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Editorial

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The past three issues of *Global Biogeochemical Cycles* have contained special sections, groups of topical papers. Judging from favorable comments, these special sections appear to be welcomed by readers of *GBC* because they offer comprehensive summaries or updates in important areas. I would like to see these special sections continue, and I give below the criteria and process that will be used in producing them. Because of the variety of approaches I have reviewed the history of each of the recent special sections, and I follow that with the new *GBC* guidelines for submitters. It is important to distinguish between special sections, which are groups of papers within a regular issue, and dedicated issues, where an entire issue is dedicated to a group of papers. *Global Biogeochemical Cycles* will not consider dedicated issues.

The special section in the September 2000 issue, "Trace Gas Exchange in a High-Arctic Valley," arrived with prior notice as a set of four manuscripts. These manuscripts provide a comprehensive summary of a modest-sized interdisciplinary field project conducted at Zackenberg, Greenland. These papers were reviewed individually as stand-alone manuscripts and also as a special section to determine whether the group represented a coherent whole with minimum redundancy. The overall review resulted in the suggestion that one of the papers be incorporated into others.

The special section in the December 2000 issue, "TRAGNET Analysis and Synthesis of Trace Gas Fluxes," consisted of five papers and an introduction. This effort originated as an activity of the International Global Atmospheric Chemistry (IGAC) project, a core project of the International Geosphere-Biosphere Programme (IGBP). Following initial meetings, funding was secured to assemble the vast and diverse body of methane and nitrous oxide chamber flux data into an electronically accessible database. Two synthesis workshops were conducted at the National Center of Ecosystem Analysis and Synthesis (NCEAS) using this database to determine controlling relationships from the data as a whole. Oral and poster sessions at the fall 1998 AGU meeting resulted in submission of five manuscripts with an introduction. This section advises the community of the availability of an electronic chamber flux database and gives the results of preliminary efforts to model processes controlling methane and nitrous oxide fluxes. I view the section as an important synthesis. As before, the manuscripts were reviewed for both individual scientific content and coherence as a section.

The special section in this issue (Excess CO₂) was assembled opportunistically by the Editor. The idea for the section started with submission of a single paper [Coatanoan et al., 2001], which represented a convergence of two distinct approaches to estimate the magnitude of the anthropogenic excess CO₂ signal in the ocean, in this case the Indian Ocean. This question has been debated vigorously for over 20 years, so arrival of a manuscript whose authors included proponents of both approaches was noteworthy. The Chen [2001] comment arrived within a week and required the Sabine and Feely [2001] response. One reviewer of the above papers mused that this was shaping up to be a very interesting group of papers but that a lot of work, probably too much, would be involved in transforming them into a special section. I felt a special section was worth a try and contacted Douglas Wallace about writing an introduction that placed the problem and approaches in historical context [Wallace, 2001]. We learned of two manuscripts dealing with modeling approaches to the excess CO₂ problem [Orr et al., 2001, Sarmiento et al., 2000], so the authors were contacted and encouraged to submit their manuscripts for consideration in the special section. The Sarmiento et al. [2000] manuscript was accidentally printed in the December 2000 issue of *GBC*. Again, the manuscripts were reviewed for both individual scientific content and coherence as a section.

The "Excess CO₂" special section illustrates one of the problems of special sections: undue delays in assembling sets of papers for a single issue. I apologize to the authors of the "Excess CO₂" special section and assume full responsibility for the long interval between submission and publication experienced by the authors of the earliest papers submitted. However, I believe that the papers in the "Excess CO₂" special section represent an important benchmark and that they will be studied more thoroughly, be of more value to the readers of *GBC*, and have greater overall impact as a special section than as individual papers. *GBC* will work on standards and procedures for future special sections that meet the needs of the community in producing timely and interesting sections while avoiding unfair delays in publication.

What do we seek in a special section and what steps should be followed to submit one? *Global Biogeochemical Cycles* is a relatively new and small journal, so a special section should not dominate any issue. A special section should contain between four and eight papers. We seek seasoned, mature, interdisciplinary efforts in an area covered by *GBC*. *GBC* will not consider dedicated issues. Special sections must be approved by the Editor, who retains sole editorial authority. There will be no Guest Editors, only Coordinating Authors, who help in the assembly and submission of the individual papers. Special sections may also be assembled by the Editor from regular submissions, as with the "Excess CO₂" special section. Special

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sections will receive an overall review to insure that they represent a coherent whole with minimum redundancy. Each manuscript will be reviewed individually and must stand alone on its merits. Those considering special sections should contact the Editor with a proposal describing and justifying the special section and also listing the proposed papers with final authors and approximate titles and lengths. The Coordinating Author will insure that the manuscripts are submitted simultaneously, serve as a contact, and be responsible for an introduction that places the special section in context.

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