

THE ARCTIC AREA VERSUS THE WORLD IN THE FIELD OF FOSSIL FUELS

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The Arctic area could represent one of the largest world powers oriented on the export of oil, natural gas and other minerals. It would provide a significant position on the international energy market at a time when the energy security is becoming the most frequent topic in international negotiations. Countries surrounding the Arctic area are becoming aware of these factors and take an action to get part of the area. Their aim is to acquire the largest area while their attention is focused on seabed of the Arctic Ocean. Presented article deals with the analysis of the Arctic region from the perspective of international law and fossil fuel reserves which are according to recent surveys located in this area. It also provides an overview of climate change taking place in this area.

Key words: the Arctic area, crude oil, natural gas, maritime boundaries.

Arktičko područje nasuprot svijeta u području fosilnih goriva. Arktičko područje može predstavljati jednu od najvećih svjetskih snaga orijentiranih na izvoz nafte, prirodnog plina i drugih minerala. To će mu osigurati značajno mjesto na međunarodnom tržištu energijom u vrijeme kada energetska sigurnost postaje najčešća tema međunarodnih pregovora. Zemlje koje okružuju arktičko područje postaju svjesne ovih faktora i poduzimaju radnje s ciljem dobivanja dijela područja. Njihov cilj je postići najveće područje, a fokusirani su na podmorje arktičkog oceana. Predstavljen članak se bavi analizom arktičkog područja iz perspektive međunarodnih zakona i rezervi fosilnih goriva, koje su prema nedavnim pregledima smještene u ovom području. Također osigurava pregled klimatskih promjena koje se događaju u ovom području..

Ključne riječi: Arktičko područje, sirova nafta, prirodni plin, pomorske granice.

INTRODUCTION

„The Arctic is defined as the Northern hemisphere region located to the north of the Arctic Circle“ [1]. This area is for the most of the year covered with ice or floating glaciers. During the last decade the interest in this inhospitable region greatly increased, especially thanks to minerals. Countries surrounding the Arctic area (Arctic countries) are gradually introducing

the requirements of its individual parts by UNCLOS convention. „But the importance of arctic petroleum goes beyond the regional and national economies. Large net-importers of petroleum like the US and the EU look to the Arctic for petroleum supply to reduce dependence on a limited number of large suppliers“ [2].

FROM THE PERSPECTIVE OF INTERNATIONAL LAW

The legal standard, which sets the boundaries in coastal waters, is the United Nations Convention on the Law of the Sea (UNCLOS). This rule was signed in November 1982 and came into force in November 1994. The Convention has so far been ratified by 159 states and the European Union, with the exception of USA. In 2009, however, the United States published new energy policy, in which they applied for ratification of this Convention [3].

„No country owns the North Pole or the region of the Arctic surrounding it“ [4]. According to the article 76 of UNCLOS convention, the coastal states have the right to an exclusive economic zone of 200 nautical miles around their coasts (see Figure 1). They are also entitled to present scientific evidence of transcending the mainland to the outer continental shelf within 10 years after the Convention ratification. After approval of the proofs they will be able to extend their exclusive economic zone to an extension of an additional 150 nautical miles or 100 miles from the 2500 meters isobath [5,6]. It will guarantee Arctic states - USA, Canada, Russia, Norway and Denmark – „the sovereign right to explore and exploit the non-living natural resources of the continental shelf“ [6].

Even though the above mentioned convention, the number of overlapping claims of economic sovereignty in Arctic waters has increased. There are some areas which were just recently divided or remain unresolved.

First disputed offshore boundary existed between Russia and Norway in the Barents Sea (see Figure 1: Norway-Russia special area). There were border disputes, which included approximately 175 000 km² wide area. On 15th September 2010, involved countries signed an agreement about the maritime borders in the Arctic, in which the disputed territory was divided (see Figure 1). This agreement, which came into force on 7th July 2011, allows the realization of projects aimed at the exploration and exploitation of hydrocarbon reserves. According to the will of any mining, which crosses the border, both countries will decide together [7,8]. Based on Russian estimates, there is from 6,8 to 7,6 billion tons of fuel in the area, American estimate talks about 1,7 billion tons [7].

The second disputed offshore boundary exists in the Beaufort Sea between the United States and Canada (see Figure 1: Overlapping Canada/USA EEZ). This dispute was not resolved until 20 December 2011 [2].

