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## **PICS News Scan – 20 December 2011**

Produced by [ISIS, Sauder School of Business, UBC](#)

Authors: [Neil Thomson](#), [Calyn Shaw](#), [Neil Salmond](#), [Kristina Welch](#)

Editors: [James Tansey](#), [Jessica Worsley](#)

The PICS News Scan is a weekly summary of the major climate-change related science, technology, and policy advances of direct relevance to the BC provincial and the Canadian federal governments and more generally to businesses and civil society. The News Scan focuses on cutting edge climate issues and solutions gathered by the fellows and faculty of [ISIS, a research centre at the Sauder School of Business](#), in partnership with the [Pacific Institute for Climate Solutions \(PICS\)](#). Access to some referenced articles may require a journal subscription or purchase of the article, and appropriate links are provided for this purpose. To be added to the News Scan distribution list or to provide content feedback and/or suggestions about interesting news items, please email [picsscan@uvic.ca](mailto:picsscan@uvic.ca).

Complementing the News Scan is the [PICS Briefing Note Service](#). This service provides timely and concise analysis, as well as suggested policy action, on issues related broadly to BC climate change mitigation and adaptation.

### ***Research Theme I: The low carbon emissions economy***

#### **What really happened in Durban – and will it be enough to combat climate change?**

*December 14, 2011.* Despite low expectations going into this month's United Nations Climate Summit (COP 17) in Durban, South Africa, the only thing 194 nations could agree on was to keep working on a replacement to Kyoto. More specifically, with the [Durban Platform for Enhanced Action](#), the world's major emitters have agreed to form a new climate deal by 2015 and to be legally bound by that agreement no later than 2020. This outcome was largely driven by the European Union's campaign to work towards a "roadmap" for climate action – an agreement on process and timelines, if not necessarily the details of a final framework.

In the meantime, the EU and nine other nations will sign up to new emissions reduction pledges under an extension of the Kyoto Protocol, which is being called [the second commitment period](#). This is expected to run until 2017 or 2020 and will give the market for carbon trading some of the certainty it was lacking in the lead-up to COP 17. In a disappointing but unsurprising move, Canada chose to withdraw from the Kyoto Protocol.



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The federal government's justification for withdrawal does not stand up to scrutiny. Minister of Environment Peter Kent suggested that the cost of complying with Kyoto would have been [\\$13.6 billion in total](#), or \$1,600 per family in Canada (or \$400 per person), although it is hard to comprehend where these figures originate. Canada, Kent says, would have to purchase [700 million tonnes of carbon dioxide](#) (CO<sub>2</sub>) offsets annually at the average price, according to Kent, of \$19 per tonne. However, at current prices in the global carbon markets (roughly \$6 per tonne), Kyoto compliance would cost less than \$4.2 billion a year nationally or about \$120 [per Canadian citizen](#). In 1990, the starting year for Kyoto, our GDP was \$583 billion and in 1997, when Canada adopted Kyoto, the GDP was \$614 billion. Today, Canada's GDP is \$1.8 trillion with expansion of the energy sector having been a major driver of the economy over the past 20 years. A charge of between \$120 and \$400 per person to cover the impact of our incremental growth in the economy and in emissions, [which Canadians appear to be willing to pay](#), sounds much more reasonable than Mr. Kent's suggestion.

With Russia and Japan also refusing to sign the extension, Kyoto will cover only 15% of the world's emissions during the second commitment period. The parties comprising the other 85% have agreed to voluntary reductions only until the legally binding plan can be agreed on and enforced by 2020. Analysts say that even these existing pledges leave the planet 1 billion tonnes of carbon short of where we need to be to avoid the most damaging effects of climate change. Any Canadian action on seriously addressing climate change now relies upon provincial governments. Quebec, Ontario and British Columbia (BC) are already showing leadership by moving to implement emissions reduction policies and carbon markets.

