

ARCTIC LEGAL SYSTEM: A NEW SUSTAINABLE DEVELOPMENT MODEL

MANJEET KUMAR SAHU,
National University of Study and Research in Law
(Ranchi, India)

DOI:10.17589/2309-8678-2016-4-2-83-95

Historically, the term 'Arctic' was used synonymously with the term 'ice', but climate change and Arctic hydrocarbon grabbed the attention of the world community as an opportunity to make the Arctic an 'Energy Hub'. Exploration of oil and gas over the past six decades in the Arctic has made the region as places in the world. All major players in the market have endeavored to approach this new energy basket to utilize its maximum benefit. Commercial exploitation of natural resources has made this place a center for the regulation of oil and gas activities. However, petroleum exploration and its operation have had significant local detrimental impacts on the atmosphere, inhabitants and marine environment.

Geologists have always believed in the huge reserves of oil and gas in the Arctic Region. However, the exploration of oil and gas started as recently as the mid-1950s. An increase in the demand of oil and gas in the international market, as well as its growing scarcity, compelled the world to locate oil and gas reserves in various regions. It is significant to note that the Arctic states are strategically going to control the excessive exploitation of Arctic hydrocarbon with much profitability. However, it is still a far sighted question 'whether Arctic will provide direct competition to the Middle East' and become another hub in the energy market.

Keywords: arctic; exploration; energy hub; energy market; sustainable development.

Recommended citation: Manjeet Kumar Sahu, *Arctic Legal System: a New Sustainable Development Model*, 4(2) Russian Law Journal 83-95 (2016).

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1. Introduction: a New Energy Basket

The economic potential for the Arctic region is changing and increasingly drawing the world's interest.¹ It is perhaps becoming the most promising arena for the oil and gas industry in the human history. It is estimated that nearly eighty-four percent of the Arctic's reserves are resting offshore.² As the demand for oil and gas has substantially increased, more and more energy companies are exploring and investing in unstable and challenging areas³ to meet the needs of existing communities. The Arctic is depicted as one of the last few remaining unspoiled ecosystems with limited human contact.

The global oil and gas industry is above all a long-term affair; nonetheless some short-term drama would endeavor to weaken the prospective growth of the industry, but exploration of oil and gas in the arctic has beckoned new waves to oil and gas explorers.⁴ Development of Arctic resources will be energy intensive, not only because of the Arctic conditions under which mines, fisheries and other activities must operate but also because of the remoteness of such sites from markets. Additionally, transportation infrastructure is underdeveloped in the Arctic region. On another level, however, new marine shipping routes through Arctic seas could become more attractive for a global transportation network that has come under pressure from increasing costs of fuels. Some of these routes are considerably shorter than existing routes for transporting manufactured goods.⁵

¹ Charles Ebinger, John P. Banks, and Alisa Schackmann, *Offshore Oil and Gas Governance in the Arctic. A Leadership Role for the U.S.*, Brookings Security Initiative (March 2014) <<http://www.brookings.edu/~media/Research/Files/Reports/2014/03/offshore-oil-gas-governance-arctic/Offshore-Oil-and-Gas-Governance-web.pdf?la=en>>.

² Kristen Rice, *Freezing to Heat the Future: Streamlining the Planning and Monitoring of Arctic Hydrocarbon Development*, 24(2) *Colorado Natural Resources, Energy, & Environmental Law Review* 393–418 (2013) <http://www.colorado.edu/law/sites/default/files/Rice_6713.pdf>.

³ Kristoffer Svendsen, *The Russian regime for subsoil use, energy and environmental policy in the High North*, 10(4) *Environmental Law Review* (2008).

⁴ Carole Nakhle, *The Arctic: The Last Great Oil Frontier – Or Is It?* 6 *International Energy Law Review* 1–5 (2010).

