

International Arctic Petroleum Cooperation

Barents Sea scenarios

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Chapter 6

Norwegian–Russian political relations and Barents oil and gas developments

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Introduction

The political relationship between Norway and Russia will influence the development of Barents Sea oil and gas. The state plays a decisive role in both the Norwegian and Russian parts of the sea. It does so as a regulator, through taxation, and through the national oil and gas companies, Gazprom, Rosneft, and Statoil. Thus, if the two states have a good relationship characterized by mutual trust, they can coordinate, search for complementarities, and mitigate issues that arise. Furthermore, due to the rising cost of oil and gas production in the Arctic, many oil and gas fields there may deliver small returns on investments. Scale economies brought about by coordinated development, joint infrastructure, and information sharing can tip projects from being commercially unviable to viable. But this depends on the ability and willingness of the two states to actively work together.

It is commonly noted that Norway and Russia have been at peace for over 1,000 years (e.g. Støre, 2010). At the end of World War II, North Norway was liberated from Nazi occupation by Soviet forces. During the two first decades after the collapse of the Soviet Union, Russia had better relations with Norway than with many other West European countries (Jensen & Overland, 2011; Vaage & Overland, 2011). Norway has not had a highly anti-Russian foreign minister, such as Sweden's Carl Bildt, neither has it had a case such as that of Aleksander Litvinenko in the UK or Akhmed Zakayev in Denmark. Norwegian companies have invested heavily in Russia, not just in the petroleum sector but also in telecoms, the media, and breweries. Some companies have made large profits, in spite of years of continuous quarreling between Norway's Telenor and Russian co-shareholders over a hostile takeover of a Ukrainian mobile operator (Liuhto, 2007). Russian companies, Rosneft and Lukoil, have in turn been allowed onto the Norwegian continental shelf, and Russian tourists are some of the biggest spenders in Norway. Russian students and immigrants have flocked to Norway, thriving there (Bourmistrov, 2007, 2011).

Nonetheless, the bilateral political relationship between the two countries is variable and subject to risks. There are at least two main sources of concern in the relationship between the two countries: their complex direct interaction in

the Barents Sea, and the broader political relationship between Russia and the West, of which Norway is a part. An accidental entanglement in the Barents Sea could lock the two countries into a negative spiral of actions and counteractions, or a long-term cold front in Russian–Western relations over a matter such as Ukraine could cast long shadows over the bilateral relationship between the two countries.

The Barents Sea and its petroleum province are divided in two by the 1,680-km Norwegian–Russian maritime boundary (Moe, Fjærtøft, & Overland, 2011; Norwegian Ministry of Foreign Affairs, 2011, p. 61). The length of this boundary, greater than the distance between Berlin and Moscow, means that the two countries have extensive and complex relations. The boundary crosses some of the world's richest fish stocks; Russia's only year-round, ice-free port in the Arctic is the Barents city of Murmansk; the Svalbard Archipelago on the Norwegian side of the boundary is Norwegian territory, but subject to the 1920 Svalbard Treaty, which gives other signatory states including Russia the right to engage in economic, maritime, research, and other activity on the archipelago; and, finally, the Barents Sea is the gateway to the Northern Sea Route leading to the Pacific Ocean. There are thus many opportunities for entanglement between Norwegian and Russian actors, including the joint management of fish stocks, illegal fishing, coast guards arresting fishing vessels, oil spills, nuclear accidents, and so on.

In this chapter we provide a forward-looking overview of the complexities of the relationships between the two countries. However, we start in the next section by looking back at the situation before the 2010 maritime boundary agreement. The subsequent sections deal with the reception of the boundary agreement in Norway and Russia, the place of Barents oil and gas in the broader Norwegian and Russian contexts, the linkages between Norwegian–Russian bilateral relations and broader Russian–Western relations, and implications for the future.

Before the Barents Sea maritime boundary agreement

The territorial dispute between the USSR/Russia and Norway dated back to the 1960s when the continental shelf came into the political spotlight, both as a promising petroleum province and as an emerging object of international law. The first informal Soviet–Norwegian consultations on the delimitation of the Barents Sea took place in 1970. The official negotiations were launched in 1974 and then held on a largely regular basis. Once the two countries established their 200-nm exclusive economic zones (EEZ) in 1976, the mandate of the negotiations was extended to cover fisheries as well.

The Norwegians adhered to the median line principle, while the Soviet side maintained the straight sector line established by the USSR government in 1926. The overlapping disputed area was about 175,000 square km (some 50,000 square nm) large, equivalent to over half of the Norwegian mainland territory (Moe et al., 2011).

The first 15 years of discussions resulted in virtually no progress. However, the very fact of equal bilateral negotiations between a nuclear global superpower and its small but NATO-member neighbor was of major symbolic importance during the Cold War. Moreover, as early as in 1976, the two countries signed a long-term agreement on cooperation in fisheries and established the Joint Norwegian–Russian Fisheries Commission, which among other things sets agreed catch quotas for common fish stocks in the Barents Sea (Krivorotov, 2011). Besides, in 1978, the USSR and Norway set up a temporary mechanism for regulating fisheries in the disputed area (the so-called Gray Zone agreement), which was later prolonged each year until the 2010 Murmansk Treaty was signed.

Both countries also had reasons to believe that the seabed in the area possessed large potential oil and gas resources, since Norway made numerous offshore discoveries in the North Sea and USSR in the eastern Barents Sea (Moe, 2010). In the early 1980s, a Soviet research vessel shot 2D seismic in the disputed area, which helped to identify several promising prospects, notably including the Fedynsky High. However, soon after, the two countries agreed to refrain from any further exploration in this area, and its actual reserves remain unknown.

In late 1988, the Soviet Foreign Ministry indicated for the first time that the Soviet Union might be willing to deviate from the sector line. After that, the delimitation process started making gradual progress, moving from north to south. When Mikhail Gorbachev visited Oslo as President of the USSR in June 1991, he announced that the borderline issue had already been resolved by two-thirds (Krivorotov, 2001). But in subsequent years, the talks slowed down and nearly stalled, as the negotiations moved on to the southern Barents Sea, which is the most important area for fishermen, oilmen, and navies alike.

