

***TomorrowNow—
Manitoba's Green Plan:
Toward a New Provincial Climate
Change and Green Economy Plan***

Consultations Background Paper

Manitoba's Larger Emitters:
Reducing emissions, enhancing our resilience to
climate change and building a green economy

January 2015

TomorrowNow—Manitoba’s Green Plan

Preface

In 2012 the Government of Manitoba released *TomorrowNow—Manitoba’s Green Plan*, which includes commitments to update its climate change plan and create the first green economy action plan for Manitoba. As an initial step in this process, the province has asked the International Institute for Sustainable Development (IISD) to host a series of consultation sessions with key stakeholders on climate change and the green economy. Each meeting will focus on a specific sector, and will seek an open dialogue on Manitoba’s new climate change and green economy action plan.

Where Do We Stand?

Climate change threatens our social, economic and environmental systems on a global scale. Governments at every level are seeking to increase climate resilience, lower vulnerability to the impacts of climate change, reduce greenhouse gas (GHG) emissions, implement adaptive actions and participate in the newly emerging green economy. Manitoba is no exception to these efforts.

In 2008 the Government of Manitoba released its Beyond Kyoto climate change action plan (Government of Manitoba, 2008), which listed over 60 actions to effectively reduce GHG emissions across Manitoba’s economy and established initial actions to adapt to climate change. Although most of these actions were successfully implemented, Manitoba was unable to achieve the desired target level of GHG reductions. Figure 1 illustrates Manitoba’s emissions from 1990 to 2012.

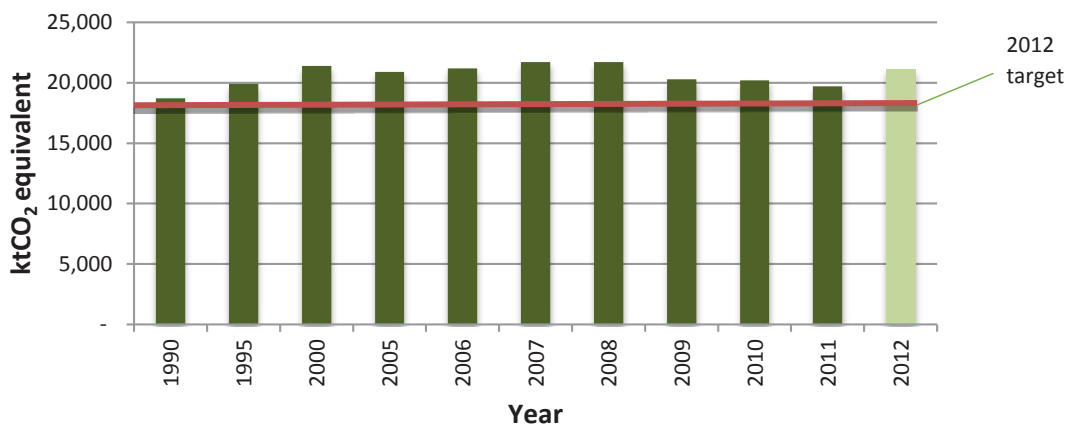


FIGURE 1: TOTAL PROVINCIAL EMISSION (IN KILOTONNES OF CO₂E) FROM 1990 TO 2012

Environment Canada (2014); Manitoba Conservation and Water Stewardship (2014).

The provincial government released *Manitoba's Report on Climate Change for 2012* (Manitoba Conservation and Water Stewardship, 2014) as the final report on performance under the Climate Change and Emissions Reductions Act (CCERA). This report noted that emissions at the end of 2012 were 500 kilotonnes (kt) lower than emission levels in the year 2000, but failed to meet the 2012 target goal of 6 per cent below 1990 levels. The majority of GHG reductions were attributed to the energy sector through the ethanol mandate (410 kt), implementation of regulations limiting the use of Manitoba Hydro's single remaining coal-fired facility (343 kt) and Manitoba Hydro's Power Smart programs (140 kt). The report also noted that in 2012 Manitoba Hydro, through electricity exports, had contributed to 6,300 kt of GHG emissions reductions in jurisdictions outside of Manitoba.

Manitoba is continuing its efforts to reduce GHG emissions, pursue green economic development and adapt to climate change. Public participation is integral to the policy development process, ensuring future policies and programs will motivate action to reduce emissions and compel us to take proactive steps to adapt. Moreover, it allows for the policy development process to be built from the bottom up¹ for an inclusive policy development process and a climate change and green economy framework that all Manitobans have a hand in creating.