⁵ Sustainable Development Working Group, *SDWG Report on Arctic Energy* (2009) [hereinafter *SDWG*]; see also Dr. Timo Koivurova, *Transboundary Environmental Assessment in the Arctic*, 26(4) *Impact Assessment and Project Appraisal* 265–275 (2008). DOI: 10.3152/146155108X366031.

Oil and gas are typically found in sands, sandstone and limestone beneath the earth's surface, and sedimentary rocks are usual reservoirs. Despite the well-known impression, oil and gas do not accumulate in subterranean pools or streams where liquids collect upon the surface of the ground.⁶ Hence, apart from the blind exploration of oil and gas in the Arctic, the principle goal of all Arctic states should be to develop and establish a sustainable framework to reduce environmental degradation of the Arctic region from land and marine-based activities.⁷

Adjacent to exploration and production, there is also a pressing need for the development and adoption of an international treaty designed to protect the Arctic environment and its natural resources. Indigenous populaces are seriously affected by contamination, mostly from numerous industrial sources located within the Arctic states as well as other countries around the world.⁸ The Arctic states are committed to international cooperation to ensure the protection of Arctic environment and its sustainable development, while also protecting the cultures of indigenous people. The international legal community is attempting to regulate the activities in the Arctic region. However, the issue is understanding of the regulating legal provisions and considering the consequences of the development and economic exploitation of the vast resources at the Arctic.

For the legal regulations to be successful, all Arctic states must surrender their personal interest to the common service to mankind. However, a sovereignty claim identifies the state role in the international community. This is not the fifteenth century where a country can travel the world, plant their flag, and claim the right to any territory. The nations have become more vigilant with respect to territorial claims. International law respects the mutual coordination among the nation but particular general principles shall not be changed.

1.1. Demystifying The Arctic

There are four different types of ice in the Arctic:

a) First year ice – Relatively thin sea ice that exists during the winter months but melts during the summer time.

b) Multi-year ice – Relatively thick sea ice that has survived at least one summer's melt.

c) Ice island – Massive piece of floating ice that has broken from an ice shelf; it may extend several hundred square miles in area and several hundred feet in depth.

⁶ James A. Veasey, *The Law of Oil and Gas*, 18(6) Michigan Law Review 445 (1920). DOI: 10.2307/1277804.

⁷ Elena Gladun, *Environmental Protection of the Arctic Region: Effective Mechanisms of Legal Regulation*, 3(1) Russian Law Journal (2015). DOI: 10.17589/2309-8678-2015-3-1-92-109.

⁸ Melissa A. Verhaag, *It Is Not Too Late: the Need for a Comprehensive International Treaty to Protect the Arctic Environment*, 15(3) Georgetown Environmental Law Review 555 (2003).

d) Iceberg – Large floating mass of ice that has broken away from a glacier.

Fundamental project decisions are based on the types of ice that will be encountered. While there is relatively little multi-year ice in the Antarctic, the Arctic Ocean has a significant amount of multi-year ice.⁹ Icebergs are dynamic features that float in different directions and up and down in the water. The study of ice can more accurately help forecast how icebergs will move and drift near operations. Operation in the Arctic for the exploration of oil and gas involves various technicalities. Using advanced software platforms, a first-of-its-kind 3D iceberg modeling capability allows mapping of an iceberg's underwater features to ensure the optimal ice load predictions available for the design of drilling structures.

2. Historical Development

Humans have utilized oil and gas for much of written history.¹⁰ Ancient cultures utilized the unrefined petroleum for binding things together, and it was used as a water repellent for keeping water away from entering unwelcome places. The Sumerians utilized asphalt to inlay mosaics in walls and floors around 5000 years ago. The Mesopotamians utilized bitumen to line water channel and construct streets. The Egyptians greased chariots with pitch and embalmed mummies with asphalt. For quite a while, the quest for oil was erratic.