The year 2010 finally brought about a real breakthrough in negotiations. At the end of the first visit of the Russian President, Dmitry Medvedev, to Oslo in April 2010, the foreign ministers of the two countries announced that a solution to the Barents Sea dispute had been reached and only details remained before an agreement could be signed (Bakken & Aanensen, 2010). A few months later, on September 15, the delimitation treaty was signed in Murmansk, dividing the disputed area approximately into two halves of 87,500 square km each.

The settlement, which was a surprise even to many insiders, apparently came about for several reasons. First, there had been a manifold increase in the level of bilateral relations, mutual interest, and trust over the two past decades. Russia and Norway had entered a number of agreements in various fields, exchanged numerous visits at top and high political levels, promoted mutual trade and investments, and cooperated closely in the High North, both in a bilateral format and within broader international organizations, including the Barents region and the Arctic Council. Second, it was in both countries' interest to settle the territorial dispute in light of the work they were doing to stake their claims for the continental shelf beyond the 200 nautical mile limit. An extra concern for Norway was expanding the part of its seabed available for oil and gas exploration, as its oil production had peaked in 2004 and started to decline.

Last but not least, Dmitry Medvedev, the pro-Western Russian President of that time, made a personal contribution to move ahead with the settlement. He made this clear in his joint news conference with the Norwegian Prime Minister, Jens Stoltenberg, after signing the treaty (President of the Russian Federation, 2010). This agreement was of high political value that extended far beyond the scope of the bilateral relationship. By ending a decades-old dispute at a time when many observers thought of the Arctic as the object of an intensifying geopolitical competition, two of the major Arctic states sent a clear message to the world that any disputes in the Arctic could and should be resolved peacefully based on international law.

Situation after boundary agreement

The domestic reaction to the Murmansk Treaty was starkly different in the two countries. In Norway, it was hailed by a vast majority of stakeholders, notably including the parliamentary opposition and most independent experts, as a big step forward. With it, the country had settled the last and by far the biggest territorial dispute it had with its neighbors. The North Norwegian fishermen were the only exception, as they were of the opinion that the deal could lead to a worsening of the situation for the fisheries in the area due to increased oil and gas activity and more lax fisheries protection (Fishermen fear the delimitation line, 2010).

The oil industry and northern regions praised the opportunity to develop oil and gas resources in the delimited area, reversing the negative trend in oil output, creating new jobs, and bringing income to the coastal communities. A large-scale campaign of petroleum exploration in the Arctic fits equally perfectly into the Norwegian government's strategy and rhetoric on the High North (Jensen, 2012). As soon as the Murmansk Treaty came into force, it started sponsoring seismic shooting in the previously disputed area. However, licensing in the area followed the usual path, including the issuing of environmental and social impact assessments, public hearings, etc. Exploration blocks in the southern part of the delimited area were granted for the first time in Norway's twenty-second licensing round, in 2013.

By contrast, in Russia the treaty encountered significant skepticism. Fishermen, backed strongly by the Communist faction in the Duma, came out as the strongest opponents in Russia, as they stated that they were losing access to the rich fishing grounds in the western part of the formerly disputed area, which were now Norwegian waters. Although the joint fisheries management was to remain intact for 15 more years, they feared that their catch quotas would be cut dramatically (Norway to get part of Barents Sea today from Russia, 2010). Another argument against the treaty, closely connected to the first one, was that it did not mention explicitly the special status of, and Russian rights on, Svalbard and in the adjacent waters, including notably Norway's fisheries protection zone around Svalbard, which the USSR/Russia had never acknowledged (Oreshenkov, 2010; Zilanov, 2013). The broader Russian public, which had been unaware of this dispute, also criticized the deal as a unilateral Russian

concession of its traditional possessions. If it had not been for the ruling party, Unified Russia, which was chaired by then Prime Minister Vladimir Putin, the treaty would likely not have been ratified by the Duma.

Meanwhile, Rosneft, the Russian national oil company, which had for years shown an interest in the Barents Sea shelf, quickly saw the opportunities that the delimitation agreement created, all the more as the recent amendments to the Russian legislation on the continental shelf had made it possible for Rosneft to obtain Arctic shelf acreage without competitive bidding. By early 2012 the Russian part of the delimited area was split into three large blocks, and Rosneft was granted the licenses to all of these.

The Barents Sea in the broader national contexts

The Arctic in general remains high on the political agenda in both Norway and Russia, with an emphasis on maintaining a presence and leading positions in the Arctic, developing domestic northern regions, and enhancing the national Arctic identity. This may encourage both cooperation and competition, as we have seen in the Arctic since the 1960s.

Despite the high political importance to both countries of oil and gas exploration and development in the Barents Sea, any large-scale investments must be commercially viable and comply with broader national approaches to the countries' petroleum resources. In other words, it is not just a question of Norway and Russia coordinating their efforts in their respective parts of the Barents Sea, but also of how the Barents Sea fits into respectively the broader Norwegian and Russian oil and gas industries.

In this perspective, the situation is asymmetric, as Russia has more domestic alternatives to the Barents Sea than Norway does, and the political context in the two countries is different. This asymmetric situation creates a trend towards an imbalanced development of the Barents Sea: the Norwegian petroleum industry is chased away from Lofoten and towards the Barents Sea, while the Russian petroleum industry is drawn away from Europe and the Barents Sea towards East Siberia and the Far East (although the Russian geopolitical interest in the Barents Sea may only be heightened).

The domestic Norwegian context

As in northwest Siberia, the producing oil and gas fields in the North Sea are in decline and Norway needs to invest if it wants to maintain the flow of petroleum revenue. In this regard, the two countries are in a similar situation. Although Norway is a much smaller country than Russia and has much less acreage for potential petroleum exploration and extraction, Norway does also have a choice between different petroleum provinces. Three of the main options between which the Norwegians need to prioritize are investing in enhanced oil recovery (EOR) to extend the lifespan of the North Sea fields, or in greenfield areas near the Lofoten Islands, or in the Barents Sea.

The drivers and debate over priorities in Norway are, however, different from those in Russia. First, there is significantly more emphasis on EOR in Norway. The average rate of recovery in the North Sea is above 50%, whereas in Russia it is below 20% (Maugeri, 2006, p. 209). In 2014, the Norwegian government established a national center for EOR, further strengthening the emphasis on EOR (University of Stavanger, 2014).

