

Introduction

Arctic Development, In Theory and In Practice

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Introduction

Few concepts are as contested as ‘development’. It can have economic, political, or social implications, but in most cases connotes progress or improvement.

And then there is the concept of ‘sustainable development’, which has found substantial currency in the Arctic region, even consisting of one of the Arctic Council’s two mandates. It adds an environmental caveat to the concept of development, contending that progress only happens if there isn’t a permanent environmental cost to it.

Although Arctic governance, policy and social science is overwhelmingly concerned with development, it can be argued that the art and the science of it is poorly understood, though not for lack of effort. Arctic development is hard: tensions exist between industrial activity and environmental protection; and between Western and Indigenous perceptions of quality of life. Populations are sparse and remote, and so difficult to provide public services for. There is a widespread lack of labour and financial capital, affecting investment and prosperity. Infrastructure – roads, airports, ports, broadband, housing and hospitals - is expensive, where it exists at all. Southern or urban models of development don’t usually apply, and even within the Arctic lessons learned do not always transfer across regions.

This year’s Arctic Yearbook theme, “Arctic Development, In Theory and In Practice” is dedicated to better understanding development in the Arctic region: how can we improve the well-being and prosperity of the residents of the Arctic? What kind of development do we want, and how can it be practically achieved? Development is multifaceted; so too is the scholarly focus of the 2018 Arctic Yearbook. The articles in this volume approach these questions from a variety of geographic, epistemological, and theoretical perspectives. As a whole, it continues discussions started in previous Arctic Yearbooks: on Change & Innovation (2017); Human Capital & Capacity (2014) and Governing & Governance (2015), addressing perennial questions of development.

Arctic Developments

Political

One bright spot in Arctic development has been political development. Few places in the world can claim to have assumed the level of innovation and ingenuity in political development as the Arctic since the 1970s, driven largely by Indigenous self-determination efforts at the local and sub-national levels; and by a proliferation at the regional level of international organizations such as the Arctic Council. While far from *terra nullius* before the Cold War period, the growth in formalized governance and legal structures in the region is remarkable.

At the same time political development in the Arctic is far from complete. There is an ongoing incongruity at the local level between ambitions for self-government and greater independence, and the tyranny of finances, whereby the tax base of northern polities is almost always inadequate to the need for public sector spending. Northern and Indigenous governments will not soon relinquish their dependence on resource revenues and/or southern capitals, though there are guidelines, such as the Circumpolar Inuit Declaration on Sovereignty in the Arctic and that on Resource Development Principles in Inuit Nunaat (in 2009), for economic self-sufficiency that redefine (state) sovereignty, including resource sovereignty.

At a regional level, the burgeoning constellation of environmental, marine and other regulations constitutes political progress. There remain concerns however that the global warming is causing the Arctic to change faster than governments can manage. The diversity of stakeholders – Indigenous and northern communities, scientists, industry, and environmental NGOs in addition to governments - likely means political development processes will continue to evolve and seek balance.

Social

Social elements of development are hard to define. While much of the world accepts the basic parameters of the UN Human Development Index – life expectancy, education and income per capita – it is considered inadequate in an Arctic context. Considerable effort has gone to quantifying Arctic social development, for example via the Arctic Social Indicators (ASI) and Survey of Living Conditions in the Arctic (SLiCA). Fate control and cultural vitality, for example, have a disproportionate importance in the Indigenous Arctic. And health encompasses much more than mortality, especially given the disproportionate burden of mental illness in the region, including substance abuse, depression, family violence and suicide, a result of colonialism and marginalization.

Having influence and control over education, health care, research; and the rate and nature of resource development; are essential elements to the quality of social development in the Arctic. So is meaningful occupation, whether in the form of wage employment, subsistence activities, school attendance or care giving. The transition from a traditional to a wage economy, and towards a globalized society, has disrupted social norms and ties. Arctic communities are seeking a new equilibrium in their social development, but there remains little consensus on what that should or will look like.

