

CLIMATE CHANGE - AN EFFECT ON INDIGENIOUS PEOPLES

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INTRODUCTION

This paper outlines the issues around Climate Change and to provide an analysis of the threats and challenges faced by peoples. Climate change is a major issue for indigenous peoples around the world. Climate change is considered to be a critical global challenge and recent events have demonstrated the world's growing vulnerability to climate change. The impacts of climate change range from affecting agriculture to further endangering food security, to rising sea-levels and the accelerated erosion of coastal zones, increasing intensity of natural disasters species extinction and the spread of vector-borne diseases⁽¹⁻³⁾ Climate change is about the growth of greenhouse gas emissions due to the burning of fossil fuels, resulting mainly from industrial activities and motor transportation, hence there is a buildup of the carbon dioxide levels in the atmosphere.⁽⁴⁾ The carbon dioxide build up is made worse by the increasing loss of forests, which act as "carbon sinks" that absorb gases and prevent its release into the atmosphere. Further, the increase of carbon dioxide and other gases in the atmosphere also enhances the "Greenhouse Effect" (in which more heat is generated), thus leading to temperatures rising. Based on data on Climate Change, it is estimated that the mean global surface temperature has increased by about 0.3 to 0.6 degree Celsius since the late 19th century to the present, and an increase of 0.2 to 0.3 degree over the last 40 years.⁽⁵⁾ A significant rise in temperature can trigger several events, such as melting of the ice sheets, the death of some significant marine life and other biodiversity, and effects on agriculture and human health. Today, the effects of climate change are being felt around the world. But they are being felt most by those who are the least able to cope. Indeed, the terrible irony for many developing countries is that, though they have contributed the least to the process of climate change, they are the ones most at risk from its consequences. The most advanced scientific research has concluded that changes in climate will gravely harm the health of indigenous peoples traditional lands and waters and that many of plants and animals upon which they depend for survival will be threatened by the immediate impacts of climate change. It was felt that such conclusions require urgent and unprecedented efforts and interventions from the global community.⁽⁶⁻⁷⁾

Despite the fact that these changes are impacting intensely on indigenous peoples and their communities, they are very rarely considered in public discourses on

climate change. Indigenous peoples are vital to, and active in, the many ecosystems that inhabit their lands and territories and are therefore, in a position to help enhance the resilience of these ecosystems. In addition, indigenous peoples interpret and react to climate change impacts in creative ways, drawing on traditional knowledge and other technologies to find solutions, which may help society at large to cope with impending changes.

Climate change and human health: present and future risks

Modern epidemiology has focused mainly on studying risk factors for non communicable diseases in individuals, not populations. Meanwhile there have been occasional studies examining deaths due to heat waves, some epidemiological studies of air pollution incorporating temperature as a covariate and a continuation of the longer standing research interest in meteorological effects on microbes, vectors and infectious disease transmission. Overall, the health risks of climate related thermal stress, floods and infectious disease have been the most amenable to conventional epidemiological studies. Extreme weather events include periods of very high temperature, torrential rains and flooding, droughts and storms. Over time, regional populations adapt to the local prevailing climate via physiological, behavioural and cultural and technological responses. However, extreme events often stress populations beyond those adaptation limits. Understanding the health risks from these events is important because the future frequency and intensity of extreme events is expected to change as both climate means and variability change.

Climate change will have many effects on health over the coming decades. In view of the residual uncertainties in modeling, how the climate system will respond to future higher levels of greenhouse gases, and uncertainties over how societies will develop economically, technologically, and demographically, formal predictions of future health effects cannot be made. The appropriate task is to make estimations, for future modeled climate situations, of the consequent health effects. The early modeling of the effect of extreme events assumed that climate change would act mainly by shifting the mean values of temperature and other meteorological variables. Little attention was paid to the possibility of altered climate variability. Recently however, there have been gains in the modeling of how climatic variability will also change in future. A greater proportion of people in all countries will be at risk from heat extremes in future, even without substantial climate change. Conversely, the mortality risk from cold weather is expected to decline in northern latitudes.⁽⁸⁾ The accurate estimation of future deaths from floods and storms is impeded by the absence of empirically documented exposure-response relations. Further, the typical spatial scale of global climate models—even at the country level—is still too coarse for reliable projections of precipitation. Unless current deficiencies in watershed protection, infrastructure, and storm drainage systems are remedied, the risk of water-borne contamination events will probably increase.

