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Origines, évolutions et prospectives
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ARCTIC IN THE GLOBAL WARMING PHENOMENON ERA: NEW MARITIME ROUTES & GEOPOLITICAL TENSIONS

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Résumé

De nombreuses études ont mis en lumière les différentes conséquences néfastes de la hausse des températures mondiales, scientifiquement établie, plus communément connue sous l'appelation de « réchauffement climatique ». Pour en citer quelques unes, ont été constatées de manière répétée des conditions climatiques extrêmes, des sécheresses (et la possibilité accrue de conflits d'accès à l'eau), une hausse du niveau des océans, une réduction des espèces de la faune et de la flore etc… L'économie globalisée ne peut manquer de tenir compte de ces constats. Les coûts, induits par ces différents phénomènes révélant une dégradation de l'environnement, nécessairement liés au changement climatique, s'annoncent extrêmement élevés. D'une part, le transport maritime, à l'interface entre l'environnement et l'économie, est confronté à des opportunités substantielles suite à l'ouverture de passages en Arctique. Néanmoins, les perspectives d'emprunt de ces passages doivent prendre en compte un certain nombre d'éléments de géopolitique. Compte tenu de la transformation drastique en cours de l'environnement physique, de nombreuses complications sont à redouter, affectant non seulement les Etats côtiers de l'Arctique, mais également système politique mondial dans son ensemble. La taille de la banquise en Arctique réduit continuellement alors que les perspectives de transport maritime gagnent du terrain. Pour autant, l'arrivée de ces nouvelles routes maritimes est également associée à des objectifs géopolitiques contraires sur la scène internationale.

L'objet de la présente analyse est d'aborder la région complexe qu'est l'Arctique en mettant simultanément en lumière les aspects environnementaux, économiques et les relations inter-étatiques en présence. Cette partie inhospitalière du globe est un épicentre de contradictions : un espace

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prometteur au plan économique, tout en étant un véritable échiquier, terrain de jeu de rivalités étatiques. Dépendant des grandes stratégies des acteurs impliqués, l'escalade des tensions est un des résultats possibles, pouvant anihiler la liberté de navigation. Au vu des effets dommageables du changement climatique, seule une gestion de la région fondée sur une approche coopérative peut conduire à une véritable intégration de ces nouvelles routes maritimes dans le système contemporain du transport mondialisé.

Earth's two very cold extremities -for which geographers obviously prefer the term "Poles"- are not quite often a hot topic for financial development discussion, given their extremely harsh and inhospitable conditions. It is true that in many occasions in the past the prevailing icy environment in both these locations has caused the loss of lives of those who wished to unravel their frozen secrets. When the daring explorers of the previous century finally managed to completely conquer these unfriendly for human beings areas, the Arctic withdraw completely from the news headlines and rarely drew the attention of the global community (with the significant exception of the Cold War era, during which both superpowers of that time shared a common border in the Arctic and competed strategically all around this specific region). In the last few years, the continuous ice-melting that is taking place around the earth's North Pole is changing this status. Climate change is by far indisputable; global temperature rise is being clearly proven by temperature records. For maritime transport, because of the opening of the Artic Passages, these are all simply very good news. On the other hand, these new climate data available and more specifically the so-called global warming phenomenon have caused great environmental concerns due to the series of changes brought upon sensitive ecosystems.

The Arctic region, at the northern edge of the globe, is most commonly identified with the North Pole; quite often it is synonymous with the "Arctic circle". For the analysis in hand, the region of the "Arctic" entails the Arctic Ocean and parts of the littoral countries, namely Canada, U.S.A. (Alaska), Denmark (Greenland), Russia and the neighboring Norway, Sweden and Finland. The U.S.A. and Russia are obviously the main "players" of the contemporary geopolitical chess-board. Nonetheless, other near-by countries such as Iceland, Sweden, Finland (already Arctic Council's member-states) in addition to more remote states, such as China, Japan and Korea, are all greatly interested in getting involved with the region under discussion. The so called "greenhouse effect" is causing not only severe environmental concerns, but also significant pressure upon the international political scene and regional geopolitics. The "greenhouse effect" is a natural procedure that is helping to preserve temperatures capable to sustain life (15^{o}C on average). Nevertheless, human activities have overbalanced this, causing significant gasses concentration (CO_2, CH_4, CFCs etc.) as years passed by.