Exploration in the Arctic region, beyond the High Arctic, is not new and began onshore in the 1920s and offshore in the 1970s, with an aggregate of 10,000 wells drilled to date. In the nineteenth century, an explorer also discovered oil in the United States to a great extent by searching for leakages or other surface evidences its occurrence.¹¹

In modern times, energy has been a basic highlight of the geopolitical flow between and among states. As states get to be progressively dependent on energy supplies to fuel their economies and maintain or enhance the quality of life of their citizens, a wide scope of foreign policy decisions, while not fundamentally based on energy considerations, must consider energy issues into account. Arctic states are the same and will proceed to enthusiastically assert their sovereignty against genuine or perceived incursions as openness to the Arctic and its resources increases.

Geologists have always believed in the huge reserves of oil and gas in the Arctic region. However, exploration of oil and gas started as recently as the mid-

⁹ *Shipping in Polar Waters: Adoption of an International Code of Safety for Ships Operating in Polar Waters (Polar Code)*, International Maritime Organization <<http://www.imo.org/MediaCentre/HotTopics/polar/Pages/default.aspx>> (accessed Mar. 29, 2015).

¹⁰ As Old as History, American Petroleum Institute <http://classroomenergy.org/oil_natural_gas/progress_through_petroleum/petroleum/aboutpetroleum02a.html> (accessed Mar. 2, 2015).

¹¹ James W. McKie, *Market Structure and Uncertainty in Oil and Gas Exploration*, 74(4) *The Quarterly Journal of Economics* 543 (1960). DOI: 10.2307/1884351.

1950s. An increase in demand for oil and gas in the international market, as well as growing scarcity, compelled the whole world to locate the availability of oil and gas reserves into various regions. Exploration of oil and gas in the Arctic region has substantially made the region one of the busiest place in the world over the past six decades. However, petroleum exploration and its operation have had significant local detrimental impacts on the atmosphere, local inhabitants, and marine environment.

3. Arctic Council: an Institutional Set Up

The Arctic Council is the main intergovernmental initiative for the Arctic region, including each of the eight Arctic states.¹² The Council was made as a high-level intergovernmental forum to promote cooperation, coordination, and interaction among the Arctic states on common Arctic issues, with the inclusion of the Arctic indigenous communities and other Arctic inhabitants. Specifically, the Council considers issues of sustainable development and the environmental protection in the Arctic. The Council is also a promoter of soft law. In the two-year period following adoption of the Ottawa Declaration, the Arctic states and permanent participants worked on standards of methodology and terms of reference for a sustainable development program, as well as new mandates for the Council's programs. Those rules, terms of reference and mandates were approved by the Arctic Ministers in their Declaration at Iqaluit (the 'Iqaluit Declaration').

3.1. Arctic Economic Council (AEC)

The developing significance of business in the Arctic has resulted in the creation of another key institution within the Arctic Council: the Arctic Economic Council. On September, 20 2014, the formal creation of Arctic Economic Council took place to bridge the gap between the business community and the Arctic Council. The AEC is an independent body working in connection with the Arctic Council. The formation of the AEC also marked a new step towards strengthening the Arctic Council and changed the pattern of business activities in the Arctic region.

This initiative is a challenge for opening up new circumpolar business opportunities in the north and attracts involvement of public-private partnership in the Arctic with a definitive objective of economic development in the region. The interests of private players in the energy market of the Arctic, becoming more prominent over time, has motivated the Arctic Council to set up a regulatory body in order to deal with the business activities.

¹² Evan Bloom, *Establishment of the Arctic Council*, U.S. Dep't of State
<<http://www.state.gov/documents/organization/212368.pdf>> (accessed July 16, 2015).

The AEC, as a new institution, currently faces huge challenges. However, the primary objective of AEC is focused on sustainable economic development.