Economic

Economic development in the Arctic comes primarily in two very different shapes: industrial and local. Public discussions about Arctic development mostly focus on the former: oil & gas, large scale mineral development and global shipping. There is a reasonable amount of academic analyses on these topics, though they are often written from a commodities or markets-centred perspective, rather than an Arctic-specific one. Popular approaches to the subject often fall into a hype trap, assuming that Arctic commodities will be exploited based on conventional market forces without looking closely at the larger political, social, technical and environmental context dominated the aspect of centralization and controlled by states and their State-Owned Enterprises (SOEs), as well as Trans National Corporations (TNCs). Arctic resource development is highly subject to boom and bust periods, not only in exploration but in attention. The nuance and broader perspective provided by scholarly analyses is needed.

Local regional development in the Arctic remains a puzzle. We do not have a good handle on strategies to diversify economies, create jobs or attract investment in the rural Arctic beyond large scale resource development. This is exacerbated in the Indigenous territories of the North American and most of the Russian Arctic, where distances are vast, infrastructure is more limited, and a market-oriented culture has yet to develop. In the absence of a market economy, the public sector has flourished, but with the unintended consequence of making the development of small business a challenge in the North due to wage inflation, high costs and competition from government employers. Traditional economies – hunting, fishing, gathering and reindeer herding – remain important but often require participation in the wage economy to support the purchase of gasoline, snow machines/mobiles, rifles and other equipment. Tourism is often pointed to as a solution but is better seen as complementing, rather than leading, rural Arctic growth.

Despite the need, relatively little academic analysis has focused on regional economic development – at least not from an economics or business perspective (though tourism is proving an exception). The field is dominated by political scientists, anthropologists, geographers and sociologists; but has few economists. The results are predictable: economic development strategies that produce policies and recommendations divorced from basic economic principles.

Sustainable

The concept of sustainable development has an almost ethereal quality in the Arctic: the *raison d'être* of so many government policies and efforts. And yet it is essentially contested. If resource development is the basis of the Arctic economy, can it ever be truly sustainable? What happens when the two elements – sustainability and development – are at odds? Can you have political self-determination without economic development, and can you have economic development that is sustainable? If sustainable development consists of three elements: society, economics and the environment, can you have economic development that is sustainable without having clear, even strict, environmental regulations? In few places of the world is balance achieved; in the Arctic, the scales are arguably tipped in the direction of sustainability, as moratoria, regulations and protected areas dominate policy efforts. Efforts to promote entrepreneurship, small business development or the knowledge economy remain largely abstract.

The Arctic Council has as a mandate ‘sustainable development’ and a dedicated Working Group for the purpose. The Finnish Chairmanship has focused on making links between the United

Nations 2030 Sustainable Development Goals (SDGs) and the Arctic context. Furthermore, the question is if the SDGs, or the UN Global Compact 10 Principles, fit to the reality of Arctic local and regional actors, and reflect their priorities. But there is a sense that these have been imposed, or juxtaposed, on to the region. If everything is sustainable development, is anything sustainable development?

Arctic Yearbook 2018 Content

As an effort to address many of these questions and more, we are proud to publish here a comprehensive and diverse collection of articles all focused on solving a piece of the Arctic development puzzle.

The scholarly articles are divided into six sections addressing the issues of greatest contemporary interest in Arctic development.

Thinking About Arctic Development

A handful of articles provide some high level thinking on Arctic development history, character, and processes. Andrey N. Petrov, in his contribution entitled *Re-Tracing Development Paths: Exploring the Origins & Nature of the 20th Century's Northern Development Paradigms in Russia and Canada*, explores the history of the 20th century development 'projects' in Canada and Russia/USSR, focusing on the relationship between state-promoted modernization discourses, power, and development.

