

2007 GEORGIA BASIN PUGET SOUND RESEARCH CONFERENCE MARCH 26–29, 2007 VANCOUVER, BRITISH COLUMBIA

‘Leaning on the wall’ between science and advocacy

Modern societies must rethink the role of science in the political process, Dr. Daniel Pauly, director of the University of British Columbia Fisheries Centre, will suggest in his keynote address this morning.

“We have to lean on the wall that separates advocacy from science,” he said in a pre-conference interview. More specifically, scientists must think about how they relate to the use—or non-use—of their results by public authorities.

Human activity and industry have increased to the point that they present a genuine threat to the planet, Dr. Pauly said. It may have been simpler to live sustainably when populations were smaller.

But now, “everything we do matters, and everything we do is amplified by our numbers.”

Meanwhile, politicians are trained to treat environmental concerns as just one of many variables in their decision-making.

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Chief Leah George-Wilson of the Tsleil-Waututh Nation provided a traditional Coast Salish welcome to the 2003 Georgia Basin Puget Sound Research Conference. Chief George-Wilson will welcome participants again at this year’s conference on behalf of her nation and the Musqueam and Squamish Nations, marking the event’s return to Canada. She will be joined by her sisters, Carleen and Joanne Thomas, who will sing the Coast Salish anthem.

Research results link science to action

The linkage between science and policy-making is a key focus for this conference, serving as a foundation for the collaborative effort to protect and restore the Georgia Basin Puget Sound ecosystem.

Faced with the impacts of urbanization and climate change, water quality issues and threats to biodiversity, the region’s future rests on the knowledge that science can transcend political boundaries and bring communities of interest together. In the next several days, participants will have a chance to debate some critical questions:

- Are we doing the right science? What research questions will we be

asked to answer over the next 10 to 15 years?

- Is the science right? Do we have the right tools, capacities, and skill sets to do the job?
- Are we doing all that we can, and all that we must, to effectively integrate and communicate knowledge from different jurisdictions, disciplines, and cultural traditions?

Conference chairs Justin Longo of Environment Canada and Sarah Brace of the U.S. Environmental Protection Agency (EPA) hope to see participants galvanized by the four days onsite. Plenary and breakout sessions will present compelling research findings and explore ways of “energizing the

interface between science and action,” Longo said.

“Here, scientists talk to scientists,” he noted. “We’ll be looking at how to translate science into usable knowledge for policy-makers and individuals to act on.”

Stimulating public concern over the endangered ecosystem of the Georgia Basin is a challenge that will be present throughout the conference.

“We live our lives above the water, and if you ask people to describe the [Georgia Basin Puget Sound] area, they talk about the beautiful landscape,” Longo said. “Scientists also see the imperilled ecosystem on the landscape, in the air, and below the water.”

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Photos: Surf scoters, Mike Yip; Waves, Marsha Engel, Eelgrass, Stock photo

Irene Brooks

‘No need for negotiations’ at IJC

Canada and the United States are close enough on transborder water quality issues that negotiations are almost beside the point, according to Irene Brooks, U.S. co-chair of the International Joint Commission (IJC).

During the *Georgia Basin Puget Sound Research Conference*, Brooks will discuss the International Watershed Initiative, an IJC program that addresses emerging environmental issues along the border.

Created nearly a century ago under the *Boundary Waters Treaty* of 1909, the IJC’s purpose is to prevent and resolve disputes arising from the use and quality of boundary waters. When problems arise, Brooks explained, Canadian and U.S. governments turn to the IJC. The IJC assembles a task force made up of experts from both countries, then advises the governments based on the best available evidence.

A key objective of the International Watershed Initiative is to facilitate problem-solving at the local level, without any direct involvement by the IJC. In an ideal world, Brooks said, this type of direct consultation and collaboration would eliminate the need for the IJC. Realistically, though, there will always be a role for a bilateral structure that examines “the big picture.”

During her work with interstate river basin commissions, Brooks’ early training in political science and public administration “came in handy,” she said. But there has been little call for these skills at the IJC: Canada and the U.S. are so close that negotiations are scarcely a part of the picture.

The IJC has not been asked to examine any issues in the Pacific Northwest, and there “seems to be great cooperation between British Columbia and Washington State,” Brooks said. Noting that a large part of the IJC’s work has to do with the Great Lakes, she said this conference would give her an opportunity to learn more about the Georgia Basin Puget Sound ecosystem.

With that in mind, she said she was looking forward to meeting research scientists involved with water quality in the region.

‘Leaning on the wall’

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In fisheries, for example, the biomass of the stock is but one consideration among many, including economic conditions, the job rate, and more.

In some cases, he warned, policy-makers are driven by dangerously unscientific world views.

Yet many scientists are reluctant to engage in the policy-making process. Dr. Pauly said many are employed by governments that expect loyalty, and would not look kindly on those who speak out. Others are bound by ethics—they feel that advocacy and political involvement would contaminate their results.

