transport to organise response system for oil spills, 2 *Sobranie Zakonodael'stva Rossiiskoi Federatsii* 121; US: The National Oil and Hazardous Substances Pollution Contingency Plan establishes the national response team, regional response teams, and outlines coordination between local, state, federal and private response agencies, available at <https://www.epa.gov/emergency-response/national-oil-and-hazardous-substances-pollution-contingency-plan-ncp-overview>; accessed 6 November 2018.

<sup>77</sup> OPRC (n 10) Art. 10.

<sup>78</sup> MOSPA (n 10).

under the auspices of the Arctic Council. The Agreement was negotiated ‘in a highly collaborative spirit’<sup>79</sup> and adopted within a short two-year period.

The decision to negotiate the Agreement was based on the report of the Senior Arctic Officials (SAOs), which raised concerns over the *Deepwater Horizon* blowout and the absence of the Arctic region-specific ‘marine oil pollution response instrument’.<sup>80</sup>

Despite being an Arctic-specific treaty, the MOSPA does little to address the prevention of oil spills or the response challenges discussed in the second section. The main body of the Agreement is supplemented by non-binding Operational Guidelines outlining the relevant details for any potential joint response operations. The Agreement’s provisions mainly mirror the obligations under the OPRC and do not attempt to address the Arctic specifically. Thus, it almost verbatim repeats the OPRC’s requirements for equipment and exercise, communication plans, and coordination mechanism.<sup>81</sup> It further repeats the requirements for the national response system,<sup>82</sup> incident notification,<sup>83</sup> assistance requests and movement of resources across borders.<sup>84</sup> Finally, the MOSPA similarly conditions the implementation of the majority of the Agreement’s provisions on ‘capabilities of the Parties and the availability

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<sup>79</sup> Senior Arctic Officials (SAO) Report to Ministers (Kiruna, May 2013) at p. 32, available at <https://oaarchive.arctic-council.org/handle/11374/848>; accessed 6 November 2018.

<sup>80</sup> Senior Arctic Officials (SAO) Report to Ministers (Nuuk, May 2011) at p. 6, available at <https://oaarchive.arctic-council.org/handle/11374/1535>; accessed 6 November 2018.

<sup>81</sup> MOSPA (n 10) Art. 4(2), OPRC (n 10) Art. 6(2).

<sup>82</sup> MOSPA Art. 5, OPRC Art. 6(1)(a).

<sup>83</sup> MOSPA Art. 6, OPRC Art. 5.

<sup>84</sup> MOSPA Arts. 8 and 9, OPRC Art. 7.

of relevant resources<sup>85</sup> and provides for the reimbursement of the incurred costs by the requesting party.<sup>86</sup>

The MOSPA does have some added value to Arctic oil spill response. First, it extends the geographical scope to the areas beyond national jurisdiction for the provisions related to monitoring, notification, and the request and provision of assistance.<sup>87</sup> This is significant considering the lack of protections available for such areas in general international law. Second, the MOSPA is associated with the Arctic Council's institutional capacity to monitor the implementation. Finally, it institutes some new obligations,<sup>88</sup> and contains non-binding Operational Guidelines. It should be noted, though, that the new provisions often use 'soft' language, such as 'to the extent feasible' (Art. 7.1), 'should', 'where appropriate' (Art. 11), and 'should endeavour' (Art. 12), thus potentially limiting the enforceability of these requirements.<sup>89</sup>

The joint exercises and training were mentioned in the OPRC, but only with regard to the Parties which request the assistance and 'as appropriate'.<sup>90</sup> The MOSPA uses stronger language by stating that the Parties 'shall promote cooperation and coordination by endeavouring to carry out joint exercises and training, including alerting or call-out exercises,

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<sup>85</sup> MOSPA Art. 15, OPRC 7(1).

<sup>86</sup> MOSPA Art. 10, OPRC annex.

<sup>87</sup> MOSPA Art. 3.2.

<sup>88</sup> *Ibid.*, Art. 7 requires monitoring; Art. 11 requires review of any joint operations. Art. 12 requires the promotion of the 'cooperation and exchange of information that may serve to improve the effectiveness of oil pollution preparedness and response operations'.

<sup>89</sup> P Weil, 'Towards Relative Normativity in International Law?' (1983) 77(3) *American Journal of International Law* 413-442, at pp. 414-415.

<sup>90</sup> OPRC (n 10) Art. 9(1).

table-top exercises, equipment deployment exercises, and other relevant activities’.<sup>91</sup> It further encourages States to design the exercises so as to ‘incorporate lessons learned’<sup>92</sup> and ‘include stakeholders in the planning and execution’.<sup>93</sup> The MOSPA provision on joint exercises has been implemented even before the Agreement came into force. The first table-top exercise, including all eight Arctic States and 31 distinct agencies, was hosted by Canada in May-June 2014.<sup>94</sup> Since then similar exercises have regularly been conducted around the Arctic, with the latest round taking place in March 2018 in Finland.<sup>95</sup>

The MOSPA establishes regular meetings to review the implementation and notes that Arctic Council can be used as a forum for discussions regarding the operational issues related to the implementation.<sup>96</sup> The relevant Working Group of the Arctic Council (EPPR) meets twice a year and has established a task force that is specifically tasked with the implementation of the MOSPA.<sup>97</sup>

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<sup>91</sup> MOSPA (n 10) Art. 13.1.

<sup>92</sup> *Ibid.*, Art. 13.2.

<sup>93</sup> *Ibid.*, Art. 13.3.

