

Tertiary Education for Mountain Needs

In recent years, our knowledge about mountain areas has increased significantly, and many documents have underlined the need for further research. New research projects and initiatives and a new international journal—the *Journal of Mountain Science*—have emerged, and there are more and more books on mountain subjects. However, what are the benefits of this increased knowledge for people who live in, and earn their livelihoods from, mountain areas? Do they have special needs for education? How can we integrate their traditional knowledge with science-based knowledge? How can the challenges of delivery to sparse populations with limited access to educational facilities be overcome?

Two recent documents address education for mountain people (Messerli and Bernbaum 2004; Education Initiative, no date). These discuss needs for primary, secondary, and tertiary education, as well as capacity development and the opportunities presented by new technologies. Recognizing the other needs, this MountainNote focuses on tertiary education. Already, materials and courses with a mountain focus exist around the world. In 2000, a survey conducted through Mountain Forum identified modules on mountain themes in undergraduate courses in Australia, many European countries, Japan, the Philippines, Peru, and the USA. Such a survey conducted today would reveal a far larger number and diversity. Graduate courses exist, including an International Master's Program in Mountain Forestry in Austria (www.boku.ac.at/mf.html) and a Master's course with a specialization in mountain management in France (www.cism.univ-savoie.fr/

www.cism.univ-savoie.fr/epgm). In addition to long-established academic institutions in mountain areas, new ones have been emerging, including the University of Central Asia (www.ucentralasia.org), the University of Northern British Columbia (www.unbc.ca), and the UHI Millennium Institute (to become the University of the Highlands and Islands) in Scotland (www.uhi.ac.uk).

In 2004, the UHI began delivery of an MSc in Managing Sustainable Mountain Development (www.cms.uhi.ac.uk/msc.htm). This is a unique course for a number of reasons: it is delivered online and part-time, and has a focus on sustainable development in mountain areas. The online delivery is largely Internet-based, using a password-protected web site with, for each module, course materials and a discussion board that students use to complete weekly tasks—and discuss among themselves. For some modules, lectures and readings are provided on CDs. Students also have access to the UHI's extensive electronic library resources and to tutoring by e-mail.

The initial core modules address environmental and societal issues in mountain areas, sustainable development, developing communities, and policy analysis and frameworks. Students who complete these modules can leave the course with a postgraduate certificate. Those who continue take 4 modules from a choice of 10: some focus on skills (eg GIS, Strategic Environmental Assessment), others on developing a deeper understanding of topics such as biodiversity management, tourism, and water management. Students can leave after successful completion of 4 optional modules with a postgraduate diploma, or continue to a

dissertation and the award of the MSc.

All students are part-time, taking 1 or 2 modules per semester. Over the first 3 years of delivery, the diversity of students—in terms of age, work experience, and interests—has been remarkable. They include people working in mountain areas as land managers and in rural development agencies, teachers, university lecturers, and retired people and others who are mainly taking the course for their own interest, rather than to gain an additional qualification to advance their career. The first person likely to graduate with an MSc exemplifies the need for such a flexible course, available to remote locations: she cultivates berries and mushrooms, has 2 small children, and lives on the Isle of Skye. At present, the course is only available to residents of the UK, but it is hoped that it will be possible to deliver it more widely following the current revalidation process. As Internet access grows in mountain regions around the world, this course may provide a model that can be adapted to the specific needs of people in other mountain regions.

REFERENCES

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