

<p>Institution: University of the Highlands and Islands</p> <p>Unit of Assessment: 17 Geography, Environmental Studies and Archaeology</p> <p>a. Overview The University of the Highlands and Islands is a unique partnership of 13 colleges and research institutions. Research is coordinated by the Vice-Principal for Research and the Dean of Research, working with the Research Committee on strategic issues and the Research Practitioners' Group on implementation and staff development. Relevant research is undertaken within six partners: Inverness College UHI; Lews Castle College UHI (Stornoway); Orkney College UHI (Kirkwall); Perth College UHI; Scottish Association for Marine Science UHI (SAMS) (Oban); West Highland College UHI (WHC) (Fort William). Relevant postgraduate research occurs in two 'Academic Areas' validated for the delivery of postgraduate research degrees by the University of Aberdeen: Archaeology and Sustainability Studies. The two research clusters within this UoA are: Landscape and Culture; Sustainability of socio-ecological/economic systems.</p> <p>b. Research strategy In the RAE 2008, UHI submitted to UoA 33 (Archaeology) and UoA 31 (Town & Country Planning). Since 2008, synergies between archaeology, geography and environmental studies have been recognised and acted upon, particularly in the area of Sustainability Studies. Examples include: a regular networked seminar series; an international conference; funded collaborations into Education for Sustainable Development (ESD); and the validated postgraduate Academic Area of Sustainability Studies.</p> <p><u>Evaluation of research strategies since 2008:</u> The 2008 priority in Archaeology was to enhance capacity, focusing on the distinctive cultural heritage of the Highlands and Islands. Thus, a key focus has been the global application of experience gained from working in the Heart of Neolithic Orkney (HONO) World Heritage Site (WHS), being actively developed due to its geographic advantages for the cluster, largely based in Orkney. UHI-led field projects (especially at the Ness of Brodgar and Orkney Barrows) are making a significant contribution to the understanding of early prehistory in Europe. Underwater archaeology, environmental archaeology, historical and early modern archaeology were also identified as priorities for growth. New appointments in the former two areas, and the evolving priorities of existing staff, have extended the geographic focus globally, allied to marine and coastal landscapes and to research at WHS, including collaboration on major projects on Easter Island and in Nepal and Tanzania. Sustainability has emerged as a research priority, developing from the SFC-funded ESSENCE scoping study (2007-8), now in collaboration with the City University of New York (CUNY, funded by NSF), the Universities of Bradford and Stirling; the appointments of Mainland and Strickland have strengthened expertise in this area. Since 2008, the number of research-active archaeologists has more than doubled, facilitated by the development of new teaching portfolios (enabling a new lecturing position in Stornoway: Macleod), infrastructure support and research funding. Research capability has been enhanced through the establishment of an in-house archaeological field unit, the Orkney Research Centre for Archaeology (ORCA) and collaborative research within the UK and internationally.</p> <p>The 2008 submission to UoA 31 referred to three research groups: sustainable development and planning in rural areas; social cohesion and community sustainability; corporate sustainability and management. The first two remain prioritised, with activity from national to global. The 2008 strategy recognised significant linkages between these themes and stated that each group would continue to develop its own particular emphases, collaborating where possible. Subsequent research has largely followed these linkages and emphases, with activity in rural themes at Inverness and Orkney – as well as Perth and WHC, where mountain areas are a more specific focus – and on marine and coastal themes at SAMS. Since 2008, the number of research-active staff, and collaboration, have increased considerably.</p> <p><u>Five-year strategic plan:</u> UHI's 2012-17 Research and Knowledge Exchange Strategy envisions "an international reputation for research excellence and for creating and transferring high impact and useful knowledge"; the Strategic Plan 2012-17 states that the UHI will draw "upon the distinctive characteristics of the Highlands and Islands ... and develop national and international links and alliances." These visions require research that generates knowledge and economic/social</p>

Environment template (REF5)

benefit to the Highlands and Islands as well as comparable human/social/geographic landscapes worldwide. UHI aims to: have significant players on the international stage, recognised for innovative and applied research, building on complementary interests and expertise across UHI; contribute to the sustainability and cultural and natural heritage of the Highlands and Islands and similar European and global regions; and further integrate research, knowledge exchange, and teaching in these contexts. UHI has defined Geography, Environmental Studies and Archaeology as priority areas for development. A consultation on enhancing support and development will begin in November 2013, reporting to the highest level of management by April 2014.