Manitoba's Emissions by Sector

Manitoba has unique characteristics that drive emissions, adaptation needs and green economic opportunities. These characteristics shape the way that Manitobans respond to climate change and pursue resilient, low-carbon economic development.

Manitoba's **energy mix** presents opportunities as well as some challenges. Manitoba is blessed with abundant, stable, clean energy resources. The province has achieved a standard of approximately 98 per cent of locally generated electricity from clean, renewable sources with significant export capacity. This abundance allows Manitoba to adopt a flexible approach to the integration of new sources of energy to provide a backstop, such as geothermal, wind and biomass.

Manitoba provides a significant service to GHG mitigation in North America through clean energy exports that allow customers to switch from GHG-intensive fuels (such as coal) to hydroelectricity. While hydroelectricity exports cannot be counted against provincial GHG targets, they are a significant contribution to emission reductions in other jurisdictions, as they displace coal and natural gas-fired electricity.

Due to its importance to the provincial economy, as well as the relatively low carbon intensity of both the energy and industry sectors in Manitoba, the **agriculture sector** is the second-largest contributing sector to provincial GHG emissions (Figure 2). The size of the agriculture sector relative to the provincial GHG portfolio is unique: in only two

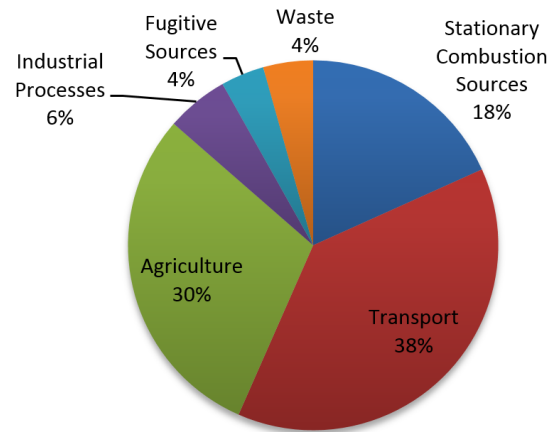


FIGURE 2: MANITOBA 2012 GHG EMISSIONS BY SECTOR
Source: Environment Canada (2014).

¹ Through a "bottom-up" approach, stakeholders' views and policy suggestions feed into the decision-making process for the Government of Manitoba, including priorities to be pursued under each plan.

other provinces does agriculture represent over 10 per cent of provincial emissions, and even there it does not approach 20 per cent. As a breakdown, the agriculture sector’s emissions include enteric fermentation, manure management and agriculture soils, where each contribute 25 per cent, 10 per cent and 63 percent, respectively, to the overall emissions in the sector in 2012 (Environment Canada, 2014).

The **built environment** and the **energy infrastructure** are not only emission sources—they are also vulnerable to the impacts of climate change. Extreme climate events threaten residential and commercial buildings, affecting the well-being of individuals and communities. These concerns also apply to the energy infrastructure, where extreme events such as ice storms and floods impact not only the ability to mitigate emissions but also energy transmission to local residents and business. As noted in the Insurance Bureau of Canada’s report *Telling the Weather Story* (2012), Canada’s insured losses, caused primarily by extreme weather events, amounted to CAD\$1.6 billion in 2011 and increased to CAD\$ 3.2 billion in 2013.

Developing the Next Climate Change Plan: What Have Other Jurisdictions Done?

The development of Manitoba’s next climate change strategy will take into account how other jurisdictions are proceeding on climate change policy development, and what influences external policies will have on Manitoba. Table 1 illustrates some of these policies.

TABLE 1. CLIMATE CHANGE POLICIES IMPLEMENTED IN OTHER JURISDICTIONS

JURISDICTION	ACTIONS	YEAR IMPLEMENTED
Federal government	Regulations for both heavy-duty and light-duty vehicle tailpipe emissions	2012
	Coal-fired electricity sector regulations	2012
	Negotiations with oil and gas and other industrial sectors	Ongoing
Quebec	New climate change action plan and adaptation strategy	2012–2020
	Launched first joint emissions trading with California	2014
	First auction of its cap-and-trade system	2013
British Columbia	Review of Revenue-Neutral Carbon Tax completed; tax retained at \$30 per tonne	2013
Nova Scotia	Finalized federal equivalency agreement for electricity sector GHG regulations	2012
Ontario	Released a climate change progress report and a report from the environmental commissioner	2013
	Emissions mitigation discussion paper	2013
	Phase-out of coal-fired power	Completed in 2014
Newfoundland & Labrador and Nova Scotia	Finalized hydroelectric link	2012
Alberta	Policy review of the Specified Gas Emitter Regulation	Deadline extended to June 2015

