

THE CANADIAN SOCIETY OF ENVIRONMENTAL BIOLOGISTS Newsletter / Bulletin



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CSEB Newsletter Bulletin SCBE

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(Back cover) Blackmud Creek, northern flicker, fireweed & butterfly, muskrat.

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CSEB NEWSLETTER 2010

Vol. 67, Number 3 Fall 2010

The Canadian Society of Environmental Biologists Newsletter is a quarterly publication. The Newsletter keeps members informed of the Society's activities and updates members on the current affairs and advances in the field of environmental biology. This publication draws together the widely diverse group of Canadian environmental biologists through a national exchange of ideas. Members are invited to contribute papers, photos or announcements that are of a national biological and environmental interest. Letters to the editor are welcome. This is a volunteer non-profit organization and we rely on your participation to make the newsletter a productive forum for ideas and discussion.

All business correspondence, changes of address, undeliverable copies and membership applications should be sent to: CSEB National Office, P.O. Box 962, Station F, Toronto, ON., M4Y 2N9. **Editorial correspondence:** Gary Ash, Editor, e-mail: gash@golder.com

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LE BULLETIN de la SCBE 2010

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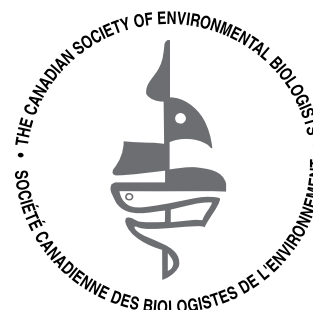
Le Bulletin de la SCBE est une publication trimestriel de la Société Canadienne des Biologistes de l'Environnement. Le Bulletin informe les membres des activités de la Société sur événements courant ainsi que les progrès qui font en sciences de l'environnement. Par un échange d'idées au niveau national, cette publication intéresse un groupe très diversifié d'environnementalistes Canadien. Les membres sont invités à contribuer des articles, photos (noir et blanc) ou des messages qui sont d'intérêt nationale en sciences biologiques et environnementales. Les lettres à l'éditeur sont bienvenues.

Tout la correspondance d'affaires, y compris les abonnements, les changements d'adresse, les exemplaires retournés et les formulaires: CSEB National Office, P.O.Box 962, Station F, Toronto, ON, M4Y 2N9. **Les lettres à l'éditeur:** Gary Ash, Editor, courriel: gash@golder.com

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The Canadian Society of Environmental Biologists**CSEB OBJECTIVES**

The Canadian Society of Environmental Biologists (CSEB) is a national non-profit organization. Its primary objectives are:

- to further the conservation of Canadian natural resources.
- to ensure the prudent management of these resources so as to minimize environmental effects.
- to maintain high professional standards in education, research and management related to natural resources and the environment.

OBJECTIFS de la SOCIÉTÉ

La Société Canadienne des Biologistes de l'Environnement (SCBE) est une organisation nationale sans but lucratif. Ses objectifs premiers sont:

- de conserver les ressources naturelles canadiennes.
- d'assurer l'aménagement rationnel de ces ressources tout en minimisant les effets sur l'environnement.
- de maintenir des normes professionnels élevés en enseignement, recherche, et aménagement en relation avec la notion de durabilité des ressources naturelles et de l'environnement, et cela pour le bénéfice de la communauté.

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NATIONAL News

PRESIDENT'S Report

Greetings, CSEB Colleagues!

The pressure to develop Canada's natural resources is strong and the need to do this in an ecologically responsible manner is very important. Yet with tight Government budgets the capacity and political will to ensure adequate environmental safeguards seems to be lacking. As environmental issues gain attention, it is important that biologists add their voice to the discourse.

One issue of interest is the 7-year review of the *Canadian Environmental Assessment Act*. It appears that the mandatory review of the Act is low on the Government's list of priorities and is advancing at a snail's pace, if at all. The CSEB will continue to press the federal Government to move forward on a meaningful public review of the Act.

CSEB provides an opportunity for biologists to learn about current issues and what's happening in the Canadian environmental scene. Our quarterly newsletter, conferences, and chapter meetings are examples of ways in which our members can benefit. Participation on our Board of Directors or Chapter Executives provides additional opportunities to learn and have influence.

The Executive Committee supports the sentiments expressed in Pat Stewart's letter to the editor. As a volunteer-based organization with no paid staff, we do indeed achieve success only when members get actively involved in CSEB projects and activities. Don't be shy about contacting any of our National Board members to see how you might help. I'd especially like to see some students and newer members get involved. "No experience necessary."

Next month is the Annual General Meeting of the CSEB. With a teleconferencing option, there is no good excuse to miss it. Please check our website for details and join us. I look forward to hearing from you!

Brian Free
President
bfree@cseb-scbe.org

LETTER TO THE Editor

WANTED: Help Revitalize CSEB!

CSEB needs members across Canada to take the initiative to make it a relevant, vibrant society. **Specifically, it needs members to set up local, informal, and student chapters in their regions.** Over the years, the core of committed individuals who keep the organization running has declined, and it has **reached a critical level.** The main reason for the decline is that we have lost the strength of our regional chapters.

Any organization relies on its grass roots. For CSEB, the roots were set in university biology departments and the recognition of the positive experience of biologists (then fish and wildlife biologists and now including environmental biology and environmental science) in getting together to share their experience, knowledge, friendship, and collective understanding. That hasn't changed. What has changed is that the roots have become disconnected from the soil.

This was brought to the fore this summer when our search for members interested in organizing a conference in Ontario was unsuccessful [virtually all the Ontario members were contacted]. Despite lots of support and kudos for the work we are doing, and the value of CSEB, no one had time to take the lead. This translates to us as **no one cares enough to make the effort for CSEB.**

Through our conferences, which many of you have attended, we've shown you the benefits and importance that CSEB has for biologists and for Canadian society and the environment. You also know that CSEB is unlike other professional biologists' organizations, in the weight it places on personal development and relationships, its concern for the environment, and its emphasis on knowledge and the 'big picture.'

CSEB has been kept alive by a small group of highly committed individuals, but it is becoming more difficult to keep this effort going in the long term.

We realize that some of the reasons for this situation are the demands placed on us by society, life, careers etc. But surely, at some point, we have to take the lead, as individual biologists, and follow what we think is important. Surely CSEB should rank highly in our priorities, as it represents the base from which our knowledge, careers, experience, etc. have sprung. **CSEB needs members to make a commitment to acknowledge the value of CSEB to them and make a personal effort to keep it alive. We've reached a point where we don't need just ideas, but we need individuals who will act on those ideas.**

Chapters and informal groups are easy to set up, it's as easy as getting together with a group of like-minded individuals agreeing to start something. Soliciting your biologist colleagues to be members is one thing. But putting efforts into starting student or university-based groups would be a more significant way to do it. This can be as simple as hosting speakers, offering student seminars, or holding wine and cheese events. These kinds of activities can form the roots of something much larger. The point is, only you can decide and take the initiative to do it.

We urge you to please think about this, and see what you can do to 'start the ball rolling' in your area. If you absolutely can't do this, there are other ways you can contribute, some of which are presented with this letter, but the efforts we have outlined must come first. We guarantee you that making a commitment to CSEB will be totally worth your effort.

Patrick Stewart, Atlantic Director
November 2010

2010 ANNUAL GENERAL MEETING PLEASE MARK THIS IN YOUR CALENDAR!

The 2010 CSEB Annual General Meeting will be held on Tuesday, December 7, 2010 at 6:30 pm EST. The in-person location will likely be in Calgary, Alberta and a web-based option is being investigated. Check the CSEB website early in December for the final details.

To join the meeting via teleconference, please dial in:
1-877-250-4348 Access code: 9225527#

(Or if you are located within the 416 area code, please use the local number 416-644-9541 with the same access code.)

At the AGM, you will hear reports from your Executive, including activities related to environmental issues, Society finances, membership and so on. Election of Board members will also be held. We'll also welcome your suggestions about environmental issues that are important to YOU!

And don't forget, nominations for the Executive Committee and Regional Directors are most welcome. Give some thought to becoming an "active" member. If you have a nomination, including yourself, please forward it to Past-President Shawn Martin (shmartin@eba.ca). If you are not sure which position would be suitable, please contact Shawn and I'm sure we can find you a place!