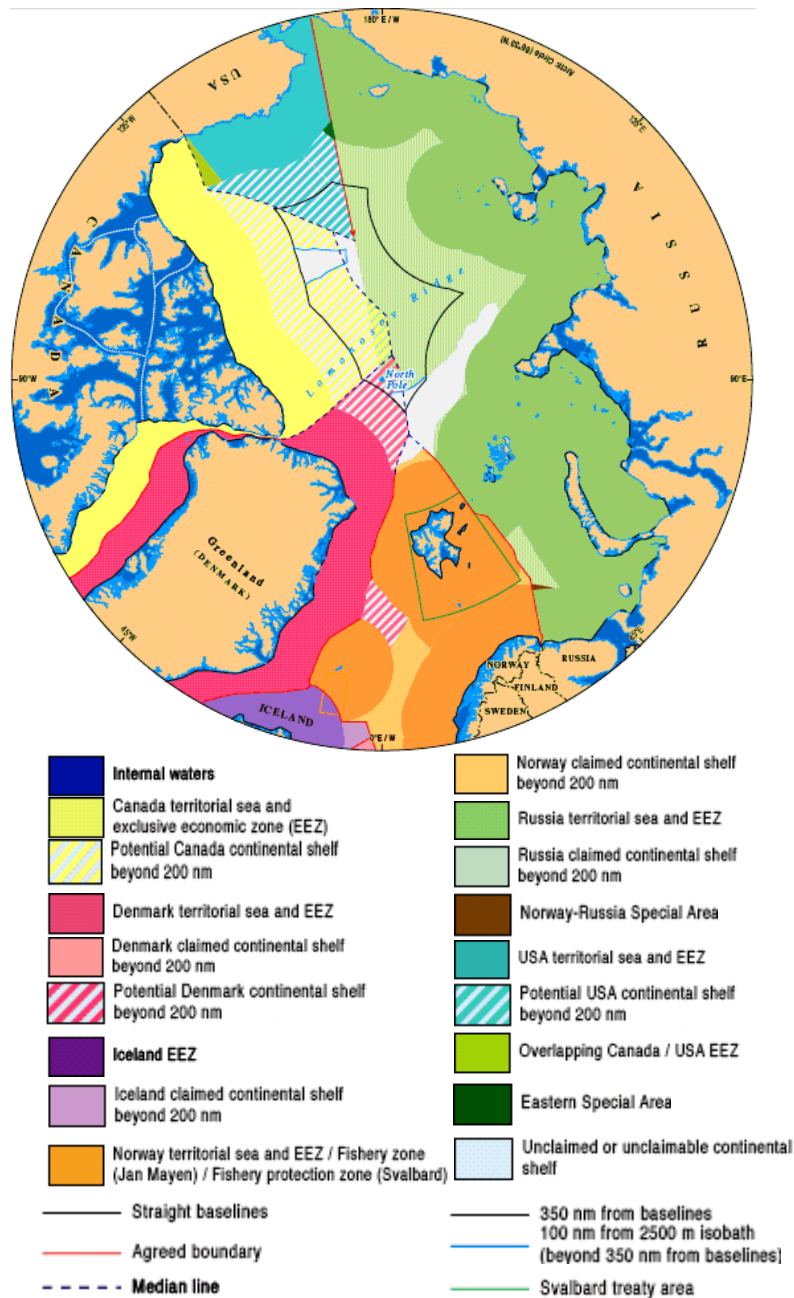


Figure 1. Maritime jurisdiction and boundaries in the Arctic region [9]

Slika 1. Pomorska jurisdikcija i granice u arktičkom području [9]

MINERAL RESOURCES IN THE ARCTIC AREA

Arctic area conceals significant stocks of fossil fuels. In addition to the economically less significant uranium and

coal deposits, there are huge reserves of oil and natural gas with great economic potential [10]. More than 400 oil and gas

fields have already been explored. They „account for approximately 240 billion barrels of oil and oil-equivalent natural gas, which is almost 10 percent of the world’s known conventional petroleum resources (cumulative production and remaining proved reserves)“ [11].

Nevertheless most of arctic oil and gas deposits have not been explored yet. These resources have been assessed by several scientific studies, from which the most important is a Circumpolar Assessment of undiscovered Resources in the Arctic – CARA carried out by the aU.S. Geological Survey in 2008. The results of this survey have become the most frequently cited

material in scientific studies concerning the development of the oil and gas extraction in the Arctic area [3].

