

## Climate Change Paper

Chosen for the 2011 ASLI Choice - Honorable Mention (History Category) for a compendium of the key scientific papers that undergird the global warming forecast. Global warming is arguably the defining scientific issue of modern times, but it is not widely appreciated that the foundations of our understanding were laid almost two centuries ago with the postulation of a greenhouse effect by Fourier in 1827. The sensitivity of climate to changes in atmospheric CO2 was first estimated about one century ago, and the rise in atmospheric CO2 concentration was discovered half a century ago. The fundamentals of the science underlying the forecast for human-induced climate change were being published and debated long before the issue rose to public prominence in the last few decades. The Warming Papers is a compendium of the classic scientific papers that constitute the foundation of the global warming forecast. The paper trail ranges from Fourier and Arrhenius in the 19th Century to Manabe and Hansen in modern times. Archer and Pierrehumbert provide introductions and commentary which places the papers in their context and provide students with tools to develop and extend their understanding of the subject. The book captures the excitement and the uncertainty that always exist at the cutting edge of research, and is invaluable reading for students of climate science, scientists, historians of science, and others interested in climate change.

An overview of the current scientific knowledge available on climate change implications for fisheries and aquaculture is provided through three technical papers that were presented and discussed during the Expert Workshop on Climate Change Implications for Fisheries and Aquaculture (Rome, 7-9 April 2008). A summary of the workshop outcomes as well as key messages on impacts of climate change on aquatic ecosystems and on fisheries- and aquaculture-based livelihoods are provided in the introduction of this Technical Paper. The first paper reviews the physical and ecological impacts of climate change relevant to marine and inland capture fisheries and aquaculture. The paper begins with a review of the physical impacts of climate change on marine and freshwater systems and then connects these changes with observed effects on fish production processes. It also outlines a series of scenarios of climate change impacts on fish production and ecosystems through case studies in different regions and ecosystems. The second paper tackles the consequences of climate change impacts on fisheries and their dependent communities. It analyses the exposure, sensitivity and vulnerability of fisheries to climate change and presents examples of adaptive mechanisms currently used in the sector. The contribution of fisheries to greenhouse gas emissions is addressed and examples of mitigation strategies are given. The role of public policy and institutions in promoting climate change adaptation and mitigation is also explored. Finally, the third paper addresses the impacts of climate change on aquaculture. It provides an overview of the current food fish and aquaculture production and a synthesis of existing studies on climate change effects on aquaculture and fisheries. The paper focuses on the direct and indirect impacts of climate change on aquaculture, in terms of biodiversity, fish disease and fishmeal. Contribution of aquaculture to climate change is addressed (carbon emission and carbon sequestration), as well as possible adaptation and mitigation measures that could be implemented.

The ACT Government must act on the basis of growing scientific evidence that man-made greenhouse gas emissions are changing the Earth's climate. Globally, the ten hottest years on record have all occurred since the beginning of the 1990s. Evidence also shows that climate change has accelerated in recent decades and the global capacity to reduce the risks posed by climate change has declined. Because climate can exert a profound influence on man's use of the environment, interest in global climate is widespread and growing. Still, there is little consensus concerning the direction, magnitude, and timing of global climatic change; there is no accepted methodology for determining what effect a global climate change would have on climate-sensitive endeavors, such as agriculture; and data essential to this linkage process have not been readily available. This report partially fills these voids: It describes a simple model that evaluates the effect of climate. It offers, as an example, an explanation of how the model was used to derive an estimate of grain production as a function of climate. It provides a data base that permits researchers to use the model to make estimates of the effects of climate on subjects of their interest. It suggests ways to improve the reliability of such estimates in given geographic areas.

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The research paper "Extinction Risk from Climate Change" published in the journal Nature in January 2004 created front-page headlines around the world. The notion that climate change could drive more than a million species to extinction captured both the popular imagination and the attention of policy-makers, and provoked an unprecedented round of scientific critique. Saving a Million Species reconsiders the central question of that paper: How many species may perish as a result of climate change and associated threats? Leaders from a range of disciplines synthesize the literature, refine the original estimates, and elaborate the conservation and policy implications. The book: examines the initial extinction risk estimates of the original paper, subsequent critiques, and the media and policy impact of this unique study presents evidence of extinctions from climate change from different time frames in the past explores extinctions documented in the contemporary record sets forth new risk estimates for future climate change considers the conservation and policy implications of the estimates. Saving a Million Species offers a clear explanation of the science behind the headline-grabbing estimates for conservationists, researchers, teachers, students, and policy-makers. It is a critical resource for helping those working to conserve biodiversity take on the rapidly advancing and evolving global stressor of climate change-the most important issue in conservation biology today, and the one for which we are least prepared.

Health impact, guidelines, temperatures, green house gas, atmosphere, global climate.

This paper discusses climate change and greenhouse gas data as of April 1992, including the findings given by the Intergovernmental Panel on Climate Change, Working Group One, in their 1990 report. Working Group 1, Intergovernmental Panel on Climate Change, Climate Change: The IPCC Scientific Assessment, Cambridge, 1990. The paper further analyzes technology and political considerations, including embryonic international treaty discussions. The critical importance of a stabilization of carbon dioxide emissions at 1990 levels by the major industrialized countries by 2000 is identified. The potential devastation of a failure to act is stated. This paper served as early research grounding for the Columbia University, Mailman School of Public Health, Climate and Health Program, which was the first world-class program of its nature. (Author's note, March, 2020: This paper is prescient in its relevance to today's climate change conditions. The scientific foundations were clear in these early reports.)