How You Can Help the CSEB

- **Contribute to the quarterly newsletter and/or website.** Give us an article on something you are interested in
- **Write a short paragraph about what you have been doing, articles or reports you have written**
- **Provide us with points of views on issues.** Your Executive is always interested in learning what issues concern you
- **Write a book review for the newsletter**
- **Become a Chapter Chair, or offer to join the Board of Directors**
- **Promote CSEB - put up a poster, distribute membership forms** - download from our website
- **Set up a Chapter** - contact any Director for help
- **Organize a CSEB event** - contact any Director for help
- **Attend the annual conference and maybe present a paper on your work.**

NATIONAL News

National Energy Board Announces Update Of Filing Manual

Submitted by Brian Free, President CSEB

The National Energy Board (NEB) is an independent federal agency whose main responsibilities include regulating the construction and operation of interprovincial and international oil and gas pipelines, international power lines and certain interprovincial power lines. The Board promotes safety and security, environmental protection and economic efficiency in the Canadian public interest.

The NEB has a Filing Manual that provides guidance to the proponents of these developments. It sets out the information they must present to the Board before it makes a decision on a project. Because the values and interests of the public continue to evolve, the NEB has decided to update the Filing Manual with respect to environmental and socio-economic assessment filing requirements.

Key areas for improvement include assessing environmental and socio-economic effects of a project and assessing the cumulative effects of the project in combination with other projects.

The CSEB has registered as an "interested party" and will be receiving information related to this review. If you have any background in NEB assessments or are just interested in this topic, please contact CSEB Director Joseph Hnatiuk for more information (hnaj@shaw.ca). Input will be accepted by the NEB until late December, 2010.



Lynx Re-introduction To Colorado A Success

Re-printed from Big Cat News, September 25th, 2010

A decade after dozens of lynx were captured in Canada and shipped to Colorado to launch the state's bid to replace its vanished population of tuft-eared wildcats, U.S. conservation officials have declared the project an unprecedented success and touted it as a model for future reintroductions of extirpated species. In fact, state biologists have already identified their next repopulation candidate — the wolverine, another creature that once lived in Colorado but is now largely restricted to Canadian habitats in North America.

The effort to bring the iconic lynx back to the forested mountains of southwest Colorado began in 1999 amid controversy over the program's million-dollar price tag. The project later endured failures that left some of the transplanted cats — natives of British Columbia Alberta, Manitoba, Quebec, Yukon and Alaska — dead from starvation or wandering unwanted into New Mexico, where they could be shot on sight.

Wildlife officials persisted with the experiment, and were able to loudly proclaim success after another bumper crop of kittens pushed lynx numbers above and beyond the point where a "self-sustaining population" had clearly been reached.

"Today is a proud day for the agency," Colorado Division of Wildlife director Tom Remington announced. "I applaud the wildlife professionals whose commitment and expertise have made the lynx project a success."

Even the state's top politician, Gov. Bill Ritter, issued a statement hailing the return of the lynx as a symbol of Colorado's rebirth as a nature haven.

"It's an example of what we can do when we have a vision and the will to see it through," he said.

The celebratory statements followed the discovery this spring of 14 kittens in five separate dens in the state, including two litters located outside the principal reintroduction zone — a key sign of the growing strength of the population.

And since several breeding-age female lynx are not wearing satellite collars to allow scientists to track them, officials believe there are many other newborns this year that haven't been documented.

"Analysis of observational data indicates that the cats' reproductive rate has outpaced mortality in the 11 years since the reintroduction program was launched, which is the hallmark of a self-sustaining population," said an overview of the achievement issued by the state's wildlife division. "DOW biologists believe lessons learned from this program could be helpful in developing a plan to reintroduce wolverine to Colorado."

Colorado's lynx reintroduction is one of several high-profile, bi-national efforts to restore long-lost wildlife populations to parts of North America where they had thrived before urban development and other forces catastrophically depleted species' critical habitat.

Officials managing reintroduction programs in the U.S. typically turn to Canada for supplies of animals to be transplanted. Controversial efforts to restore wolf populations in some parts of the U.S. have typically relied on imports of Canadian animals.

In another major bi-national effort to rescue an iconic endangered species, Canadian and American wildlife experts have been co-operating for decades to sustain the world's last natural population of whooping cranes, which migrates annually between Wood Buffalo National Park along the Alberta-Northwest Territories border to summer feeding grounds in Texas.

As part of that effort, eggs from whooping crane nests in Canada have been collected and hatched in U.S. bird sanctuaries to foster captive breeding populations.

Earlier this year, the discovery in Alberta of a dead lynx wearing a Colorado satellite collar was hailed as a promising sign for North American nature since U.S. habitats had evidently supplied enough rabbits and other prey to sustain the predator through its record-setting, 2,000-kilometre journey back to Canada.

Canada's Marine Ecosystems Face Threat: Report

Re-printed from The Canadian Press

A multi-year study by the federal government has produced a troubling report card on the health of Canada's marine environments, with major changes detected in all three oceans.

Vanishing sea species, warming water temperatures and a new wave of contaminants have struck Canada's marine ecosystems, according to the document from the federal Fisheries Department.

The 38-page report was released, without fanfare, this summer. The information surfaces as Canada joins delegates from more than 190 countries in Japan for the two-week UN biodiversity conference. Countries are expected to negotiate new targets to protect the world's ecosystems and save species from extinction.

One biodiversity expert calls the report card a reminder of how Canada has failed to live up to the UN's modest 2002 goal of reducing species loss.

"What we do know, from a biodiversity trend perspective, is that things have been getting worse — much worse," said Dalhousie University's Jeff Hutchings, who reviewed a draft of the report card for Environment Canada.

"What we don't know, to be fair, is what the consequences of those reductions will always be. But we have reasonable evidence in some instances to know that they're not going to be good."

Hutchings pointed to one possible fallout: altered ecosystems that could lead to extinctions. The 2010 Canadian Marine Ecosystem Status and Trends Report, part of a larger project launched in 2006 to gauge Canada's progress in protecting all of its species, examines nine regions across three oceans.

The report card's findings were incorporated into Environment Canada's overall biodiversity status update on terrestrial and marine ecosystems, which was posted on a government website.

Climate change, industrial development and ocean acidification have had some of the biggest effects on marine areas, the report revealed.

Overfishing has caused numerous commercial fish stocks to plummet. For example, the report said that one Pacific herring stock is "at record low levels of abundance."

In the Canadian Arctic Archipelago, warming ocean temperatures have decimated ivory gull populations by more than 80 per cent since the 1980s. The cause of the drop is unknown.

The coastline of the Gulf of St. Lawrence and its estuary have also been deteriorating because of human activities, such as shipping, aquaculture and pollution.

Some Improving Conditions

Still, the report also highlighted some improving conditions in Canadian waters. Some historically overharvested populations of marine mammals, such as the bowhead whale, beluga and sea otters, have rebounded.

Contaminants like PCB and DDT are also decreasing. However the presence of other pollutants, such as brominated flame retardants, have been on the rise.

The director of the University of British Columbia's biodiversity centre said Canada needs to balance key industries like fisheries and conservation to avoid economic disasters like the East Coast cod collapse.

"I recognize that it's difficult to know how to preserve something when preserving it will cost jobs," said Sally Otto, "But I think not acting is not the way to go."

The Department of Fisheries and Oceans did not immediately respond to a request for an interview.

Hutchings, the former chair of a committee responsible for advising the environment minister on species at risk, said the country needs to set quantifiable targets to actually reverse biodiversity loss, not just slow it down.

He said that no commercial fish species have been listed as endangered or threatened despite several recommendations made to Ottawa.

Hutchings also noted that Canada protects 9.45 per cent of its land mass, but just 0.64 per cent of its marine environment.

"And it's not as though we have a small coastline — we have the longest coastline in the world," he said. "We're not protecting very much of it."

Link to report: http://www.dfo-mpo.gc.ca/csas/Csas/Publications/SAR-AS/2010/2010_030_E.pdf

Read more: <http://www.cbc.ca/canada/north/story/2010/10/20/marine-report-card.html#ixzz131TpXEKz>

REGIONAL News

BRITISH COLUMBIA News

Prosperity Mine Not Approved

Submitted by Anne Wilson, 1st Vice-President, CSEB

Taseko Mines Limited is proposing to develop a high volume open pit gold-copper mine to be located 125 km southwest of Williams Lake, British Columbia. In addition to the mine and associated tailings and waste rock areas, the project includes an onsite mill, an approximately 125 km long power transmission line corridor and an access road. The proposed project would have a production capacity of greater than 75,000 tonnes per year of mineral ore. The mine site would cover a 35 square km area in the Teztan Yeqox (Fish Creek) watershed. The watershed, which drains to the Dasigox (Taseko River), includes Teztan Biny (Fish Lake) and Y'anah Biny (Little Fish Lake) and the surrounding area called Nabas.