Second, public concern over environmental issues plays a larger role in Norway. This includes both worries over local environmental issues, such as oil spills and conflicts with fisheries, and Norway's contribution to global greenhouse emissions. Sometimes these environmental agendas are debated separately; sometimes they are combined into a general environmental resistance by those lobbying against new oil developments.

One of the main ambitions of the environmentalists has been to avoid oil and gas extraction in the areas around the Lofoten Islands. Meanwhile, other local actors hope for economic benefits from increased petroleum activity in the North and actively promote it. The so-called red-green coalition government of the Center, Labor, and Socialist Left Parties that ruled Norway 2005–2013 was divided on this issue and ended up closing the area for exploration for the time being. This ensures that the matter will reappear on the political agenda during the coming years.

The Lofoten Islands have been a logical target for environmentalists because they are important spawning grounds for cod, and because their natural beauty holds an important place in Norwegian ethnic identity. The Barents Sea is probably at least as environmentally important, and significantly larger, but has still received much less attention. Pro-petroleum interests have thus grudgingly accepted the moratorium on petroleum exploration in the area around the Lofoten archipelago, while accelerating exploration in the Barents Sea. Thus, paradoxically, environmental resistance may have led to more rapid development of oil and gas in the Barents Sea.

While the Lofoten moratorium may have contributed to speeding up exploration in the Barents Sea, it may also be an obstacle to the development of oil and gas fields found there. This is because it would be more logical to develop the Lofoten Islands first from an infrastructure perspective, as they are located north of the last area to have already been developed, in the Norwegian Sea off central Norway. Should natural gas be found, one could then consider extending the Norwegian offshore pipeline grid northwards to the Lofoten Islands, and then later on to the Barents Sea. With the environmental moratorium on the Lofoten Islands, they become an infrastructural missing link between the undeveloped Barents Sea and the developed southern parts of the Norwegian continental shelf.

For the professional environmentalist NGOs, climate change is as important as, or more important than, local environmental protection. It is, however, more difficult to mobilize the population around climate change, especially the North Norwegian population, who can then feel that it needs to choose between the concrete benefits of jobs and rising property prices on the one

hand, and the abstract concern of climate change on the other hand (Kristoffersen, 2014; Kristoffersen & Jensen, 2012).

Another way in which the Norwegian government's choices will play a role is in terms of its policy towards Russia. For Russia, Norway is a small neighbor; for Norway, Russia is its largest, and, importantly, most difficult to understand, neighbor. As mentioned, Norwegian policy towards Russia has been milder and more cooperative than that of some other European countries such as Poland, Sweden, or the UK. There has been a relatively strong, albeit implicit, consensus about this across the Norwegian political spectrum. The main exception is the Venstre Party, which has spoken out for a more critical policy towards Russia (see Borsch, 2012), but this is a small party and all the major parties have de facto supported a foreign policy towards Russia of steadily growing ties and integration. However, this could change. During the 10-year period that started with Putin's second presidential term in 2004, the attitude of Norwegian officialdom towards Russia has gradually deteriorated, especially since the events in Ukraine in 2014. Norway is also a founding member country of NATO and with strong ties to the UK and the US, potentially sources of influence for a more critical policy towards Russia. However, Norway is closer to Russia and so far the Norwegian elite have still been more cautious than those of many other Western countries in criticizing Russia.

The current coalition government of the Conservative and Progress Parties has continued the discourse on the Arctic but so far has not done much about it. Jonas Gahr Støre was quick to emphasize the High North when he was Foreign Minister under the coalition government that was led by the Labor Party. He has now been elected leader of the Labor Party and has launched climate policy (and possibly interethnic integration) as his main political cause(s). Although it is likely that the Labor Party will return to power in a 10-year perspective, there is thus little reason to expect that it will lead to a reinvigorated focus on the High North and the development of new oil and gas fields.

The domestic Russian context

There are more alternatives to the Barents Sea in Russia than in Norway. On the one hand, developing the Arctic shelf enjoys a high priority in the government's plans, as a very visible way to compensate for the falling oil and gas production of the traditional Siberian fields, to establish a presence in the politically sensitive circumpolar area, and to enhance the well-being of the country's northern territories. All the relevant government papers, like the regularly updated National Energy Strategy or the Strategy for the Russian Arctic Zone adopted in 2013 (Government of the Russian Federation, 2009; President of the Russian Federation, 2013), set the goal of creating a new upstream province on the country's Arctic continental shelf, which in the first order means the Barents Sea and eventually the Kara Sea. Russian researchers, although aware of the inherent environmental challenges, advocate strongly for intensified exploration and development of the nation's Arctic shelf, as one of the biggest

remaining hydrocarbon reserves of global scale (Laverov, Dmitrievskiy, & Bogoyavlenskiy, 2011; Tsunevskiy, 2008). Gazprom and Rosneft also highlight their Arctic profile as a part of their global market positioning. When crude oil shipments started from the Prirazlomnoye field in the eastern Barents Sea, Gazprom was happy to announce that it had opened a new Russian petroleum production center in the Arctic.

On the other hand, the above plans date back to the time when experts in and outside Russia forecasted a steady growing demand for oil and gas in the Atlantic basin, both in Europe and the United States. There has been a need to reconcile policy goals with changing market realities. First, even regardless of the current strain in Russian–Western relations over Ukraine, both Rosneft and Gazprom have to revisit their market strategies. There has been speculation for some time as to whether Gazprom had to choose between the previously undeveloped Barents Sea and the more “conventional” Yamal Peninsula (Moe, 2006, p. 393). Yamal has the advantage that, in terms of geology and natural conditions, it is nearly identical to other onshore northwestern Siberia areas where Gazprom has proven technologies and decades of experience. This dispute was, however, rather academic as long as all experts foresaw a steady increase in the global demand for fuels, justifying simultaneous on- and offshore developments. But at a time when the United States is turning into a leading global producer and a potential net exporter of gas and perhaps even oil, when natural gas prices face an increased volatility and the EU attempts to reduce its dependence on Russian energy, the priorities may need to be set more clearly. “Gazprom critically analyzes and reviews the strategies it has been following recently,” its CEO, Alexey Miller, said in October 2014, addressing the global changes in the natural gas markets. “It doesn’t mean that we are going to change these strategies and approaches, but it is possible” (Gazprom, 2014b).

