

# COUNCIL OF CHAIRS OF CANADIAN EARTH SCIENCE DEPARTMENTS CCCESD

## CARLETON UNIVERSITY, Robertson Hall FRIDAY NOVEMBER 20<sup>th</sup>, 2009

### Notes from meeting

Present: Kevin Ansdell (Saskatchewan), Carolyn Eyles (McMaster), Sandy Cruden (Toronto), Rob Raeside (Acadia), Hugo Beltrami (St. F.X.), John Blenkinsop (Carleton), John Cox (Mount Royal), Greg Dipple (UBC), Dave Eaton (Calgary), Carolyn Eyles (McMaster), Ian Ferguson, (Manitoba), Kathy Gillis (Victoria), John Greenough (UBC-Okanagan), Martin Head (Brock), Steve Kissin (Lakehead), Jean Hutchinson (Queen's), Pierre Jutras (St. Mary's), Jonathan Newman (Guelph), Gerhard Pratt (Western), Hairuo Qing (Regina), Michel Robin (Ottawa), Iain Samson (Windsor), David Scott (Dalhousie), Cliff Shaw (UNB), John Stix (McGill), Derek Thorkelson (SFU).

Regrets: Mike Higgins (UQàC), René Therrien (Laval), Barry Warner (Waterloo),

No response: Robert Creaser (Alberta), Andy MacDonald (Laurentian)

Visitors and Representatives: Elisabeth Kosters (CFES); David Boerner (GSC); Dave Bowen, Mario Lamarca, Jennifer Michel, Kenn Rankine (NSERC); Ali Aksu, John Spray (NSERC Geoscience EG co-chairs), Claudia Schroeder-Adams (CSPG)

### MORNING SESSION

#### **Introduction and welcome**

Sandy Cruden (chair) welcomed attendees and introduced John Armitage, Interim Dean of Science, Carleton University who welcomed us to campus and reflected on his meetings with Geology graduates from Carleton. Sandy gave an overview of the day's activities and the background of CCCESD. It was agreed to make an opportunity for discussion on NSERC issues in the morning before the NSERC representatives arrive.

#### **CCCESD finances (J Greenough)**

John Greenough reported on the budget, with a balance of \$13,812.71 and expenses of \$2015.72 in the past year. Discussion ensued about departments contributing to the account. K Ansdell moved, J Blenkinsop seconded, that a non-binding contribution of \$100 be charged annually. Carried. Rob Raeside will arrange.

#### **CCCESD Statistics (R Raeside)**

Rob Raeside provided a summary of enrolment and staffing statistics to December 2008, as collected in early 2009. He noted that the original data (without university identification) can be obtained if required by heads for reviews, etc.

#### **News and views from the Departments – issues arising**

Most departments submitted an outline in advance (published separately). Other departments reported orally and were asked to send a written statement after the meeting.

Some of the themes arising during the roundtable were indirect costs, working with or merging with environmental science programs, full programs (especially in the West), shortage of teaching personnel, lay-offs in the oil and gas sector, budget cuts, large classes in field schools, growth of programs, limited growth of faculty, replacement of aging equipment (particularly electron microprobes), introduction of lab fees, sabbatical replacements, industrial research chair opportunities.

### News from CSPG

Claudia Schroeder-Adams reported on behalf of the CSPG, noting that although the industry is experiencing a downturn currently, when this ends CSPG anticipates that hiring at the Masters level will be preferable over BSc. CSPG is also especially concerned that students obtain sufficient field-based education.

### Canadian Federation of Earth Sciences

Elisabeth Kusters spoke on “The Unified Voice of Earth Science in Canada” (to be posted on CCCESD website), outlining the establishment of CFES. CFES occupies a critical position as an umbrella organization of Earth Science groups; it is also a member of PAGSE (Partnership Group for Science and Engineering). A new member in CFES is CPTG (Committee of Provincial and Territorial Geologists). She described communication efforts with government, reported on the establishment of the CFES Mentorship Medal (awarded to Paul Williams), on the work of the Canadian National Committee for Geoparks through UNESCO, and on IYPE and WHERE on Earth? (ending this weekend). She noted that the publication of *Four Billion Years and Counting* will be delayed to 2010.