3.2. Proposal for Arctic Treaty

Both the Polar regions have similar characteristics. A multilateral agreement or an 'Arctic treaty' could either be modeled after the already existing Antarctic treaty or established as a unique Arctic treaty. Nonetheless, the circumstance in the Arctic today has all the earmarks of being fundamentally diverse to the one in the Antarctic in 1961, when the treaty for its peaceful use entered into force. For example, the Antarctic Treaty is aimed at preventing exploration whereas Arctic States are eager to explore and exploit. Despite a multilateral agreement aimed at the delimitation of boundaries, the Arctic states could also enter into joint development agreements. Such agreements would empower them to commonly impart the restrictive rights with natural resources in the contested areas without abandoning their claims and without the requirement for a final resolution of all legal issues. Additionally, joint development agreements may simply offer important adaptability when confronting such a multitude of complex claims.

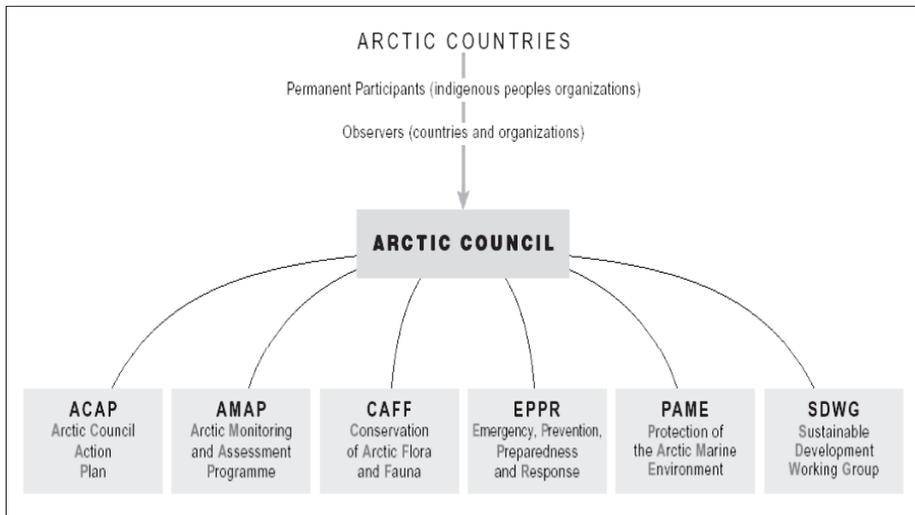
3.3. Arctic Environmental Protection Strategy (AEPS) – 1991

The Arctic Environmental Protection Strategy of 1991 (AEPS) was signed with an objective to guide the actions of Arctic countries individually and collectively, as they move toward achievement of these objectives. This strategy is also known as the Finnish Initiative.¹³ It also describes the problems and priorities which the eight Arctic states agree need to be addressed. Arctic ecosystems are influenced, and in some cases threatened, by factors occurring outside the Arctic. In turn, the Arctic also exerts an important influence on the global environment. The implementation of an Arctic Environmental Protection Strategy will therefore benefit both the Arctic countries and the world at large. The strategy is also intended to guide development in a way that will safeguard the Arctic environment for future generations and in a manner that is harmonious with nature. As a priority, the countries distinguished six pollution issues: persistent organic pollutants, oil pollution, heavy metals, noise, radioactivity and acidification. The Council set up diverse mechanisms in order to tackle them, and the AEPS also created four working groups to support the countries by the establishment of international cooperation.¹⁴

¹³ *Arctic Environmental Protection Strategy*, Council on Foreign Relations (June 14, 1991) <<http://www.cfr.org/world/arctic-environmental-protection-strategy/p20582>>.

¹⁴ *Guide to Arctic Policy and Assessment*, Arctic Council <<http://www.grida.no/polar/resources.aspx>>.

Currently, there are six working group directing working under the direction of Arctic Council and submitting its report to the same:¹⁵



4. Arctic Legal System

The Arctic legal system is perhaps one of the best theoretical and experimental case studies of the international legal regime. It is regulated in light of a system of a more extensive general binding regulation of different international environmental law treaties. These older legislations needs to be rejuvenated by adding clarification to adapt to and solve the existing complexities arising in the arctic region due to its growing relationship with the world community. A multifaceted approach is required to resolve some issues in the Arctic. The current Arctic legal system is confronted with various changes in its political as well as social strategies; however, it is subjected to the execution of existing regulatory framework in an effective manner.