Maxwell C. McGrath-Horn & Ryan R. Uljua attempt to answer the question *Is the Arctic an Emerging Market?* in their article entitled the same. After discussing the prominent frameworks and assessing available data they find that by most customary metrics the Arctic is not a traditional emerging market, but rather a nascent transactional arena nestled inside of stable, highly developed economies where buyers and sellers nonetheless have difficulty in conducting transactions, particularly in capital markets.

Jessica Metuzals & Myra J. Hird examine the fundamental differences in approach between Western and Inuit epistemologies and development strategies using Areva's (now Orano), a uranium miner, efforts in Qamani'tuaq/Baker Lake in Nunavut, Canada, as a case study in their paper "*The Disease that Knowledge Must Cure*": *Sites of Uncertainty in Arctic Development*. The paper demonstrates how the differing approaches – with Areva seeking certainty and the Inuit community seeing uncertainty as a given, resulted in claims that were deeply contested and deconstructed when positioned against the contextual and relational knowledge of local residents.

Finding Sustainability in Development

Sustainable development is a hot topic, as well as a hotly debated topic. Several authors attempt to define and describe sustainable development in the Arctic and the efforts to advance it.

In his paper on *Indexing Arctic Urban Sustainable Development Planning Strategies: The Case of Russia*, Alexander Sergunin discusses possible indicators to evaluate the Sustainable Development Strategies (SDS) of the major industrial cities of the Russian Arctic, where efforts are ongoing to develop and implement the proper conceptual, legal and institutional settings.

Continuing the focus on cities, David Chapman, Kristina L. Nilsson, Agatino Rizzo and Agneta Larsson explore urban design principles for winter settlements in their article *Updating Winter: The Importance of Climate-Sensitive Urban Design for Winter Settlements*. Winter communities have evolved

lifestyles and means suited to living and working with local conditions and seasonal variation. However, climate change will cause changes in weather that will require adaptation in such communities.

Jørgen S. Søndergaard brings a more philosophical perspective on sustainable development, arguing about the importance of language in his article *When Words Matter: The Concept of “Sustainable Development” Derailed with Words Like “Economy,” “Social,” & “Environment”*. The struggle for recognition of the cultural dimension as an integral part of sustainable development thus remains important in an Arctic context. Focusing on the main points of the Finnish Presidency’s Arctic Council Program for the period 2017 - 2019, he concludes that the struggle to expand the understanding and definition of ‘sustainable development’ to include the cultural dimension - and thus go beyond “economy”, “social” and “environment” - continues.

Naja Carina Steenholdt and Daniela Chimirri explore a case of local, sustainable development in the form of tourism in their article *Tourism & Quality of Life in Greenland: Exploration through farm Stays in South Greenlandic Settlements*. They explore how the developing tourism industry in South Greenland interrelates with resident quality of life in this area. By applying the bottom-up spillover theory as a theoretical frame, they investigate whether generated income from farm tourism can contribute to people’s state of wellbeing, but find that there is more to wellbeing than “just” money.

Pierre-Louis Têtu, Jackie Dawson and Julia Olsen examine another aspect of Arctic tourism in *Navigating Governance Systems & Management Practices for Pleasure Craft Tourism in the Arctic*. Their study identifies practices regarding the management and governance of pleasure craft in Arctic regions, including inventorying national, regional and local regulations. Using data from secondary sources, statistical information, and Coast Guard reports, they discuss the diversity of management policies that exist throughout the Arctic that support and manage pleasure craft tourism, and conclude that harmonization of governance frameworks and improved reporting mechanisms among Arctic states could be beneficial.

Research, Education & Arctic Development

Perhaps more so than any other region, research is an integral aspect of Arctic development, for better and for worse. Who has the capacity to direct, conduct, and benefit from such research is a topic of debate. Samantha Darling, Aynslye Ogden and Gordon M. Hickey assess one aspect of this in their paper *Reviewing Northern Capacity for Enhancing Impact Assessment (IA) in Yukon Territory, Canada*. They explore the concept of ‘capacity’ in its various forms and considers its core relevance to ensuring effective IA processes associated with northern development. Through a literature review, they identify that ambiguity surrounding the concept of capacity requires careful policy attention to fully appreciate conditions that prompt appeals for increased northern research capacity and help minimize confusion amongst different actors and institutions working to build northern capacity.