The area was described by participants as a pristine, untouched, and unique ecosystem with exceptional vistas, clear glacial fed lakes and streams, relative remoteness and

abundant wildlife. A postcard featuring Teztan Biny was issued by GoBC as one in a series promoting tourism in the province. The mine would involve the destruction of Teztan Biny, Y'anah Biny and portions of Teztan Yeqox. A new lake, called Prosperity Lake, would be created as part of the fish and fish habitat compensation plan. The Project would result in the destruction of approximately 90,000 rainbow trout in Teztan Biny (Fish Lake) and Y'anah Biny (Little Fish Lake). For First Nations, lake trout are an important and well established food source when salmon populations are low.

Teztan Biny is also a fishing lake valued by recreational fishers.

The CEAA Report of Environmental Assessment was released July 2nd, and concluded that the project would result in significant adverse environmental effects on:

- Fish and fish habitat;
- Navigation;
- Current use of lands and resources for traditional purposes by First Nations and on cultural heritage; and
- Certain potential or established Aboriginal rights or title.

For a copy of the report, go to: <http://www.ceaa.gc.ca/050/05/description-eng.cfm?evaluation=4481> Following the release of the EA report, the Government of Canada considered the project and environmental impacts, before announcing a decision on the development.

Ottawa Vetoes Controversial Prosperity Mine Project in BC

By Wendy Stueck, Globe and Mail

November 3, 2010 – Vancouver - In a province that trades on its natural beauty, it came down to the business-friendly government of Prime Minister Stephen Harper to save a postcard-perfect lake.

Federal Environment Minister Jim Prentice announced Tuesday that the proposed Prosperity mine near Williams Lake in Interior B.C. could not proceed, citing significant adverse environmental effects that included turning Fish Lake – once featured in a tourism campaign – into a tailings dump.

The decision, which ended months of uncertainty and spiralling rhetoric over the \$800-million project, takes the lid off a bubbling conflict between Ottawa and the government of Liberal Premier Gordon Campbell, who had championed the project as a boon for the provincial economy.

In Victoria on Tuesday, B.C. Minister of State for Mining Randy Hawes insisted that Ottawa's rejection of the project is not a slap against B.C.

"I wouldn't call it embarrassing, I would just say disappointing," Mr. Hawes said.

The Liberal government will attempt to help Taseko Mines rejig its project and try again to win approval, he added.

"We should go back and take a look and see if there is a way this can be re-presented and restructured so it can work," he said.

The Prosperity project was seen by many in the province, especially in Williams Lake, as a lifeline for a forestry-dependent region crippled by slumping lumber markets and a pine beetle infestation. Located about 125 kilometres southwest of Williams Lake, the proposed mine has been on and off the shelf in B.C. for nearly 20 years, with the most recent plans in full swing since 2005.

Under a provincial review process, B.C. gave the Prosperity mine a green light in January, saying environmental effects would be outweighed by jobs, spinoff benefits and millions of dollars in tax revenue for regional and provincial governments.

In July, a federal panel – which did not take economic factors into account – found that the proposed mine would have significant adverse environmental effects on such things as fish and fish habitat and "potential or established Aboriginal rights or title."

On Tuesday, Mr. Prentice said the panel's report was "scathing" in its comments on the environmental impact.

The Tsilhqot'in National Government, which represents six bands in the area, was the main opponent of the project, saying it would destroy a pristine lake and threaten area watersheds.

"We finally feel that someone listened," said Tsilhqot'in Chief Marilyn Baptiste, who has spent years opposing the project. "The panel did a good job – they heard our voices, they came out here on the land, they went to the sites. I am extremely happy, and extremely grateful."

Tempers and rhetoric flared over the project, especially in Williams Lake, where several mills have closed and new jobs are in short supply.

In a statement, Taseko said it was disappointed in the decision and that it plans to meet with federal and provincial governments to look at options for the project.

Mr. Prentice said the Prosperity project could not proceed "as proposed," giving supporters hope that a revised proposal might fly. On the same day Ottawa gave a thumbs down to the Prosperity mine, it gave a green light to the Mount Milligan gold-copper mine near Prince George, a move widely seen as an attempt to soften the blow of the Prosperity decision.

Business interests have fretted that a decision against Prosperity would discourage mining investment in the province.

"This was the biggest and the most significant of the new metal mines planned in the province," said Pierre Gratton, CEO of the Mining Association of British Columbia. "We are concerned about the impact this might have on investor confidence."

ALBERTA News

Blackmud Creek Environmental Stewardship Project (Edmonton, AB.)

Submitted by Jim O'Neil, Golder Associates Ltd. and CSEB member

In 2010, Golder Associates Ltd. an environmental and ground engineering firm, is celebrating its 50th anniversary by delivering a series of employee-inspired "legacy projects" around the country. Environmental and ground engineering staff were challenged to develop projects that benefitted the community and the environment, while reinforcing the company's commitment to sustainability. The 35 legacy projects across Canada are as broad in scope as the skills and interests of the company's employees. The Golder office in Edmonton, in partnership with the Blackmud Community League and the City of Edmonton, is directing an environmental stewardship project on Blackmud Creek, which is a tributary to Whitemud Creek that enters the North Saskatchewan River within the City of Edmonton boundaries.

The watershed extends into adjacent counties and represents an area of about 660 km². As Edmonton's population has grown, agriculture, industry and municipal development have influenced the hydrology and ecology of the watershed. In spite of this development, a natural buffer has been retained around portions of the creek. This relatively intact riparian zone provides an important movement corridor between the Blackmud Creek ravine and the North Saskatchewan River valley for a variety of wildlife species, including moose, white-tailed deer, coyote, red fox, beaver, muskrat and silver-haired bat. It also provides seasonal and year-round habitat for a large number of bird species, including northern flicker, pileated woodpecker, red-tailed hawk, cedar waxwing, black-capped chickadee and pine siskin.



Photo 1: Man-made weir in Blackmud Creek
(Photo Credit: Karen Brown-Stefanyk)

The Blackmud Creek Legacy Project has three phases:

- An "Environmental Stewardship Day" on the stream (completed on Sept. 18, 2010) to raise awareness of the importance of groundwater, hydrology, vegetation

and land use in conserving the biodiversity of fish and wildlife resources in the area;

- The development of an interpretive sign for the site, which highlights the natural resources in the ravine, identifies potential risks due to land use and human influences and points out the need for Environmental Stewardship by industry and community residents (sign currently being reviewed by partner groups); and
- The creation of an educational book on Environmental Stewardship based on the materials developed specifically for Blackmud Creek by the various disciplines (ground water and surface water hydrology, vegetation, wildlife, fisheries); the book will be distributed to local schools and libraries during the winter 2010-2011.



Photo 2: Natural habitat in Blackmud Creek
(Photo Credit: Dale Doram)

The Environmental Stewardship Day was a great success, with the event attracting many Golder staff, community members and a number of political dignitaries. The group carried out an inaugural stream cleanup, participated in an Environmental Passport Challenge (see newsletter cover photo), and enjoyed an afternoon BBQ. The passport challenge showcased a series of interactive educational stations with live demonstrations, talks and presentations by Golder employees and other participating groups which included Yellowfish Road, Nature Nuts, Play Rangers, John Janzen Nature Centre and the City of Edmonton Master Naturalist Program.

For more information, contact Jim O'Neil at jponeil@golder.com

SASKATCHEWAN News

Province Releases New Provincial Fisheries Management Plan

The new Provincial Fisheries Management Plan released this summer outlines the Government of Saskatchewan's plan for maintaining healthy, sustainable fish populations and habitat that provide diverse benefits for Saskatchewan people.

"Our plan will guide fisheries management in Saskatchewan over the next decade and beyond," Environment Minister Nancy Heppner said. "It will build on partnerships and ensure our fisheries are used in a sustainable way, promoting economic and social growth for the benefit of the people of Saskatchewan."

Over the past three years, the Ministry of Environment has gathered the views of the public, First Nations and Métis, communities, businesses and organizations across the province on the future of fisheries management in Saskatchewan.

"The Provincial Fisheries Management Plan will maintain the traditional and cultural activities we enjoy today, while ensuring sustainable fish stocks," Heppner said.

The plan includes 10 principles to provide guidance on how the plan will be implemented and identifies outcomes and objectives. The key challenges to achieving these objectives are identified and a number of actions and management approaches are recommended. Performance indicators are identified in the plan to help measure the government's success in achieving plan outcomes. Regular review of the progress in implementing the plan and its impact to the fishery will result in ongoing evaluation of, and improvement to, policies, procedures and legislation. The plan is available at www.environment.gov.sk.ca/fisheriesmanagementplan.

For more information, contact: Michele McEachern
Environment Regina Phone: 306-787-0412
Email: michele.mceachern@gov.sk.ca

MANITOBA News

Manitoba Announces Plans For Aboriginal Interpretive Learning Centre

Submitted by Bill Paton, CSEB Regional Director

This Waabanong Anishinaabe Learning Centre will provide a suitable location for learning to take place at the gateway to Manitoba's east side, an area recognized internationally as the heart of the world's last remaining intact boreal forest. This will complement the UNESCO World heritage designation for an area of the east side boreal forest. The province is providing the \$2.5 million capital cost of the project scheduled to begin construction next spring.