Some updates of recent activities of CFES include:

- www.earthsciencescanada.com website (careers opportunities aimed at Grade 9-10).
- CanGeoRef
- National student chapter has been delayed
- Shared services (e.g., insurance)

CFES asks for input and feedback on long-term strategic planning document, including issues:

- Earth science literacy
- Climate change\
- Mineral resources, energy, uranium
- The North
- Hazards, water
- Research and human resources (specifically asking CCCESD)

CFES will be increasing its membership fees – CCCESD should expect to receive a request for an increase in fees to \$3 per person (\$1698, using 566 faculty members as a base, as opposed to the current base-level support of \$500).

### Careers in Earth Sciences

Discussion will be postponed till 3 p.m.

### Discussion on NSERC issues

Issues to raise with the NSERC visitors include:

- H Beltrami noted that the new evaluation group system with joint 08/09 evaluation groups is only one year old, and that we don't have enough data to analyse its impact fully from one year's experience.
- K Gillis asked for advice about the weight being placed on HQP.
- Considerable concern was noted of the difficulty faced by new and recently hired faculty as they cannot provide evidence of HQP. Similarly, faculty in universities with no graduate (or PhD) programs are disadvantaged.
- J Stix asked what faculty approaching retirement should expect and noted that new faculty might be well advised to delay application to NSERC-DG until they have developed some HQP.
- Replacement of large equipment “work horses” is a developing crisis – when are RTI-2 level infrastructure projects likely to be re-established.

## News from the Geological Survey of Canada

David Boerner, Director General of the GSC, joined the meeting. He noted that government has put pressure on science-based departments like the GSC to show what they get for their money, emphasizing excellence. He reported on the GEM (Geo-Mapping for Energy and Minerals) program and the emphasis on development of a northern economy that employs northerners. GEM provides \$100M over five years and has been developed as an economic development program that employs science. It has resulted in a large increase in field programs in the territories. He also noted that there has never been a time when Earth Sciences have had the attention of government that they now have.

Other economic development programs include:

- Targeted geoscience program (expires in March; argument made for renewal) aimed at base metal mining camps in collaboration with Canadian Mining Innovation Council.
- Sustainable Offshore Resource Development
- Gas Hydrates (Mackenzie Delta)
- Carbon Capture and Storage, developing a storage capacity atlas, and exploring unintended consequences.

Environmentally oriented projects include:

- Safe environment (standardizing environmental impact development, conducting regional environmental assessments, exploring cumulative impacts, mineral and energy resource assessments of areas that proposed for protection)
- Aquifer assessment for groundwater management, examining all major aquifers in Canada and compiling an inventory of 30 key aquifers, seeking links to meteorological systems. This project has received support from the provincial premiers.

UNCLOS (Law of the Sea) submission, due in 2013, has an effect on sovereign rights.

Climate change and safety and security issues:

- Seeking robust indicators of change
- Creating regional adaptation collaborative, funding self-identification of issues
- Promoting concerns about water redistribution
- Hazard information service (with relevance to civil emergencies)
- Reducing risks from natural hazards

Upcoming issues involve fiscal restraint (budgets will be under greater scrutiny), need to demonstrate value for money, have well defined program dimensions, employing mission-driven science. An underlying theme is Government has a problem and geoscience can help solve it.

## AFTERNOON SESSION

### Meeting with Members of NSERC

Additional participants:

Dave Bowen, Team Leader, Environmental Sciences Team  
 Mario Lamarca, Director, Evolution, Ecology and Geosciences  
 Jennifer Michel, Kenn Rankine, Program Officers, Geosciences Evaluation Group  
 Ali Aksu, John Spray, Co-chairs of Geosciences Evaluation Group

Dave Bowen gave a PowerPoint presentation (posted at <http://cccesd.acadiau.ca/past.html>) explaining the results from the federal budget, and noting an increase in budget this year primarily targeted to student support. NSERC has undergone a strategic review, resulting in cuts of some programs and increased funding for others (or for new programs). In particular, the Major Resources Support (MRS) now only supports national facilities.