Rapid development of digitization and replication technologies reveals a potential for empowering community heritage restoration and perpetuation, as well as strengthen abilities of distant stewardship institutions to improve access, improve community collaborations and enhance their capacity for cultural preservation. Medeia Csoba DeHass and Eric Hollinger address this

development potential for research in the Arctic in *3D Heritage Preservation & Indigenous Communities in the Circumpolar North*.

What role can education play in promoting development? A large network including Lau Øfjord Blaxekær, Martin Mohr Olsen, Hanne Thomasen, Maria Tammelin Gleerup, Sune Nordentoft Lauritsen, Anne Lise Kappel, Kristoffer Buch, Pål Simon Fernvall and Jay Friedlander describe one model in their paper *The Sustainable Development Goals & Student Entrepreneurship in the Arctic*. Their article analyses their joint project which sought to support the entrepreneurial potential among students to the benefit of the sustainable development of Arctic societies. The project built on two key frameworks: 1) The UN Sustainable Development Goals, and 2) The Abundance Cycle framework. By incorporating social, environmental as well as financial aspects, the internationally recognised Abundance Cycle framework provided an operational approach for working with sustainable entrepreneurship and a toolkit for incorporating sustainability thinking into teaching and entrepreneurial projects in higher education in the Arctic.

Mítdlárak Lennert examines education from a grassroots perspective in *Coherence in the Greenlandic Education System? Educational Planning & Evaluation in Greenland from a Complexity Theory Perspective*. She analyzes Greenland's primary and lower secondary school governance system and how the central level design organizes and steers education systems across complex multilevel governance arrangements. How these central and decentralized levels interact and communicate, and how this affects trust, cooperation and negotiation of conflicts, and ultimately the outcomes of reform, is discussed using interviews with local officials and stakeholders, as well as field observation.

In another collaborative project, Kamilla Nørtoft, Sidse Carrol, Anu Siren, Peter Bjerregaard, Christina Viskum, Lytken Larsen, Merete Brædder, Lise Hounsgaard and Tenna Jensen discuss how collaboration between research and practice can be an important factor in sustainable development in *Enhancing Well-Being Among Older People in Greenland through Partnerships of Research, Practice & Civil Society*. In their project they study ageing policy, homecare, institutions, professional practices and the municipal administration of these as well as older people's health, well-being, everyday life and historical perceptions of the roles of older people in Greenland. Researchers and municipalities collaborate together to develop relevant and appropriate policies and initiatives.

Science Based Governance & Regulation of Arctic Energy Installations

This section provides an overview of the potential risks and impacts associated with the construction and operation of offshore installations in the Arctic, drawing on expertise from a range of disciplines including law, environmental science, management, and politics. The content of the special section has its roots in a network established with the support of the UK Arts and Humanities Research Council: The Science Based Governance and Regulation of Arctic Energy Installations Network (SciBAr Installations) and is guest edited by Elizabeth A. Kirk of Nottingham Trent University.

The papers give some indication of the range of relevant disciplines and issues to be addressed if we are to ensure a 360 degree review of the regulation of offshore energy installations in the Arctic. Thus Vinogradov & Azubuike take a traditional legal approach in assessing the current global and regional regulations relating to pollution from offshore petroleum operations in the Arctic and propose solutions to identified gaps in the existing Arctic regime in the form of a regional intergovernmental framework or an industry-wide compensation scheme. Kirk & Miller provide

an interdisciplinary analysis of the ways in which gaps in scientific understanding of the potential impacts from oil and gas installations on the marine environment may raise legal questions such as what “significant transboundary pollution” means in the Arctic context. Poppel’s paper also directly links to oil and gas activities, but focuses more on the impacts or potential impacts on the political discourse in Greenland.

