COMMENTARY

The GSA Critical Issues Caucus

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INTRODUCTION

Twelve years ago in *GSA Today* (v. 5, no. 5, p. 100), I summarized the history and purpose of GSA's Geosphere Alliance Committee (GAC) and invited GSA Members to join. Since then, the prospect of Earth as a sustainable habitat has become increasingly precarious. The need for earth scientists to acquire new knowledge about planetary and environmental systems and to transmit that knowledge to decision-, opinion-, and policy makers is ever more urgent.

In 1991, as GSA president, I appointed an ad hoc committee to recommend to GSA Council what the profession and the Society ought to do to ensure that geoscientists would be contributing adequately to nascent discussions on global sustainability. Inaugural members of this committee were Fred Donath, Bill Fisher, Bob Hatcher, Sue Kieffer, and Raymond Price, with Bill Fyfe as chair. I joined the committee in 1993.

In 1995, the Union of Concerned Scientists and the American Academy of Arts and Sciences jointly called a meeting of leaders of nearly two dozen scholarly and scientific societies to a three-day workshop on "critical issues" facing the world's future. Many ideas that emerged at this conference turned out to be the very ones that the GAC had considered important, and to highlight this opportunity to work across disciplines, the GAC changed its name to the Critical Issues Committee (CIC). It was formally attached to the Geology and Public Policy Committee. After the formation of the Geology and Society Division, the CIC became a part of that group, and it is now called the Critical Issues Caucus.

PROGRESS

From its inception, the CIC has acted as an informal "think tank" on issues that threaten the continued health of the earth-system habitat. The CIC's purpose is to highlight important earth-science issues that significantly impact the well-being, equity, and life quality of global human society; to consider conditions for the prospect of preserving the health of the global ecosystem irrespective of its utility to mankind; and to consider how geoscientists can help make lateral linkages for more holistic interdisciplinary thinking. The CIC has discussed intergenerational, interspecies, and intersociety equity in resource allocation and whether geological knowledge can provide insight on better ways to preserve and nourish the decision-making options of future generations. Accordingly, our activities have in recent years focused on sustainability, societal vulnerability, and related topics, including global energy resources, water resources, land use, human ecological footprints, agriculture and soil, the NIMBY (not in my backyard) syndrome, global resource monitoring systems, and the intersection of scientific knowledge with social equity, justice, and value systems.

In 1995, I wrote that the CIC "would profit by including a few representatives from fields that our deliberations impinge upon—ecology and economics, for example—so as to both broaden our perspective and promote synergism." At one point, our roster did include an ecologist, an economist, a political scientist, a social geographer, and a biologist. Everyone was interested, but everyone was busy. So the CIC, now numbering 23 members, is once again dominated by earth scientists. We remain conscious of the need for cross-disciplinary thinking, however, and invite people outside our disciplines to join us.

Our formal activities have concentrated on identifying themes for presentations at the annual meetings of both GSA and the American Association for the Advancement of Science (AAAS). Since 1995, the CIC has sponsored the following sessions:

AT GSA

1998, Toronto: "The sustainability challenge I—energy for the 21st century" and "Developing sustainability curricula: A challenge for earth science educators."

1999, Denver: "The sustainability challenge II—water and human sustainability" and "Environmental justice: Geological, social, and philosophical perspectives."

2000, Reno: "Toward a stewardship of the global commons: Perspectives for a new century, part I, the issues; part II, the engines of change."

2001, Boston: "The watershed within: Scientific and moral reflections on water in the 21st century."

2002, Denver: "Effective communication and/or partnership: Engaging geoscientists, the public, and policymakers: Case studies."

2003, Seattle: "Soils and a sustainable future, the neglected challenge in geology: A tribute to the many contributions and challenges of Aldo Leopold."

2004, Denver: "Geoscientific aspects of human and ecosystem vulnerability" and "The science of sustainability: How can we most effectively educate students, the public, and policymakers?"

2005, Salt Lake City: "Does geology serve society? Let's count the ways."

2006, Philadelphia: "Geosciences and the media: How can we better communicate the imperatives of sustainability?"

AT AAAS

1996: "Population and consumption: Twin challenges to sustainable development."

1997: "Beyond the 100th meridian."

2004: "From the ground up: The importance of soil in sustaining civilization."

2007: "The science and ethics of a culture of sustainability."

It is important that we communicate our concerns not just to GSA Members or even to fellow scientists, but also to citizens at large. Accordingly, our Web site, http://bcn.boulder.co.us/basin/local/sustainintro.html, includes a link to a "Guideline for Sustainability Literacy," accompanied by 12 short, teacher-friendly explanatory articles on specific subtopics. Our Web site also includes an article by Zen et al. (2002) titled "Earth resources: The little engine that could brake sustainability."

In 2004, a free CD-ROM containing these articles and other items from our Web site was distributed at the National Science Teachers Association annual meeting, as well as at the 2004 GSA Annual Meeting.

CIC member A.R. (Pete) Palmer has been a champ in community outreach and deserves special mention. Since 2005, he has presented talks to more than 50 civic and church groups on understanding deep time and on sustainability and the challenge for the human enterprise. Inspired by her work with the CIC, Sue Kieffer of the University of Illinois Urbana-Champaign, along with the university's faculty of religion, has developed a course titled "The ethics and science of sustainability." Other outreach efforts include a discussion with John Grim and Mary Evelyn Tucker, coordinators for the Harvard Forum on Religion and Ecology, which directly led to one of the CIC-sponsored sessions at a GSA Annual Meeting.

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Please consider this an invitation for you to join the CIC. Either let one of the steering group know of your interest or write to us about some issues that you feel we should consider. We'd like your comments about our efforts so far: Are they in the right direction? How can we do better?

Current CIC members are Paul Barton, Richard Berg, Robin Brett, Charlette Chastain, Ward Chesworth, Gary Ernst, George Fisher, Brooks Hanson, Laszlo Keszthelyi, John Kiefer, Sue Kieffer, Bob Kopp, Estella Leopold, Eldridge Moores, Julianne Newton, A.R. (Pete) Palmer, Eric Reitan, Paul Reitan, Craig Schiffries, Chris Swezey, Trileigh Tucker, Christine Turner, and E-an Zen.

CIC members share ideas and concerns via e-mail. Chesworth (wcheswor@uoguelph.ca), Fisher (gfisher@jhu.edu), Kieffer (skieffer.uiuc.edu), Palmer (allison.palmer@comcast.net), P. Reitan (preitan@buffalo.edu), and Zen (ezen@erols.com) have served as CIC's coordinators; today they make up an informal steering group to identify, initiate, and advance projects and to maintain communication within the group and with other entities of GSA.