<sup>94</sup> Arctic Council, ‘Arctic Exercise: After Action Report’ (2014) available at [https://oaarchive.arctic-council.org/bitstream/handle/11374/404/ACMMCA09\\_Iqaluit\\_2015\\_EPPR\\_Fisheries\\_and\\_Oceans-After\\_Actions\\_Report.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/404/ACMMCA09_Iqaluit_2015_EPPR_Fisheries_and_Oceans-After_Actions_Report.pdf?sequence=1&isAllowed=y); accessed 29 June 2018.

<sup>95</sup> Arctic Council, ‘EPPR Table-Top Exercise on Oil Spill Response in the Arctic’ (5 March 2018) available at <https://www.arctic-council.org/index.php/en/our-work2/8-news-and-events/484-mospa-ttx-2018>; accessed 23 May 2018.

<sup>96</sup> MOSPA (n 10) Art. 14.2.

<sup>97</sup> Arctic Council Marine Environmental Response Experts Group Mandate (29 June 2017) available at [https://oaarchive.arctic-council.org/bitstream/handle/11374/2107/MER\\_EG\\_Mandate\\_Final\\_Signed.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/2107/MER_EG_Mandate_Final_Signed.pdf?sequence=1&isAllowed=y); accessed 25 June 2018.

The Operational Guidelines are included as an Appendix to the Agreement and are explicitly non-binding.<sup>98</sup> They include forms for request for and provision of assistance and communication (section 11), and information on the national organisation of the response system for each of the Arctic States (section 12). The EPPR adopted the revision procedure to keep the Guidelines up to date.<sup>99</sup>

The Guidelines specify the content of general obligations contained in the body of the Agreement. To that end, they provide recommendations and highlight best practices. For example, sections 1 and 2 specify the detailed content of a notification of an incident, and the request for assistance. Section 3 considers the implementation issues for the movement and removal of resources associated with customs and immigration. They provide a timeline for cooperation during an oil pollution incident and distribute roles and responsibilities between the requesting and the assisting parties.

Thus, although the MOSPA builds on the OPRC by introducing some new obligations, extending the scope, and using the Arctic Council's capacity for implementation and updating the Operational Guidelines, it still does little to address the prevention of oil spills.

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<sup>98</sup> MOSPA (n 10) Art. 21.1.

<sup>99</sup> EPPR, Procedures for Updating the Operating Guidelines (2013) available at <https://oaarchive.arctic-council.org/handle/11374/1260>; accessed 29 June 2018.

*Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and International Convention for the Prevention of Pollution from Ships (MARPOL)*

Two further international agreements appear, at the outset, to be instrumental for prevention of and response to oil spills in the Arctic. The OSPAR is aimed at the protection of the North-East Atlantic waters, and the MARPOL is the global treaty on prevention of pollution from ships. Both treaties' relevance to oil spills in the Arctic is analysed below.

The OSPAR's geographical scope extends to parts of the Arctic waters.<sup>100</sup> The OSPAR establishes the OSPAR Commission, which supervises implementation, reviews the condition of the maritime area, and evaluates the effectiveness of the adopted measures.<sup>101</sup> The OSPAR is supplemented by the Annexes; Annex III regulates the 'Prevention and Elimination of Pollution from Offshore Sources' and primarily deals with dumping<sup>102</sup> and decommissioning of the offshore petroleum installations and pipelines.<sup>103</sup> Because 'dumping' relates to deliberate disposal,<sup>104</sup> this incidental pollution is not covered by the Annexes' provisions. Thus, although the geographical scope of the OSPAR warrants its examination for the purposes of Arctic petroleum development, the main text of the OSPAR and its relevant Annex do not address oil spill prevention and response specifically.

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<sup>100</sup> Waters between Norway and Denmark, see the map at <https://www.ospar.org/convention/the-north-east-atlantic>; accessed 29 June 2018

<sup>101</sup> OSPAR (n 61) Art. 10.

<sup>102</sup> *Ibid.*, Annex III Art. 3.

<sup>103</sup> *Ibid.*, Annex III Art. 5, 6-8.

<sup>104</sup> OSPAR (n 61) Art. 1(f).

The consideration of oil spills, however, is present in the activities of the OSPAR Commission. In response to the *Deepwater Horizon* blowout,<sup>105</sup> it adopted Recommendation 2010/18 on the prevention of significant acute oil pollution from offshore drilling activities.<sup>106</sup> The Recommendation required States to continue or urgently start reviewing ‘existing frameworks including the permitting of drilling in extreme conditions’.<sup>107</sup>

The MARPOL is the main international legal instrument regulating operational and incidental pollution from ships, including ‘fixed or floating platforms’.<sup>108</sup> Although the MARPOL appears to be relevant to the regulation of Arctic oil spill prevention and response due to its scope, this paper submits that it is of limited application.<sup>109</sup> The term ‘discharge’, under the MARPOL’s definition, does not include substances ‘directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources’.<sup>110</sup> Furthermore, Regulation 21 under the Annex I sets requirements for ‘drilling rigs and other platforms’. The requirements refer to operational discharges, oil filtering equipment, and oil discharge monitoring. However, the Regulation is of limited applicability to oil spills as only

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<sup>105</sup> *Ibid.*, preamble.

<sup>106</sup> OSPAR 10/23/10-E available at <https://www.ospar.org/convention/agreements/page5>; accessed 29 June 2018.

<sup>107</sup> *Ibid.*, Art. 3. By ‘extreme’ the Recommendation means conditions including depth, pressure, and weather, Art. 1.

<sup>108</sup> MARPOL (n 62) Art. 2(4).

