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**ABSTRACT:
ECONOMIC DEVELOPMENT AND SOCIAL TRANSFORMATIONS**

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Sustainable Development of the Arctic: the Challenges of Reconciling Homeland, Laboratory, Frontier and Wilderness

This presentation will examine relationships among Arctic and non-Arctic interests. It will argue that it is not enough to simply advance scientific knowledge of the Arctic. The translation of Arctic knowledge (scientific and indigenous/local) into policy development and policy implementation is slow and poorly executed in some Arctic states and in most non-Arctic states. Arctic state and non-state actors can no longer simply talk among themselves. Non-Arctic state and non-state actors can no longer ignore their connection to changes in the Arctic. Both Arctic and non-Arctic interests must accelerate their efforts to find processes and mechanisms to improve dialogue and take actions. Even with immediate reductions in greenhouse gas emissions, the impacts of climate change on the Arctic, and on global systems generally, will continue. The primary search for mitigative solutions needs to be outside the Arctic. The search for solutions in the Arctic needs to be directed primarily at adaptation. A coordinated global approach is needed.

The Arctic can be analysed under four broad and often competing conceptualisations: homeland, laboratory, frontier and wilderness. Depending on how it is delimited, the Arctic is home to between 4 and 9 million people, including indigenous peoples. Hunting, herding, fishing, trapping, gathering and other renewable resource activities remain important components of indigenous cultures and economies. For the past few decades the Arctic has been a laboratory for increasing scientific research and cooperation, particularly during the current *International Polar Year*. For many nation-state governments and multinational corporations the Arctic is a "frontier" with potential for exploitation of important natural resources to feed global demands for energy, fresh

water and other minerals. Alternatively, many environmental and conservation organisations rooted in towns and cities outside the Arctic see this region and its flora and fauna as “wilderness” to be preserved in parks and protected areas.

While this way of characterizing Arctic affairs is an over-simplification, juxtaposing homeland, laboratory, frontier and wilderness helps clarify some of the values and goals of various stakeholders. The future of the Arctic will be determined by how these various values and goals are reconciled in regional, national and international law and policy. This reconciliation may well hinge on the ability of state and non-state actors to achieve sustainability and balance. In the Arctic, sustainability is often characterized as a blend of the best of the old with the best of the new. Balance is important because the values expressed through each of the conceptualisations of the Arctic (homeland, laboratory, frontier and wilderness) are politically legitimate and have to be taken into account in policy-making processes.

The Arctic is not a closed system. The presence of some sort of ‘Arctic Circle’ demarcating the southern-most limit of the Arctic has tended to “ghetto-ize” the region even within the Arctic states, setting it aside as a boutique issue that is often viewed in isolation, apart from mainstream national and international affairs.

Many of the drivers of Arctic change have origins outside the region. Quite simply, the solutions to many Arctic problems cannot be implemented by actions in the Arctic alone. While climate change and developmental pressures have potentially profound impacts on the ecosystems and peoples of the Arctic, changes in the Arctic also have significant implications for non-Arctic regions which are poorly understood and often overlooked by non-Arctic states. Non-Arctic regions may be unable to address some of their pressing local and regional problems without giving due attention to Arctic factors.

Therefore, the Arctic should be viewed as a barometer that is highly responsive to global processes. It may also be a trigger for a cascade of globally-important processes relating to ocean circulation and weather systems. In other words, the Arctic today is a tightly-coupled component of highly dynamic global biophysical, geopolitical and socio-economic systems. Such systems can involve shifts that may be both non-linear and abrupt. Even under normal conditions it is difficult to forecast or project their trajectories beyond the immediate future. We cannot say when dramatic changes will occur or what particular form they will take. Climate change could produce impacts in the Arctic that overwhelm existing adaptive capacity, not only in the Arctic, but in other regions of the globe.

Devising governance systems and management practices that are both resilient in the face of change and nimble in their ability to adapt quickly and effectively to new challenges is essential in situations of this kind. Soft and hard law tools will be required to deepen and broaden co-operation among Arctic states, but also to provide meaningful roles for non-Arctic states and non-state actors.

Recommendations:

- Greater attention could be given to expanding the dialogue among Arctic and non-Arctic interests in relation to the non-Arctic drivers of Arctic change and the significance of Arctic change for non-Arctic populations and economies. Arctic states in particular could accelerate efforts to expand the discourse with non-Arctic states through bodies like the Arctic Council.

- Political cycles in many western nations tend to be too short to foster implementation of long-term strategies directed at the social transformations which must underlie new approaches to sustainable economic development and global stewardship. Some practical and effective mechanisms (governmental and non-governmental) for continuity in policy development and policy implementation are required within states and among states.
- Addressing Arctic issues will require lateral thinking. While multilateral environmental agreements are one component, international trade agreements, research and development efforts and energy policies (to name only a few) must take into account the Arctic as a barometer of planetary change.