"The First peoples of Manitoba have a unique relationship with the land, waters and animals that have sustained our people here for thousands of years," said Aboriginal and Northern Affairs Minister Eric Robinson. "This will be a place for Aboriginal people to pass on teachings of our ancestors in a way that honours this unique relationship by protecting the land for future generations."

Creation Of New Provincial Park

Conservation Minister Bill Blaikie is seeking public input on proceeding to designate Birch Island Park Reserve as a provincial park. The park is about 150 kilometres north of Dauphin. The area features a diverse mix of forest and muskeg habitats on land, and small islands and reefs on the lake that are used by colonies of nesting birds. The designation would legally protect the park area from commercial logging, mining, hydroelectric development, and oil and gas development, while continuing to respect Aboriginal rights in the area. Input may be e-mailed to parksystem@gov.mb.ca

Is There A Genuine Government Commitment To Cleaning Up Lake Winnipeg?

By Bill Paton, CSEB Regional Director

In mid-September a joint agreement was signed in Winnipeg by M.P. Vic Toews, representing the Federal Government and Christine Melnick, the Water Stewardship Minister in the Manitoba Government. This was the first step in the creation of a new authority that would head up the cleanup of Lake Winnipeg and manage water quality throughout its basin.

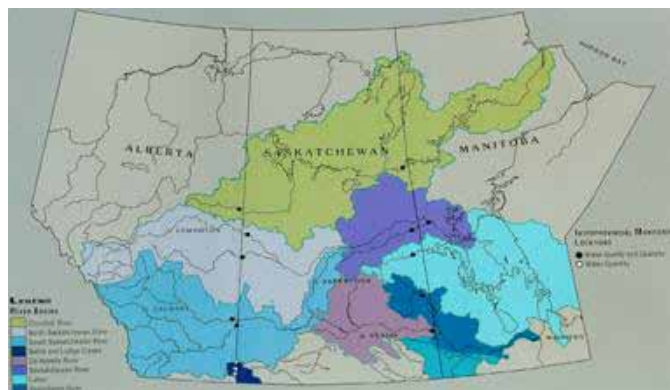


Figure 1: Lake Winnipeg Drainage System in Canada (4 Provinces including Ontario not shown)

North Dakota and Minnesota also contribute nutrients to the Lake drainage and clearly the Province and the Canadian Government have no control of water quality management in these jurisdictions.

The Canadian Government has delayed the signing of this agreement for 5 years. If it had been signed in 2005 when first proposed by the then Liberal Government, we could be so much further ahead in dealing with this problem. The co-author of the 2005 report *Restoring the Health of Lake Winnipeg* Terry Duguid has commented recently "To save Lake Winnipeg, it will take a major federal effort like that done for the Great Lakes. What they've done (to this

point) is approve small projects that are worthwhile, but really only merely tinkering.” I would be even more critical in that the projects being funded are all in areas where the answers are already well demonstrated and published in the scientific literature. One could perhaps suggest that these small grants are more politically motivated than scientifically or practically assessed to address the fundamentals of Lake Winnipeg’s recovery.

Manitoba Minister, Christine Melnick added that the province will focus on scientific research into what ails the Lake and how it can be reversed. However, the problems with this Lake were recognized in 1974 when a task force warned about cyanobacterial blooms, etc. In 1976, a conference arranged by the Manitoba Environmental Council (advisory to the Minister) highlighted the need to address reactive phosphate levels in Manitoba surface waters. Both of these issues were largely ignored by successive governments, and legally enforceable phosphate standards still do not exist for Manitoba surface waters. Meantime, cottage development continued on the drainage basin and the Lake, with increased potential for sewage/septage leakage and fertilizer runoff. Sales of agricultural fertilizers shot ever upward, and massive increases in the provincial hog population further impacted on the Lake.

Finally, in 2003, the Manitoba Government laid out a 6-point plan for the Lake, and in 2007, Ottawa committed \$18 million towards getting a better idea of water quality and the biology of the Lake. The research vessel the Namao was equipped by Environment Canada and has proceeded to assess Lake water quality and impacts on the biota.



Figure 2: The modified coast-guard vessel the Namao

Clearly, blooms of toxic cyanobacteria have been a very major issue, and yet in a request for funding to Environment Canada in 2008 to isolate and investigate potential dangerous health products of these organisms, particularly those that may bioaccumulate in fish, the request was denied, since Environment Canada did not see the relevance of such research to Lake Winnipeg. It is also noteworthy that the decision was supposed to have been made by May/June but was not announced until late August – too late to carry out the work in that year anyway!



Figure 3: Cyanobacterial scum on shores Lake Winnipeg Summer 2010

In the current request for proposals, Environment Canada has gone one step further to exclude serious academic researchers from this program. How many industries, communities, or farm organizations are going to sponsor researchers to address their nutrient loading into the drainage basin? Applicants are now expected to have at least one-third of the total dollars in matching funds provided by other contributors.

“The Fund’s contribution is generally limited to one third of project costs and targets one-third provincial contribution. However, in some cases the Fund may provide up to two-thirds of the total” (Fund total \$3.6 million over 4 years).

The opportunity for the latter funding option is not explained. How the Provincial Government becomes involved is not clarified.

The process starts with a Letter of Intent, which normally one would think would be assessed scientifically, and on those merits, a full proposal would be invited. No, the Letter of Intent is screened by a bureaucrat with no science background, who looks at the dollars requested and adjudicates the LOI on the basis of a statement of the precise maximum dollars expected from the Fund. This number is difficult to be precise about when other funds in cash or in kind are unconfirmed until approved by other contributors. However, that argument bears no weight with the bureaucrat, who insists that a precise federal dollar contribution must be identified!

In my experience with other granting agencies that require a private sponsor(s), this goes a long way to reduce dollars spent and encourage less critical research. Time will tell whether all of the \$3.6 million will be spent and whether Lake Winnipeg will be helped in the process.

ONTARIO News

Ontario's Environmental Commissioner Reports On Government Inaction

*Submitted by Wendy Thomson, Ontario Director;
Press release from the Ontario Environmental Commissioner*

The government is failing to follow through on all of its environmental promises, says Environmental Commissioner Gord Miller. "This government rightly prides itself on the progress it has made in passing legislation to protect the environment," says Miller, "but actions on the ground often undermine it."

In his 2009/2010 Annual Report, Miller points to a number of cases where bureaucratic or political inaction has ended up threatening the environment and undermining the government's stated environmental policies. The Environmental Commissioner's report found:

- The Ministry of the Environment has failed to keep an up-to-date inventory of closed landfills that could be polluting nearby groundwater.
- Municipal wastewater discharges are worsening the pollution of our Great Lakes because the Ministry of Environment's discharge rules fail to factor in the rapidly increasing population of southern Ontario.
- Ontario's air quality standards are not airtight, allowing the government to exempt whole sectors of industry from tougher provincial rules.
- One billion more trees need to be planted in southern Ontario - far more than the government's target of 50 million trees by 2020 - to conserve biodiversity and respond to the challenges of climate change.
- Legislation has been introduced to protect half the boreal forest in the Far North, but ineffective oversight by the Ministry of Northern Development, Mines and Forestry has allowed mining service companies to set up illegal camps and landing strips.
- The government made a commitment to protect the dwindling number of caribou in the province. But the Ministry of Natural Resources has not protected their habitat from mining or forestry to prevent their likely disappearance from Ontario.

The Environmental Commissioner also says Ontarians need to develop a new approach to conservation, or face the significant consequences of climate change and biodiversity loss. Miller says "current policies have already degraded the environment in the long-term and significantly compromised the ability of future generations to meet their needs. We must make do with less, and use what we have more wisely. This is not a choice for us but a reality imposed by the world we have created."

The chapters cited above and the entire 2009/2010 Annual Report can be found at www.eco.on.ca/eng/

Quebec News

Quebec Calls For Drilling To Stop On Disputed Energy Deposit Near Newfoundland

*Reprinted from The Canadian Press On-Line Edition
20 October 2010*

The Quebec government is calling on Ottawa to stop awarding new drilling permits for a disputed offshore fossil-fuels deposit near the Newfoundland border. The Old Harry hydrocarbon field has been the source of a heated feud between Quebec and Newfoundland and Labrador for years.

Quebec's natural resources minister says no new activities should be permitted on Old Harry until a formal agreement is reached between the provinces and the federal government. Nathalie Normandeau tabled a motion on the issue in the provincial legislature on October 20th. Quebec is calling on the Canada-Newfoundland and Labrador Offshore Petroleum Board to stop awarding permits for drilling and seismic testing until ongoing environmental studies are complete. She says the reports are due in 2012.