<sup>109</sup> In January 2017, the Polar Code, the first binding international instrument for regulation of shipping in the polar waters, entered into force. It is implemented through the amendments to three IMO Conventions, including the MARPOL. Although it is instrumental in imposing stricter standards on ships operating in the Arctic, it does not regulate incidental pollution from offshore petroleum installations. Available at <http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx>; 29 June 2018.

<sup>110</sup> *Ibid.*, Art. 2(3)(b)(ii).

‘the discharge of machinery space drainage and contaminated ballast’ are subject to MARPOL.<sup>111</sup> It, therefore, does not cover incidental pollution. Such omissions in the scope of the application are understandable given the IMO mandate as the specialised UN agency responsible for ‘safety and security of shipping and prevention of marine pollution by ships’.<sup>112</sup>

Thus, both the OSPAR and the MARPOL, although of great significance to the protection of the marine environment in general, are of limited application for the purposes of upstream petroleum oil spill prevention and response in the Arctic.

### *LOSC*

Part XII of the LOSC sets out a general framework for the ‘Protection and Preservation of the Marine Environment’. It reaffirms States’ sovereign rights to exploit their natural resources ‘in accordance with their duty to protect and preserve the marine environment’.<sup>113</sup> It further confirms the obligation for the States to take measures to minimise pollution, including that from offshore petroleum installations.<sup>114</sup> Part XII further calls for global and regional

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<sup>111</sup> MARPOL, Unified Interpretations of Annex I available at [http://www.marpoltraining.com/MMSKOREAN/MARPOL/Annex\\_I/ui1.htm#56](http://www.marpoltraining.com/MMSKOREAN/MARPOL/Annex_I/ui1.htm#56); accessed 29 June 2018, 56.1-2.

<sup>112</sup> Some argue that the IMO should focus its work on safety, pollution prevention and liability, including offshore petroleum development. See *e.g.*, JA Roach, ‘International Standards for Offshore Drilling’ in MH Nordquist, J Norton Moore, AE Chircop, and RJ Long (eds), *The Regulation of Continental Shelf Development: Rethinking International Standards* (Brill Nijhoff, Leiden, 2013) 105-150, at p.116.

<sup>113</sup> LOSC Art. 193.

<sup>114</sup> *Ibid.*, Art. 194(3)(c).

cooperation ‘in formulating and elaborating international rules, standards and recommended practices (...) for the protection and preservation of the marine environment, taking into account characteristic regional features’.<sup>115</sup> The national laws and regulations for regulating petroleum extraction activities ‘shall be no less effective than international rules, standards and recommended practices and procedures’.<sup>116</sup> The LOSC further prescribes that States ‘acting especially through competent international organizations (...) shall establish global or regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment’.<sup>117</sup> The reliance on such external norms for the purposes of environmental protection, although ensuring the relevance of the regulation, might also lead to ambiguity on what standards are indeed generally accepted,<sup>118</sup> particularly in the Arctic regional context. Whereas such standards exist for a number of activities potentially harmful to the marine environment, as discussed above and by other scholars,<sup>119</sup> upstream petroleum activities are not globally regulated in a comprehensive way. If one were to accept the Arctic Council as a ‘competent international organization’ and its documents on the regulation of upstream petroleum development as the relevant regional rules, standards, and recommended practices for the purposes of the LOSC interpretation, the Council’s contributions might become vital for filling the lacunae in international regulation. The relevant non-binding guidelines and recommendations produced by the Arctic Council are analysed in the fourth section.

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<sup>115</sup> *Ibid.*, Art. 197.

<sup>116</sup> *Ibid.*, Art. 208(3).

<sup>117</sup> *Ibid.*, Art. 208(5).

<sup>118</sup> Redgwell (n 15) at p. 607.

<sup>119</sup> *Ibid.*, at pp. 610–612; Chabason (n 56).

***Response over prevention? The effectiveness of treaties in regulating oil spills in the Arctic waters***

Given the overview of the treaties related to oil spill prevention, preparedness and response in the Arctic, it is clear there are gaps in the legal regime relating to oil spill prevention preparedness and response in the Arctic waters. Two of the most obvious gaps are in the international regulation of the oil spill prevention and the lack of international rules for addressing Arctic-specific response challenges. Table 1 below briefly summarises the scope of each treaty in advance of a more detailed discussion below.

**Table 1: Treaty regulation of Arctic oil spill prevention, preparedness, and response**

<b>Factors</b>	<b>OPRC</b>	<b>MOSPA</b>	<b>OSPAR</b>	<b>MARPOL</b>	<b>LOSC</b>
Operational scope	Includes offshore oil installations	Oil pollution incidents in any marine area over which Arctic States exercise sovereignty, sovereign rights or jurisdiction	Mostly dumping and decommissioning	Only 'the discharge of machinery space drainage and contaminated ballast'	Marine environmental protection in general
Prevention and well control	No	No	Recommendation 2010/18 encourages to 'to review existing frameworks'	No	Yes, very general and referring to GAIRS
Preparedness	Requirements to have a State emergency response system; pre-positioned equipment; coordinate internationally; conduct exercises	Yes, duplicated from OPRC. Operational Guidelines provide practical details for international cooperation	No	No	Yes, very general
Oil spill response plan	Yes	Yes	No	No	No
Well response plan	No	No	No	No	No
Response techniques	No	No	No	No	No
Arctic-specific	No	Yes, but very limited. No considerations of	No	No	Art. 234, extending

requirements		lack of infrastructure, use of burning and dispersants, limitations of mechanical recovery and well construction requirements in the Arctic conditions			Coastal States rights to legislate on environmental protection
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As demonstrated, all of the examined treaties are either concerned with operational discharges or the preparedness and response. Although these are significant for the protection of the Arctic marine environment, they are not sufficient to improve safety at the offshore petroleum installations and ensure the prevention of a large-scale oil spill. The lack of common prevention and well control standards thus constitutes a clear gap in the treaty-based regulation of the Arctic offshore petroleum development.