<http://blogs.scientificamerican.com/observations/2011/12/14/what-really-happened-in-durban-and-will-it-be-enough-to-combat-climate-change/>

## **Indigenous peoples call for REDD moratorium**

*December 12, 2011.* A group of indigenous peoples are calling for a halt to all [United Nations REDD](#) (Reducing Emissions from Deforestation and Forest Degradation) programs, claiming they are merely colonialism in a modern-day cloak. The [Global Alliance of Indigenous Peoples and Local Communities against REDD](#) issued releases during the COP 17 meeting in Durban stating that there are reports of indigenous peoples' rights being violated as a result of REDD and REDD+ programs in various countries. Land ownership is central to REDD, and in areas where indigenous land rights are uncertain or are not upheld, indigenous groups may lose land or fail to receive any of the expected benefits of REDD programs. Concerns are being raised that communities will lose access to their forests, food sources, and eventually traditional knowledge, and the future of forest carbon offsets is still uncertain.

BC has taken steps in the province to address First Nations ownership of carbon offsets, and has indicated in recent [negotiations the need for 'Offset Sharing Agreements'](#) to address the mechanisms by which offsets will be sold, traded, and counted. Reconciliation protocols with First Nations seek to [promote partnerships around forest management and create economic opportunities](#) for communities, though the specific details of how offset sharing will be executed have not been finalized. The broader issues of the United Nations REDD programs will help to inform and guide local conversations on forest carbon markets.

<http://ipsnews.net/news.asp?idnews=106187>

## **Research Theme II: Sustainable communities**

### **Pedal power study assesses cycling's climate impact**

December 12, 2011. A [new report](#) from the [European Cyclists' Federation](#) (UCF) says more cycling could help the European Union (EU) reach its emissions reduction targets. The EU has committed to reducing CO<sub>2</sub> emissions 80-95% below 1990 levels by 2050. Such long-term targets can only be met if transport emissions are reduced by an estimated 54% to 67%. The report says more than a quarter of these reductions could come from increased cycling. The figure would rise to 50% of the EU's target if all Europeans cycled 5 kilometres a day, according to one of the authors. The report includes a complete lifecycle emissions analysis, taking into account all aspects of the food production process – farm machinery, irrigation, the use of pesticides and fertilizers, as well as the CO<sub>2</sub> intensity of various foods – to account for the additional calorie intake required by cyclists. The report estimates the lifecycle emissions of cycling to be 21 grams of CO<sub>2</sub> per kilometre traveled, which is 10 times less than that of passenger cars.

The report includes recommendations that could be useful for BC policymakers. The [BC Climate Action Plan](#) calls for a reduction in the number of kilometres driven to help reduce the greenhouse gas (GHG) emissions from BC's transportation sector, which accounted for 36% of the province's total emissions in 2006. To support increased cycling, every municipality and regional district has been eligible since 2006 for \$250,000 in matching funds for new cycling infrastructure projects. While the [Climate Action Progress Report](#) does not provide an update on the effectiveness of this funding, increasing cycling in BC to European levels would certainly require further action. Recommendations include monetary disincentives for driving, such as road pricing, and non-price levers, such as more dedicated bike lanes and new parking policies. The report also recommends the empowerment of bicycle stakeholders by clearly identifying and evaluating the economic benefits of cycling. This would also have the effect of strengthening political arguments in favour of increased cycling infrastructure.

<http://www.euractiv.com/climate-environment/pedal-power-study-assesses-cyclings-climate-impact-news-509604>

### **California proposes rules to spur clean car growth**

December 7, 2011. California's [Air Resources Board](#) (ARB) is proposing [new rules](#) to reduce greenhouse gas emissions from vehicles. The new rules aim to put 1.4 million electric, plug-in and hydrogen cars on California roads by 2025. In terms of GHG emissions, the ARB expects the regulation to result in a 75% reduction by 2025, which would be an absolute reduction of 52 million tons of GHGs – the equivalent of taking ten million cars off the road. When the program is fully implemented, the annual fuel costs to operate a car will be reduced by an average of 25 percent, with an overall cumulative savings of \$22 billion by 2025. Economic analysis by the ARB indicates that the overall savings generated by the proposed rules will result in an additional 21,000 jobs in California in 2025, rising to 37,000 in 2030.