The Ukrainian crisis has added to this strain. By June 2014, Ukraine had accumulated debt for previously delivered Russian gas worth USD 5.3 billion and Gazprom switched to deliveries against advanced payment only. This may lead to Ukraine consuming some of the transit gas delivered from Russia to the EU through its territory, something that has happened before. Both parties have sued each other in the Stockholm Court of Arbitration. Several rounds of tripartite Russia–Ukraine–EU negotiations on gas sales to Ukraine failed to produce an agreed price. Rosneft has also declared the loss of some of its oil in the Ukrainian pipeline network and in addition had to postpone the planned overhaul of its Lisichansk refinery in eastern Ukraine due to the violence in that part of the country (Rosneft plans to seek compensation, 2014). As a result, the Russian oil and gas transit through Ukraine, which had never been easy, became even more unpredictable than ever before, forcing Russia to further intensify its efforts to diversify export routes.

The second point, which is interrelated with the first, is the growing Russian focus on the expanding Eastern Asia markets (China, Japan, Korea, India, etc.). Their demand is big and growing, while natural gas prices are some periods twice as high as in Europe and the US. Besides, energy cooperation with these

nations gives Russia a strong impetus to develop infrastructure in the adjacent regions of eastern Siberia and the Far East, which are vital to provide Russia with an access to the Asia–Pacific area. Problems in the European market are a secondary, still important, factor to enhance this trend.

In the past few years, Russian companies, backed strongly by the authorities, have committed to supply major quantities of both oil and gas to China. In 2009, the Russian state oil company, Rosneft, signed a deal with the China National Petroleum Corporation (CNPC) to supply 15 mt/y of oil till 2030, starting in 2012. In 2013, Rosneft signed an additional contract with CNPC for the supply of another 365 mt within 25 years, and also signed a memorandum of understanding with Sinopec to deliver another 100 mt of oil in 2014–2023 (Starinskaya, 2013). Besides their great scope and long-term nature, these contracts have the strong advantage for Rosneft of major advance payments (for example, USD 70 billion under the second Rosneft–CNPC deal alone) (Rosneft receives advance payment from China for oil, 2014). Rosneft has also recently engaged in a number of joint projects with Chinese companies on producing oil in eastern Russia and constructing an oil refinery in China (Rosneft, 2014).

In May 2014 Gazprom signed a contract worth USD 400 billion with CNPC for the delivery of 38 bcm/y of natural gas from eastern Siberia to China over 25 years starting from 2019. On September 1, 2014 Gazprom started construction of the 4,000-km-long *Sila Sibiri* [Power of Siberia] gas pipeline (Gazprom, 2014a). At the ceremony Gazprom also indicated that another contract may soon be signed with CNPC for the western route, to transport gas to China from existing fields in western Siberia, which make up the main resource base for deliveries to Europe (though Gazprom maintains that it has enough gas to supply both markets). The framework agreement on the western route was later signed by the two companies on November 9, 2014 under the Asia–Pacific Economic Cooperation Summit in Beijing (Gazprom, 2014c).

Third, as several industry experts and environmentalists have pointed out, there are promising alternatives to increasing upstream production, like enhancing oil recovery from the fields in operation, cutting associated gas flaring, and curbing nonproductive fuel and energy losses under both production and consumption. According to Russian estimates, energy efficiency may be increased by 30% in national power generation and by 40% in hot-water supply systems.

The effect of these market-driven changes, which were already well underway before the conflict in Ukraine, on Russia's interest in the Barents Sea may be exacerbated by the Norwegian government's participation in Western criticism and measures against Russia, including economic sanctions. The attempts by the US and EU to isolate Russia highlight the risks involved in close economic relations with them for a government such as that of President Putin, which is not recognized by Western governments as democratic. As predicted and theorized by Overland, Torjesen, and Kjærnet (2010, p. 93), the realization of this risk causes countries with such governments to reorient themselves towards China.

Seen with Russian eyes, the issue is more fundamental: the West has failed to establish a working global order based on a unilateral dominance, and other nations have to combine their efforts (both in political and economic terms) to construct a more balanced system of relations and protect their legitimate interests. This close interaction of economic, political, and ideological considerations makes the situation both complicated and hard to predict. However, it is rather evident that Russia lacks some key technologies to develop its Arctic shelf, and the US and EU sanctions on the transfer of Arctic and deep-sea oil and gas technologies can help make Russian companies focus more on Siberian onshore fields and Asian markets.

Another factor in the Russian domestic context is the potential changes in the country's company landscape. Novatek and Rosneft actively increase their national gas production and sales, and Gazprom could potentially lose its monopoly on pipeline exports (see e.g. Henderson, 2013; Lunden, Fjærtøft, Overland, & Prachakova, 2013). Already Novatek has been permitted to launch LNG exports from its Yamal LNG project independently of Gazprom, and Rosneft indicates a strong desire to obtain gas export rights both for LNG and pipeline gas. These changes may further enhance the Russian trend towards the East, since both Novatek and Rosneft seem to be giving high priority to cooperation with China (CNPC already has a 20% stake in Yamal LNG).

As the scenario horizon of this book is 10 years, which exceeds the constitutional term in office of President Vladimir Putin, it also raises the question of Russian policies in the longer run. The government could, for example, pursue a more liberal Western-oriented policy, or rely more on Asian partners, or become more domestically oriented. This applies to Russian behavior in the Arctic as well – different modes are possible, and the choice among these does not at all depend solely on the personality of the next Russian president. Indeed, the president possesses extensive powers, but the personal factor is often exaggerated (Overland, 2011), as the declared and especially the practical Russian policies are a product of a broader elite and government apparatus. The Arctic shelf is a good example of this. While the Russian laws ban foreign investors explicitly from the shelf resource base, this has not stopped Rosneft and Gazprom from forging offshore partnerships with foreign companies and from suggesting legislative amendments to facilitate this in September 2014 (i.e. when the Western sanctions against Russia had already been imposed). In this respect, the political developments in Russia represent an uncertainty. Russian–Norwegian political relations in the Barents Sea will be a function of, among other things, the broader Russian choices between East and West, plus the general role of the Arctic in the national political agenda.