Furthermore, although treaties address preparedness and response in general, they do not sufficiently address Arctic-specific challenges outlined in the second section above. The most glaring gaps are the lack of consideration of Arctic-specific oil clean-up techniques and development of spill response infrastructure along the Arctic coasts.

The OPRC is not an Arctic-specific treaty, but the MOSPA is. However, it largely repeats the obligations already in place in the OPRC. More importantly, it does not address Arctic-specific issues associated with preparedness and response. Some drawbacks of the MOSPA have been pointed out in this regard. First, it does not address the lack of adequate investments in the infrastructure.<sup>120</sup> There is no pan-Arctic obligation on the minimum

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<sup>120</sup> SV Rottem, 'The Arctic Council in Arctic Governance: The Significance of the Oil Spill Agreement' in L Jakobson and N Melvin (eds), *The New Arctic Governance* (Oxford University Press, Oxford, 2016) 147-174, at p. 163; E Tedsen and S Cavaliere, 'EU-US Cooperation to Enhance Arctic Marine Governance' in E Tedsen, S

standards for response capacity and equipment and no mention of specially trained personnel. Second, it is not clear which cooperation frameworks are prioritised: the MOSPA or those under the bilateral agreements. Rottem argues that the Agreement could be of ‘secondary importance’<sup>121</sup> in the presence of other cooperation mechanisms, such as the bilateral treaty between Norway and Russia.

The response plans for Arctic offshore oil development, although present in every jurisdiction in compliance with the OPRC and the MOSPA, have been heavily criticised by environmental NGOs. For example, Greenpeace found the oil spill response for the Prirazlomnaya platform in the Russian Pechora Sea inconsistent with the relevant Russian legislation.<sup>122</sup> Shell’s Oil Spill Response Plan for the Chukchi Sea<sup>123</sup> has been approved by the regulator, but was met with criticism from the environmental NGOs for making

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Cavalieri and RA Kraemer (eds), *Arctic Marine Governance* (Springer, Berlin/Heidelberg, 2014) 237-262, at p. 255.

<sup>121</sup> Rottem (n 120) at pp. 165–166.

<sup>122</sup> Greenpeace, ‘Gaps in the Oil Spill Prevention and Response Plan for the Operational Area of the Prirazlomnaya Offshore Ice-Resistant Stationary Platform of Gazprom Neft Shelf’ (2014) available at [http://www.greenpeace.org/russia/Global/russia/report/Arctic-oil/Gazprom/Gaps\\_OSR\\_Prirazlomnaya\\_English.pdf](http://www.greenpeace.org/russia/Global/russia/report/Arctic-oil/Gazprom/Gaps_OSR_Prirazlomnaya_English.pdf); accessed 29 June 2018. Among the inconsistencies are the failure to fulfil the requirement to have financial guarantees for conducting response measures and incorrect effectiveness evaluation of clean-up techniques in ice-covered waters. The executive summary of the plan is available at <http://shelf-neft.gazprom.ru/d/textpage/4f/79/referat-po-planu-lrn-2013.pdf> [in Russian]; accessed 29 June 2018.

<sup>123</sup> Shell, ‘Chukchi Sea Regional Exploration Programme Oil Spill Response Plan’ (2011) available at <https://www.bsee.gov/sites/bsee.gov/files/oil-spill-response-plan-osrp/bsee/shell-chukchi-sea-osrp-february-2012.pdf>; accessed 29 June 2018.

unrealistic assumptions regarding the success rates of mechanical recovery.<sup>124</sup> These concerns were reiterated by Shell's failures during the 2012 drilling season when the containment dome failed and was crushed during testing,<sup>125</sup> and when the drilling rig *Kulluk* ran aground in the storm leaving the crew to be rescued by the Coast Guard.<sup>126</sup>

Treaties, as expected under international law, create obligations for States, rarely engaging with important non-State actors, such as the relevant industry bodies, national governance agencies (such as offshore petroleum agencies and coast guards), indigenous peoples organisations.

Under the Arctic Council framework, the oil spill response regulation has been actively promoted through the work of the EPPR, joint exercises, and the development of technical reports.<sup>127</sup> Should the Council's non-binding documents constitute generally accepted international rules and standards (GAIRs) under the LOSC framework, they could assist in

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<sup>124</sup> Oceana, 'Frozen Future: Shell's Ongoing Gamble in the US Arctic' (2014) at p. 29, available at <https://oceana.org/reports/frozen-future-shell%E2%80%99s-ongoing-gamble-us-arctic>; accessed 6 November 2018.

<sup>125</sup> 'Review of Shell's 2012 Alaska Offshore Oil and Gas Exploration Program [Report to the Secretary of Interior]' (DOI 2013) at p. 19, available at <https://www.bsee.gov/sites/bsee.gov/files/notification-of-incidents-of-non-compliance-incs/notices-to-lessees/shell-report-3-8-13-final.pdf>; accessed 6 November 2018.

<sup>126</sup> The Coast Guard report examining the accident quotes 'significant number and nature of the potential violations of law and regulations' US Coast Guard, 'Report on Investigation in the Circumstances Surrounding the Multiple Related Marine Casualties and the Grounding of the MODU Kulluk' (2014) at p. 1, available at <https://usa.oceana.org/report-investigation-circumstances-surrounding-multiple-related-marine-casualties-and-grounding-modu>; accessed 6 November 2018.; M Funk, 'The Wreck of the Kulluk' *The New York Times* (30 December 2014).

