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PICS News Scan – 29 November 2011

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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.

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

Climate talks begin in Durban and the energy research imperative

November 17, 2011. A number of papers have been issued in the run-up to the 17th Conference of the Parties (COP 17**)** climate change negotiations being held in Durban, South Africa from November 28 – December 9, 2011. UNEP has released a report indicating that cutting emissions by 2020 to a level that could keep global temperature rise under 2ºC is technologically and economically feasible. The IEA has published a book offering guidance on successful renewable energy deployment policies and offers assistance to policy makers on how to avoid past mistakes and overcome challenges surrounding the deployment of renewable energy. Bill Gates has written on the need for the US to substantially increase (almost triple) government funding for energy innovation, which currently lags behind China, Japan, France and Canada. Over the past three decades, US government investment in energy innovation has dropped by more than 75%. In spite of delayed US action, Bloomberg reports that, 'renewable energy is surpassing fossil fuels for the first time in new power-plant investments.'

Mr. Gates remarks that, 'carbon-based fuels are prone to wild price gyrations and are causing the planet to overheat.' BC is well positioned to benefit economically when the US does move to increase its investment in renewable energy and clean technologies, thanks to years of progressive climate policies that have stimulated development of a vibrant BC-based cleantech sector. BC Minister of the Environment Terry Lake will be in Durban to share lessons learned from BC's experience and to represent the interests of the province's growing energy-technology industrial base. A new OECD publication points out how important it is for leaders to have the political courage to move their jurisdictions towards low carbon, climate resilient economies.

http://www.thegatesnotes.com/Topics/Energy/The-Energy-Research-Imperative

What's next for Keystone XL?

November 17, 2011. A decision regarding approval of the Keystone XL pipeline has been delayed by the Obama administration until 2013 – after the next US presidential election. The pipeline from Alberta's oil sands through the mid-western United States to the Gulf of Mexico may still be built, but the delay has renewed conversations about alternative pipeline routes that would serve Canada's booming oil industry. It has also invigorated talk about Enbridge's proposed Northern Gateway project, a 1,170-kilometre pipeline across northern BC to a new tanker terminal on the coast in Kitimat. Northern Gateway is a key component of the Canadian oil industry's long-term strategic planning, as it would allow the industry to diversify its markets and become more of a price maker instead of taker.

The Northern Gateway raises complicated issues for BC policymakers; they are under pressure from the Alberta and Canadian governments and the oil industry to support pipeline construction. The export of oil sands bitumen through Kitimat to Asian markets would generate hundreds of millions of dollars to government and billions of dollars to industry. The issue for BC is the perception that the province is taking all the risk while gaining little of the financial benefit. If BC does decide to support the Enbridge pipeline it will need to attach the appropriate price to the environmental impact associated with oil sands extraction and export, and to determine the correct regulatory mechanism to account for the associated emissions. The European Union is currently going through a process to categorize fossil fuels according to their CO_2 intensity, a move that will directly affect oil sands extraction and one that has been poorly received by both Alberta and Ottawa.

http://www.davidsuzuki.org/blogs/climate-blog/2011/11/pipe-dreams-whats-next-for-keystone-xl/

Research Theme II: Sustainable communities

United Nations predicts more frequent extreme weather

November 19, 2011. The United Nations Intergovernmental Panel on Climate Change (IPCC) has released a summary for policymakers on extreme weather risk. The report, approved line-by-line by Canada and all other participating governments, clearly links increased extreme weather events to human-caused climate change. Extreme weather

events include unusually dry summers, leading to increased forest fire risk, and more frequent large downpours. Among the low-regret solutions (i.e. those with co-benefits) proposed by the UN are improved land use planning, ecosystem restoration, and investments in drainage systems, weather-proofing of infrastructure and enforcement of high-quality building codes.

The Insurance Bureau of Canada says severe-storm-related water damage now comprises 44% of claims compared to just 22% in 1992. This has led to an increase in insurance premiums for all Canadian families. Most sewer systems have been designed to handle storms expected to happen only once every 50 years, but in the past two decades in Toronto alone there have been seven of these supposed one-in-50-year events. Swiss Re and Ernst and Young have also testified about the impact of climate change on disaster risk. In BC, most of the UN's proposed adaptations are handled by local and regional governments, suggesting a need to direct climate adaptation funding toward those jurisdictions.

http://www.montrealgazette.com/business/Report+sounds+stark+climate+warning/5736485/story.html

GHG bulletin highlights new high of atmospheric greenhouse gases

November 21, 2011. The latest release from the World Meteorological Organization's Greenhouse Gas bulletin announced that the world has reached a new high for anthropogenic greenhouse gas (GHG) emissions; the report also notes that the rate of growth has also increased. In other words, GHG emissions resulting from human activities are high and are rising faster than ever before.