Normandeau says the matter is urgent because Newfoundland has already conducted test drilling at the Gulf of St. Lawrence site. Old Harry is thought to contain either as much as two billion barrels of oil, or five trillion cubic feet of natural gas. The Halifax-based company Corridor Resources Inc. recently obtained a licence from Newfoundland to go ahead with exploratory drilling in an uncontested area of Old Harry.

Editor's Note: CSEB Members – Is this an issue CSEB should be addressing? If so, please contact one of the CSEB executive (see page 1 for contact information).

ATLANTIC News

Go-ahead for Nova Scotia Biomass To Energy Project

Submitted by Patrick Stewart, Atlantic Region Director

A large scale forest biomass to fuel project has been approved by a Nova Scotia regulator with the support of the Nova Scotia government.

The Nova Scotia Utilities Review Board gave an approval in mid-October to Nova Scotia Power Inc. (NSPI) the local power utility and NewPage Inc, a pulp and paper manufacturer on Cape Breton Island, to generate and sell power from wood waste. The project has been widely

condemned by the public and environmental groups because it is expected it will lead to more clear-cutting of forests, as well as pushing down the market price of wood. NSPI is looking to the project to help it meet sustainable energy targets imposed by the Province.

The Halifax Ecology Action Centre made a presentation to the public hearings surrounding the approval outlining the case that burning of forest biomass leads to a net increase in greenhouse gas emissions. In addition the expected increase in clear-cutting will cause inestimable environmental damage to Nova Scotia's already small forest resource. Clear-cutting leads to increased peak runoff, sedimentation, fish habitat destruction, changes in water balance, and local microclimate changes as well as loss of habitat for forest species. They commented that a project of this nature and scope (the project would result in harvesting of 26,000,000 tonnes of forest biomass over a 40-year project life) would not be approved in nearby jurisdictions including the New England states.

The decision came as a panel of Nova Scotia experts prepared to release the *Nova Scotia Forest Strategy* containing recommendations on sustainable forest practices.

TERRITORIES News

Submitted by Anne Wilson, 1st Vice-President, CSEB

Greetings to all from Yellowknife! Although it is still technically fall, winter has settled on most areas of the North. It is one of the nicest times of the year, with temperatures between -10 °C and 0 °C and with the bonus of being outside without any bugs. Late October still has about 8 hours of daylight, and I love the sight of the stark contrast of still-open water against snow-covered Shield rocks. Field programs have been wound up, and a steady stream of lab results are making their way to our desks, ready to be compiled, interpreted and reported. Equipment is being cleaned, serviced and stored away for the fall, and we are settling in until the ice forms and winter programs can gear up.

Summer brought a brief hiatus in the frenzied pace of environmental assessment and regulatory activity which seems to be a regular feature in the North, but that ended with the submission of several project descriptions, and there are more to come with several major Environmental Impact Statements to hit our desks before year end.

Project Updates: Mining:

- In the NWT, the Prairie Creek Mine Project environmental assessment has moved forward with the April submission

of the Developer's Assessment Report (DAR) and recent rounds of Information Requests to the Developer. The mine site is virtually surrounded by the expanded Nahanni National Park, and the winter road goes through the Park, so there is a lot of scrutiny being given this proposal.

- The Fortune Minerals NICO cobalt-gold-bismuth-copper project is still caught in land tenure wrangling and jurisdictional challenges. The latest round is an application to the Supreme Court of the NWT contesting the Review Board's decision to allow the Environmental Assessment to proceed. The Tlicho Government is insistent that the Mackenzie Valley Environmental Impact Review Board place the environmental assessment in abeyance while road access/tenure is settled.
- The Giant Mine Remediation Project DAR was released at the end of October, and if the process stays on track, we expect to go to public hearings in mid-May. The project includes the containment of 237,000 tonnes of arsenic trioxide dust currently stored underground, and the first test thermosyphons have been installed to freeze the first arsenic vault.
- No further word on Tyhee NWT Corp.'s Yellowknife Gold Project with respect to submission of their DAR, which was to follow completion of the pre-feasibility study in mid-2010.
- De Beers and Mountain Province have announced positive feasibility results for the Gahcho Kue Diamond Project, which will soon be moving ahead with the Environmental Impact Review. We expect the release of the Environmental Impact Statement by the end of 2010. This project has some interesting aspects around partially dewatering a lake, mining the ore beneath it, then backfilling two of the three pits and rewatering the lake at closure.
- Avalon Rare Metals Inc.'s Nechalacho Rare Earth Elements Project has been referred to Environmental Assessment following submission of their project description and permit applications. The proposed rare earth and metals project is located in the Thor Lake area of the NWT (just north of the Hearne Channel of Great Slave Lake). An underground operation is proposed, along with a processing plant and tailings management area near Thor Lake. A hydrometallurgical processing plant is proposed to be located at the old Pine Point Mine site. Extraction of rare earths from the ore is complex, with extensive steps using various reagents and processes. With the recent trade restrictions China has placed on shipments of rare earth elements and metals there is a lot of impetus for REE exploration and development across Canada.

Information on current projects undergoing assessment is available from the Mackenzie Valley Environmental Impact Review Board site at <http://www.reviewboard.ca>

- The 3 active diamond mines (Ekati, Diavik, and Snap Lake) in the NWT continue operations, and have wound

up aquatic effects monitoring until the ice forms. Work is underway to review and revise the Snap Lake monitoring program as appropriate, and this will occur in conjunction with the water licence renewal process.

- The closed Jericho Mine which was constructed by Tahera Diamond Corp. has been purchased by Shear Minerals, who are doing a 2 year exploration program in hopes of subsequently re-opening the mine.
- In October North American Tungsten announced the re-start of production at the CanTung Mine. The mine has been continuing its environmental monitoring under the Metal Mining Effluent Regulations, as have several other closed mines (Lupin Gold Mine, Giant Mine, and the Con Mine).

Information on projects in the Mackenzie Valley jurisdiction of the NWT can be found at <http://www.mvlwb.ca/default.aspx>.

Nunavut is seeing a fair amount of activity as well on a variety of projects:

- The environmental assessment for the AREVA Resources Canada Inc. Kiggavik uranium property is underway, and will proceed to scoping in the near future.
- Agnico-Eagle Ltd. will do further exploration at the Meliadine Lake gold property, which it purchased from Comaplex Minerals earlier this year, followed by a feasibility study.
- Newmont Mining Corp. is proceeding to develop the Doris North gold project and working concurrently on a project description for a regional development of the adjacent Hope Bay area deposits. Phase 2 will include the incremental development of the Hope Bay Greenstone Belt as a mining district through a series of underground and open pit mines, processing tailings facilities, and infrastructure including but not limited to an expanded port, new airstrip, wind farm, camps and roads that connect the Roberts Bay port to the Boston property. The Phase 2 Project will permit them to expand production mining and milling to include the Madrid and Boston deposits and to complete mining of the Doris deposit.
- Although there has been no movement on other mining projects, including the base metal properties held by MMD Minerals at High Lake, Ulu, Lupin and Izok Lake, current commodities prices will likely push these forward.
- Sabina Silver Corp. is revisiting the Preliminary Economic Assessment of their resource at the proposed Hackett River Mine (lead, silver, copper, lead, and gold), and will re-evaluate the Pre-Feasibility Study which was started in 2007.
- Between takeover bids, Baffinland Iron Mines Corp. expects to submit their Environmental Impact Statement in the near future, and has added a haul road to the options for getting ore to port.
- Meadowbank is undergoing an environmental assessment for an expansion of the airstrip which extends into the adjacent lake.

In Nunavut, information for environmental assessments can be found on the public registry at <http://ftp.nirb.ca>

Hydroelectric:

Taltson Hydro Expansion: The Mackenzie Valley Environmental Impact Review Board released the Report of Environmental Review with their decision that the project could proceed subject to certain measures, and subject to the transmission line route being negotiated with the Lutsel K'e Dene First Nation. Given their adamant rejection of the transmission line going through their territory, it appears unlikely this development can proceed.

Slave River: The NWT Smith's Landing Band rejected this development based on concerns with flooding of traditional lands just south of the NWT border; venture partners TransCanada Corp. and ATCO Ltd. have shelved the planned \$5B hydro project.

Oil & Gas:

Editorials and media articles seem almost evenly divided on whether the Mackenzie Valley Gas pipeline will proceed after all this time, cost, and effort. After the Joint Review Panel (JRP) report was released in December 2009, the Governments of Canada and the Northwest Territories provided the JRP with an interim response and initiated the consult to modify process. The JRP reviewed the Interim Government Response (IGR) and provided their comments to Governments on October 4, 2010. The next step is the government review of the JRP comments and revision of the IGR, where appropriate, to release the Final Government Response. This will be available on the Canadian Environmental Assessment Registry website. Further information can be found online at <http://www.ec.gc.ca/bpgm-mgpo/default.asp?lang=En&n=B554E5F9-1>.

