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Sustainable development Goal 14 and Youth involvement

Sustainable development is the need of the present time not only for the survival of mankind but also for its future protection. Unlike the other great revolutions in human history the Green Revolution and the Industrial Revolution the «Sustainable revolution» will have to take place rapidly, consciously on many different levels and in many different spheres, simultaneously.

Since one third of the Earth surface is covered by oceans and seas which contain more than 99 % of world water resources it is hard to overestimate the importance of conservation and sustainable use the oceans, seas and marine resources for sustainable development (Goal 14). In this essay I am going to discuss and tackle the target 14.1 «By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution » from the point of view of sustainable development of the Arctic region by oil and gas companies, such as Gazprom neft.

One of the main factors of oceans and seas pollution is the wide use of high-sulfur fuel oil by vessels and ships (including fishing boats) all over the world. Emission of NO_x, SO_x and CO_2 has an enormous impact on marine animals and changes the entire ecosystem by water acidification and occurrence of acid rains. Target 14.3 addresses the minimization of influence of this kind.

The promising way to lower the emission is the use of Liquefied Natural Gas (LNG) as the primary fuel for all kinds of vessels, as it is already done on LNG-tankers. Natural gas in known as the most ecological commercial fuel and has almost no emission of NO_x, SO_x, due to high purification. The liquefaction allows to store enough volume of LNG even for transcontinental journeys. Moreover, modern ship engines are 20 % more effective working on LNG than on traditional fuel oil.

Russia has the unique opportunities for LNG-bunkering development due to the availability of gas resources and the increasing role of Northeast passage (NEP) in shipping goods from China to Europe and hydrocarbon resources from Yamal and Nadym-Pur-Taz region. Russia has the largest proven natural gas reserves in the world. Geographically, most of these reserves are located in the Arctic zone, in particular on Yamal, and when setting up the largest liquefied natural gas production facilities there, it is possible to arrange delivery of LNG as a commodity to most of the world's largest consumption centers and provide most of the vessels serving and operating in the North area with local fuel. From 15 to 30 million tons per year can be transported along the Barents Euro-Arctic Transport Corridor, from 15 to 50 million tons per year through the Asia-Pacific Corridor, and from 15 to 50 million tons per year along NEP itself. This is a huge amount and prospects.

The development of LNG bunkering allows to preserve not only the delicate Arctic ecosystem, but the world ocean by providing economically effective low emission fuel for vessels in the form of LNG. Moreover, the development of LNG bunkering allows to diversify the gas business of such companies as Gazprom, Gazprom neft, Navatek, etc. However, such ambitious idea requires the participation of young open-minded people from all over the world. Today students all over Russia conduct research on the topic, but practical experience is even more important, so there is a need to develop the system of internships and training centers in order to educate and explain the advantages of sustainable development. In this case the head recruitment and operational practice of oil and gas companies in the Arctic region becomes more valuable. For example, the head recruitment procedures of «the most attractive company for young people» (hh.ru) Gazprom neft can be used for realization of projects in sustainable development of the Arctic region.