The legal regime representing the Arctic region is presently a boundless and complex accumulation of standards, settlements, traditions and soft law controlling the exercises of national governments in their utilization of Arctic waters in several dimensions ranging from flexibility of the Arctic seas, the preservation of fisheries and other marine resources, disallowances against marine pollution and dumping to regulations that guarantee safe shipping, carriage and navigation and endeavors to ensure peaceful use of the ocean.¹⁶

¹⁵ *Organisational Structure, Arctic Monitoring and Assessment Programme* <<http://www.amap.no/about/organisational-structure>>.

¹⁶ Elena Gladun, *Id.* 92.

Some of the applicable conventions and their applicabilities are as follows:

1. *United Nations Convention on Law of the Sea 1982 (UNCLOS)*

The UNCLOS provides rules regarding continental shelf, outer continental shelf, exclusive economic zone, and other similar areas. The provisions are relevant in the context of exploration and exploitation of oil and gas activities. The UNCLOS also provides generally applicable rules for marine pollution that may come out from the oil and gas activities.

2. *United Nation Framework Convention on Climate Change (UNFCCC)*

According to the UNFCCC Factsheet, numerous long haul changes in atmosphere have been observed at continental, regional and ocean basin scales, including changes in arctic temperatures and ice. The fact sheet additionally expresses that the Arctic Ocean will endure enormous effects and stands at the threshold of significant transformation. Climate change¹⁷ and the melting of ice have created a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities and the potential misuse of natural resources.¹⁸

3. *The ESPOO Convention*

This Convention deals with environmental impact assessment in transboundary. It is silent on how alternatives shall be resolved, yet it does require the consideration of a "no action" alternative to the proposed activity.

4. *The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) Convention (1992)*

The OSPAR Convention deals with offshore activities carried out in the maritime area for the purpose of exploration and exploitation of liquid and gaseous hydrocarbon and other offshore transportation sources.

5. *International convention on oil pollution, preparedness, response and co-operation (OPRC) (1990)*

OPRC requires national or cooperative measures to deal with pollution incidents and oil pollution emergency plan.

6. *The Agreement between Denmark, Finland, Iceland, Norway and Sweden Concerning Cooperation in Measures to Deal with Pollution of the Sea by Oil or Other Harmful Substances (1993)*

¹⁷ UNFCCC, art.1(2): 'Climate change' means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

¹⁸ The Ilulissat Declaration, Arctic Ocean Conference Ilulissat, Greenland (May 27–29, 2008) [hereinafter *Ilulissat Declaration*] <http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf>.

This agreement specifies measures of monitoring and dealing with events like oil spills occurring within the waters under the jurisdiction of the parties in the territorial sea, EEZ and continental shelf.

7. *Bilateral Agreement Between Denmark and Canada for Cooperation Relating to the Marine Environment (1983)*

This agreement provides provisions to ensure appropriate measures in the engagement of installations for exploration and exploitation of natural resources of the seabed and subsoil in so that risk of pollution is minimized.

8. *International Maritime Organization (IMO)*

IMO adopted the International Code for Ships Operating in Polar Waters (Polar Code) in November 2014. Related amendments to the International Convention for the Safety of Life at Sea (SOLAS).¹⁹

9. *Arctic Offshore Oil and Gas Guidelines*

These guidelines outline the strategic actions for regulation of oil and gas activities including transportation and related onshore activities.²⁰ They have tried to uphold the general principles of environment like the precautionary principle approach, the polluters pays principle, and the continuous improvement and sustainable development.