Municipal:

Municipal field work was conducted at several communities across the North in order to do comprehensive characterization of representative Northern systems in order to evaluate performance, as well as collection of sampling data from a number of other systems to round out the community data inventory. Result summaries will be available early in the new year on the Aurora Research Institute and the Nunavut Research Institute web sites.

Are you doing work in the North that you'd like to let others know about? Got an idea for a training course the CSEB could help organize? Please feel free to contact me, or to draft an article for the newsletter. The CSEB provides a valuable networking and communication forum! There is also the option of instigating other CSEB activities – both of the fun and/or of the educational variety - with colleagues in the north. Please email your thoughts to me at anne.wilson@ec.gc.ca.

CIVIL SOCIETY DIALOGUE AND ENGO RECOMMENDATIONS ON THE PROPOSED NEW STRATEGIC PLAN OF THE COVENTION ON BIOLOGICAL DIVERSITY

In August 2010, the Canadian Environmental Network Biodiversity Caucus (which includes 2 members of our own CSEB board – Joseph Hnatiuk and Wendy Thomson) were asked to create a paper on Canadian perspectives on the main issues to be addressed at the 10th Conference of the Parties (COP10) of the Convention on Biological Diversity (CBD) taking place in Nagoya, Japan in October 2010. The purpose of this document is two-fold: to offer advice to the Federal Government as it prepares for COP10 negotiations and suggest critical first steps to help launch a robust approach to mainstreaming biodiversity in Canada.

Canadian Civil Society Dialogue

On 11 June 2010, the RCEN hosted a by-invitation multi-stakeholder dialogue on the draft Strategic Plan of the CBD and exploratory discussion around the recently launched Canadian Friends of the CBD Association.

Participants discussed the draft Strategic Plan and the post-2010 Targets, with an emphasis on elements necessary for success. There was general agreement that for both domestic and international implementation of the Strategic Plan a three-pronged strategy was needed including economic, policy and education (formal, informal and non formal) measures to mainstream biodiversity. Another point of agreement was the need to focus on public awareness, tracking progress on outreach and engagement and developing baseline data on the state of biodiversity knowledge. Participants also emphasized the importance of considering the root causes of biodiversity loss to ensure that Canadian efforts are relevant and effective.

Business and Industry indicated that companies are often reticent to tackle biodiversity issues due to their complexity and the potential to “fail” in the eyes of the public. Consequently, those that are doing biodiversity work tend not to publicize it to avoid potential criticism from media and the public. A mechanism to recognize positive efforts at the company or sector level would both encourage and support Business and Industry undertaking biodiversity initiatives.

Local Authorities emphasized that while biodiversity conservation often happens at the community level, a gap exists between international commitments and their application at the municipal level. The biodiversity initiatives of local governments tend to be modest in scope and local authorities themselves often do not recognize their efforts as “biodiversity” related per se. More consideration needs to be given to helping to demonstrate the relevance of Local Authorities in understanding and stemming local biodiversity loss.

The scientific community noted that they were seeking ways to translate complex research results into common language and recommendations for action. They also supported the creation of a national network of scientists, based on the Quebec Center for Biodiversity Science (QCBS) model.

The ENGO community noted that a proposal was put forward by Japan for the UN to declare a Decade on Biodiversity and strongly urged its endorsement by all participants. ENGOs underscored the need to include Workers and Trade Unions, Women and Farmers as key stakeholders to achieve National Biodiversity Action Plans and suggested that the UN Commission on Sustainable Development model could be adapted to help implement work on biodiversity in Canada. Lastly, ENGOs highlighted the need for a greater focus on Educators and education, with greater efforts to educate all government representatives, including at the sub-national level.

The Indigenous Peoples underscored the need to integrate Traditional Knowledge with western science as key to achieving all of the CBD objectives. The Aboriginal representative reminded participants that Aboriginal peoples were the first scientists in Canada and that Traditional Knowledge is derived from millennia of discovery, with elders holding the evolution of knowledge just as genetic evolution is held within plants. The story of the Wampum Belt should be used to remind us of our shared responsibilities to each other and to Mother Earth.

Participants agreed that there are numerous opportunities, both within Canada and internationally, to mainstream biodiversity. However, it was noted that many sectors and government ministries are working in silos and that existing initiatives to foster cross-sector collaboration need to be reviewed and innovative and progressive mechanisms developed to encourage creative non-traditional partnerships. Business and Industry and Local Authorities, for example, are both well placed to address the root causes of biodiversity loss and their collaboration could result in multiple positive benefits.

In considering an implementation mechanism in Canada, a discussion ensued pertaining to the newly formed Canadian Friends of the CBD Association. This initiative came out of a Memorandum of Understanding between the Secretariat of the CBD and the RCEN to forward the objectives of the Convention according to domestic needs and priorities. There was agreement that a Canadian Friends of the CBD Association could act to foster both vertical and horizontal dialogue and collaboration.

Environmental Non Government Organizations' Response to the Strategic Plan

The plan notes the lack of financial, human and technical resources as limits to implementing the Convention, as well as a lack of sufficient scientific information to support policy and decision-making. With one of the fastest growing and recovering world economies, we need to ensure that economic concerns do not trump biodiversity concerns and that necessary resources are allocated to foster the sustainable use of biodiversity.

There have been various approaches within Canada to implement the Canadian Biodiversity Strategy (CBS) and although all jurisdictions were required to follow the CBS, implementation was not undertaken in a comprehensive or consistent manner. ENGOs recommend that the Federal Government take a more strategic approach with support given to the various jurisdictions on how to best implement the strategy. In addition, recognition and inclusion of all (global and national) indigenous/aboriginal peoples/communities is critical in the CBD process, particularly ABS. As such Canadian ENGOs encourage Canada to sign on to the UN Declaration on the Rights of Indigenous Peoples.

The listed entry points to reflect the Goals of the Strategic Plan include many of the critical elements needed to address the root causes of ecosystem degradation and habitat and species loss. This consideration of multiple entry points is vital for different sectors of society to adopt a more sustainable approach to biodiversity. Water must be included as part of the natural resource sector, especially as it relates to service provision in a municipal setting. Agriculture should also be specifically mentioned as it is a key natural resource sector. There is no specific mention of an entry point that ties economics to biodiversity. From an anthropocentric perspective, biodiversity as Natural Infrastructure needs to be considered within the global infrastructure paradigm. This could lead to an increased financial mechanism for biodiversity.

Implementation

The Strategic Plan discusses how the plan will be implemented through activities at the national or sub-national level with supporting action at the regional and global levels. However the various levels of government are the only institutions able to put in place policies and laws that are enforceable. Therefore it would be beneficial to include a call for review of state policies and laws to determine those that are incompatible with or derail progress towards stemming biodiversity loss, as well as identify if new policies or laws are needed to move towards achieving state commitments within the Convention on Biological Diversity.

As a Party to the CBD, Canada needs to review its National Biodiversity Strategy. In this strategy, by requiring the creation of provincial /territorial action plans to be written and cascaded to the local level, the biodiversity

message, goals and targets can be effective and achievable in the Canadian context at all levels. The strategy would need to coordinate participation from the various agencies and ministries. The Canadian Biodiversity Strategy should also be translated into layman's terms in order to be better understood and adopted by civil society. Collaboration should be fostered not just between neighbouring countries but internationally. In a Canadian context this also means that provinces and local jurisdictions should share knowledge and learn from each other, as well as from other countries.

Canadian ENGOs strongly believe in the need for partnerships at all levels (international, national, subnational, and local civil society) for effective implementation of the plan. Partnerships at the site or landscape level are necessary to stem ecosystem degradation and species loss. It would also be appropriate to promote a systems approach to land use planning or landscape change that internalizes the costs to biodiversity, thereby accounting for ecosystem values.

The proposed common set of metrics (from SBSTTA) would effectively provide consistent measurement to help benchmark and compare progress between and within countries. The identification of keystone species and targets within each country will help facilitate implementation of the targets domestically. Canadian ENGOS are keen to ensure that the Strategic Plan also provides for indicators that reflect the indirect drivers of biodiversity loss.

Biodiversity plan reviews help to create a closed loop, feeding data into the process to enable improvements and refinements. Countries should undertake frequent participatory stakeholder reviews. These reviews should be set up during the implementation phase and at various points thereafter to make sure plans remain on track. Canada should undertake reviews at all levels (federal, provincial and local) with each review feeding into the level above to ensure a consistent approach. Civil society and ENGOs should be asked to participate in these reviews as a means to strengthen capacity and encourage biodiversity mainstreaming. These reviews should not just report on status of implementation and progress towards targets, but also include an analysis of effective funding, participation, and communication.