Concluding thoughts: the broader influence of Russian–Western relations

All the factors explored above are important to understand the prospects for Norwegian–Russian cooperation. An additional and overarching factor that

must be considered as we conclude is the broader relationship between Russia and the West. Relations between Russia and the West have entered a spiral of Western sanctions and Russian countermeasures over the conflict in Ukraine. As this book has a 10-year scenario horizon, it is, however, important not to become too caught up in current events – however difficult that is. The longer-term implication of the current impasse is a major break in Russian–Western relations. Even compared to previous negative incidents such as the conflict in South Ossetia, this is worse. Russia and the West appear to be locked into a negative spiral, where it is difficult for either party to offer a compromise. It will be difficult for any future Russian leader to give up or compromise on Crimea, and it will be as difficult for Western leaders to accept Crimea becoming part of the Russian Federation. Once in place, sanctions may be difficult to remove, because it puts the onus of argument on those who want to remove the sanctions. These considerations point towards a long-term worsening of Russian–Western relations.

However, it is also possible that Russia and the West will be forced to find a *modus vivendi*. Arguments pointing in this direction are a number of common challenges like fighting terrorism and reshaping the global economic order, Russia's dependence on oil and gas revenues, economic collapse of Ukraine (about which both sides may ultimately be obliged to do something), the EU's dependence on Russian energy, and Russia's fear of becoming too dependent on China.

So what then does this imply for Norwegian–Russian relations? One analysis that was carried out before the Ukraine conflict found that Russian–Western political trade had a limited impact on Norwegian–Russian trade and economic cooperation (Vaage & Overland, 2011). This analysis covered eight previous political spats between Russia and the West. However, none of these quarrels were as severe as that over Ukraine, and none involved formalized sanctions by the West against Russia. In this respect it is clear that the Ukraine crisis is different and will affect the bilateral trade relationship, although it is not possible to say how much and for how long.

What can be said with some confidence is that Norway, in spite of not being an EU member, is highly loyal to EU policy. Although Norway can choose whether or not to follow the EU's lead on Russian policy, any Norwegian government is likely to do so. This is because the main political parties in Norway – the Conservative and Labor Parties – are both firmly pro-EU, and because adhering to EU policy removes the risks involved in formulating an independent policy. As long as Norway consistently follows the EU lead, there is not so much need for the government to explain its choices, as they are made for it by the EU. As soon as Norway deviates from the EU line, the question arises whether it should be more or less lenient and why. Thus, as long as the EU is locked into a formal conflict with Russia through formalized sanctions, Norway is likely to also be so. Since the oil sector was singled out for targeted sanctions early on, this does not bode well for cooperation in the Barents Sea.

On the Russian side, the Russian–Western distrust over Ukraine is highly negative for Russian interest in the Barents Sea because the Russians are already so dependent on European gas markets. Events in Ukraine make Russia want to diversify export markets towards Asia faster, and the Barents Sea is just about as far away from Asia as one can get on the planet. At the same time, tensions with the West may strengthen Russian security and military attention regarding the Barents Sea, which might add additional negativity to the prospects for Norwegian–Russian cooperation in the area.

In the past there have been suggestions for Norwegian–Russian joint infrastructure for the transport of natural gas from the Barents Sea to markets, either in terms of extending the Norwegian offshore gas pipeline grid northwards to the Barents Sea (Barlindhaug, 2005), or in terms of building a pipeline from the Murmansk to Hammerfest so that Russia could use the Norwegian LNG capacity to export Shtokman gas when suitable and the Norwegians could pump their gas in the other direction and use the planned Murmansk–Vyborg pipeline to export gas to Europe when suitable (proposed by Karen Sund of Sund Energy, personal communication). One problem with these propositions is that they would increase Russia’s dependence on transit countries, which it is generally trying to reduce (as well as increasing Norway’s mutual dependency on Russia). However, in the context of a continuing standoff between the EU and Russia, such proposals might gain new currency if they helped dissipate mutual fears by mixing Russian with Norwegian gas.

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7 Norwegian–Russian cooperation on oil and gas education

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Introduction

This chapter reviews the results of Norwegian–Russian cooperation on oil and gas education. There are many examples of Norwegian and Russian higher education institutions that started active cooperation at the beginning of the 1990s. However, what makes oil and gas education cooperation special is that it took advantage of both the political climate calling for improved energy cooperation and dialogue between Norway and Russia as well as opportunities that opened up for improved international education cooperation introduced by European harmonization in terms of the Bologna process. This chapter aims to discuss the cooperative experience between four universities in Norway and Russia that developed joint education programs in energy management and petroleum technology.

International and national contexts for Norwegian–Russian education cooperation

Before we describe the cooperation experience in setting up and running joint oil and gas education programs between two pairs of Russian and Norwegian universities, it is necessary to briefly describe the international and national frameworks in which this education cooperation has evolved. The Bologna process, launched in Europe at the end of the 1990s to create a European Higher Education Area, aimed at facilitating international cooperation in education through increased academic collaboration, mobility between academic institutions and academic recognition. Education cooperation across borders is always challenging because of differences in education systems between countries, especially in terms of degree structures, lengths of study programs, different grading systems, organization of study processes, etc. Recognizing that, the Bologna process focused especially on improving international quality assurance and transparency in order to strengthen academic collaboration in an open European area of education and training. The introduction of the European Credit Transfer and Accumulation System (ECTS) – a common tool of linking the workload of students in terms of time required to achieve specific

learning outcomes – was a particular means for improving academic recognition for study abroad using commonly understood measurements (e.g. credits and grades) as well as an interpretation of national systems of higher education.

Norway and Russia have traditionally had different education systems (Bourmistrov & Mellemvik, 2007). The sections below give a brief overview of the major differences between those in terms of regulatory structure of education practices and education programs. We also describe how the education systems changed when the Bologna declaration was ratified in Norway and Russia.

National education regulation in Russia

The education regulation structure and its influence on the educational institutions have traditionally been more hierarchically arranged in Russia than in Norway (Bourmistrov & Mellemvik, 2002). In Russia, the Ministry of Education and Research was (and still is) a rather central actor in forming education policies and preparing detailed education standards and instructions as well as assuring institutional compliance. Each ministerial education standard specifies three components indicating the degree of relevance of the content and the autonomy of the local education institution to change the content: so-called federal, regional and local components. Educational institutions only have autonomy in designing subjects included in the local component; the content of courses related to the federal and regional components is usually outside the educational institution's direct influence. Each Russian education institution has to comply with those standards, as otherwise it could lose the state authorization for running particular programs.