10. *Agreement of Marine Oil Pollution Preparedness and Response to the Arctic*

On May 15, 2013, the member nations of the Arctic Council signed an agreement called The Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic with an objective to strengthen cooperation, coordination and mutual assistance among the Parties on oil pollution preparedness and response in the Arctic in order to protect the marine environment from pollution by oil.²¹ It was the first Pan-Arctic Agreement that combined duties and obligations for all the Arctic countries.²² The member states of the Arctic Council acknowledged the

¹⁹ *Shipping in Polar Waters, Polar Code*, International Maritime Organisation <<http://www.imo.org/MediaCentre/HotTopics/polar/Pages/default.aspx>> (accessed July 17, 2015).

²⁰ *Arctic Offshore Oil and Gas Guidelines*, Arctic Council (2009) <http://www.pame.is/images/03_Projects/Offshore_Oil_and_Gas/Offshore_Oil_and_Gas/Arctic-Guidelines-2009-13th-Mar2009.pdf>.

²¹ Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, U.S. Dep't of State (May 15, 2013) [hereinafter *Agreement on Cooperation*] <<http://www.state.gov/r/pa/prs/ps/2013/05/209406.htm>>.

²² Alex Boyd, *The Circumpolar States of the Arctic Council Have Agreed to Tackle Oil Spill Disasters as a Team*, Barents Observer (May 15, 2013) <<http://barentsobserver.com/en/arctic/2013/05/binding-oil-spill-agreement-signed-15-05>>.

threat from marine oil pollution to the vulnerable Arctic marine environment and to the livelihoods of local and indigenous communities and sought to minimize damage that may result from such an incident.²³

11. Un Declaration on the Rights of Indigenous Peoples (UNDRIP)

The UN Declaration on the Rights of Indigenous Peoples has attempted to guarantee direct indigenous participation in all matters that straightforwardly influence them, including those within the Arctic region.²⁴ The Arctic is not a homogenous region²⁵ and seven out of eight Arctic states have indigenous communities.²⁶ People have been living in the Arctic for years and have built up profoundly concentrated societies and economies based on the physical and biological conditions of the long isolated region. Notwithstanding, with the slow interruption from the business world has led to significant changes in their ways of life and economies. Out of a total of four million inhabitants of the Arctic, approximately 500,000 people belong to indigenous peoples and indigenous organizations have been conceded as permanent participants in the Arctic Council.²⁷

Arctic indigenous people include Saami in circumpolar areas of Finland, Sweden, Norway and Northwest Russia, Nenets, Khanty, Evenk and Chukchi in Russia, Aleut, Yupik and Inuit (Iñupiat) in Alaska, Inuit (Inuvialuit) in Canada and Inuit (Kalaallit) in Greenland. The majority of the aforementioned nations, with the exception of Iceland, have indigenous groups living inside their region. Official statistics do not essentially recognize indigenous populations independently, in spite of the fact that distinctions happen. The number of indigenous people is not precise because of the definition of indigeness.²⁸

²³ Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, *supra* note 117.

²⁴ *Study, as examples of good practice, of the Indigenous participatory mechanisms in the Arctic Council, the Circumpolar Inuit Declaration on Resource Development Principles in Inuit Nunaat, and the Laponia management system*, UN ECOSOC Res No. E/C.19/2012/10 11th Session Item 9 of the provisional agenda (May 7–18, 2012), Permanent Forum on Indigenous Issues New York at Para. 1 [hereinafter UN ECOSOC] <<http://www.un.org/esa/socdev/unpfii/documents/2012/session-11-e-c19-2012-10.pdf>>.

²⁵ Joan Nymand Larsen, Arctic Human Development Report-II: Regional Processes and Global Linkages, Nordic, Council of Ministers, Nordic Council of Ministers Secretariat (Feb. 2015) <<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A788965&dswid=3411>>.

²⁶ Ronald O'Rourke, *Changes in the Arctic: Background and Issues for Congress*, Congressional Research Service Report 7–5700 (Mar. 17, 2015) <<http://www.fas.org/sgp/crs/misc/R41153.pdf>>.

²⁷ *Permanent Participants*, Arctic Council (Apr. 27, 2011) <<http://www.arctic-council.org/index.php/en/about-us/permanent-participants/inuit-circumpolar-council/123-resources/about/permanent-participants>>.