CARA examined all 33 Arctic provinces. But quantitative assessments were conducted only in those 25 geologic areas „considered to have at least a 10-percent chance of one or more significant oil or gas accumulations“ [11]. The study included only resources recoverable using existing technology (with the exception of the nonconventional resources) with assumption „that the resources would be recoverable even in the presence of permanent sea ice and oceanic water depth“ [11].

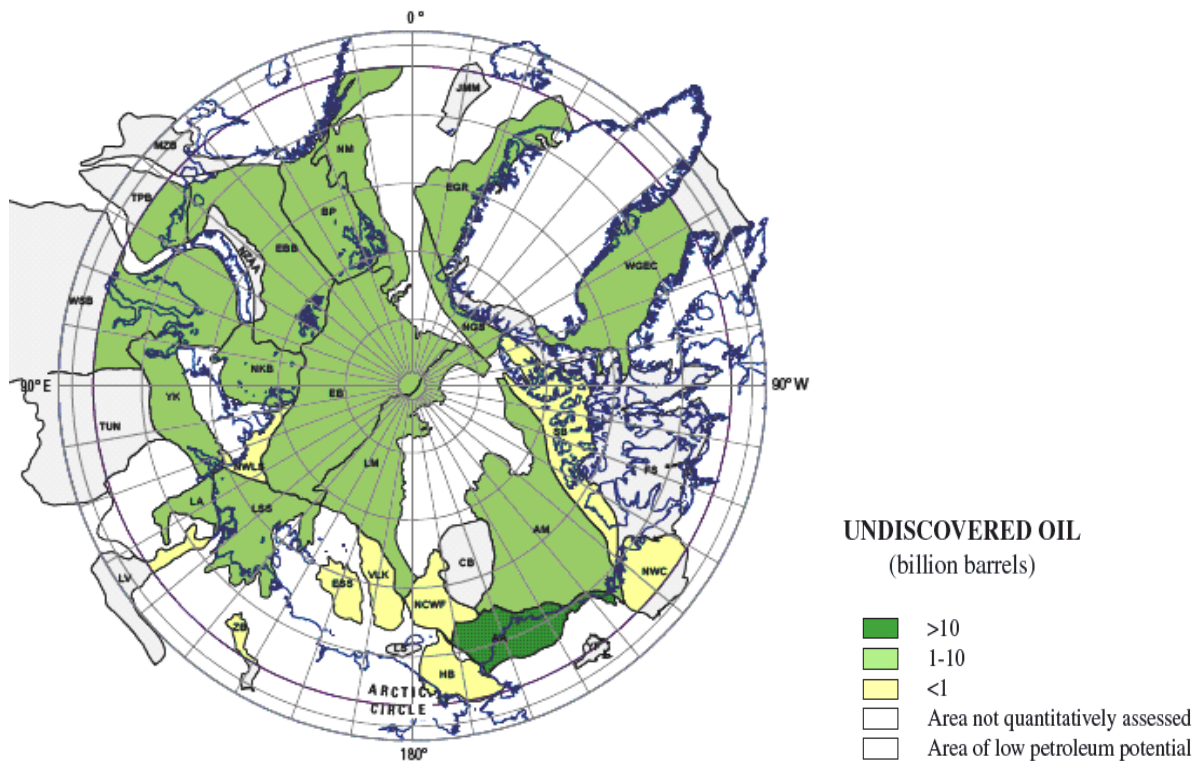


Figure 2. Estimated relative potentials for undiscovered oil [11]

Slika 2. Procijenjeni relativni potencijali za neotkrivenu naftu [11]

According to the results of the CARA study, the Arctic area has an „estimated 90 billion barrels of undiscovered, technically recoverable oil, 1,670 trillion cubic feet of technically recoverable natural gas, and 44 billion barrels of technically recoverable natural gas liquids” [12]. These volumes accounts for „about 13 percent of the undiscovered oil, 30

percent of the undiscovered natural gas, and 20 percent of the undiscovered natural gas liquids in the world“ [12]. Estimated relative potentials for undiscovered oil and gas in the assessed provinces illustrate

Figure 2 and

Figure 3. Results of CARA study are presented without any economic considerations.