In past years, provinces had taken it upon themselves to act unilaterally or in partnership with other provinces and U.S. states to address GHG emissions, while federal policy remained either in development or stalled. The advent of federal GHG regulations raises the potential for conflict over jurisdictional control of emissions policy, which can have major influence over provincial economies. As a result, equivalency agreements are an option that would allow provincial approaches to GHG mitigation to take precedence over federal sector regulations. The most prominent early example of this was the equivalency agreement reached between the federal government and Nova Scotia that installed provincial regulations in place of proposed federal regulations for electricity (Nova Scotia Department of Energy, 2012).

Table 2 shows nine brief examples of what other jurisdictions have done specifically for the larger emitters sector.

TABLE 2. POLICIES REGARDING THE LARGER EMITTERS SECTOR IN OTHER JURISDICTIONS

JURISDICTION	ACTIONS
British Columbia	The Carbon Tax Act and the Greenhouse Gas Reduction (Cap and Trade) Act address climate change in British Columbia’s legislature. The legal framework of the Greenhouse Gas Reduction (Cap and Trade) Act sets out GHG emission reporting regulations and requirements for B.C. facilities emitting 10,000 tonnes or more of carbon dioxide equivalent emissions per year. Those reporting operations with emissions of 25,000 tonnes or greater are required to have their emissions reports verified by a third party. Reporting facilities are required to use the quantification methods established by the Western Climate Initiative (WCI). For the purposes of the reporting requirements, emissions from wood biomass or wood-biomass components of mixed fuels are excluded in determining the reporting thresholds. The data is collected annually and supports an ongoing provincial emissions inventory. Reporting regulation does not apply to public sector organization except for BC Hydro and BC Transmission Corporation (Government of British Columbia, 2008).
Alberta	In 2009 the province created the Climate Change and Emissions Management Corporation, a climate change fund to establish or participate in funding initiatives that reduce GHG emissions or improve Alberta’s ability to adapt to climate change. Alberta’s Specified Gas Emitters regulation identifies that existing large industrial facilities (100,000 tonnes or more annually) must reduce emissions relative to their production by 12 per cent below the facility’s average 2004–2005 baseline emissions intensity or pay CAD\$15 for every tonne exceeding that target. This money is funnelled into the Climate Change and Emissions Management Fund (Climate Change and Emissions Management Corporation, 2014).
Saskatchewan	The Government of Saskatchewan enabled the Saskatchewan Technology Fund, similar to Alberta’s Climate Change and Emissions Management Fund, which has the ability to collect payments from large emitters to invest in low emission and emission-reducing technologies (Government of Saskatchewan, 2009).
Quebec	The Quebec Regulation Respecting Mandatory Reporting of Certain Emissions of Contaminants Into the Atmosphere took effect in 2007 and resulted in amendments in 2012. The regulation applies to facilities that emit a contaminant listed in Schedule A of the regulation at or above a designated threshold level. Any facility that emits GHG emissions in a quantity equal to or greater than 10,000 metric tonnes of carbon dioxide equivalent must report those emissions annually. Any emitter reporting annual GHG emissions equal to or greater than 25,000 metric tonnes carbon dioxide equivalent (except for certain emissions referred to in the regulations) must send a verification report on its emissions report, carried out by an accredited organization (Government of Quebec, 2012). In 2014 Quebec linked its cap-and-trade system with California’s, and they held their first joint carbon auction on November 25, 2014.
Ontario	In 2009 the Government of Ontario introduced the Greenhouse Gas Emissions Reporting Regulation. All facilities that emit 25,000 tonnes of carbon dioxide equivalent or more per year are required to report GHG emissions data annually. Reporting facilities will be required to use identified standard quantification methods. Third-party verification, in accordance with ISO standards, is required (Government of Ontario, 2014).