California is acting independently of US federal legislation. BC faces a similar situation, as it does not look likely that Ottawa will take any substantive action to address climate change. Due to BC's abundance of available clean energy, [plug-in electric vehicles have the potential](#)

[to significantly reduce greenhouse gas emissions](#) from the transportation sector. The [Plug-in BC Working Group recently announced](#) a host of [provincial programs to support increased use of clean energy vehicles](#) (CEV) in BC. The [CEV for BC](#) program includes point of sale incentives (ranging from \$2,500–\$5,000 depending on vehicle type), and a residential rebate (\$500 per station) for purchases of qualifying EV charging equipment. The provincial CEV strategy also includes an Infrastructure Deployment Demonstration Project, which involves funding for 400-1000 EV charging stations across the province.

<http://www.reuters.com/article/2011/12/08/autos-california-idUSN1E7B613C20111208>

### ***Research Theme III: Resilient ecosystems***

#### **Ocean acidification may directly harm fish: study**

*December 11, 2011.* Ocean acidification is [a well-known threat](#) to species that rely on calcification – such as shellfish and corals – with indirect impacts up the food chain. However, [a new study suggests](#) that the decrease in ocean pH due to CO<sub>2</sub> absorption may also directly impact survival rates of fish eggs and larvae. The researchers describe an experiment, repeated five times, in which the offspring of inland silversides (a common fish in estuaries) were reared under air with a CO<sub>2</sub> content of 400 parts-per-million (ppm; around current levels), 600 ppm (predicted by 2050) and 1000 ppm (predicted by 2100). Fewer than 30% of the fish survived one week under the 2100 conditions, as compared to current conditions, and those that did survive were 18% smaller.

This study implies that there is a new long-term threat to [BC's estuaries](#) and [\\$500 million aquaculture industry](#). Although the authors note the research is too specific to be generalized, they point out that estuarine fish like inland silversides are likely to be better adapted to more acidic water than fish in the open ocean. This would suggest that not just BC's farmed fish might be at risk, but marine stocks, too. The authors call for comprehensive early-life CO<sub>2</sub> sensitivity investigations, which would likely be of interest for all British Columbians who are dependent on this key industry.

<http://www.physorg.com/news/2011-12-ocean-acidification-fish.html>

### ***Research Theme IV: Social mobilization***

#### **Can gaming change the climate change conversation?**

*December 6, 2011.* At the recent [Gaming for Good event](#) in New York City, entries from around the world were evaluated on their ability to use computer games to affect societal change. Speaking at the event was Al Gore, who identified his top five picks and [spoke of the important role that private companies](#) must play to mitigate climate change. The Gaming for Good initiative is part of a growing conversation on the role that gaming can have in motivating change, and speaks to the creativity that is required to overcome barriers and apathy towards environmental issues. Other tools and [games are being developed by](#)

[researchers](#) as well, with the intent to engage audiences in a fun way while filling knowledge gaps.

In BC, LiveSmart launched a [program in 2010 called 'Apps 4 Climate Action'](#), aimed at Canadian software developers. The objective was to use the [Climate Change Data Catalogue](#), consisting of published GHG emissions and climate data from the BC government. The US Environmental Protection Agency (EPA) recently ran a similar initiative, [Apps for the Environment Challenge](#), and announced the winners in November. [Gaming, online tools, and visualization scenarios](#) are being increasingly used to engage audiences on a range of topics with more research needed to measure the impacts of these and other programs.

<http://mashable.com/2011/12/06/gaming-for-good/>

**Please Note:** This is the final news scan for 2011. We will be taking a short hiatus for the holidays and our next issue will be published on January 10, 2012. Happy Holidays from all of us at PICS and ISIS!



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