Editorial

This issue of our newsletter is being published to coincide with the international conference, ‘Mountains of our Future Earth’, in Perth on 5-8 October.

This has been a major undertaking for our small team. Angela Paterson, our indefatigable Administrator, is working extra hours, and we have hired Amy Woolvin, who will stay on with the CMS after the conference, and Scott Herrett and Noelle Crimmins, who recently completed the MSc in Ecosystem Services at the University of Edinburgh. We will also be relying on many volunteers, including current students and graduates of our MSc in Sustainable Mountain Development. Together, we are looking forward to a very successful event!

On 1 October, just before the conference, we will be celebrating the graduation of two PhD students: Mohammed Al-Kalbani from Oman; and Pippa Wagstaff, the last of the three PhD students on the ‘Sustainable estates for the 21st century’ project. Much of our work in Scotland continues to build on this project, often in partnership with Rob McMorrin, who moved from the CMS to Scotland’s Rural College (SRUC) at the beginning of 2014 and remains a valued collaborator. This research is contributing both to practice and to the evidence base for the Land Reform Bill which is currently before the Scottish Parliament.

As you will see from the following articles, the CMS is active at many levels, from Scotland to global – and not always on mountain topics. The mountains remain our primary focus, but our expertise is also in demand in other types of regions, as the methodologies we develop and apply are of value in many different contexts.

Personally, I have been active in many roles within UNESCO’s Man and the Biosphere (MAB) programme, including support for the development of a new biosphere reserve in Wester Ross which I hope will be approved by the MAB International Coordinating Council when it meets in Lima, Peru, in March.

We hope that you find this publication interesting and useful, and will want to receive future issues. As one of our major emphases is knowledge exchange, we will also be grateful for any suggestions about format and content – we would like to hear from you!

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Amy Woolvin – New staff member

Amy is an interdisciplinary researcher with a background in geography. She has a particular interest in landscape research and exploring human-environmental relationships within Highland landscapes: the focus of her recently completed PhD thesis at the University of Dundee. Methodologically, she has experience in utilising participatory and creative approaches. She has a strong commitment to knowledge exchange and engaging with multiple stakeholders as part of the research process. Since joining the CMS in April, Amy has played a key role in organising the ‘Mountains of our Future Earth’ conference. She has also been assisting with research projects and is looking forward to developing new projects.

Visitors

Over the last year, we have welcomed three foreign visitors to the CMS. From November 2014 to February 2015, Katarzyna Wicher, who had recently completed a Master’s degree at Jagiellonian University, Krakow, Poland, came to us as an Erasmus+ trainee, funded by the European Commission. Her work at the CMS focused on the zonation of mountain biosphere reserves. As she was so efficient in completing this work, she also compiled references on research in biosphere reserves. In May and June, Daniele Crimella, an Italian student studying on the Master’s programme in Social-Ecological Resilience for Sustainable Development at the Stockholm Resilience Centre, joined us for a traineeship. This focused on research in Cairngorms National Park. From September, Mari Oiry Varacca, from France, joins us for an 18-month postdoctoral fellowship funded by the Swiss National Science Foundation. Her project is titled ‘Territories of return and innovation: heritage and mobility in the mountains’.

Mountains - A very short introduction

In September, Oxford University Press published the 444th volume in its ‘Very Short Introduction’ series, ‘Mountains: A very short introduction’, by Martin Price. The well-known mountaineer Mick Fowler has written: “This marvellous little book might be labelled ‘short but it is packed with detail.

If you are interested in the mountain environment and the relationship between humans and mountains then it should be essential reading”. Professor Jack Ives has described it as “A masterful treatment of virtually all aspects of Mountains, outstanding, well-documented, and highly readable”.

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Jayne Glass and Ros Bryce are working with Scotland’s Rural College (SRUC) and the Wild Land Research Institute at the University of Leeds on a project for Scottish Natural Heritage (SNH) about the benefits and impacts of wild land. This builds on previous work on wild land in Scotland at CMS, from 2006 onwards, which informed the development of SNH’s map of 42 Core Areas of Wild Land, published in 2013. These are defined according to four criteria: remoteness, perceived naturalness, low levels of human artefacts, and ruggedness. The current study has two aims: 1) to use existing data sets to provide an up-to-date overview of the benefits attributed to wild land areas at a national level; 2) to conduct case studies of selected wild land areas, to illustrate the ways in which they positively and negatively influence landowners, local communities, and the general public. An ecosystem services framework is being used to assess different types of benefits provided by wild land at both national and local scales. In the case studies, a mapping survey application is being used to build up a picture of how different stakeholders perceive the different ecosystem services – such as climate change mitigation and cultural heritage – that wild land areas provide. Interviews will add important qualitative depth about the environmental, social and economic benefits and impacts that characterise each area and will help in understanding the ways in which they are perceived and managed.