<sup>127</sup> See <http://www.eppr.org/> accessed 25 June 2018.

bridging the gaps in international regulation of oil spill prevention and response in the Arctic. The section below analyses the Council's work on oil spill prevention and response in the context of offshore petroleum development.

### **Soft law as an instrument to fill in the regulatory gap in the international governance of oil spills in the Arctic**

As established above, treaty regulation of oil spills in the Arctic leaves significant gaps in oil spill prevention and region-specific response challenges. The non-binding guidelines and standards play an important role in the protection of the marine environment from the negative effects of offshore petroleum activities.<sup>128</sup> The Arctic Council has been active in research and cooperation in prevention of, preparedness for and response to oil spills in the Arctic. Despite its inability to take binding decisions, it has initiated research and cooperation, and produced some normative outputs, such as the Arctic Offshore Oil and Gas Guidelines.<sup>129</sup> This section examines these outputs and focuses on the ways in which the Council's activities might be instrumental in supplementing the relevant treaty regulation.

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<sup>128</sup> Liu (n 14) at p. 197; Redgwell (n 15).

<sup>129</sup> Arctic Council, Arctic Offshore Oil and Gas Guidelines (2009) (AOOGG), available at <https://oaarchive.arctic-council.org/handle/11374/63>; accessed 6 November 2018.

*Arctic Offshore Oil and Gas Guidelines (AOOGG)*<sup>130</sup>

The Working Group of the Arctic Council on the Protection of the Arctic Marine Environment (PAME) released the latest version of the AOOGG in 2009. They are not binding but are intended to guide the national authorities and the industry by encouraging them to apply the ‘highest standards currently available’<sup>131</sup> and cover all stages of offshore oil and gas activities, apart from transportation.<sup>132</sup>

The Guidelines address oil spill prevention, preparedness and response and could be complementary to the existing treaties. Thus, section 6 of the Guidelines engages with well control requirements and refers to the Arctic conditions. It requires that the ‘BOP and related equipment should be suitable for operation in subfreezing conditions’.<sup>133</sup> It further stipulates that the drilling fluids, well casing programmes, cement, emergency well shut-in procedures, and well safety programmes should be ‘suited to Arctic conditions including moving ice and possible subsurface permafrost’.<sup>134</sup> Finally, the Guidelines require that well-control exercises ‘be conducted regularly for each crew to develop response proficiency to conditions threatening a blowout’.<sup>135</sup> These requirements are implemented in the US and Greenland.<sup>136</sup>

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<sup>130</sup> *Ibid.* 2009 is the latest version. The first Guidelines were adopted in 1997 and updated in 2002.

<sup>131</sup> *Ibid.*, sec. 1.2.

<sup>132</sup> For transportation, the Guidelines refer to the AMAP, ‘Assessment 2007: Oil and Gas Activities in the Arctic - Effects and Potential Effects (vol 2)’ (2010), available at <https://www.amap.no/documents/doc/assessment-2007-oil-and-gas-activities-in-the-arctic-effects-and-potential-effects.-volume-2/100>; accessed 6 November 2018.

<sup>133</sup> AOOGG (n 129).

<sup>134</sup> *Ibid.*

<sup>135</sup> *Ibid.*

Canada, Russia, and Norway require adapting the requirements to Arctic conditions to a varying extent.<sup>137</sup>

Emergency preparedness and response are addressed in section 7 of the Guidelines, which offers some Arctic-specific provisions, absent from both the OPRC and the MOSPA. First, the Guidelines require an ice-management plan in addition to the usual emergency response documents. The contingency and oil spill response plans are expected to evaluate the environmental effects of the response operation under varying weather and ice conditions, which means identifying alternative clean-up techniques where appropriate.<sup>138</sup> These requirements are implemented in some Arctic States, albeit inconsistently.<sup>139</sup>

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<sup>136</sup> The US: CFR §250.418(f); 30 CFR §250.428(i). Greenland: Exploration Drilling Guidelines 2010, available at [https://www.govmin.gl/images/stories/petroleum/bmp\\_Exploration\\_Drilling\\_Guidelines\\_March%20\\_2010.pdf](https://www.govmin.gl/images/stories/petroleum/bmp_Exploration_Drilling_Guidelines_March%20_2010.pdf); accessed 6 November 2018.

<sup>137</sup> Canada: the operators must demonstrate how Arctic environment would affect the design of the rig and the well. ‘Filing Requirements for Offshore Drilling in the Canadian Arctic’ (National Energy Board 2014) at p. 2–6. Norway: ‘Norway Guidelines Regarding the Facilities Regulations’ sec 48. Russia: the Arctic-specific standards for materials used in offshore petroleum exploration and production are reportedly currently under development. M Kichanov, ‘Siberian Innovations Will Be Tested in the Arctic [in Russian]’ *Kommersant* (28 June 2016).

<sup>138</sup> AOOGG (n 129) sec. 7.2.

<sup>139</sup> Canada: Requirement of identification of spill containment in ice and ice-infested waters. ‘Filing Requirements’ (n 137) sec 4.18. Greenland: requirement of Ice Management Plans prior to drilling authorisation. ‘Drilling Guidelines’ (n 46). Norway: case-by-case approach to the oil spill response plan based on the specificities of a particular field. The plan for *Gøliat* reportedly considers the specific conditions of the Barents Sea, such as strong winds and waves, low temperatures, and reduced visibility. Recommendation from the Ministry of Petroleum and Energy, Proposition no 64 (2008-2009) ‘The Development and Operation of

Finally, the emergency response plan is expected to contain information on ‘precautionary measures to secure the well’ in the case of an emergency and on relief well arrangements, with the demonstration of the availability of necessary equipment and support systems.<sup>140</sup> At present the relief well requirement is implemented in some Arctic States.<sup>141</sup>

Thus, the Guidelines address prevention to some extent, and engage with preparedness and response. They address well control through the requirement of the capacity to drill a relief well and set minimum content requirements for emergency response plans. In setting content requirements, the Guidelines take into account specific Arctic conditions such as harsh weather, low temperatures, presence of ice, and possible issues with mobilising response equipment quickly due to lack of roads, airports and ports.