Between 1990 and 2010, radiative forcing – essentially, the effectiveness of atmospheric greenhouse gases in retaining heat – increased 29%. According to the WMO, carbon dioxide emissions are responsible "for 85% of the increase in radiative forcing over the past decade and 81% over the last five years". Methane and nitrous oxide were also singled out as important contributors to the growing burden of GHGs in the atmosphere. Methane now accounts for one-fifth of the forcing associated with anthropogenic greenhouse gases released since 1750, and is released to the atmosphere by flatulent livestock, rice cultivation, the fossil fuel industry, biomass burning and decomposition processes in landfills. Following nearly a decade (2000-2008) of approximately constant concentrations, the methane content is again rising, for reasons that are not yet clear. A possible contributor is permafrost retreat in high latitudes, which may be releasing methane previously trapped in or below frozen soils. Pending better measurements from such potential source areas, this possibility remains speculative. The increasing abundance of nitrous oxide in the atmosphere reflects contributions from both land and sea. Bacterial processes in soils amended with nitrogen fertilizers and in oxygen-depleted subsurface waters in areas of the ocean convert nitrate to nitrous oxide, and these account for the growing atmospheric content of this important greenhouse gas. Nitrous oxide now contributes about 6% of the radiative forcing associated with anthropogenic greenhouse gas emissions.

A common sentiment among many scientists and concerned individuals is that society is not doing enough to limit GHGs, and the WMO bulletin demonstrates this. In BC, total GHG emissions have been rising since 1990, though per capita emissions have held steady over the same time period. What the studies do not show is a decrease in emissions, which is

needed if serious climate change implications are to be averted. The WMO bulletin highlights that governments and communities need to do more to reduce their emissions; reducing emissions intensities is not sufficient to address climate change if absolute emissions are rising. Some positive news in an otherwise dreary outlook – BC's carbon tax is having an impact on GHG emissions in the province. BC's gas consumption 'dropped by three percent compared to the rest of Canada', and BC holds the lead as the lowest per-capita gas consumer in the country.

http://climate-l.iisd.org/news/wmo-ghg-bulletin-highlights-new-high-of-atmospheric-greenhouse-gases/

Research Theme III: Resilient ecosystems

Effects of climate change to further degrade fisheries resources

November 20, 2011. A new study from University of British Columbia researchers shows how the effects of climate change are impacting fisheries. According to the report, gross revenues from marine capture fisheries worldwide are estimated at between US$80 billion and $85 billion annually. With ocean warming, many species will move further towards the poles and into deeper water. While fisheries in a few regions, such as the far north, may benefit from climate change, many other regions, particularly those in the tropics, can expect revenue losses. Fisheries are under threat from overfishing, pollution and habitat degradation, and the lead author Rashid Sumaila, of UBC's Fisheries Economics Research Unit says further losses due to climate change will occur unless action is taken.

Although UBC researchers led the study, the findings and recommendations are not specific to BC. However, the study makes a number of recommendations that are relevant to planning strategies in BC and Canada. The study recommends adaptation strategies including vessel buybacks, restrictions on the use of some gear types, and livelihood diversification measures. This week the Canadian Federal government and the province of Newfoundland announced a new lobster sustainability plan that will include the buying back of lobster licenses to prevent further decline. Similar programs could be useful in BC to help fish stocks adapt to climate change. According to the study, "Biologically, maintaining more abundant populations can help increase fish's capacity to adapt to environmental change. Curbing overfishing is crucial to making marine systems more robust and ready for changes that are already underway." More study and assessment is needed to determine the best course of action.

http://www.sciencedaily.com/releases/2011/11/111120134823.htm

Research Theme IV: Social mobilization

Public willing to pay more for greener urban spaces, British study shows

November 17, 2011. Research from the University of Sheffield suggests that people are willing to pay more for green urban spaces. On average respondents were willing to spend

about $600 (CAD) per year for such things as ornamental or full sized trees, natural vegetation, and other green rights-of-ways along rivers. Interestingly, the study noted that people were willing to pay the most for large trees and for areas which were allowed to maintain or regenerate to natural state, suggesting that natural environments are the most highly valued. The study, undertaken as part of the broader Valuing Attractive Landscapes in the Urban Economy (VALUE), has implications for land-use and urban planning, real-estate value, and other markets which seek to place value on existing or regenerated forested areas and other natural environments.

By demonstrating that people will indeed pay for natural green spaces, the research supports ongoing work by the UN's REDD+ programme to 'create financial value for carbon stored in forests'. The research is also particular relevant for regions of BC with ongoing disputes over forest conservation or the creation or maintenance of parks and green spaces. Demonstrating that people will pay to maintain or conserve green spaces highlights the 'use-value' of these places, and creates opportunities for new conversations around conservation and the economic opportunities of preserving forests.

http://www.sciencedaily.com/releases/2011/11/111117140627.htm