JURISDICTION	ACTIONS
Government of Canada	In 2004 the Government of Canada announced the introduction of the Greenhouse Gas Emissions Reporting Program (GHGRP). The GHGRP applies only to the largest industrial GHG emitters in Canada. All facilities that emit the equivalent of 50,000 tonnes (50 kilotonnes) or more of GHGs in carbon dioxide equivalent units per year are required to submit a report (Government of Canada, 2014).
European Union	The EU Emissions Trading System covers more than 11,000 power stations and industrial plants in 31 countries, as well as airlines. Emissions are capped for power stations and other fixed installations, and this cap decreases each year by 1.74 per cent of the average total quantity of allowances issued annually in 2008–2012 until 2020 (European Commission, 2014).
Germany	The German funding initiative KMU-innovativ (innovative small and medium enterprises [SMEs]) launched in 2007 also promotes research and development projects aiming to increase energy and resource efficiency. The initiative’s overall goals are to strengthen cutting-edge research in SME and to introduce innovative businesses to the various specialist programs of the federal government (The Federal Government of Germany, 2009).
South Korea	The South Korean government has emphasized increasing strategic investments in research and development in the green sector, development of green SMEs, cutting-edge convergence industry and high value-added service industry, the creation of a national carbon emissions trading market, laying the structure for green finance and tax incentives for eco-friendly activities (Government of the Republic of Korea, 2009).

Building Blocks for Manitoba’s Climate Change and Green Economy Plan

The Government of Manitoba recognizes that a concerted effort is required to meet Manitoba’s responsibility to adapt to climate change and mitigate GHG emissions. Manitoba has committed to actions on climate change in a number of strategy documents, including *TomorrowNow—Manitoba’s Green Plan and Focused on What Matters Most: Manitoba’s Clean Energy Strategy* (Manitoba Innovation, Energy and Mines, 2012), as well as following up on the recommendations in the Auditor General’s 2010 Performance Audit on Managing Climate Change (Manitoba Office of the Auditor General, 2010).

Manitoba’s next plan will also require a consideration of the types of principles that are important for addressing climate change policy in Manitoba. These principles are expected to evolve and could include elements such as:

- Achieve GHG emissions targets in a cost-effective way that considers competitiveness
- Employ simplicity, policy coherence, transparency and administrative efficiency
- Treat sectors and facilities equitably
- Account for early action by industry leaders
- Use accurate and verified emissions data to support policy development
- Promote development and deployment of clean technologies
- Align with emissions reduction programs in other jurisdictions (linking)
- Integrate with other provincial environmental policies where possible

These principles are open to input and their discussion will be part of the consultation process for the new climate change plan and green economy plan. Manitobans are encouraged to share their views regarding which principles should be embedded in climate change action in the province.

Integrating Adaptation and Mitigation

The next climate change plan will integrate both adaptation and mitigation strategies, with an increased focus on adaptation. It will be important for the coming plan to consider the adaptation impacts of mitigation actions (and vice versa), as well as identify areas where co-benefits can be achieved and negative side effects avoided regarding mitigation or adaptation actions. The consultation process with stakeholders will seek input on how best to integrate a more balanced approach for adaptation and mitigation.

For adaptation, capacity building in key areas can assist Manitobans to undertake meaningful, informed action with regards to adaptation to climate change. Some examples of areas where capacity may be lacking include areas related to climate data and risk mitigation—an assessment of vulnerabilities and potential impacts is important.

Green Economy and Green Jobs

The development of a green economy action plan is one of the core pillars for the achievement of *TomorrowNow*'s goal in protecting the environment while ensuring a prosperous and environmentally conscious economy. The vision is of a resilient, low-carbon economy that respects environmental sustainability and supports social well-being. Sector-specific consultations are an important element in shaping Manitoba's green economy and green jobs by identifying opportunities and actions that feed into sector-specific comparative advantages within a sustainable development pathway.

The Role of Manitoba's Larger Emitters in the New Climate Change Plan and Green Economy Action Plans

Larger emitters play an essential role in climate change and the green economy, and therefore in the development of their associated plan under *TomorrowNow*. No single sector can bear the responsibility of reducing GHG emissions. The challenge is to adopt an efficient, fair and equitable approach for all involved.

To this end, the province has made significant progress in putting its GHG emissions reduction programs into practice. Manitoba launched the Climate Investment Pilot Program to help businesses measure and reduce their GHG emissions through the Corporate Capacity Building Grant and the Climate Mitigation Action Grant. In addition to hydroelectricity, the province has made a number of investments into other clean energy sources to leverage partnerships with the private sector for clean technology development (Manitoba Conservation and Water Stewardship, 2014).