²⁸ *Settlement in the Arctic regions, Arctic Indigenous Peoples* [hereinafter *Arctic Peoples*] <<http://www.arcticcentre.org/EN/SCIENCE-COMMUNICATIONS/Arctic-region/Arctic-Indigenous-Peoples>> (accessed Mar. 2, 2016).

5. A Call for New Sustainable Development Model

It is indubitably clear that the current Arctic legal system is inadequate to manage the existing socio-legal issues in an organized manner. The future lawmakers of the arctic need be more vigilant in inculcating those provisions in the international legal regime, which has remained untouched by any of the international conventions and treaties. These gaps shall be treated as a scope for future lawmaking. Existing legislation has been successful as a part of social experiment to some extent and has acted as a legal driver for the Arctic hydrocarbon development. Now it is necessary to smooth the drive of Arctic exploration for the long run. This can only happen when all the Arctic States maintain a similar platform and curtail their political conflicts.

The Arctic legal system is nothing more than the conflict between common heritage of mankind and the territory of Arctic states. The Arctic Ocean is regulated by certain standards in the provisions of UNCLOS and many controversial issues still go unattended due to lack of a universal legal framework especially with respect to economic interests of future shipping and exploration of Arctic hydrocarbon. The Arctic Region has constantly been put to scanner relating in each century. In the first part of 20th century, the dispute was not over exploration of oil and gas in the Arctic; rather, it was over the jurisdiction of the Arctic Region.

Oil is the world's vital source of energy and will remain so for many years to come, even under the most idealistic of suppositions about the pace of development and deployment of alternative innovation. However, the sources of oil to take care of rising demand, the cost of producing it, and the prices that consumers will need to pay are greatly unverifiable, perhaps like never before.²⁹

The primary forces driving Arctic hydrocarbon development today are the hybridization of economic opportunity and the likelihood of earning effectively sovereign rights to hydro-carbon-rich waters under UNCLOS. The time has come when Arctic states should launch expert dynamic approach in controlling the oil and gas activities in the Arctic. The Arctic states shall require industry to consolidate cultural and environmental protection along with the consideration of various exploration and production phases of oil and gas activities, identify and appropriately manage oil and gas activities in ecologically and culturally sensitive areas and regional assessment for oil and gas activities needs to be promoted.

There are certain possible options that could be done in order to organize whole of the Arctic Legal System.

First, an introduction of a new dispute settlement mechanism is required to be incorporated within the Arctic Council, which shall grant power to look into all concerns relating to limitation over the exploitation of hydrocarbon resources also dispute uproaring the environmental dilapidation to be looked into by a panel of group

²⁹ World Energy Outlook, Executive Summary, International Energy Academy 37 (2008) <<http://www.iea.org/Textbase/npsum/WEO2008SUM.pdf>>.

from the Arctic states. The Arctic Council should also play the role of a neutral party and analyze the effects of the arctic oil and gas development in order to build public confidence through transparency and facilitate state-level regulatory consistency.

Second, in concurrence to the Antarctic Treaty for the South Pole, there must be a formation of an Arctic treaty for the North Pole. It should be based on the Antarctic Treaty system consolidating all the concerns with respect to social, economic, and political changes. However, the thinkers argue that such a treaty would be unnecessary and inappropriate because situations in the Arctic and the Antarctic are hardly analogous. The primary concern over incorporation of an Arctic Treaty is to 'shift the soft legal arrangement of the arctic into the hard legal regime.' The mechanisms under Antarctic Treaty System also gives an outline for a future Arctic regime comprising norms, standards, and rules to prevent the ill-effect of increased offshore oil and gas activities.

Third, the governance of the Arctic region shall solely be vested under the Arctic Council. All disputes pertaining to any complexities must be channelized from the Arctic Council.