Support Mechanisms

Civil society actors could play a valuable role in capacity development. Including people at the landscape level will result in job creation, articulation of specific roles and a sense of responsibility with respect to the Strategic Plan. By enabling the participation of civil society, achievement of the Strategic Plan will be accelerated. As such, the value of local actors in delivering effective national action should be specifically mentioned. Capacity building is also necessary for youth to understand the impact of biodiversity loss on their future, and the actions they can take to mitigate it.

The development of a knowledge network for biodiversity as part of the clearing house mechanisms is an exciting

direction. This network should include space for traditional and local knowledge, as well as practitioners and other interested stakeholders including the most marginalized. The creation of national as well as an international clearinghouse of biodiversity information would foster transparency, best practice sharing and a mechanism for civil society engagement.

In many countries, civil society and the ENGO community represent significant resources which could be utilized more effectively. In order to best focus biodiversity efforts, countries may want to systematically conduct cost benefit analyses to assess which projects have the greatest impacts and multiplier effects, which in turn will help to direct research and project funding.

A central focus of all biodiversity plans should be to make biodiversity relevant on a personal level. The First Nation traditions in Canada have much to teach us about this. Youth, women, the scientific community, new immigrants and business also have a significant role to play in mainstreaming biodiversity. We need to reach out and engage these and other civil society sectors to ask them to help to define why biodiversity is important to them. We also need to think about the opportunities for creating green jobs by interpreting the Strategic Plan within a Canadian context.

Even within sectors, biodiversity actors are working in silos and the ENGO sector is no exception. The Federal Government should encourage collaboration between ENGOs, as well as strengthen partnerships between government and the environmental community to promote ENGO-led projects at the grassroots level. Lastly, by bringing together stakeholders from Canadian academia, industry, municipalities, non-governmental organizations and other sectors, the Canadian Friends of the CBD Association aims to take an active role in meeting Canada's commitments to the CBD, safeguarding biodiversity and, with federal support, has the potential to greatly support Canada's implementation of the new Strategic Plan.

High Level Review of the Strategic Goals and 2020 Headline Targets

The targets proposed by the CBD Strategic Plan cover the period 2010 – 2020. Special emphasis should be placed on the concept of ecosystem services provided by biodiversity. This emphasis needs to include biodiversity valuation in tools such as the system of National Accounts. It is a compelling way to demonstrate the link between biodiversity outcomes and individuals and encourage the consideration of biodiversity in economic decision-making. We call upon the Federal Government to put in place intermediary target dates (such as 2015 targets) to ensure continual evaluation of progress. We also call upon the Federal Government to update the National Biodiversity Strategy incorporating intermediate as well as 2020 target dates.

At a minimum, Canada should develop a core system of indicators, targets and associated data systems to support monitoring of the twenty targets specified in the CBD Strategic Plan. Priority should be placed on developing targets that accurately report the results of national biodiversity efforts (e.g. the preservation of species at risk and the loss of ecosystem function) rather than primarily focusing on process goals that monitor progress on developing and implementing policies and programs. Given our great natural resources, Canada should aggressively expand numeric targets and indicators to measure biodiversity threats and mitigation efforts, ecosystem status and trends, and public awareness and engagement. ENGOs recommend that each of the 2020 Headline Targets be carefully considered prior to determining whether to pursue them within a Canadian context.

In addition to the development of expanded targets, Canada should develop a comprehensive plan to communicate both commitments and biodiversity outcomes to a variety of constituencies including the public, the policy community, the business community, the scientific community and civil society organizations. The capacity of indicators to leverage action by all these communities on behalf of biodiversity should be fully exploited. This will be facilitated by taking the international approach of focusing on a series of headline indicators. At the International level, Canada should be forthcoming and generous in sharing financial support and expertise in developing and implementing a biodiversity indicator system with other countries in need of such expertise.

The first goal of the Strategic Plan importantly calls for "mainstreaming biodiversity across Government and society." Without wide spread appreciation of the problems and the challenge of finding appropriate solutions, needed support for policies and programs to protect biodiversity may be elusive. Communications will be facilitated by taking the approach described in the CBD Strategic Plan of focusing on a series of "headline indicators" in these communications. Such indicators must be sufficiently broad to capture the sense of the overall progress being made yet sufficiently narrow to be capable of relating to specific stories concerning the status of biodiversity. The capacity of appropriate communications based on indicators to leverage action on behalf of biodiversity should be fully exploited.

The need to work at a sub-national level with a multi-stakeholder collaborative approach is critical within the context of developing targets which reveal accurate results of national biodiversity efforts. As such, the Federal Government must consider not only indicators, but also a framework that is in line with provincial/territorial biodiversity action plans (e.g. the preservation of at-risk ecosystems, species and genetic resources). By developing the indicator suite with sub-national government and multiple stakeholders, enabling conditions are created to engage and build capacity at all levels and within all sectors. By incorporating performance-based assessments to policies and

programs, an adaptive approach can be applied where results are closely observed and monitored. These results – both successes and failures – should be included in the national reports that feed into international progress on Goals and Indicators of the Strategic Plan.

Experiences within the provinces and territories, as well as coordinated national efforts, have also provided a “test environment” for methodologies and approaches that might be built upon or applied nationally in a more organized way. In addition, the Ecological Monitoring and Assessment Network (EMAN) may be utilized. The ENGO community calls upon the Federal Government to investigate the existing data and indicators of the EMAN office to determine the role their existing information can play in establishing indicators in Canada. We also call upon the Federal Government to evaluate whether the EMAN office could be scaled up; a first step to working on the Canadian indicators should be to assess what all ready exists and what has been working.

Canada should place special emphasis on the development of methodologies which accurately reflect the value of ecosystem services considering the potential environmental and financial impacts of their potential loss. Indicators also need to be developed to monitor the degradation of ecosystem services and policies and actions implemented to reverse these trends. In considering funding sources to develop these indicators, Canada should frame ecosystem services through an Ecological/Natural Infrastructure lens. Framed in this way, infrastructure funding could be made available for not only national, but also subnational, indicator development. Inclusion of the impacts of biodiversity (and more generally the physical environment) in our System of National Accounts would demonstrate, in a compelling manner, the link between biodiversity outcomes to individuals and encourage the internalization of the costs and benefits of biodiversity in economic decision-making.

Canada's reporting capacity must be further refined to provide more quantitative information on the status, threats and impacts related to biodiversity and its loss. Although qualitative information is also required to explore the impacts of specific policies and programs, quantitative information is more useful in providing a sense of the “bigger picture” against which the overall success or failure of our collective efforts can be measured.

From an ENGO perspective, there are two missing elements in the Targets. The first is the absence of a water quantity- and quality-related target. This should be addressed in the Strategic Plan. The preference would be to include a stand alone Target for water. The second missing element relates to Children and Youth. Children and Youth are recognized as a major group both internationally and by the CBD. However, there is no inclusion of Children and Youth in the Strategic Plan. Given Canada's support of Children and Youth in numerous areas, it is appropriate to review the text of the outcome documents with the objective of including Children and Youth, where appropriate.

Conclusion

From a Canadian ENGO perspective, the need to incorporate CBD in the domestic context is crucial for our Canadian well-being, fairness to all our communities, security of our biosystems, and our responsibility to other species. We believe that the COP10 meeting in Japan this October is a pivotal moment in defining the future of our global biodiversity and a basis for improving the state of biodiversity in Canada. Both civil society and the ENGO community have made numerous recommendations to the Canadian Federal Government throughout this and previous documents to help shape Canada's positions to forward these objectives.

Moving into the post COP10 period, Canada will turn to developing its own post-2010 biodiversity strategy. One of the first steps will include deciding on national priorities and the development of the National Biodiversity Strategy for COP12. We recommend taking a collaborative decision making approach including multi-stakeholder dialogue and shared responsibilities within and across government and civil society – we all have a role to play.

Nationally, Environment Canada should engage other federal ministries to ensure that biodiversity considerations are reflected in their policies, programs and sustainability strategies. Environment Canada should also coordinate biodiversity strategy implementation across federal, provincial and territorial actions. As a consequence of the multiple jurisdictions with a responsibility for various aspects of biodiversity conservation and sustainable use, special attention should be paid to specification of responsibility and provision of reliable recording mechanisms for benchmarking and measuring progress. In order to act on these and other key recommendations in this paper, we recommend an increase of federal funding to Environment Canada for activities related to biodiversity work and the application of Canada's responsibilities under the CBD.