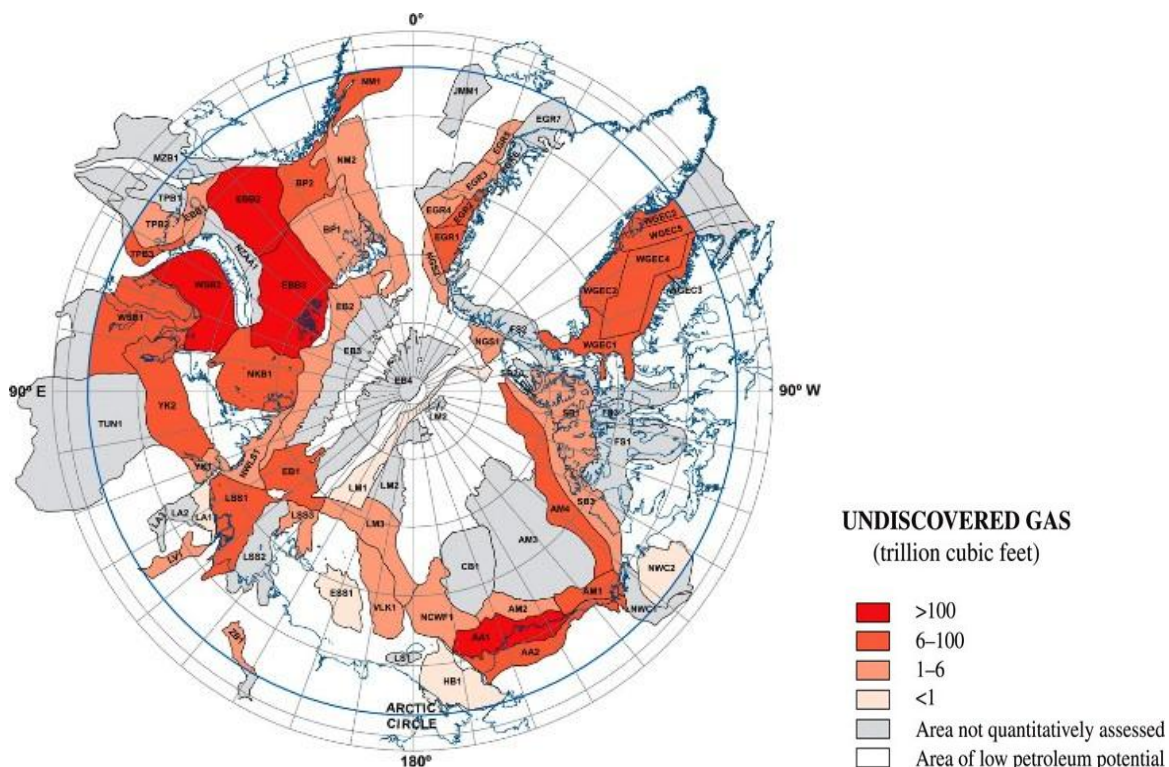


Figure 3. Estimated relative potentials for undiscovered gas [11]

Slika 3. Procijenjeni relativni potencijali za neotkriveni plin [11]

FROM THE PERSPECTIVE OF CLIMATE CHANGE

On the other hand, the environment of the Arctic has a „delicate and easily disturbed balance. The threats facing it is in somewhat more dramatic than the rest of the globe, since climate change in the Arctic

may in fact prove to accelerate climate change in the rest of the world“ [13]. A serious threat from the perspective of the climate change is the rapid melting of Arctic ice and associated increase of sea level. In

this area latest models predict a rise of future global sea level from 0.9 to 1.6 m above the 1990 level by 2100 [14]. This process also has positive effects, because allows exploitation of minerals, which were

unavailable because of ice cap. Melting of arctic ice also makes available Northwest and Northern sea route and thus ensure save shipping costs for ships.

CONCLUSION

It's necessary to mention, that Arctic area has gained attention during radical climate change. The North Pole was quite forgotten, uninteresting and difficult rich area. Nowadays this situation is changing and also countries surrounding the Arctic accede to this area to fulfil their own interests.

North Pole is generally significant region, because ongoing climate changes will have significant impacts on area, which is bigger than the region. Geopolitical meaning of North Pole is large and its meaning will rise in the future. Changes and impacts of these changes in this specific zone will be transferred worldwide.

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