Standards usually provide descriptions of a large number of small courses (8–10 subjects per semester as a student's workload). There are also large numbers of compulsory courses not directly related to the program specialization (such as physical culture, history, philosophy, chemistry) and defined in terms of the federal component. The Russian system has also traditionally favored a focus on class teaching as a main method of delivering the subject, with regular plenary lectures. For a two-year program, lectures could have accounted for around 2,000 class hours.

In order to join the Lisbon Recognition Convention and implement elements of the Bologna declaration, in 1999 the Russian government established the National Information Center for Academic Recognition and Mobility (NIC ARM), assuming responsibility for educational quality assurance in Russia. This center is a part of the Ministry of Education of the Russian Federation. However, it took some time to pass amendments to the legislation. In 2007, the two-cycle education system was finally introduced: bachelor (with duration of study – four years) and master (with duration of study – two years, building on the previous cycle). Later, Russia introduced new types of state education standards for higher education, orienting those more towards educational outcomes, offering a greater degree of academic freedom for educational institutions (Tempus Report, 2010).

National education regulation in Norway

Though the Ministry of Education and Research is the highest authority for education in Norway and sets the terms of the major obligations and rights of educational institutions in a national education framework, its role has been traditionally limited in terms of regulating the content of most educational programs. Other nongovernmental national standard-setting bodies that function independently of the Norwegian Ministry of Education and Research, like the Norwegian Council of Universities and the Norwegian Council of University Colleges (which, after 2000, merged into the Norwegian Association of Higher Education Institutions [UHR] [www.uhr.no]), were important in developing the educational frameworks and recommended study plans for educational institutions and study programs. In most cases, requirements from national standard-setting bodies were considered as guidelines for autonomous education institutions to take into account when designing and evaluating education programs. Contrary to the Russian system, a relatively small number of larger courses characterize the Norwegian education programs (two–five subjects per semester as a typical student load). The student workload related to class teaching is lower than in Russia (up to 500 class hours for a two-year program), but it is a requirement that students must undertake more individual self-study and group work.

Ratification of the Bologna process in Norway started with the passing of new legislation in 2002 and bringing this into practice by 2003 (The National Bologna Group, 2005). Two new independent agencies were established: 1) the Norwegian Agency for Quality Assurance in Education (NOKUT¹) (www.nokut.no/) – to work with quality assurance, and 2) the Norwegian Centre for International Cooperation in Higher Education (SIU) to promote international cooperation in education and research (The National Bologna Group, 2005). Norway has also changed its degree structure to the 3 + 2 + 3 year model for corresponding bachelor-, master- and PhD degrees as well as transferred fully to the ECTS model.

Joint degrees: experience of cooperation between University of Nordland and MGIMO University in the field of energy management

At the beginning of 2000, inspired by the increasing political attention of the Norwegian and Russian authorities to develop energy cooperation in the High North, Bodø Graduate School of Business (HHB) at the University of Nordland established contact with the International Institute of Energy Politics and Diplomacy (MIEP) at MGIMO University. In February 2004, the partners signed an agreement to establish the Norwegian–Russian Institute of Energy Cooperation that aimed to develop joint education programs, with a special focus on the management of oil and gas resources in the High North. Particularly important was the idea of creating synergies by combining the unique

strengths of MIEP (e.g. in exploring and analyzing key geopolitical, macro-economic and business related factors affecting the world energy industry) and HHB (e.g. in the management of oil and gas companies, international and cross-cultural management, innovation, logistics, environmental management) to establish new education and research programs. During 2004–2005, the partners developed two master programs: 1) a joint-degree program, Master of Science in Energy Management, and 2) a joint corporate executive MBA program, International Business in the Oil and Gas Industry, for top managers in a Russian company, Rosneft.

Energy enterprises and the authorities were active in supporting the development of those programs. On the Norwegian side, HHB involved Nordland County administration, the Norwegian Petroleum Directorate, companies, Gassco, INTSOK, Norsk Hydro, PetroArctic, Petoro, Selmer, Statoil and Total Norge, all of whom contributed differently – some secured program relevance by participating in the activities of the program boards, some provided financial resources for program development, others provided part-time faculty and teaching staff. On the Russian side, MIEP secured institutional support and active participation in the education processes by leading specialists from BP, Gasprom, Rosneft, Exxon Mobil and Transneft. The Ministries of Foreign Affairs in both countries also supported the development of such programs.

MSc in Energy Management program: learning-by-doing, the model and outcomes

This program targeted students who had completed their bachelor's degrees in the business administration/management field and who wanted to continue education at the master's level in the field of energy, specializing in management in the oil and gas business. From the start, the idea was to provide education to a joint class of 30 students (15 students enrolled in Bodø and 15 in Moscow).

Since Norway and Russia had at that time already committed to the Bologna declaration, HHB and MIEP recognized that program development would benefit from having its principles incorporated as a foundation for the development of the education programs. However, to turn ideas found in the Bologna declaration into a complete functional program was an interesting challenge, and solutions to challenges were far from clear-cut.

The work started with the formation of working groups on both the Norwegian and Russian sides with relevant formal competence in each other's education systems. However, individuals who had formal knowledge of both Norwegian and Russian systems and had previous positive formal and informal experience of Norwegian–Russian education cooperation played a crucial role in mediating the dialogue and knowledge exchange between the groups. Challenges were many, for example, differences in the requirements of programs in terms of subjects to be included in the master's program curriculum in both countries, the allocation of subjects per semester, qualifications of students to be admitted to the program and workload of students.

In this sense, the main challenge was to design a joint curriculum based on the idea of a joint degree program. The main principle was that, while some parts of the curriculum can be the subject of harmonization, it would not be possible to harmonize others, at least in the short term. The first step towards developing the common curriculum was to agree about the maximum student workload as a main point of departure. Partner universities should work from the indicator of the 30 ECTS representing the student semester load in both Norway and Russia. This helped to foster agreement about the content of the semesters, but it should not affect the teaching traditions of the respective partners. Therefore, it was possible to move towards recognition of the course content by the other partner university, with acknowledgement at the same time that the use of teaching method will certainly vary and cannot be harmonized.

Based on a constructive dialogue between the groups, it was possible to adjust the subjects' reallocation between semesters and to assign the responsibilities of HHB and MIEP for particular courses. It was important to secure transparency between the subjects the students should learn according to the Russian and Norwegian curricula, especially to ease the mutual recognition of courses and the grades received by students. Teachers provided harmonized course descriptions and the institutional administration developed routines for taking care of practical matters such as fees, incoming students' accommodation, invitations and visas, etc.