The **Landscape and Culture cluster** will continue to develop innovative approaches to cultural landscapes, past and present. A key driver will be a new **Institute of Archaeology**, an international centre of excellence building on existing research facilities and interdisciplinary approaches to landscape, archaeological and heritage practice. This initiative has begun with a Professorial appointment for Downes (2013) and additional infrastructural funding being sought from Highlands and Islands Enterprise (HIE) and other funding bodies. Research priorities will coalesce around strengths in **Scottish prehistory, World Heritage Management, Historic Marine and Coastal Environments** and emerging expertise in **Sustainability Studies**, with several monographs and major publications targeted by 2018. Research capacity will be enhanced by formalising existing research partnerships in the UK and globally through funding proposals addressing: Neolithic origins and identities (Leverhulme, with University of York [awarded 2013] & NERC); connecting communities through archaeology (HLF & AHRC); long-term trajectories of societal sustainability and resilience in Northern maritime communities (AHRC & NSF).

The main objectives of the **Sustainability of Social-Ecological/Economic Systems cluster** are to: consolidate and expand work on **coupled social-ecological systems** (particularly marine/coastal and mountain) and their governance; continue to play a major role in developing the **ecosystem approach and adaptive management** in marine policy; study the implications of globalisation; contribute to evidence-based policy-making across the **mountains and seas of Europe**; and embed our growing recognition and reputation in enhancing global **adventure, eco and wildlife tourism**. These will be achieved through: application of systems science for innovative multidisciplinary assessments; completion of scenario analysis within the National Ecosystem Assessment (NEA) with follow-up proposals to NERC/ESRC and the European Commission; continued work on landscapes and communities on small islands; work with European partners on the economic and social aspects of marine planning for renewable energy (MERIKA project, funded by FP7); development of a multidisciplinary international project under Horizon 2020; development of a international science for policy initiative with the United Nations University (UNU) and Future Earth; continued work with the European Environment Agency (EEA) and the Alpine and Carpathian Conventions on environmental and socio-economic assessment; research on wild land and its values for recreation and tourism; a third international conference on global change and mountain areas in 2015 together with global partners.

New and developing initiatives: A strategic priority is to further embed the research capacity in **Sustainability Studies** by establishing a distributed **Research Centre**, drawing on existing wide-ranging expertise across UHI to promote a multi-disciplinary perspective with a specific focus on remote and upland communities, and marine and coastal systems. Infrastructural support will be facilitated through several linked initiatives, with the following research priorities: **Tourism and Sustainable Development** at WHS and in outdoor and natural environments, linked to a **Tourism Innovation Centre** (proposal to SFC with Glasgow Caledonian, Robert Gordon, Queen Margaret, Strathclyde, and Heriot-Watt universities); **Renewables and the Low Carbon economy (LCE)**, a major strategic alignment, bringing together nodes of expertise that focus on the human element of the LCE, to investigate reform to land/coast/sea management, renewable energy, carbon markets, community values, and change in the Highlands and Islands; **Education for Sustainability** - development of a regional hub in the recently established 'UN Recognised Centre of Expertise in EfS for Scotland'; **Sustainability and the Environmental Humanities** - further involvement in the '**Gateway to the Atlantic**' project, linking past and present island sustainability in the North Atlantic islands, involving the North Atlantic Biocultural Organisation (NABO), the Global Human and Ecodynamics Alliance (GHEA), and Bradford University, including funding proposals to NSF and AHRC; **Horizon Scanning and Scenario Modelling** in marine systems at SAMS, with the Universities of East Anglia and Hull, building on the work conducted for the NEA

Environment template (REF5)

and the European Commission and linked to a long-term programme to monitor public opinion and values on marine issues globally; **Coastal Systems**: through further development of the SAMS-James Hutton Institute (JHI) 'Partnership for Sustainable Coasts', which aims to align research across the land-sea interface, recognising mutual interest in assessing and analysing coastal systems, developing practical research on ecosystem services; and building policy influence. This aligns strategic strengths of both organisations and addresses key gaps: e.g., strong social science expertise in economics, environmental psychology and geography at JHI; the strong international profile in multidisciplinary marine science at SAMS (also included in our submission in UoA 7). The partnership will build on its projects (e.g. from the World Bank, JNCC, Scottish Government), and on collaboration in the Valuing Nature Network and the NERC CBESS consortium on relationships between biodiversity and ecosystem service flows across coastal margins.