Fourth, the composition of the Arctic Council must also hold the representation from the recognized NGO's working on the development of the Arctic region. The Role of NGO shall also be regulated by the Arctic Council. It is significant to note that the Arctic Council is not a Government body but an international governance forum and such responsibility granted to an independent body will render fair and proper justice. The International Tribunal for the Law of the Sea (ITLOS)³⁰ in the Arctic Sunrise Case³¹ has also discussed about the implications of NGO participation in international lawmaking.

Fifth, if possible, all current legal framework existing in the regulation of the Arctic shall be consolidated into a single legal instrument. However, it is admitted that the journey to consolidate such law is not an easy process of amelioration.

Sixth, there shall be standard requirement from the oil companies to maintain the environmental standards for exploration and production in the Arctic. These environmental standards shall include the latest technology, drilling operation, aspects of climate change, protection of the interest of indigenous people.

Seventh, the role of Non-Arctic states³² shall also specify their needs. In fact, some Non-Arctic states have long standing participation in the Arctic.³³ The role of Non-

³⁰ It is a judicial body entrusted with the adjudication of disputes that arise from application and interpretation of the United Nations Convention on the Law of the Sea (UNCLOS).

³¹ Kingdom of the Netherlands v. Russian Federation, 22 (2013) <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no.22/Order/C22_Ord_22_11_2013_orig_Eng.pdf>.

³² Non-Arctic States comprises states from various Continents like from Asia: China, India, Japan, Republic of Korea, and from Europe: European Union considered itself as an Arctic Entity, Germany, United Kingdom, France.

³³ Interests and Roles of Non-Arctic States in the Arctic: Background Brief, Seminar presented by the National Capital Branch of the Canadian International Council and the Munk-Gordon Arctic Security Program (Oct. 5, 2011).

Arctic states shall be limited to scientific research on climate change and global warming, energy security, natural resource security, protection of marine species, shipping routes, and other similar roles in compliance with their foreign policies.

6. Conclusion

Energy is the most fundamental unit of any existing civilization. The hunt for energy is another aspect which has immensely helped in the discovery of almost every place on this organized planet.³⁴ There is increased exploration and exploitation for oil and gas resources that happens worldwide and most recent endeavors have focused on prospective development of hydrocarbon resources in the Arctic Ocean. Throughout much of human history, the Arctic region was neglected as important ocean space, largely because the area was permanently covered by a massive ice sheet and thick sea ice. However, this negligence is depicted as the boon for the indigenous peoples and eschews the consequences of adverse effects in the ecological system. However, the increases in demand of natural resources and the continual hunt for vast reserves of hydrocarbon on this earth landed geologists to this undiscovered Arctic in the late nineteenth century.

Someone has rightly stated that we cannot regulate natural systems, but we can make an attempt to manage the interaction between social systems and natural systems. Law is an effective tool to manage those interactions. It is based on a given factual and social reality that is constantly changing and helps us characterize such essential concepts and serves to allocate rights and responsibilities and ensure the human rights of individuals and peoples.

As the Atharva Veda states, 'Oh Earth, whatever we dig out from you must have to be filled up again, and restored as fast as possible. Oh Pure one we do not intend to hit you at your heart of hearts.'

References

McKie James W. *Market Structure and Uncertainty in Oil and Gas Exploration*, 74(4) *The Quarterly Journal of Economics* 543 (1960). DOI: 10.2307/1884351.

Nakhle Carole, *The Arctic: The Last Great Oil Frontier – Or Is It?* 6 *International Energy Law Review* 1–5 (2010).

Veasey James A. *The Law of Oil and Gas*, 18(6) *Michigan Law Review* 445 (1920). DOI: 10.2307/1277804.

Information about the author

Manjeet Kumar Sahu (Ranchi, India) – LLM (Constitutional and Administrative Law) student at National University of Study and Research in Law (Ward No.11, Shanti Nagar, Palkot Road, Gumla-835207 (Jharkhand)); e-mail: manjeetsahu2009@gmail.com).

³⁴ SDWG, *supra* note 6.