In 2012 Manitoba's Emissions Tax on Coal Act came into effect. All revenues from this tax are being redirected to support the transition from coal to carbon-neutral biomass energy. The petroleum coke ban took effect in December 2013, while the coal ban is being phased in to allow the biomass energy sector to respond to growing demand (Manitoba Conservation and Water Stewardship, 2014). In addition, the province maintains a Green Registry website that is designed to help Manitobans obtain relevant information to measure, reduce and report their GHG emissions.

In 2010 the province undertook public consultations on cap and trade to explore mechanisms to reduce GHG emissions. However, compared to other Canadian jurisdictions, Manitoba's GHG emissions are released by many small emitters from a wide range of sectors, hence a cap-and-trade program would regulate only a small percentage of Manitoban industries that fall under large emitters (Manitoba Conservation and Water Stewardship, 2010).

The Waste Reduction and Recycling Support Program (WRARS) is a far-reaching strategy to encourage greater waste diversion rates and encourage sustainable waste management practices. Under the Climate Change and Emissions Act, owners and operators of prescribed landfills must submit an assessment of the potential mitigation emissions generated at the landfill. This also includes a plan for monitoring, controlling, collecting or using GHG emissions before they are released (Manitoba Conservation and Water Stewardship, 2011). In 2013 a landfill gas collection system at the City of Winnipeg's Brady Road Resource Management Facility became operational to capture and treat landfill gases.

Manitoba has also drawn up a long-term sustainable economic development plan for the north of the province in the Northern Development Strategy. This includes investment in hydroelectric energy and transport infrastructure, a fund for seed capital in development projects and a framework to promote sustainability (Manitoba Aboriginal and Northern Affairs, 2001)

Mandatory Reporting

Manitoba is committed to developing regulations for mandatory reporting of GHG regulations by larger emitters. This commitment was reiterated again in *TomorrowNow* (Government of Manitoba, 2012). In 2004, Environment Canada introduced the GHGRP, which applies to facilities that emit over 50,000 tonnes of carbon dioxide equivalent per year, replacing the 100,000 tonne threshold that has been in effect since the introduction of the program. There are no regulations dictating which calculation methodology reporting entities need to use (Government of Canada, 2014). Several provinces require reporting at 10,000- and 25,000-tonne thresholds. In developing mandatory reporting regulations, stakeholders' input is important in determining the scope of covered entities reporting thresholds, and protocols for measurement and verification.

Questionnaire

The questions below will feed into larger emitters sector-specific needs and opportunities in the new climate change plan as well as Manitoba's first green economy action plan. Written or verbal responses are welcomed. Written responses may be sent to tomorrownow@iisd.ca.

Action Plan Goals and Strategy

1. What are the current sector approaches and good practices in Manitoba and elsewhere in Canada to address climate change that can be built upon and enhanced over time?
2. What are the broad and specific barriers you see in Manitoba to the achievement of deeper emissions reductions by larger emitters?
3. What are unfulfilled opportunities in Manitoba to achieve deeper emissions reductions and create capacities to deal with extreme weather events with respect to larger emitters?
4. For larger emitters, what opportunities exist to increase collaboration with other jurisdictions to advance climate change goals?
5. What specific actions should be taken to effect a substantial reduction in GHG emissions by larger emitters?
6. What elements should Manitoba consider in its regulations for mandatory reporting for larger emitters?

Science, Information and Capacity Building

7. What types of information, capacity and tools are required by Manitobans to identify the actions they need to take in preparation for climate change? What mechanisms could be used to enable access to this knowledge?
8. How can we provide better access to Manitoba-specific climate data and climate projections, and the potential socioeconomic and ecological impacts of these projected changes?
9. What are the metrics to assess progress on actions taken to manage GHG emissions?

Encouraging Action Among Manitobans

10. In terms of actions responding to climate change adaptation and GHG mitigation, what are the responsibilities of citizens, the government and the private sector/industry when responding to climate change adaptation and mitigation?

