United Nations
Educational, Scientific and
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International Experts Meeting

Climate Change
and Arctic Sustainable Development :
scientific, social, cultural and educational challenges

3-6 March 2009, Monaco

ABSTRACT: CIRCUMPOLAR INDIGENOUS PEOPLES

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Climate Change, Human Health and Sustainable Development in the Arctic

The Arctic, like most other parts of the world, has warmed substantially over the last few decades. The warming trend is projected to continue, and may lead to significant economic and cultural upheaval particularly for the indigenous peoples of the Arctic.

Resident indigenous populations of the Arctic are uniquely vulnerable to climate change because of their close relationship with, and dependence on, the land, sea and natural resources for their cultural, social, economic and physical well being. Direct health threats from climate change include morbidity and mortality resulting from increasing extreme events (storms, floods, increased heat and cold) and an increased incidence of injury and mortality associated with unpredictable ice and storm conditions. Indirect effects continue to include increased mental and social stress related to changes in environment and loss of traditional lifestyle, potential changes in bacterial and viral diseases, and access to quality water sources. Some regions will be at risk from increasing illness due to failing sanitation infrastructure resulting from changes in permafrost and storm surge. Some regions will also experience changes in diet resulting from changes in subsistence species distribution and accessibility. This may have negative impacts on health as diet shifts from a traditional diet to a more western diet are associated with increases in "modern diseases" such as obesity, diabetes, cardiovascular disease and cancer. Projected warming will affect the transport, distribution and behavior of contaminants, and human exposure in northern regions, further threatening the safety of the traditional food supply. These changes are taking place in the context of ongoing cultural and socioeconomic changes. Climate change represents another of many sources of stress on these northern societies and cultures as it affects the relationship between the people and the land and environment, which will further stress communities and individual psychosocial health. The potential impact

on human health will differ from place to place depending on regional differences in climate change was well as variations in health status and adaptive capacity of different populations.

Communities must be prepared to identify, document, and monitor changes in their region in order to support adaptations to shifts in their local environment. The basis of this understanding will be the ability to collect, organise and understand information that indicates changes taking place and emerging threats, as well as their potential impacts.

Much still remains to be done to establish a relationship between climate change and individual and community health. There remains an urgent need to implement community based monitoring strategies. A network of such communities, within and across regions, reporting a common set of similarly measured climate, health status, and infrastructure and ecosystem observations would serve to identify both emerging threats as well as new opportunities.

"*Without health there is no sustainable development-without sustainable development there is no health*"

Recommendations:

1. Encourage action on the Arctic Council's Climate Impact Assessment recommendations in human health and climate change in the Arctic
2. Explore linkages within the Arctic Council's Sustaining Arctic Observing Networks process to establish an arctic observing network for human health.
3. Use the Arctic Council and other circumpolar partnerships to identify communities and segments of the population at greatest risk and to facilitate the design of community based monitoring and formulation of intervention and adaptation strategies.