Adapting to Climate Change

Adaptation to climate change is a necessary strategy to complement climate change mitigation effects. Adaptation often produces benefits as well as forming a basis for coping with future climate change. However, experience demonstrates that there are

constraints to achieving the full measure of potential adaptation. There are many instances of, maladaptation, such as promoting development in risk-prone locations, which can occur due to decisions based on short-term considerations. The ability of human systems to adapt to and cope with climate change depends on factors such as wealth, technology, education, information, skills, infrastructure, access to resources and management capabilities.⁽⁹⁾

Biofuels and Carbon Trading

Under the Kyoto Protocol, Parties have a certain degree of flexibility in meeting their emission reduction targets. The Protocol developed three innovative mechanisms - known as Emissions Trading, Joint Implementation and the Clean Development Mechanism (CDM). There is also the view that these mechanisms help identify lowest-cost opportunities for reducing emissions and attract private sector participation in emission reduction efforts. At the same time, developing nations benefit because of technology transfer and investment brought about through collaboration with industrialized nations under the CDM.

Meeting greenhouse gas emissions reduction through carbon emissions trading is an issue that continues to be debated in the international community. In many developing countries the production of Biofuels, carbon sinks and carbon emissions trading are not only emerging issues, but also having a major impact on indigenous peoples.

Carbon sequestration through forest growth is said to mitigate global warming, but where plantation monocultures of exotic plants replace the fragile ecosystems of the *páramos* located in high elevations, between the upper forest line and the permanent snow line), the sequestration benefits are questionable.⁽¹⁰⁾ Due to weak legislation in developing countries, these plantations make it easier and cheaper for high-polluting developed countries to offset their greenhouse gas emissions in developing countries rather than in their own countries. The concern is that not all the costs are being counted. For example, the plantations negatively affect the hydrological cycle and also reduce the amount of land available for indigenous peoples. Hence, not only is the climate changing, so, too, are the lives of the indigenous peoples and farming communities.

However, carbon trading continues to be a hugely contentious issue mainly due to its inherent problems. The main concern is that while companies do not have to actually reduce their emissions they can pay other companies and groups, mostly from non-industrialized countries, to reduce emissions or to absorb CO₂ from the atmosphere, and account that as their own reductions. The big profit for companies is that when paying others, they pay only a fraction of what they would need to invest at home to achieve the same goal.

CONCLUSION

Indigenous peoples' experiences and interpretation as well as scientific research indicate that climate change seldom acts in isolation but interacts with other environmental and social factors.

Given past experiences, indigenous peoples and their communities have been especially resilient and have adjusted to environmental and socio-economic changes. Further, they continue to fight to protect their rich social and cultural fabric and enduring community

attachment. Assessment of adaptive capacity of indigenous peoples and their communities must take into account not only their inherent resiliencies, but also differential rights, discrimination and other social processes that limit access to resources, power and decision-making. In other words, the socio-cultural context in which community activities and livelihoods are situated is important.

For indigenous peoples, climate change is already a reality and poses threats and dangers to the survival of their communities. While there is scientific consensus, notably through the Intergovernmental Panel on Climate Change in regards to the threats that climate change poses, the response from governments have been slow. He urged Government leaders to ask indigenous peoples about the effects of climate change before taking any decisions, and that indigenous peoples should not to act when under pressure from global processes driven by big Governments.

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