

Communicating Environmental Geoscience – Preliminary Results from a Survey of Environmental Geoscientists

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Summary

Preliminary results of a survey of environmental geoscientists on communication issues are discussed. Although more responses are required to reach an adequate sample size, some clear trends are apparent in these early results. Previous surveys on scientific communication were directed to scientists in general, and were country specific. Communication is a major barrier in using the results of environmental geoscience to inform public debate and policy, and this survey aims to identify problems experienced by scientists in communicating their results.

Introduction

Geologists whose research deals with environmental problems such as landslides, floods, earthquakes, and other natural hazards that affect people's health and safety must communicate their results effectively to the public, policy makers and politicians. There are many examples of geological studies being ignored in policy and public action; this is in due in part to geoscientists being poor communicators.

The International Union of Geological Sciences Commission for "Geoscience for Environmental Management" established a working group to deal with the issue of communicating environmental geoscience. This group is holding workshops, publishing collections of papers (Liverman, Pereira and Marker, 2008), and is looking at other means to aid geoscientists in addressing these problems.

One task the working group set itself was examining environmental geoscientists attitudes and experiences of communicating environmental geoscience. In order to do this an on-line survey was created. Previous surveys examining communication and scientists were specific to the USA (Harz and Chappell, 1998) and United Kingdom (Royal Society, 2006); and were generalized to include all scientists. There is thus a need to consider the broader international scene, and to examine whether environmental geoscientists face any particular challenges in the area of communication not identified by these previous studies.

Methods

The survey was based largely on the examples cited above (Harz and Chappell, 1998; Royal Society, 2006) and designed to be filled in on-line using a commercial survey management tool. Both Spanish and English language versions were provided in an effort to increase international representation.

The major challenge in the study is encouraging a wide spectrum of geoscientists to complete the survey. The first means of publicizing the survey was via the personal connections and networks built up by the members of the IUGS Commission. The Commission has representatives from a wide range of disciplines and countries, and in many cases represent leaders within the discipline of environmental geoscience in their countries and institutions. As such they have access to a wide range of contacts. It is recognized that this method of using personal connections departs from social science methodology- the sample taken for the survey is by no means random, and it is hard to gauge response rates. Thus results need to be interpreted with caution. A second phase consisted of targeted requests to environmental geoscience groups and societies, plus placing of an article in the IUGS Newsletter.

Results

To date (December 2009) 77 responses have been received (53 English language, 24 Spanish), representing 29 countries. Thus the survey is achieving at least one objective, that of examining international attitudes. The limited number of responses to date, however, means significant conclusions will be difficult to draw. Further efforts will be made to publicise the survey using a variety of methods – e-mail lists, scholarly group newsletters and more. The objective will be to garner at least 300 responses.

Even at this very preliminary stage some early trends are clear. These include the following:

- 77% of respondents had no formal training in dealing with the media, but 75% would be interested in taking such a course if offered; 87% had no courses in communication as part of their formal education.
- 71% agree that the news media are more interested in negative stories about environmental geoscience than positive stories.
- 76% agree that few members of the news media understand the nature of environmental geoscience
- 74% said their institution supported efforts to engage the public; 70% said their colleagues were supportive of such efforts.
- 76% felt they were well or fairly well equipped to engage with the non-specialist public about their research.
- Respondents agreed it was important to engage the public, politicians, policy makers, NGOs and schools in addition to scientists within their own discipline
- When discussing research, 64% found their fellow scientists easiest to talk to; and 64% found politicians and policy makers the most difficult to talk to.
- 67% had been involved in developing policy; and 65% found their input had to some degree been effective
- The major barrier to using geoscience to inform policy was thought to be the lack of scientific background of policy makers (64% of respondents)

Conclusions

Although results are very preliminary, it suggests that overall this survey of environmental geoscientists shows some contrasts to the more general surveys cited above. In particular the level of support from institutions and colleagues is encouraging, as well as the clear importance placed on communication by the respondents. The lack of formal training in communication however is a concern.

Further trends will become more apparent as a useful sample size is reached, and will allow examination of differences by specialization or nationality.

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