In designing the curriculum, many compromises had to be made (Bourmistrov & Sørnes, 2007). First, the challenge was to balance compulsory courses in management with specialization courses in the energy field. Second, within the specialization courses, the challenge was to balance three areas: the focus on general issues relevant for the energy field (e.g. geopolitics, energy economics); the focus on issues of natural energy resources' management that are often country-specific (e.g. licensing regimes, taxation, structure of the energy sector); and the focus on the increasingly important potential for developing petroleum resources in the High North, especially after the signing of the Delimitation Line treaty in 2010. Third, the program had also to reflect its international nature and allow for cross-cultural exchange and learning. After constructing the initial program content and adjusting the program structure to reflect the experience gained, the program structure is presented in Table 7.1.

In the model, student mobility and mutual recognition of courses taken at each other's universities represent an indispensable part of the program. The specificity of the model is that student semester exchange is a compulsory part of the program, with students spending at least one semester at each other's partner university. The program's design gathers students into a single group, allowing them to have the experience of studying together for at least one year. This represents an important networking potential during the study as well as after graduation.

During the first semester, students take compulsory business administration and management courses at their "home" institution. For the second semester, which is a joint semester in Bodø, MGIMO students stay in Bodø and study

Table 7.1 The model of the joint degree program, Master of Science in Energy Management, between MGIMO University and the University of Nordland

<i>1st semester</i> 30 ECTS	<i>2nd semester</i> 30 ECTS (BODØ)	<i>3rd semester</i> 30 ECTS (MOSCOW)	<i>4th semester</i> 30 ECTS
	<i>Exchange semester</i>	<i>Exchange semester</i>	
Compulsory courses in Business Administration and Management 30 ECTS	The Geopolitics of Petroleum and Natural Gas 10 ECTS Energy Management – Norwegian Perspectives 7.5 ECTS Research Methods 7.5 ECTS Russian or Norwegian Language and Culture 5 ECTS	Energy Diplomacy and Economy of Fuel and Energy Complex 30 ECTS	Master Thesis 30 ECTS

specialization courses as well as courses on research methods and language. Because there is a close link between language and culture, Norwegian students learn the basics of the Russian language, while Russian students can learn the basics of Norwegian in order to facilitate the cross-cultural experience of being in a foreign country. During the third semester, Norwegian students take specialization courses at MGIMO University in Moscow together with Russian students. These are: financial management in the fuel and energy sector, international business environment for the oil and gas sector, the exchange trade in oil and oil product commodities, the economy of Russia, brand management and public relations in the fuel and energy sector, project management and investment in the energy sector, development of the Arctic energy resources, corporate finance, joint ventures and offshore zones in the energy sector, investment management in oil and gas companies, oil and gas sector business development strategies, trade policy and its main instruments, Russia and the EU: energy policy and security, and communication management. During the fourth and final semester, students have multiple opportunities for working for their master's thesis including staying at "home" institutions, taking internships in companies in each other's countries or going abroad to partner universities (e.g. the University of Texas in the US, the University of Alberta in Canada).

Upon graduation, the students receive diplomas from their "home" universities. In addition, students receive a Diploma Supplement (DS) with logos and signatures from both deans and rectors at the MGIMO and UiN, indicating that the program is a joint degree between the universities. The Diploma Supplement (DS) has been developed according to the standards of the Bologna process.

The program enrolled its first students in August 2005. In the period 2007–2014, more than 200 students graduated from the joint degree program, Master of Science in Energy Management. Work placement records from the alumni network demonstrate that, of graduates on the Norwegian side, around 50% are working in the energy-related industries (e.g. Aker Solutions, Conoco-Phillips, DNV, FMC Technologies, General Electric, Marine Aluminum, North Energy, OneSubsea, Statoil, Suncor Energy Norge, Total E&P Norge, Winterhall), 30% in auditing and consulting business (e.g. Accenture, Deloitte, E&Y, KPMG, PricewaterhouseCoopers), 15% in the area of business analysis and research (e.g. universities, knowledge parks) and 5% in authorities and agencies (e.g. EFTA, Innovation Norway, Office of the Auditor General, Ministry of Petroleum and Energy). Graduates on the Russian side are working in companies such as Rosneft, Gazprom, Lukoil and Sakhalin Energy.

Initially, the program targeted only Norwegian and Russian students, but, with time, students from other countries enrolled in and graduated from the program (Austria, Cyprus, Czech Republic, Greece, France, Kazakhstan, Lithuania, Poland, Portugal, Romania, Nigeria, Iran, Italy, Pakistan, Swaziland and US), indicating that the program has gained international relevance.

Corporate program for Rosneft

Another interesting example is a two-year Russian–Norwegian corporate Executive MBA program, International Business in the Oil and Gas Industry, for Rosneft JSC. MIEP at MGIMO University and HHB at the University of Nordland signed an agreement with Rosneft in November 2005; the agreement has been renewed four times since then, allowing around 190 managers to complete the program.

This program targeted competence improvement in middle and top management at Rosneft JSC and its subsidiaries. The program is tailor-made for the needs of Rosneft when it comes to managing in the international oil and gas environment. It includes 12 modules, covering issues of strategic management, human resource management, public relations, technology management and innovations, international diplomacy and security, politics, ethics and environmental regulation, managing large projects in the O&G sector, as well as writing a master's thesis. Ten modules are held in Russia (responsibility of MIEP) and two are run in Norway (responsibility of HHB): one in Oslo–Stavanger and the second in Bodø–Hammerfest.

Modules organized in Norway offer particular understanding of the Norwegian system's framing and regulating of oil and gas activities on the Norwegian continental shelf. The module in Oslo–Stavanger is devoted to long-term planning of energy resources' development, state regulations on energy projects on the Norwegian shelf and how communication and dialogue take place between private companies and the state. The module in Bodø–Hammerfest focuses on aspects connected to the management of large oil and gas projects in Arctic conditions (e.g. managing practices, supply activities, environmental aspects,

social responsibility, security of operations, etc.). While in Norway, program participants visit companies and organizations, where they meet with experts, e.g. Ministry of Foreign Affairs, DNV, Econ O&G, INTSOK, Statoil AS, Total E&P Norway, PETORO, Gassco, NUPI, the Russian Trade Mission, Nordland County, Petro Arctic, the local indigenous community, Rescue Coordination Center North Norway, etc.