Two of the papers range slightly more widely, in that they address topics which encompass issues pertaining to Arctic offshore energy installations as well as broader issues. Thus Basaran’s paper on civil liability for oil pollution has potential implications for the transit passage of oil tankers as well as pollution from shipping transporting oil from Arctic installations. Similarly, Andræsen, Borch & Ikonen’s analysis of Arctic marine emergency response draws out how Arctic operational conditions add to inter-organizational coordination challenges in delivering emergency response to all maritime operations, not just those relating to offshore energy installations.

Russian Arctic Development & the Environment

Covering half the Arctic and with a majority of its inhabitants as well as its economic activity, there can be no discussion on Arctic development without addressing Russian Arctic development; and there is no addressing Russian Arctic development without discussing the environment.

Irina Chesnokova, Emma Likhacheva and Aleksandra Morozova look at the imminent environmental risks to the Russian Arctic in *Stable Development of the Natural Environment in the Arctic Region of the Russian Federation*. These dangers are associated with extreme climate conditions, the focal character of economic development, remoteness from major industrial centers, and low stability of ecological systems, which are susceptible even to minor climatic and anthropogenic impacts. Attention is paid to changing geocryological and geomorphological conditions, which lead to the activation of exogenous processes in the continental part of the Arctic zone.

Daryana Maximova considers the fundamental problem of ensuring sustainable development of the Arctic zone of the Russian Federation in her article *Sustainable Development of the Russian Arctic Zone: Challenges & Opportunities*. This paper examines the Russian Arctic’s challenges and opportunities regarding sustainable development, including an analysis of the recent Russian plans in relation to the territorial development. These plans include the new edition of the Russian state program on the Arctic’s socio-economic development, released in August 2017. The main idea of this document and the future law “On the Arctic Zone of the Russian Federation” is to create support zones which will be complex projects of social and economic development of the Arctic territories, with the Northern Sea Route as the main navigable artery and the central project.

Despite external perceptions, Russia has a notable, stewardly emphasis concerning the Arctic offshore environment. Troy J. Bouffard explains why in his article *Authoritarian Administration: An Environmental Paradox in the Russian Arctic*. He suggests that Russia not only enables deliberately different behaviors, but could also be setting conditions through its Arctic maritime environmental priorities in order to eventually leverage soft power for the purposes of contesting established international rules. In support of this examination, the use of authoritarian environmentalism provides the framework in which to view the evidence and perspectives.

In determining the economic efficiency, or rationale, for Russian Arctic oil and gas investment, purely commercial considerations are no longer sufficient due to high capital intensity, the use and creation of special (innovative) materials, machinery and technologies, the lack of production

infrastructure in most of the territories, and the increased sensitivity of the natural environment of the Arctic zone to man-caused stresses. Mansur H. Gazeev, Natalia A. Volynskaya and Anatoly B. Rybak develop a more realistic and comprehensive equation for investment in their article *Complex Efficiency Assessment of Development of Arctic Oil & Gas Resources in Russia*.

The Polar Silk Road & Arctic Maritime Development

The release this year of China's White Paper on Arctic policy, and their particular interest and potential for influence in polar shipping, led to a spate of analysis on the Polar Silk Road. Providing the context for this issue, Kong Soon Lim's article on *China's Arctic Policy & the Polar Silk Road Vision* considers three questions: (1) what are China's key interests in the Arctic, (2) what are the aims and basis of China's Arctic policy as outlined in the White Paper and (3) how does China's Arctic policy complement with its Polar Silk Road vision as an extension of its Belt and Road Initiative?