The AOOGG is the most comprehensive soft law document on offshore petroleum in the Arctic. However, neither the Arctic Council nor the PAME conducted a comprehensive follow-up on their implementation. Some commentators are sceptical about the overall effectiveness of the AOOGG. Thus, Byers asserts that the Guidelines fell short in that they are non-binding and avoided ‘some of the more difficult’ issues.<sup>142</sup> Koivurova, Kankaanpää,

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Gøliat’ [in Norwegian] available at <https://www.regjeringen.no/no/dokumenter/stprp-nr-64-2008-2009-/id560066/sec3#KAP3-3>; accessed 25 May 2018, sec 3.3.3. US: plan must describe the ‘ice intervention practices’ meant to improve the effectiveness of the oil spill response options and strategies listed in the oil spill response plan ‘in the presence of sea ice’. 30 CFR §254.23(g)(2).

<sup>140</sup> AOOGG (n 129) sec 7.2.

<sup>141</sup> Canada: National Energy Board, ‘The Past Is Always Present: Review of Offshore Drilling in the Canadian Arctic’ (2011) (n 44) at p. 39. Greenland: ‘Drilling Guidelines’ (n 46). Norway: ‘NORSOK Standard D-010 (n 45) sec 4.8.2. US: 30 CFR §250.471.

<sup>142</sup> Byers (n 16) at p. 212.

and Stepień criticise the lack of ‘regular evaluations procedure’.<sup>143</sup> Independent studies considered the implementation in Canada and the US<sup>144</sup> and in Greenland and Russia.<sup>145</sup> Further, more recent 2016 US Arctic Drilling rule acknowledges addressing recommendations contained in the Guidelines<sup>146</sup> and Greenland ‘expressly models its guidelines on environmental impact assessment on the AOOGG’.<sup>147</sup> In addition, scholars highlight<sup>148</sup> the important role of the Guidelines as the basis for new initiatives, such as the 2014 Guidelines Systems Safety Management and Safety Culture<sup>149</sup> and the web-based information-sharing portal on the regulation of offshore petroleum in the Arctic States.<sup>150</sup>

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<sup>143</sup> T Koivurova, P Kankaanpää and A Stepień, ‘Innovative Environmental Protection: Lessons from the Arctic’ (2015) 27 *Journal of Environmental Law* 285-311, at p. 297.

<sup>144</sup> ‘Operating Practices in the United States and Canada’ (Vermont Law School Institute for Energy and the Environment 2010) at p. 1, available at [http://www-assets.vermontlaw.edu/Assets/iee/Baker\\_ArcticOffshoreOil1.pdf](http://www-assets.vermontlaw.edu/Assets/iee/Baker_ArcticOffshoreOil1.pdf); accessed 6 November 2018.

<sup>145</sup> ‘The Arctic Offshore Oil and Gas Guidelines in Greenland and the Russian Federation’ (Vermont Law School Institute for Energy and the Environment 2011) White Paper 5, available at [http://www-assets.vermontlaw.edu/Assets/iee/Baker\\_ArcticOffshoreOil5.pdf](http://www-assets.vermontlaw.edu/Assets/iee/Baker_ArcticOffshoreOil5.pdf); accessed 6 November 2018.

<sup>146</sup> Arctic OCS Drilling Rule (n 70).

<sup>147</sup> B Baker, ‘The Arctic Offshore Hydrocarbon Hiatus of 2015: An Opportunity to Revisit Regulation Around the Pole’ in Peladeix and Basse (n 8) 148-166, at p. 152.

<sup>148</sup> *Ibid.*, at pp. 152–3.

<sup>149</sup> PAME (n 33).

<sup>150</sup> PAME, available at <https://www.pame.is/index.php/projects/resource-exploration-and-development/mre>; accessed 25 June 2018.

## *AOOGG Systems Safety Management and Safety Culture*<sup>151</sup>

In 2014, the PAME issued a new guidance document ‘to enhance and supplement’<sup>152</sup> the AOOGG. The Safety Management and Culture Guidelines (SMCG) deal with systems or process safety rather than occupational health and safety.<sup>153</sup> The SMCG make recommendations for the regulators to ‘define and communicate expectations regarding positive safety culture’, and to require operators to ‘establish, implement, and improve their safety culture’.<sup>154</sup> They further identify challenges and recommended approaches for improving safety management. Although the SMCG represent an important compilation of ‘lessons learned’ from the past offshore petroleum incidents and the current safety requirements of the Arctic States, they are written in a report form and contain few norms that could be directly implemented by the Arctic States. Rather, they propose recommendations for operators and regulators. Nevertheless, the SMCG address the issues that have been identified as catalysts to the previous offshore well blowouts.<sup>155</sup>

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<sup>151</sup> PAME 33).

<sup>152</sup> *Ibid.*, at p. 1.

<sup>153</sup> *Ibid.*, at p. 2.

<sup>154</sup> *Ibid.*, at pp. 19–21.

<sup>155</sup> National Commission on the BP Deepwater Horizon (n 34) at pp. 223–224; ‘Report of the Montara Commission of Inquiry’ (n 34) at pp. 343–350.

