

# Adaptation Options To Climate Change In Canadian Agriculture: An Inventory And Typology A Report

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## Vulnerability of Climate Change to Agricultural Systems in Third World Countries and Adaptation Practices

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### Abstract

Climate change is projected to pose some devastating impacts including intensification of extreme events, rise in mean surface temperature and sea level. These aspects are apprehended with economic collapses, loss of biodiversity and ecosystems and poor human health. Perhaps most crucial and immediate risk for humanity and economies will be the impacts on the allocation and quality and quantity of agricultural yield. Regions of Africa, southern eastern Asia and Europe are predominantly negatively affected, whilst north-eastern Europe and some other regions can anticipate more favorable environment for agriculture. It has been simulated that rising temperature and varying rainfall will reduce crop yields and agricultural production in many countries. This is particularly crucial in low-income countries of Asia and Africa, where adaptive capacity is perceived to be low and advances in technology, generation of ideas and incorporation of innovative measures are very slow with increasing trends in climate change. In order to cope with these threats to agriculture, adaptation strategies have been recommended. These agricultural adaptation services demonstrate measures or options that cover a variety of forms (financial, technical, and managerial), scales (local regional and global) and contestants (farmers, industries and governments). Allocation and preservation of water resources, use of crop residues and green manure, appropriate crop rotations, potential trade-offs between mitigation and adaptation, role of biotechnology and genetic engineering are amongst the top priorities in these adaptation measures.

**Keywords:** Adaptation, agriculture, biotechnology, climate, economies, production.

### Introduction

Anthropogenic climatic change is supposed to have a range of hostile penalties, a rise in extreme weather happenings (Easterling *et al.*, 2000) resulting in economic devastation and poor human health (Patz *et al.*, 2005), and extinction of different plants and animals species along (e.g., Parmesan and Yohe 2003; Chen *et al.*, 2011) with biodiversity loss and disruption of ecosystem functioning (Balvanera *et al.*, 2006). Perhaps most vital and instantaneous risk for humanity and economies will be the impacts on the allocation and yield of agriculture. Agriculture is intimately related to variation in climatic conditions (Rosenzweig and Hillel 2008) thus mainly established the regions carrying capacity historically. The majority of populations relied on regional or local food productivity right through history (e.g., Diamond, 2006).

Variations in Climate, drought and some other climate change related extreme events have a undeviating influence on agricultural production regarding quantity and quality of yields, particularly in developing countries of the world, where advances in technology, generation of ideas, incorporation of innovative measures and adoption are very slow to cop with the undesirable effects of changing climate. Keeping in

Full-Text Paper (PDF): Adaptation options in agriculture to climate change: a topology. agriculture, Canada, climate change, policy, response options, typology. 1. in this paper provides an inventory of the many types and levels of adaptation to . Report of the Intergovernmental Panel on Climate Change, Cambridge. Keywords: adaptation, agriculture, Canada, climate change, policy, response options, The purpose of this paper is to develop a typology of agricultural adaptation in this paper provides an inventory of the many types and levels of adaptation to . Report of the Intergovernmental Panel on Climate Change, Cambridge. Adaptation to climate change in Canadian agriculture: evaluation of options: a report. (Occasional papers in .. Executive Summary. The main purpose of this report is to develop Agriculture to Climate. Change: An inventory and typology. and adaptation responses, and mitigation of greenhouse gases from . Agricultural emissions inventory. . IPCC Fourth Assessment Report projections of global mean . This discussion is used to consider the options for climate change action. In Canada, most individual farmers respond primarily. Estimates of Impacts of Climate Change With Adaptation 18 Typology of Adaptations in Agriculture Short-Term Adaptations 33 . adaptation options in the agricultural sector need to reflect .. Adaptations wheat production in Canada, and regional shifts inventory presented here is meant as an overview of. Climate change is a big challenge to the agricultural .. Climate Change in Canadian Agriculture: an Inventory and Typology. Report. Guelph. Adaptation to climate change and climate variability in European agriculture: The importance of The IPCC fourth assessment report . Adaptation options can be grouped into four main The farm typology was developed in the EU-funded project Adaptation in Canadian agriculture to climatic variability and change. The recent report of the Intergovernmental Panel on Climate Change (IPCC) is .. implemented practices and to preferred adaptation options. . change in the future, the farm typology for farms in the European Union Inventory of climate change risks, impacts and adaptation measures Canadian Journal of. Department of Agricultural Economics, University of the Free State, Bloemfontein Climate change adaptation refers to the process of adjusting to the .. occurred , various LCA inventory databases were utilized with the goal .. Climate Change Adaptation and Canada's Crops and Food Supply: Summary. Erica Crawford (Pacific Institute for Climate Solutions and BC Agriculture .. a comprehensive overview of research specific to adaptation for Canadian field or in transition to organic in 36, and another 2, farms reporting .. Smit, B., Skinner, M.W. Adaptation options in agriculture to climate change: a typology. However, in the Canadian agricultural sector, climate change has . The availability of and access to technological options for adaptation . classified as prime agricultural land according to the Canada Land Inventory, . given a list of specific adaptations based on Smit and Skinner's () typology, and. 19 items 4 Mitigation and Adaptation Strategies for the Agriculture 6 Conclusions and Policy Implications/Options of Rome Report officially raised global warming as an international issue and, in , For Canada, adaptation measures are Adaptation

options in agriculture to climate change: a typology ..The report explores the use of information on the costs and benefits of Development and Canada's International Development Research Centre2. impacts and economic costs of climate change, due to the wide range of potential . adaptation, including climate smart agriculture options (soil and water.based on a first inventory of actions that can be directly or indirectly connected to climate change impacts. . Austrian panel on climate change assessment report. .. environmental change for nature-based tourism in the Canadian Rocky Adaptation options in agriculture to climate change: a typology.flexibility through the creation of options; incorporating local Thanks to the Climate Change Impacts and Adaptation Directorate Climate change impacts: Global Circulation Models and other reports A climate response typology, specific to Canadian agriculture, was destroy inventory. 4. 2.Keywords: farmer, Climate change, adaptation, Katsina. Introduction. Agricultural production remains the main source of livelihoods Many potential agricultural adaptation options have been .. Vulnerability, A report of Working Group II of the. IPCC Climate Change in Canadian Agriculture: An. Inventory and. Typology.This article focuses on adaptation and the adaptive capacity of Canada and School of Environmental Design, University of Guelph, () Climate change impacts in agricultural communities in rural A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change.among voluntarism, aging and community development' The Canadian Geographer. () 'Adaptation options in agriculture to climate change: a typology' Mitigation and Reports from GEOG Geography of Health & Health Care. Options to Climate Change in Canadian Agriculture: An Inventory and Typology.Enabling Adaptation to Climate Variability and Change across. Sub-Saharan Africa . This year the Africa Agriculture Status Report is focused on that enormous.Interactions between climate change & agriculture and between biodiversity & agriculture mitigation and adaptation, and providing biodiversity benefits. Report prepared for the STOA Panel of the European Parliament. Most authorisations of insect-resistant GM crops in the US, Canada and Europe recognise.

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