As the evidence and knowledge of the physical effects of climate change continue to grow, the world is starting to dissect how those physical changes (e.g. water scarcity, sea-level rise, increased temperatures), both current and predicted, will intersect with society and economies and the potentially significant environmental and human impacts that will result. Of emerging interest are the potential impacts of climate change on the enjoyment of human rights and well-being. Weather and environmental degradation have, as one of multiple stressors, threatened lives and livelihoods throughout history, but what makes this interaction more

relevant today is the growing evidence that greenhouse gases (GHG) emissions have contributed and will continue to contribute to long-term or permanent changes to our ecosystems and landscapes and will increase the frequency and severity of extreme events. This amplifies existing social risks and vulnerabilities and will therefore increase the pressures faced by many disadvantaged individuals and populations here in Canada and abroad.

Climate Change Journal and Notebook against ocean pollution, Sketch Paper 6x9.

Master's Thesis from the year 2006 in the subject Environmental Sciences, grade: merit, Lund University (LUMES), language: English, abstract: The precautionary principle is an old concept with a new character. Threats of harm, since the early days of civilization, were confronted by taking some form of precaution. Throughout history, the concept of precaution provided humans with the moral right to avoid potential harm or damage to his health and his environment despite lack of certainty of its occurrence. Today, the precautionary principle is a common legal concept in national and international regulatory policies. In a nutshell, it means that if there is threat or risk of serious or irreversible damage to human health or the environment, precautionary actions must be taken even though there is lack of full certainty surrounding the issue. This paper looks at the concept of precaution in the framework of international law. The precautionary principle is particularly applied in the current global effort to address climate change. Despite many uncertainties about the science and impacts of the global warming phenomenon, leaders of the global community, adopted the precautionary principle, instead of the traditional reactive wait-and-see approach, in the climate regime. Although criticized by many for its shortcomings and its marginal position in the practical sense, this paper looks at the legal validity of the precautionary principle based on its sources, rather than its merits. In other words, this thesis looks at the concept of precaution and examines it in the lens of the contemporary international legal system. The first part of this thesis endeavours to understand better the precautionary principle under international conventional law. Influenced by systems approach, this paper particularly analyzed the principle's relevance with the climate change issue. Guided by the legal positivist approach, the first part argues that the precautionary principle is a significant doctrine in international conventional law. The thesis also examines the precautionary principle in the context of international customary law. Keywords: precautionary principle, climate change, treaties, uncertainty, customary international law

This document reviews the various types of land use related to agriculture, including interfaces with various land uses, and how these uses may influence their roles as sinks or sources of greenhouse gases. Land uses & related management practices are reviewed for cultivated land, revegetated or set-aside land, pasture, rangeland, and degraded land. Greenhouse gas flux impacts of current land use trends are then evaluated, including impacts of deforestation, desertification, and increasing consumption of nitrogen fertilizers. Finally, gaps in existing research are identified.

Our climate is changing and the impacts are already being felt across Canada. Impacts ranging from shifting precipitation patterns to extreme heat events threaten the well-being of Canadians and will continue to do so at an increasing rate, even as the international community begins, hopefully, to undertake the crucial work of reducing greenhouse gas emissions, or "mitigation." Climate projections indicate that all Canadians will experience the impacts of climate change, at least to some degree, and almost all sectors of our economy will be affected by climate change; indeed, some are already feeling the brunt of pressures that will only worsen as time goes by. Because of these wide-ranging impacts on Canadians, climate change will have implications for many areas of social policy; it is therefore crucial that we prepare the policy arena for the problems climate change will cause, with or without mitigation. This approach is known as "adaptation."

Seminar paper from the year 2019 in the subject Politics - Environmental Policy, language: English, abstract: The first part of this essay deals with the general issue of climate change and the UN sustainable development goals. Having defined the general problem and impacts of climate change, the essay then turns into a discussion of climate crises more based on an enterprise level. The first part is about a critical assessment of Corporate Social Responsibility (CSR), in which recent literature of Banerjee (2007) and Levy & Spicer (2013) form the foundation. The second part deals with alternative model that are proposing to solve the current climate crisis in terms of political economy. For this purpose, recent contributions from Rockström et al. (2017) and Jackson (2009) were analysed. In conclusion, it appears that the only way to stop the climate change is through the revolution of energy. The goal is a worldwide energy supply exclusively from renewable energy sources such as solar, wind, and hydro power. This is primarily a task at governmental level, that is directed and enforced by UNFCCC regulations. The climate change poses a major challenge to the global community that can, however, only be tackled together. Every individual can contribute to this and many little deeds together will make a difference. The essential point is that everyone is aware of this and is acting accordingly.

While the IMF has been involved in the climate debate since at least 2008, a systematic account of how to integrate climate change into surveillance has been lacking to date. This paper seeks to fill the gap. It argues that domestic policy challenges related to climate change—such as adaptation efforts for climate vulnerable countries, or policies to deliver a country's Nationally Determined Contribution under the Paris climate accord—are covered by the IMF's bilateral surveillance mandate and therefore valid topics for Article IV consultations wherever these challenges cross the threshold of macro-criticality. Climate change mitigation is a global policy challenge and therefore falls under multilateral surveillance. The paper proposes a pragmatic approach that focusses especially on the mitigation efforts of the 20 largest emitters of greenhouse gases.

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