On a related theme, Helen Steen, a student on the MSc in Sustainable Mountain Development living in Germany, received a distinction for her dissertation in which she used narrative analysis to understand the ways in which people value wild land in Scotland.

Grouse shooting, moorland management and local communities

Ros Bryce and Jayne Glass, together with colleagues at Scotland’s Rural College (SRUC), have recently concluded a project to gain insights into the social and economic benefits and impacts of the grouse shooting industry on rural communities. There has been a lot of recent publicity surrounding grouse shooting. While there are many reported benefits for the local economy – i.e. on employment and local business, and for upland habitats – concerns have also been expressed about the negative influences of this form of upland management in rural areas. The team carried out a large household survey across the Angus Glens and the Monadhliath mountains to analyse perceptions of moorland management and grouse shooting among rural communities. This elicited 266 responses and was followed up with interviews with community representatives and local business people who revealed in more detail the ways in which the grouse industry has shaped these areas. The project report will be released shortly, and will inform the evidence base on this contested topic.

Estates and communities

Jayne Glass and Ros Bryce are contributing to research for The Scottish Government that aims to explore examples of how diversity of land ownership has led to different social, economic and environmental outcomes in rural communities. Led by Scotland’s Rural College (SRUC), the research considers the implications of large land holdings for the local communities that reside within their boundaries. It focuses on size rather than tenure of ownership and aims to develop evidence on the relationship of different patterns of landholding size to social, economic and environmental outcomes. A robust theoretical framework has been developed, guiding the selection of outcomes to be considered; data collection and analysis will be conducted in six case studies. The research will be completed towards the end of 2015.
Mapping historic hydro schemes

Ros Bryce worked on a project to map historic hydropower infrastructure in eastern Scotland with Rob Boyd and Peter Bell of the Perth & Kinross Green Technology Business Accelerator project, a partnership between Perth College UHI and Perth & Kinross Council. The project was funded by East Coast Renewables and the four Councils concerned. Small-scale hydro is a promising, but currently underutilised, source of renewable energy in Scotland.

Small-scale hydro schemes offer a means for farmers and other landowners to diversify their incomes and can contribute to sustainable rural development; through the ownership of such schemes, both landowners and communities can derive a range of economic and social benefits. The project comprised a preliminary evaluation of existing infrastructure and historical sites, with a view to assessing the potential for refurbishment in the future.

A large area of eastern Scotland, from Aberdeenshire to Kinross-shire, was mapped using Google Earth and historic datasets; 587 historic sites were located. At many, there was little evidence of the historic infrastructure, but other sites still had dams, weirs, sluices, mill wheels and water channels in varying condition. It is hoped that more detailed feasibility studies will be done, to identify case study sites and develop them for refurbishment.

Research in Cairngorms National Park

In 2013, Cairngorms National Park (CNP) became the UK’s first ‘Long Term Socio-Ecological Research’ (LTSER) platform. As a member of the Board of the CNP Authority until September 2014, and since, Martin Price has worked with the Authority and other stakeholders to prepare a research strategy for the Park.

A key element of these linked processes is to identify ‘who is doing what research, how, when and where’ in the Park. This was the focus of Daniele Crimella’s traineeship, during which he undertook a web-based search and used a questionnaire survey in order to compile a detailed spreadsheet based on a metadata structure which he designed. This work identified the many organisations doing research in the park, and their range of activities, and provides an important basis for taking the LTSER and the research strategy forward; next, at a workshop in Aviemore on 21-22 October.