### ***The Task Force on Oil Pollution Prevention (TFOPP) Framework Plan***<sup>156</sup>

The TFOPP was established ‘to develop an Arctic Council action plan or other arrangement on oil pollution prevention’.<sup>157</sup> Participants included all of the Arctic States, two Permanent Participants, nine Observer States, the European Union (EU), and a number of Observer NGOs.<sup>158</sup>

It was not clear from the outset whether the Plan would be binding or not. The ultimate choice of the non-binding form was explained by ‘the limited time remaining to deliver the Plan within the envisaged timetable’.<sup>159</sup> The document was adopted

to strengthen cooperation, including exchange of information, among the [Arctic States] in the field of prevention of marine oil pollution in order to protect the Arctic marine environment.<sup>160</sup>

The majority of the Plan’s provisions relate to ‘sharing lessons learned and best practices’ and ‘exchange of data’.<sup>161</sup> The Plan recommends the promotion of ‘cooperation between

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<sup>156</sup> TFOPP, ‘The Arctic Council Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic 2015 (Prevention Framework Plan)’, available at [https://oaarchive.arctic-council.org/bitstream/handle/11374/609/ACMMCA09\\_Iqaluit\\_2015\\_SAO\\_Report\\_Annex\\_3\\_TFOPP\\_Framework\\_Plan.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/609/ACMMCA09_Iqaluit_2015_SAO_Report_Annex_3_TFOPP_Framework_Plan.pdf?sequence=1&isAllowed=y); accessed 6 November 2018.

<sup>157</sup> Kiruna Declaration on the Occasion of the 8th Meeting of the Arctic Council (15 May 2013) at p. 4, available at <https://www.arctic-council.org/index.php/en/document-archive/category/425-main-documents-from-kiruna-ministerial-meeting>; accessed 6 November 2018.

<sup>158</sup> ‘Senior Arctic Officials’ Report to Ministers (Iqaluit, 24 April 2015)’ at p. 4, available at <https://oaarchive.arctic-council.org/handle/11374/494>; accessed 6 November 2018.

<sup>159</sup> TFOPP, Meeting September 2014; summary of the meeting available at <https://oaarchive.arctic-council.org/handle/11374/817>; accessed 29 June 2018.

<sup>160</sup> Prevention Framework Plan (n 156) sec. 1.1.

competent national authorities on issues concerning the prevention of Arctic marine oil pollution from petroleum activities'.<sup>162</sup>

The Plan requires the completion of 'an overview of the existing and potential technical and operational safety measures specifically designed to prevent oil pollution in the Arctic marine environment from offshore petroleum activity'.<sup>163</sup> In response to this requirement, the EPPR published a report on technical and operational measures specifically designed to prevent oil spills in the Arctic waters.<sup>164</sup> The Plan's further requirement to promote the development of prevention standards/best practices and to assess the sufficiency of the existing ones was implemented through the publication of the relevant report.<sup>165</sup>

Some of the Plan's provisions relate more to the preparedness rather than prevention. Thus, section 3.2.4 stipulates that the Arctic States develop a catalogue of existing resources to minimise the environmental impact of a spill, and to assess the adequacy of such resources.<sup>166</sup>

The majority of the Plan's provisions relate to the exchange of information and data. To facilitate the implementation of the Plan, the Arctic Offshore Regulators Forum has been established in 2016.<sup>167</sup> The Forum brings together the offshore petroleum safety regulators

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<sup>161</sup> *E.g., ibid.*, secs. 3.1.1; 3.2.1; 3.2.2; 3.1.2; 3.2.5; 3.2.6.

<sup>162</sup> *Ibid.*, sec. 2.1.

<sup>163</sup> *Ibid.*

<sup>164</sup> EPPR (n 28).

<sup>165</sup> EPPR, 'Standardization as a Tool for Prevention of Oil Spills in the Arctic' (2017), available at <https://oaarchive.arctic-council.org/handle/11374/1951>; accessed 6 November 2018.

<sup>166</sup> Prevention Framework Plan (n 156) sec. 3.2.4.

<sup>167</sup> 'Arctic Offshore Regulators Forum: Terms of Reference (SAO Meeting of the Arctic Council, March 2016)' sec. 1(a), available at <https://oaarchive.arctic-council.org/handle/11374/1729>; accessed 6 November 2018.

across the Arctic States and holds meetings twice a year to ‘exchange information, best practices and relevant experiences learned from regulatory efforts’. The Arctic Council has followed up on the Framework Plan by assessing the progress of the implementation.<sup>168</sup> This is a novel initiative in the Arctic Council, which was criticised before for not following up on the status of implementation of its recommendations.<sup>169</sup>

### **Complementary nature of the Arctic Council soft law documents**

The Arctic Council has consistently worked on oil spill prevention and response since its establishment. In terms of scope, its outputs are wider than the treaties’. Thus, unlike treaties, they address oil spill prevention measures, well control, and Arctic-specific responses. Table 2 below summarises the scope of each document.

**Table 2: Arctic Council regulation of oil spill prevention, preparedness, and response**

<b>Factors</b>	<b>AOOGG</b>	<b>SMCG</b>	<b>TFOPP Plan</b>
Operational scope	All stages of petroleum development, except transportation	Systems or process safety for oil and gas development	Oil pollution in general
Prevention and well control	Yes, requirements for materials to be suitable for Arctic conditions;	Yes, but only safety management systems	Yes, but only sharing and compilation of knowledge

<sup>168</sup> EPPR, Arctic Council Status on Implementation of the ‘Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic’ (2017) available at [https://oaarchive.arctic-council.org/bitstream/handle/11374/1938/2017-05-05-EPPR-](https://oaarchive.arctic-council.org/bitstream/handle/11374/1938/2017-05-05-EPPR-Report_Implementation_Framework_Plan_OPP-Edocs-3742.pdf?sequence=1&isAllowed=y)

[Report\\_Implementation\\_Framework\\_Plan\\_OPP-Edocs-3742.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/1938/2017-05-05-EPPR-Report_Implementation_Framework_Plan_OPP-Edocs-3742.pdf?sequence=1&isAllowed=y); accessed 29 June 2018.

