Earth Science, Education, Public Outreach and our Future World

Morgan, Alan[1]
[1]University of Waterloo, Department of Earth and Environmental Sciences, Waterloo, Ontario, Canada N2L 3G1

Few will deny that the Earth sciences are the "poor relation" within the academic sciences. There are many reasons, historical, academic, financial and political for this lack of recognition. However, few will deny that in a world with rapidly growing population numbers, increasing demand for natural resources, escalating risks from natural hazards and the very real problems associated with climate change, that this matter needs rapid correction. The question is how to engage the public with interesting and relevant data and how to illustrate the importance of our discipline so that it might encourage them to push for better recognition within the schools, more innovative and pertinent teaching at universities and more engagement with politicians?

Demographics are generally unfavourable because in the western world most Earth scientists were trained several decades or more ago and many are now reaching retirement age. There has been a traditional resistance from practitioners of chemistry, physics and biology to allow geologically-based topics into the school curricula. Universities have, over the last few decades, often combined or eliminated Earth science departments. Politicians, while paying lip service to the importance of the Earth sciences, often are slow in recognizing a crisis.

And there are crises. In the past few months approximately 200,000 humans have died as a result of two "natural disasters" caused by the cyclone Nargis in the Irrawaddy delta region and the earthquake deaths in the Szechuan Province of China. Several years ago an even larger number died as a result of the great Asian tsunami. In North America storm-related damage costs of the past three years are approaching the initial costs of the invasion and war in Iraq. The data and prognoses provided by the last IPCC panel report are now starting to be realised as potentially serious matters by (at least European) politicians and many members of the public. The human and economic costs related to climate change will be significantly larger than those mentioned above and may well place the planet's climate into a situation that is unprecedented in the last 35 million years.

This talk addresses the problems mentioned above from a personal perspective especially in regard to university teaching techniques and public outreach. It also attempts to illustrate some methods that might be used to engage students through field excursions, distance education and podcasts, and the public through lectures, films and local education (e.g. Geoscape, Waterscape and Geotime trails) in Earth-related matters.

→

Abs. No. **445**
Meeting: **DMG 2008**
submitted by: **MORGAN, ALAN V.**
email: **avmorgan@uwaterloo.ca**
date: **0000-00-00**
Req. presentation: **Vortrag**
Req. session: **S01**