At the same time, the global ecosystem's ability to absorb these types of gasses is diminishing because of deforestation, phytoplankton reduction and other repercussions of human activity. This derangement of the natural environment has led to the increase of the radiation absorbed, feeding a vicious cycle of

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temperature rise[1]. Unless decisive action is taken, this tendency is expected to continue, adding from 1.5 up to 4.5ºC by 2100 according to recent scientific estimates. And apart from the environment, this global rise of temperature is creating fermentation in international politics or simply put geopolitical tensions.

I. The transformation of the Arctic environment

A significant number of both academics and analysts have already focused upon examining the way human activities affect the environment, with their main aim being to stop the global rise of temperature -or at least to eliminate its negative impacts. But, the global warming phenomenon is nevertheless a reality; the complex situation around the Arctic suggests examining how this environmental change will influence activities in the domains of business and politics simultaneously. As already briefly mentioned, until recently, this part of the world did not attract much attention due to the inhospitable climate and the inability to access it without the appropriate equipment/preparation. New climate data and statistics have radically transformed the overall picture. Before impact is further discussed, it is noteworthy that the Arctic region is actually used as a global climate index due to its sensitivity. Bearing this in mind, it should also be noted that the Arctic is the most rapidly warming region of the planet. The extremely high temperatures recorded in recent time periods have intensified not only the arctic ice-melting, but the receding speed as well. Areas free of ice, are now dark ocean water which reflect less and absorb more sunlight during the summer months, heating in turn the surface of the sea and the air, leading to further melting of the ice and ice density diminishing[2]. A "darker" Arctic aggravates global warming, which could lead to the melting of the land-bound ice sheets, raising sea levels as a consequence. Today, ice is less by 25% compared to 1978 and summer ice of the Arctic Ocean reduces at a rate of 7-8% per decade (Figure 1)[3].

Additionally, ice density has also dropped by 40% during the last decades[4].

[1] J. RÄISÄNEN, T.N. PALMER, "A Probability and Decision-Model Analysis of a Multimodel Ensemble of Climate Change Simulations", *Journal of Climate*, Vol. 14, 2001, pp. 3212–3226. J. HANSEN, M. SATO, R. RUEDY, K. LO, D.W. LEA, and M.E. MARTIN. « Global temperature change ». *Physical Sciences - Environmental Sciences*, *PNAS* Vol. 103 (39), 2006, pp. 14288-14293.

[2] W.H. CHAPMAN, "Arctic Climate Change: Recent and Projected", *Swords and Ploughshares: Global Security, Climate Change, and the Arctic* Vol. XVII, no. 3, Fall 2009.

[3] National Snow and Ice Data Center at nsidc.org/arcticseaicenews/ accessed 23.6.2014. R. BLACK, *Earth-melting in the heat?* BBC News, 18.5.2007, http://news.bbc.co.uk/2/hi/science/nature/4315968.stm#arctic, accessed 12.4.2013. Economist, *Arctic sea ice is melting far faster than climate models predict. Why?* 24.9.13, http://www.economist.com/node/21530079 accessed 28.5.13. Economist, *Outsiders in the Arctic, The roar of ice cracking: Will Asian countries consolidate or disrupt Arctic stability?* 2.2.2013, at http://www.economist.com/news/international/21571127-will-asian-countries-consolidate-or-disrupt-arctic-stability-roar-ice-cracking, accessed 6.6.13.

[4] R BLACK, *op.cit;*