Examining this issue from a regional perspective is Lau Øfjord Blaxekær, Marc Lanteigne and Mingming Shi's *The Polar Silk Road & the West Nordic Region*. On the one hand, China's enhanced Arctic engagement and strategic collaboration with the Nordic region, which includes the Arctic, maritime economy, and bio-economy, seem very promising for West Nordic development. On the other hand, geo-political unease about Chinese investments in the Arctic raise questions about what happens when the large-scale geopolitics meet the micro-scale geopolitics of the West Nordic Region.

In *Arctic Blue Economic Corridor: China's Role in the Development of a New Connectivity Paradigm in the North*, Vasilii Erokhin, Gao Tianming and Zhang Xiuhua discuss the critical points in the implementation of China's paradigm of collaboration and connectivity in the Arctic. They further focus on the promotion of bilateral win-win investment and trade projects with the countries along the potential Arctic Blue Economic Corridor (ABEC). The authors conclude that the ABEC may be efficiently incorporated into China's Belt and Road network, but emphasize that specific technological and economic challenges have to be considered and met before a sustainable connectivity between the markets of Asia and Europe is established in the Arctic.

Derek Moscato examines how China's pursuits in the Arctic region are being perceived in *The Polar Silk Road in the Popular Press: Global Media Framing of China's 2018 Arctic Policy White Paper*. Drawing from media framing theory, his study establishes how three prominent media outlets from North America, Europe, and Asia covered China's high-profile Arctic publication. China's self-identification as a "Near-Arctic State" created an inevitable focal point for the press and subsequent dialogue highlighting the convergence of Chinese and Arctic affairs.

To conclude the section, Arctic Yearbook's Chair of its Editorial Board, Lawson Brigham, contributes his seventh straight commentary, this year focusing on *China's Polar Ships and Future Operations*, adding a dose of reality to the hyperbole one often finds in the Western media about Chinese capabilities in the Arctic.

Briefing Notes

Finally, as in previous volumes, the Arctic Yearbook 2018 contains a number of Briefing Notes – shorter, more analytical than theoretical pieces, on issues of current relevance.

Ashlee-Ann E. Pigford, Samantha Darling and Gordon M. Hickey describe the many expenses involved in contemporary, ethical Arctic research in *The Need to Better Unpack the Transaction Costs Associated with Northern Research in Canada*.

Afroja Khanam provides a much needed Global South perspective on the widespread impacts of global warming in her piece *On the Link between Climate Change and Forced Migration: The Impact of Climate Change in the Arctic and Global South – An Analysis in the Context of Bangladesh*.

Malgorzata Smieszek, Tahnee Prior and Olivia Matthews describe their exciting and increasingly influential initiative *Women of the Arctic: Bridging Policy, Research & Lived Experience*.

Stefan Brocza and Andreas Brocza offer their scepticism on the European Union's future involvement in the Arctic in their short article entitled *Less EU in the Arctic Region after 2020*.

Finally, Peter Kujawinski provides an eloquent summary of the *2018 Calotte Academy*, an annual travelling symposium crossing the Euro-Arctic which has been organised by Lassi Heininen for decades.

In addition, for the first time the Arctic Yearbook has published a separate Special Section, which we warmly welcome, on China & the Arctic, containing seven scholarly articles and one Briefing Note, and guest edited by Ane Bislev, Ulrik Pram Gad and Jesper Willaing Zeuthen. This timely collection, focusing on the recent Chinese White Paper on the Arctic, Chinese resource development, China's role in Arctic governance and politics, is available at: <https://arcticyearbook.com/arctic-yearbook/2018/china-the-arctic>.

Conclusion

Strategies for Arctic development remain a puzzle, despite, or perhaps because of, decades of state led efforts to grow economies, create jobs, improve health and wellness, and increase educational attainment. While investment and interest in Arctic scientific research has been growing over the past decade in the face of climate change, the academic research on Arctic development has largely stagnated, both intellectually and financially. This volume represents our effort to stimulate the field. Social science research cannot improve Arctic development outcomes in and of itself, but it is an essential component to finding smarter and more effective strategies that positively impact human wellbeing in the Circumpolar North.