References

- Climate Change and Emissions Management Corporation. (2014). About. Retrieved from <http://ccemc.ca/about/>
- Environment Canada. (2014). *National inventory report 1990–2012: Greenhouse gas sources and sinks in Canada*. Retrieved from <http://www.ec.gc.ca/ges-ghg/>
- European Commission. (2014). The EU Emissions Trading System (EU ETS). Retrieved from http://ec.europa.eu/clima/policies/ets/index_en.htm
- Government of British Columbia. (2008). Climate Action Plan. Retrieved from http://www.gov.bc.ca/premier/attachments/climate_action_plan.pdf
- Government of British Columbia. (2009). Greenhouse Gas (GHG) Reporting Regulations. Retrieved from <http://www.env.gov.bc.ca/cas/mitigation/ggrcta/pdf/ghgrr-paper.pdf>
- Government of Canada. (2014). Greenhouse Gas Emissions Reporting Program. Retrieved from <http://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=F3E7B38E-1>
- Government of Manitoba. (2008). *Beyond Kyoto*. Retrieved from http://www.gov.mb.ca/beyond_kyoto/
- Government of Manitoba. (2012). *TomorrowNow—Manitoba's green plan*. Retrieved from <http://www.gov.mb.ca/conservation/tomorrownowgreenplan/>
- Government of Ontario. (2014). Report greenhouse gas (GHG) emissions. Retrieved from <https://www.ontario.ca/environment-and-energy/report-greenhouse-gas-ghg-emissions>
- Government of Quebec. (2012). *The Quebec Cap and Trade System for Greenhouse Gas Emissions Allowances*. Retrieved from: <http://www.mddelcc.gouv.qc.ca/changements/carbone/Systeme-plafonnement-droits-GES-en.htm#regulatory>
- Government of the Republic of Korea. (2009). *Road to our future: Green growth*. Retrieved from <http://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=698&menu=975>
- Government of Saskatchewan. (2009). Saskatchewan takes real action to reduce greenhouse gas emissions. Retrieved from <http://www.gov.sk.ca/news?newsId=387f7573-1e28-4155-b0ca-06fd17b0d38e>
- Insurance Bureau of Canada. (2012). *Telling the weather story*. Retrieved from http://www.IBC.ca/en/natural_disasters/documents/mcbean_report.pdf
- Manitoba Aboriginal and Northern Affairs. (2001). *Northern Development Strategy*. Retrieved from <http://www.gov.mb.ca/ana/info/nds.html>
- Manitoba Conservation and Water Stewardship. (2010). *Public consultation on a proposed cap and trade system for Manitoba*. Retrieved from http://www.gov.mb.ca/conservation/climate/pdf/1453_cap_and_trade.pdf
- Manitoba Conservation and Water Stewardship. (2011). *Manitoba's Report on Climate Change for 2010*. Retrieved from http://www.gov.mb.ca/conservation/climate/pdf/2010_climate_change_web.pdf
- Manitoba Conservation and Water Stewardship. (2014). *Manitoba's Report on Climate Change for 2012*. Retrieved from http://gov.mb.ca/conservation/climate/pdf/2012_climate_change_web.pdf

Manitoba Innovation, Energy and Mines. (2012). *Focused on what matters most: Manitoba's Clean Energy Strategy*. Retrieved from <http://www.gov.mb.ca/ia/MobilePages/energy/cleanenergy.html>

Manitoba Office of the Auditor General. (2010). *Report to the Legislative Assembly: Performance audits*. Retrieved from http://www.oag.mb.ca/wp-content/uploads/2011/06/rtl_performance_audits_2010.pdf

Nova Scotia Department of Energy. (2012, December 17). Lower Churchill Project sanctioned by Emera and Nalcor Energy. Retrieved from <http://novascotia.ca/news/release/?id=20121217005>

The Federal Government of Germany. (2009). Progress report on the National Strategy for Sustainable Development. Retrieved from http://www.bundesregierung.de/Content/DE/_Anlagen/Nachhaltigkeit-wiederhergestellt/2009-05-13-fortschrittsbericht-2008-englisch.pdf?__blob=publicationFile

Published by the International Institute for Sustainable Development.

International Institute for Sustainable Development

Head Office

161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba, Canada R3B 0Y4

Tel: +1 (204) 958-7700 | Fax: +1 (204) 958-7710 | Web site: www.iisd.org

About IISD

The International Institute for Sustainable Development (IISD) contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change and energy, and management of natural and social capital, as well as the enabling role of communication technologies in these areas. We report on international negotiations and disseminate knowledge gained through collaborative projects, resulting in more rigorous research, capacity building in developing countries, better networks spanning the North and the South, and better global connections among researchers, practitioners, citizens and policy-makers.

IISD's vision is better living for all—sustainably; its mission is to champion innovation, enabling societies to live sustainably. IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States. IISD receives core operating support from the Government of Canada, provided through the International Development Research Centre (IDRC), from the Danish Ministry of Foreign Affairs and from the Province of Manitoba. The Institute receives project funding from numerous governments inside and outside Canada, United Nations agencies, foundations and the private sector.