Halting biodiversity loss is not a challenge that rests solely in the hands of the Federal Government. Just as biodiversity encompasses a complex network of relationships and interactions, the solutions for stemming its loss will also rely on a complex network of actors with shared responsibility – one that is dynamic, creative and collaborative.

BOOKS OF Interest



Floral Diagrams: An Aid to Understanding Flower Morphology and Evolution

By Louis P. Ronse De Craene. 2010. Cambridge University Press.

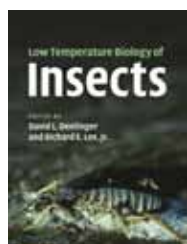
Floral morphology remains the cornerstone for plant identification and studies of plant evolution. This guide gives a global overview of the floral diversity of the angiosperms through the use of detailed floral diagrams. These schematic diagrams replace long descriptions or complicated drawings as a tool for understanding floral structure and evolution. They show important features of flowers, such as the relative positions of the different organs, their fusion, symmetry, and structural details. The relevance of the diagrams is discussed, and pertinent evolutionary trends are illustrated. The range of plant species represented reflects the most recent classification of flowering plants based mainly on molecular data, which is expected to remain stable in the future. This book is invaluable for researchers and students working on plant structure, development and systematics, as well as being an important resource for plant ecologists, evolutionary botanists and horticulturists.



Philosophical Foundations for the Practices of Ecology

By William A. Reiners. 2009. Cambridge University Press.

Ecologists use a remarkable range of methods and techniques to understand complex, inherently variable, and functionally diverse entities and processes across a staggering range of spatial, temporal and interactive scales. These multiple perspectives make ecology very different to the view of science often presented by philosophers. In *Philosophical Foundations for the Practices of Ecology*, designed for graduate students and researchers, ecology is put into a new philosophical framework that engages with these alternate views, while still placing constraints on the ways that we can investigate and understand Nature. The authors begin by exploring the sources of variety in the practice of ecology and how these have led to the current conceptual confusion. They argue that the solution is to adopt the approach of constrained perspectivism and go on to explore the ontological, metaphysical, and epistemological aspects of this position and how it can be used in ecological research and teaching.

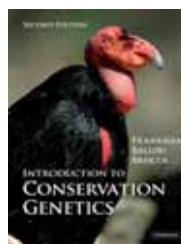


Low Temperature Biology of Insects

Edited by David L. Denlinger and Richard E. Lee, Jr. 2010. Cambridge University Press

Low temperature is a major environmental constraint impacting the geographic distribution and seasonal

activity patterns of insects. Written for academic researchers in environmental physiology and entomology, *Low Temperature Biology of Insects* explores the physiological and molecular mechanisms that enable insects to cope with a cold environment and places these findings into an evolutionary and ecological context. An introductory chapter provides a primer on insect cold tolerance and subsequent chapters in the first section discuss the organismal, cellular and molecular responses that allow insects to survive in the cold despite their, at best, limited ability to regulate their own body temperature. The second section, highlighting the evolutionary and macro physiological responses to low temperature, is especially relevant for understanding the impact of global climate change on insect systems. A final section translates the knowledge gained from the rest of the book into practical applications including cryopreservation and the augmentation of pest management strategies.



Introduction to Conservation Genetics, 2nd Edition

By Richard Frankham, Jonathan D. Ballou and David A. Briscoe. 2010. Cambridge University Press.

Introduction to Conservation Genetics brings the wealth of advances in conservation genetics into the new edition of this introductory text, including new chapters on population genomics and genetic issues in introduced and invasive species. The authors continue the strong learning features for students - main points in the margin, chapter summaries, vital support with the mathematics, and further reading - and now guide the reader to software and databases. Many new references reflect the expansion of this field. With examples from mammals, birds, reptiles, fish, amphibians, plants and invertebrates, this is an ideal introduction to conservation genetics for a broad audience. The text tackles the quantitative aspects of conservation genetics, and has a host of teaching tools to support students learning the numerical side of the subject. Combined with being up-to-date, its user-friendly writing style and first-class illustrations forms a robust teaching package.



Protecting Biological Diversity-Roles and Responsibilities.

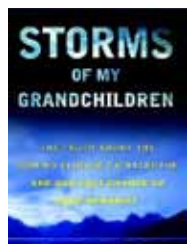
Edited by Catherine Potvin, Margaret Kraenzel, and Gilles Seutin. 2001 McGill University Press.

The most species-rich regions of the globe, the tropics, are economically the poorest. How can biologists work toward effective protection for endangered species in countries hungry for food and basic resources? And why should local people in those countries trust the advice of scientists from wealthier countries, who have broken their promises in the past and have typically shown little respect for the cultural values of others?

BOOKS OF Interest

Catherine Potvin, Margaret Kraenzel, and Gilles Seutin asked scientists from developing countries to summarize their experiences of international collaboration and to suggest attitudes and practices that would lead to more fruitful exchanges with northern scientists. They also asked scholars to provide an analytical framework in which these issues could be discussed and to identify possible solutions to questions such as: What are the responsibilities of first world scientists involved in conservation actions in developing countries? How can biologists work toward the protection of biodiversity while being respectful of the human desire for a better future? The resulting papers analyze specific situations encountered in countries such as Democratic Republic of Congo, Madagascar, India, and Panama and discuss the philosophical basis for environmental research. They also examine the work of two institutions whose projects in developing countries have been particularly effective through outreach and attention to local values and needs and who propose a pluralistic view of conservation biology ethics.

Protecting Biological Diversity seeks to encourage students and professionals involved in conservation projects to adopt culturally sensitive attitudes that will lead to greater effectiveness and efficiency in conservation and greater respect for the differences of others.



Storms of my Grandchildren: The Truth about the coming climate catastrophe and our last chance to save humanity

By Jame Hansen. Published by Bloomsbury Press in 2009

James Hansen is perhaps the world authority on climate change. He has been head of NASA's Goddard Space Agency for a long time, collaborating with the late Carl Sagan on various extraterrestrial investigations, notably the climate of other solar system planets. Hansen has also advised several US presidents about anthropogenic global warming. His scientific credentials are impeccable and impressive. I mention all this because here is a person who knows what he's talking about, unlike the rest of us who follow the unfolding climate scenario but usually have little new to add.

The book is tough going in the beginning but quickly hits its stride. Hansen outlines the evolution of our knowledge leading up to the present state of affairs (as of late 2009). He then offers solutions and he doesn't beat around the bush. "NO COAL". We must stop burning coal soon if we have any hope of reducing the prospect of runaway warming. And to do this we must invest--quickly--in nuclear power generation. Renewables are a great long-term strategy but it isn't going to happen soon enough, period. Hansen is not alone in reaching this set of conclusions; the most knowledgeable people I read say exactly the same thing. Hansen tells it like it is.

The only completely new consideration in the book is this: Hansen warns us that there is a small probability that

runaway warming will result in a climate like that of Venus, the end of life on earth. Now that really scared me.

If you read nothing else on climate change, read this book. It will be one of the source books when a century from now when people study the history of the climate issue. I highly recommend this book, perhaps the best and most important one I have read this decade.

Review by Dr. Harold Welch Clandeboye, MB.



Birds of Ontario: Habitat Requirements, Limiting Factors, and Status, Vol. 2 Nonpasserines: Shorebirds through Woodpeckers

By Al Sandilands, with Ross James. May 2010. UBC Press.

The volumes in the Birds of Ontario series summarize life history requirements of bird species that are normally part of the ecology of Ontario. The first volume dealt with waterfowl through cranes while this volume deals with shorebirds through woodpeckers and completes the treatment of the nonpasserines. Information on habitat, limiting factors, and status are dealt with for the three main bird seasons: breeding, migration, and winter. This book will be an essential reference for biologists, planners, environmental consultants, and other resource professionals involved in environmental issues and management pertaining to birds. It will also be a valuable reference for serious birders. Although focusing on birds of Ontario, the book will be relevant to adjacent provinces and states.



The Aquaculture Controversy in Canada: Activism, Policy, and Contested Science

By Nathan Young and Ralph Matthews. 2010. UBC Press.

The farming of aquatic organisms is one of the most promising but controversial new industries in Canada. The industry has the potential to solve food supply problems, but critics believe it poses unacceptable threats to human health, local communities, and the environment. This book is not about the methods and techniques of aquaculture, but an exploration of the controversy itself. Rather than choosing sides, Nathan Young and Ralph Matthews present the controversy as a multi-layered conflict about knowledge, rights, and development. Comprehensive and balanced, this book addresses one of the most contentious public policy and environmental issues facing the world today.

The Aquaculture Controversy in Canada successfully negotiates the minefield of partisan positions and provides a clear way to grasp the multidimensional character of the aquaculture controversy.

- Jeremy Rayner, University of Regina

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