Dual degree program, Master of Science in Offshore Field Development: experience of cooperation between University of Stavanger and Gubkin Russian State University of Oil and Gas

History of cooperation

There has been academic cooperation between the Faculty of Science and Technology at the University of Stavanger (UiS) and Gubkin Russian State University of Oil and Gas in Moscow for more than 20 years, dating back to 1991. The cooperation has involved research, the publication of textbooks in both Russian and English, participation at conferences, joint teaching and mobility of teachers, academic staff and students. Professorial exchange has been active for 18 years.

The cooperation resulted in the establishment of a double degree program, Master of Science in Offshore Field Development in 2011, financed by the Norwegian Ministry of Foreign Affairs, through the Norwegian Barents 2020 program. Funding for the project period ran from 2011 to 2013. The Russian part of the program was financed by the Russian oil and gas industry.

The program is founded on a common interest in both institutions, based on a common national priority: to prepare young graduates from both countries for the challenges of offshore developments of oil and gas fields, in particular in the Barents Sea (Zolotukhin, 2014).

Upon completion of the Barents 2020 project, the first group of students had completed their master's in 2012 (five Russian students), the second group finalized their studies in June 2013 (six Russian and two Norwegian students). In the spring of 2014, five Russian students graduated, while in the fall of 2013 another five Russian students and one Norwegian student were enrolled in the program for graduation in 2015. The status at present is that the program continues, being funded by the Russian oil and gas industry and private funds. Both universities are determined to continue the program as long as there is interest in the market for the candidates graduating from the program.

Development of common teaching material/textbooks

The cooperation between Gubkin Russian State University of Oil and Gas and the University of Stavanger has led to the preparation of textbooks for the oil and gas industry (Gudmestad et al., 1999; Gudmestad, Zolotukhin, &

Jarlsby, 2010; Zolotukhin et al., 2000; Zolotukhin & Ursin, 2000; Zolotukhin, Gudmestad, & Jarlsby, 2011). The objective has been to prepare common teaching material in English and Russian in order to align the teaching and to serve as common ground for common research activities. Joint scientific publications have also been prepared, in particular related to the development of offshore oil and gas fields in the northern region (Bulakh, Gudmestad, & Zolotukhin, 2011; Efimov, Kornishin, & Gudmestad, 2013; Efimov, Zolotukhin, Gudmestad, & Kornishin, 2014; Pribytkov, Zolotukhin, & Gudmestad, 2014). We suggest that these textbooks and publications will be useful and serve as basic reading when common Russian and Norwegian development projects take place in the future. Particular attention has been paid to attending the biannual Russian Arctic Offshore conferences held in St. Petersburg and later the Arctic and Extreme Environment conferences (2011, 2013) held in Moscow, where special sessions are organized for the presentation of student work.

The double degree Master of Science program

The double degree program, Offshore Field Development, between Gubkin Russian State University of Oil and Gas and the University of Stavanger, is organized according to a model similar to the program between MGIMO University and the University of Nordland (Table 7.1). The organization is shown in Table 7.2.

The emphasis of the program is on subjects that are general and that should help the candidate to develop a career where basic knowledge represents the cornerstone of the activities. Much emphasis is also placed on the preparation of a thesis that may be published as a contribution at a conference or in a scientific journal.

Table 7.2 The model of the double degree program, Master of Science in Offshore Field Development, between Gubkin Russian State University of Oil and Gas and the University of Stavanger

<i>1st semester 30 ECTS (Home University)</i>	<i>2nd semester 30 ECTS (MOSCOW)</i>	<i>3rd semester 30 ECTS (Stavanger)</i>	<i>4th semester 30 ECTS (Home university)</i>
	<i>Exchange semester</i>	<i>Exchange semester</i>	
Compulsory courses in Mathematics, Risk Analysis, Statistics and Offshore Field Development 30 ECTS	Specialist courses in Structural Engineering, Marine Technology, Gas Engineering and Maintenance Engineering 30 ECTS	Specialist courses in Marine Operations, Subsea Developments of Fields, Arctic Offshore Engineering and Offshore Pipeline Design 30 ECTS	Master Thesis 30 ECTS

Conclusions

What can be learned from the experience of two Norwegian and two Russian universities, cooperating for many years in the field of oil and gas education? As we can see, there are five main important points.

First, cooperation is a natural strategy when partners are able to create synergies by combining their unique strengths based on a common understanding platform. The long-term university cooperation described in this chapter has been productive possibly because university partners in Norway and Russia clearly identified those synergies and competitive advantages and worked together, based on a joint platform created by the Bologna declaration.

Second, cooperation is about respecting each other's differences and finding pragmatic ways to live with those. Increased internationalization and globalization can make cultural and regulation differences more visible but will never be able to eliminate those. The regulatory and cultural differences between the education systems in Norway and Russia experienced by the higher education institutions described in this chapter were pragmatically addressed in the unified system adopted by Russia and Norway. The European ECTS system functioned as an important "bridge" between different educational and institutional systems.

Third, cooperation is about never stopping experimenting and learning-by-doing. Cooperation based on the international principles of the Bologna process was quite new for institutions and there was no clear way of how to apply these principles in the practice. However, through discussion and dialogue, new agreements were formed and the ECTS practice established. This requires experience, will and commitment. Despite political will and governmental support, joint degrees between Norwegian and Russian institutions are still uncommon.

Furthermore, cooperation very often succeeds due to the hard work of dedicated individuals. Institutional support is important, but individuals involved at the professional science level (professors) are of most importance to be able to understand the major challenges and find the right solutions.

Finally, the cooperation should include common research and the exchange of scientific staff (mainly at PhD, post doc and professorial level) to ensure that the educational program is based on research. Research cooperation supported by the industry also ensures incentives for the preparation and quality of publications in scientific journals.

The efforts made to run these programs and to ensure that they excelled were not wasted: graduates from the joint master's programs are employed by the best companies and institutions around the world and contribute with the greatest competence to the further development of science, research and the industry.

Note

- 1 NOKUT stands for Norwegian Agency for Quality Assurance in Education, responsible for the quality assessment of Norwegian educational institutions (universities, university

colleges and colleges) as well as the assessment of foreign higher education in terms of requirements of the Norwegian education system.

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