<sup>169</sup> Koivurova *et al.*, (n 143) at p. 97; MA Dubois and C Tesar, ‘Making It Stick – A New Approach to Implementing Arctic Council Decisions and Recommendations’ [2014] *Arctic Yearbook*, available at <https://arcticyearbook.com/arctic-yearbook/2014>; accessed 6 November 2018

	contractors management.		regarding prevention
Preparedness	Yes, risk analysis, emergency planning; requirement for operators to demonstrate financial capacity to respond	Yes, limited consideration of risk assessment	Yes, limited consideration of risk assessment
Oil spill response plan	Yes, minimum content requirements to include response in Arctic conditions	Yes, to a limited extent, no requirements	No
Well response plan	Yes, relief well	No	No
Response techniques	Yes, to a limited extent	No	No
Arctic-specific requirements	Yes	Yes	Yes

As demonstrated, the scope of the non-binding documents is wider, particularly where oil spill prevention measures and the Arctic regional specificities are concerned. This comes with some trade-offs. The provisions of the non-binding documents are largely not formulated as international legal rules. Rather than placing obligations directly on the Arctic States, the Council’s documents typically establish the review of best practices and make recommendations not just to the relevant regulatory bodies, but also to the industry and other relevant stakeholders. Indeed, an important advantage of the Arctic Council outputs on oil spill prevention and response is the way it involves the relevant non-State actors: national and regional government agencies and industry stakeholders. Such direct involvement might extend the legitimacy of the documents and enhance institutional collaboration. It has further been positively regarded by scholars in the context of ‘hybrid governance.’<sup>170</sup>

Despite the lack of direct rules and the non-binding nature, as noted above, some national documents directly refer to the Guidelines, which signals the implementation not just through increased cooperation and information sharing, but through the legislative outputs at the national level as well.

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<sup>170</sup> The authors, however, warn of potential fragmentation of implementation leading to the lack of ‘coherent regional governance’. Osofsky *et al.*, (n 17) at p. 418.

Further non-treaty regulatory instruments can be prominent in improving the offshore oil and gas safety in the Arctic. The use of industry standards across the Arctic region, although falling outside the scope of the treaty regulation, could become a source of generally accepted rules and practices. Thus, the Norwegian petroleum industry standards for well control, NORSOK D-010,<sup>171</sup> are specifically referenced in the Canadian Filing Requirements for drilling in the Arctic waters.<sup>172</sup> Another example is the bilateral project between Norway and Russia, Barents 2020, which was established to create a coordinated approach to petroleum development in the Barents Sea.<sup>173</sup> With direct involvement of the industry,<sup>174</sup> the Barents 2020 Reports identified and recommended common standards with the view of *inter alia* coherent approaches to risk assessment of major hazards, including blow-outs on offshore drilling, production and storage units.<sup>175</sup>

The Arctic Council governance does not come in lieu of treaty regulation, but in addition to it. The complementary nature of such soft law approach is evident in a number of ways. First, the additional value of the MOSPA, compared to the OPRC, stems from the cooperation it encouraged in recommending common practices, conducting exercises and using the regular Council meetings as a discussion forum. Second, the Arctic Council recommendations and

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<sup>171</sup> 'Filing Requirements' (n 137) at p. 5–8.

<sup>172</sup> 'NORSOK Standard D-010' (n 45).

<sup>173</sup> 'Barents 2020: A Tool for a Forward-Looking High North Policy' (2006) at p. 3 available at <https://www.regjeringen.no/globalassets/upload/ud/vedlegg/barents2020e.pdf>; accessed 29 June 2018.

<sup>174</sup> DNV acted as the project manager; Gazprom, Lukoil and Statoil, among others, were on the steering committee. DNV, 'Barents 2020: Assessment of International Standards for Safe Exploration, Production and Transportation of Oil and Gas in the Barents Sea (Phase 4)' (2012) at p. 13, available at <https://www.dnvgl.com/oilgas/arctic/barents-2020-reports.html>; accessed 6 November 2018.

<sup>175</sup> *Ibid.*, at pp. 18–23.

the industry standards were found to be included in at least some of the relevant national legislation. Finally, the LOSC already envisages the incorporation of the generally accepted international rules and standards,<sup>176</sup> and the norms developed under the Council's auspices could potentially qualify as such.

## **Conclusions**

The importance of a robust regulatory framework for offshore safety in the Arctic is hard to overestimate. However, the issues of international regulation of oil spill prevention and response measures are not inherent to the Arctic region. Both prevention and response measures for oil spills from shipping are regulated under the global IMO agenda, whereas for spills from blowouts, it is only the response measures that fall under the scope of treaty regulation. With the exception of a few regional agreements, the prevention of oil spills from petroleum development remains largely unregulated by treaties. The growing role of soft law governance warrants additional research, especially where the norms and standards are constantly evolving and require the involvement of a number of non-State stakeholders. In the Arctic, the Arctic Council and its working groups, have now fully asserted its position as the regional governance and knowledge centre on oil spill prevention and response.

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<sup>176</sup> See third section.