Marine Conservation Zones in Sussex – Community Voice Project

In late 2014, Ros Bryce worked with Jasper Kenter at The Scottish Association for Marine Sciences (SAMS) UHI on a project to evaluate management options for two of the first new Marine Conservation Zones (MCZs) to be designated in England. The Sussex Inshore Fisheries and Conservation Authority is responsible for managing fishing activities in MCZs in their district and, in partnership with the Marine Conservation Society (MCS), led a process to engage stakeholders in discussions about local management measures. Jasper and Ros designed and ran a series of workshops in which stakeholders (including fishermen and environmental organisations) discussed and evaluated management measures, such as different types of trawling restrictions. Central to the project was a film produced by MCS containing extracts of interviews with stakeholders which illustrated the wide range of perspectives on local marine management (community voice method). The film was shown in the workshops to help stakeholders evaluate the potential impacts of different management measures. The workshop results will be included in a wider consultation on the management of the new MCZs.
In the first two decades of UNESCO’s Man and the Biosphere (MAB) programme, one of its major strengths was networks of scientists working in 14 ‘project areas’ relating to specific types of environment (forest, mountain, urban etc.) or specific themes. Today, the World Network of Biosphere Reserves is the programme’s major focus. While considerable knowledge is generated by scientists in BRs, neither the Secretariat of the MAB Programme nor its European network (EuroMAB) has had the resources necessary to compile or disseminate this in recent years. Thus, although many scientists work within individual BRs, often (but not always) with the organisations responsible for coordinating/managing them, and some scientists have conducted comparative research across multiple BRs, a collaborative network of such scientists does not exist. Such a network could have many benefits, such as collaborative research, sharing of research findings and good practice, obtaining funding for projects, and exchanges of scientists and students. These issues were discussed in a workshop organised by Martin Price and Swedish colleagues at EuroMAB’s biennial meeting in Haapsalu, Estonia, in May 2015. Outcomes included agreements to continue the review on literature on research in BRs, started by Katarzyna Wicher during her traineeship (to be done at Vancouver Island University, Canada); a possible proposal for a COST Action to the European Commission; and a session on this topic at the 4th World Congress on Biosphere Reserves in 2016.

In October, Martin Price was appointed Adjunct Professor at the University of Bergen, Norway, primarily to assist in developing the proposal for a biosphere reserve in Nordhordland, north of Bergen. He has also been a member of the Advisory Board of the Swiss-Polish project ‘Forest cover changes in mountainous regions – drivers, trajectories and implications’ (2012-15), and is working with the Mountain Research Initiative to develop a position paper, ‘Mountains for Europe’s Future’, to be submitted to the European Commission to encourage the specific inclusion of research in mountain areas in future calls within the Horizon 2020 programme.
International conference: Mountains of our Future Earth

The third international, and highly interdisciplinary, mountain science conference organised by the CMS, ‘Mountains of our Future Earth’, will take place in Perth on 5-8 October. This follows previous conferences in 2005, with 210 scientists from 41 countries, and in 2010, with 420 people from 60 countries. As in 2010, the Mountain Research Initiative (MRI) is collaborating in organising the conference; this time, together with the Global Mountain Biodiversity Assessment (GMBA). Funding is being provided by Perth and Kinross Council, VisitScotland, The Scottish Government, Sir Henry Angest the Swiss Agency for Development and Cooperation, the Austrian Academy of Sciences, MRI and GMBA. 422 participants from 62 countries will attend. In addition to 7 keynote presentations by global experts, there will be 46 parallel sessions and 8 roundtables on very diverse topics ranging from different aspects of long-term environmental change to urbanisation and tourism. Conference outcomes will be summarized in strategic documents and policy briefs which will contribute to future research. Key papers will be published in a special issue of the peer-reviewed open access journal Mountain Research and Development. Presentations from conference sessions will also be used as the basis for special issues of other journals. A special issue of The Geographer focusing on Scottish mountains will be published by the Royal Scottish Geographical Society, which will also co-organise a public lecture by the renowned mountaineer Leo Houlding during the conference.

Ecosystem services from mountain areas under climate change

In 2013-14, Martin Price and Paul Egan of Trinity College, Dublin, Ireland – in their capacity as co-chairs of the Mountain Ecosystems Thematic Group of the Commission on Ecosystem Management of the International Union for the Conservation of Nature – worked with UNESCO’s International Hydrological Programme on a project on ‘Climate Change Impacts in Major Mountainous Regions of the World: Multidisciplinary Network for Adaptation Strategies (Africa, Asia, Latin America and Europe)’. This involved three regional workshops and the preparation of a comprehensive overview paper and policy brief. These were discussed in a synthesis workshop at UNESCO Headquarters in Paris in January 2014, and disseminated at the Conference of Parties to the UN Framework Convention on Climate Change in Lima, Peru, in December 2014.