Despite these considerations, Dr. Pauly said scientists must find a way to ensure that human harm to the environment becomes the dominant consideration for politicians, not one of many.

“It shouldn’t be possible to just ignore a big issue like global warming,” he said. “This is something people will pay for dearly in terms of risk and damage to health, to communities, and to future prosperity.”

Dr. Pauly looked ahead to a day when policy decisions will have to pass scientific review, similar to the ethical review undergone by researchers. Politicians would be obliged to demonstrate the science behind a recommendation or policy, and a science advisor could be elevated to the role of policy screener.

In the meantime, while they cannot cross the line between advocacy and science, Dr. Pauly said it is up to scientists to engage more with policy-makers and society at large. Scientists cannot leap over that wall, he acknowledged: but they must learn to lean.





DAILY NOTES

'Green' conference walks the talk

For an organizing committee dedicated to sustaining and restoring a threatened ecosystem, it was a foregone conclusion that the *Georgia Basin Puget Sound Research Conference* would be organized as a "green" event.

"We can't ask citizens to share responsibility for taking action and not do it ourselves," said Mary Beth Bérubé, manager of Environment Canada's Georgia Basin Coordination Office.

"While the conference may not be perfectly green, I'm proud of what we've been able to do."

Key green features of the event include:

- Special arrangements with a local bus transportation company to ensure low- or no-emission vehicles, as well as smaller vehicles when fewer participants have signed up for conference shuttles;
- Cloth instead of paper napkins for all meal functions;
- Water served in pitchers instead of plastic bottles;
- Recycling throughout the conference facility;
- Menus modelled on the 100-Mile Diet, a local initiative to support family farms while eliminating the cost and greenhouse gas emissions associated with transporting food an average of 1,500 miles from producer to consumer.

The conference is also carbon neutral. With a sponsorship from the provincial power utility, B.C. Hydro, organizers will buy offsets equivalent to all carbon emissions associated with conference travel and operations.

Bérubé saw the conference as an opportunity to encourage local businesses to take a closer look at their own green potential.

"I don't think any of the hotels in town have the triple bottom line approach totally in place yet," she said. But by bringing green assumptions onsite, "we're pushing them a bit farther."

Student awards encourage a new generation

A cadre of 70 talented students will be among the scores of presenters at this year's *Georgia Basin Puget Sound Research Conference*. Recognizing the urgent need to nurture and encourage the next generation of environmental science researchers, conference organizers established a student award to celebrate the very best in the category.

The student papers are distributed across the schedule of regular sessions and poster presentations. A panel of three judges will assess the students' work. First, second, and third prizes will be awarded to outstanding papers and posters presented by graduate students, while another set of prizes will be reserved for undergraduates.

In keeping with a theme threaded through the conference—persuasively communicating scientific research—students' work will be judged on the "effectiveness of the presentation, as well as the research," said conference co-chair Justin Longo.

Winners will be announced at the closing session Thursday afternoon.





DAILY NOTES

Research results

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Papers presented over the next few days will introduce new findings that may help the public grasp—and care about—the state of the Georgia Basin and Puget Sound. When scientific knowledge is framed in everyday terms, raising public awareness of problems like the proliferation of cryptosporidium and giardia in shellfish, people do become more concerned about the effects of environmental degradation on food and health.

Researchers have traditionally focused primarily on the scientific dimensions of their work. But more and more

specialists are now actively shepherding their findings through the corridors of power, ensuring that they have a life beyond the lab.

“Science goes through translations and iterations at many different policy levels,” he said. “Scientists can and must engage in that process.”

Longo predicted that attendees will leave the conference inspired to interpret their research for the non-scientific community, and to see their hard-won knowledge translates into action that benefits the Georgia Basin Puget Sound ecosystem.

By the numbers

Projected population of the Georgia Basin region by 2027: **5.3 million**

Percent growth from 2007 to 2027: **100**

Percent increase in average daily discharge of treated municipal wastewater to the Georgia Basin, 1983 to 1999: **62**

Percent increase in residential water use, 1991 to 2001: **28**

Percent increase in population served by municipal water systems: **410**

Percent of municipal water use in Georgia Basin now attributed to residential consumption: **60**

Projected lost tourist revenue due to poor air quality and visibility in Greater Vancouver, per incident: **\$7.45 million**

In the Fraser Valley: **\$1.32 million**

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PROGRAM UPDATE

At 15:00 today, Concurrent Session 3B is entitled *International Joint Commission: Special Consultation Session on the 2006 Progress Report Under the Canada-United States Air Quality Agreement*. The session is chaired by IJC Co-Chairs Jack Blaney (Canada) and Irene Brooks (USA). Copies of the report are available at registration.

At 15:00 today, the session on salmonid migration and habitat use is cancelled.