Improvements were made to the Discovery Grants program arising from an international review of the program. The review concluded the DG program does support excellence, but the high success rate was challenged. A new rating system has been employed, using a two-step process separating the merit

assessment from funding. NSERC is confident it has retained the program strengths, maintaining merit criteria, supporting research, continuing funding for highest performers, a commitment to support meritorious early career researchers, and a stable overall program budget. It is noted that there is increased pressure from people coming into the system. In discussion, it was recognized that new researchers are funded separately – those in their first two years of an appointment will achieve DG funding at a lower bin level. Cut-off for funding was at the level of “two strong and a moderate” bin rating (with one bin lower for early career applicants). In discussion of the criteria for the various bin levels, it was recommended that applicants consider the Peer Review Manual ([http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reviewers-Examineurs/IntroPRManual-IntroManuelEP\\_eng.asp](http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reviewers-Examineurs/IntroPRManual-IntroManuelEP_eng.asp)).

D Bowen reviewed the Conference Model, initiated for Evolution and Ecology where the number of applications became too large, but the field could not be split. The model employs an initial plenary, which then splits up by theme, but re-mixes as themes are covered. The Geosciences evaluation group will now follow this model, using three streams, two of which will be similar to the former 08 and 09 GSCs.

A question period followed:

- Will NSERC reinstate a higher priority of funding for aging instrumentation and equipment?  
Response: any such reinstatement would come at the expense of another category, and would require \$15-20M to have a success rate of 20%.
- How can CCCESD assist in increasing the level of funding in Geosciences / NSERC. It was noted that discussion with the Finance dept and local MPs are routes to inform decision makers for increases in funding. Given that Geosciences provide immense value to the Canadian economy, greater investment and funding in the Geosciences should be worthwhile.
- CFI has been a blessing and a curse – large facilities have been established, but operating funds have not been available. This problem is well recognized, but has not been solved yet.
- Is there any intent to return to reallocation exercises? No: there is no mechanism for changing the level of support among the evaluation groups, other than as a response to changes in the number of early career researchers that garner new funding. Discovery accelerator supplements are also a means to reallocate funding to priority areas.
- Are annual applications expected to be stable from year to year? Yes, roughly.

The PowerPoint presentation is added to the CCCESD website.

### **Careers in Earth Sciences**

B Warner asked how Earth Science chairs could address student recruitment issues. Should Earth Science have a website targeted toward guiding senior high school students into Earth Science programs? PDAC, CFES, the NSF Geovision document have all detected a looming HQP issue in the Earth Sciences.

In discussion, it was noted that the website is a good idea, but \$25K is expensive. Content on websites for teachers of geology may be more beneficial. A website should target not just Grade 11 and 12 students, but also teachers, and first year university students. Collaboration with PDAC, CSPG, CCPG, APGO would be needed. If departments are asked to fund it, funding needs to be scaled.

It was suggested that Barry head up a working group to flesh out a proposal.

### **Field Education**

K Ansdell addressed concerns about the size of some field courses, and insufficient faculty to teach and provide safety overview. There does not appear to be any impediment for students to take field schools at other universities, although capacity appears to be very limited. Strong support was expressed for retaining real (as opposed to virtual) field schools. Some universities use adjunct faculty, but issues arise concerning insurance.

**Executive Changes**

John Stix' term (Quebec representative) will end in December 2009. He was asked to communicate with other Quebec members to obtain a new representative.

Treasurer: John Greenough (UBC-Okanagan) – willing to continue

Secretary: Rob Raeside (Acadia) – willing to continue

**Wrap-up and action items**

S Cruden expressed the concern that a one-day meeting is not sufficient to do all the business required at this meeting and that we need more opportunity for discussion to achieve better communication among departments, societies, and to delve into issues to a deeper level. Proactivity tends to decline later in the day. It was generally agreed that a 1.5 day session would be preferred. CCCESD indicated an interest in reconvening at the GeoCanada meeting in Calgary and/or at the GAC-MAC meeting in Ottawa, the latter with the intention of obtaining more interaction with government.

Discussion ensued on the need for the geoscience community to develop a better vision for what it can offer to Canada, and how it can unite to speak with a common voice. A need was expressed to develop a new megaproject akin to Lithoprobe. Concern was expressed about the fragmentation of societies in Canada, and the decline of Canadian publications.

**Next year's meeting**

The University of Ottawa has offered to host this meeting next November.

Meeting adjourned at 4:35 p.m.

Submitted by  
Rob Raeside  
Secretary