UNESCO’s Man and the Biosphere Programme

In his capacity as Chair of the UK Committee for UNESCO’s Man and the Biosphere (MAB) programme, Martin Price was appointed to the programme’s International Coordinating Council (ICC) in 2012, to its Bureau in 2013, and as its Rapporteur in 2014. He has had a long involvement with the MAB programme, particularly in the context of biosphere reserves, designated by UNESCO as “sites of excellence to explore and demonstrate approaches to conservation and sustainable development at a regional scale”. His work in leading two national-level periodic reviews of the UK’s biosphere reserves is internationally recognised as good practice as a process of quality control. This is a key period for the MAB programme, with the development of both a strategy and an action plan for 2015-2025. Martin is centrally involved in these processes as Rapporteur of the MAB Strategy Group, which led the production of a strategy that the ICC approved at its 2015 session, and is now working on the action plan, to be presented to the 4th World Congress on Biosphere Reserves and the ICC in Lima, Peru, in March 2016. He is also a member of the Organizing Committee of the Congress.
Postgraduate courses
MSc in Sustainable Mountain Development

The part-time on-line MSc in Sustainable Mountain Development has just started its 12th year, currently with 32 students from across the UK as well as Bulgaria, Canada, Germany, Spain, and the USA. So far, 25 students have graduated with an MSc, 9 with a Postgraduate Diploma, and 10 with a Postgraduate Certificate. In 2013, we were grateful to receive a bequest from the estate of Lt. Col. John Moncreiff, a keen mountaineer who was a long-standing supporter of the CMS. This is being used to fund two full scholarships for the MSc. The 2014 scholarship was awarded to Pedro Fiz Rocha from Spain. It is also possible to take modules for Continuing Professional Development (CPD): particularly Sustainable Deer Management and Water Management (January – May) and Sustainable Land Use and Renewable Energy in Rural Scotland (September – December). The Sustainable Deer Management module, in particular, has attracted good numbers of CPD students from a diverse range of backgrounds, including private and public sectors and NGOs, and we expect the newer Sustainable Land Use module to prove similarly popular. In these and other modules, the students’ diversity of knowledge and experience makes for stimulating debates on the online discussion boards. Whether they sign up for an MSc or for individual modules, the flexible online format is appealing to those with busy jobs in often remote locations.

A new Rural Masters in Business Administration?

The University of the Highlands and Islands is carrying out market research for a proposed Rural MBA programme which will combine modules in business administration and natural resources management, in a flexible online learning format. If the course is developed, it will provide an opportunity for those with academic and/or industry experience to develop knowledge and skills related to managing land-based businesses in rural Scotland. We expect the course to be of interest to estate owners/managers, individuals working with various land-based businesses, and members of community groups who are actively managing land or have an interest in doing so. The proposed course would have the following features:

1. a unique opportunity to combine business management skills with an in-depth understanding of land management approaches and issues in Scotland, with a focus on sustainable development.
2. an interdisciplinary course taught by specialists in business management, ecology/environment and sustainable rural development.
3. a high level of flexibility, with learning taking place entirely online full- or part-time, allowing study from any location.

We are looking for feedback. If you are reading this online please take our short survey here or contact Ros Bryce (rosalind.bryce.perth@uhi.ac.uk).

PhD Research

Mohammed Saif Al-Kalbani successfully defended his PhD thesis, ‘Integrated environmental assessment and management of water resources in Al Jabal Al Akhdar, Sultanate of Oman, using the DPSIR framework’, in June. In recent months, Mohammed has also been working on research papers which will be published in international journals, as well as others for which decisions are awaited. He presented papers to the XV World Water Congress (Edinburgh, May), the International Conference on Sustainable Water Resources Management (La Coruña, Spain June), and the International Graduate Summer School on Mountains and Cities: Environmental Risks (Lyon, France, June). Julian T. Inglis’ PhD research began in March. He will establish a sustainable development framework for coastal and marine regions, based on key factors contributing to good practice in the integrated management of land and marine regions around the world. This framework will be tested in the lower Tay region on the east coast of Scotland, which has numerous terrestrial and marine conservation designations, two large urban centres, coastal villages, important inshore fisheries, and a developing offshore wind farm sector. The final stage of his research will be to assess the utility of the resulting framework for wider application. Of his research Julian has a particular interest in the biosphere reserve model, having served on the Canadian Committee for UNESCO’s Man and the Biosphere Programme, and contributed to the development of the biosphere reserve network in Canada.

CMS staff are also involved in supervising other PhD students: Euan Bowditch (Inverness College UHI), Rodney Garrard (University of Berne), Christiane Valluri-Nitsch (University of Edinburgh) – Martin Price; Matt Curran (Inverness College UHI) – Ros Bryce; Jessica Roberts (University of York) – Jayne Glass.

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The Centre for Mountain Studies (CMS) was established at Perth College UHI in August 2000, with the objective of creating a centre of excellence for work in mountain areas within the University of the Highlands and Islands.

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