c. People, including:

i. Staffing strategy and staff development

Staffing policy: The key aims of staffing strategy for UoA17 are to ensure: stability and resilience; that key staff have sufficient international standing and experience to lead major research projects; succession planning. These objectives are being achieved through:

- **establishment of key research leadership roles**, including the appointment of a new Director at SAMS (Mee), a Professor in Archaeology (Downes), establishment of a Centre for Tourism and Recreation Research at WHC (Varley, award of £143k from SFC);
- **investment in research-active mid and early-career researchers in areas aligned to the unit strategic plan**, including Alexander and three new posts in environmental economics and marine spatial planning at SAMS (funded by the EU FP7 Convergence and Outermost Regions programme), appointments in medieval, environmental and underwater archaeology (Macleod, Mainland, Strickland, Christie, and Geomatics project staff) funded by increased teaching capacity and the ERDF Marine Historic Environment project;
- **facilitating career progression**, including progression from PhD to ECR (Mc Morran and Glass) and promotions (Mainland, Senior Lecturer; Downes, Professor).

Research career development: It is UHI policy to ensure equality of opportunity and career development support for all staff, regardless of age, gender, disability, location, or employment status. UHI staff are appraised annually through Performance Review, identifying opportunities for CPD and research training. **Research training** is available for all UHI staff, with in-house courses on *inter alia* research methods, proposal writing, and research supervision. Support for staff undertaking higher degrees and for supervisors and early career researchers is provided through the UHI Graduate School. **Research support** includes mentoring and coaching, a UHI sabbatical leave scheme, annual staff (and student) development and research conferences, a staff travel and conference fund, and pump-priming resources for pilot study development. Examples since 2008 include Downes' research sabbatical and study leave for Glass and McMorran. The UHI Research Office supports staff with funding opportunities and grant applications. The principles of the **Concordat for Research Development** are enshrined in the UHI research strategy and policy, and implemented via support processes and opportunities for staff (particularly, but not exclusively, early career staff). UHI is seeking, and soon expects to secure, Athena Swann recognition.

Procedures for monitoring research quality: Quality control processes are provided centrally by the UHI (e.g., Ethics policy, Quality Enhancement Steering Group) and implemented locally (e.g., SAMS Internal and External Research Committees). This ensures high standards of quality control in proposal writing, reporting, ethics, objective setting and scrutiny of results. An annual cycle ensures that researchers are supported and there are measurable objectives to monitor progress.

ii. Research students

Postgraduate research environment: Submitted staff are involved in supervising 21 PhD students and 2 Masters by research. Many are part-time. Numbers have increased steadily since 2008; a low drop-out rate reflects quality of supervision. Externally-funded studentships include the AHRC (1), European Commission (2), SFC (1), and a private foundation (3). Research students are fully integrated into the research culture of the UHI and are active participants of research teams, including supervisory roles in field projects. Students give oral presentations on their research in

Environment template (REF5)

the regular UHI-wide seminar series for Archaeology (co-ordinated by PGR students) and the Sustainability Studies network (coordinated by Glass). The biennial UHI postgraduate and staff research conference permits students to present to, and interact with, research-active staff from across the UHI and to develop their networking skills. In alternate years, there are both a postgraduate research students' conference - allowing all students to present their work, orally and in poster format, and develop their networking skills - and a thematic research conference: in 2012, on 'Sustainability and heritage: how can the past contribute to a sustainable future', bringing together staff and students from across this UoA and others from the UK and overseas. Students are encouraged to present at conferences, publish in professional media, engage in professional networks and organisations, and make grant applications.

Postgraduate research training: The UHI Graduate School, created in 2010, co-ordinates activities relating to PGR student **support and training** and, together with the UHI Research Degrees Subcommittee, oversees student progression and monitoring. Supervisory teams are typically cross-disciplinary, enhancing the experience of students – and strengthening staff research networking. New research students participate in an annual UHI-wide induction and complete a localised programme of induction. Supervisors and the student conduct a Training Needs Analysis to identify skills gaps; Progress Monitoring Reports are reviewed annually. The Graduate School offers a range of internal and external training courses (e.g. University of Edinburgh Transkills programme, Vitae) designed to provide the basic generic skills of a graduating postgraduate researcher, and meets related costs, including travel and subsistence, so students are not compromised by geography. The Graduate School also provides support for each student towards the costs associated with one conference and one training event per annum.

d. Income, infrastructure and facilities

For this UoA, the natural, social, cultural and economic environment of the Highlands and Islands is the most important research resource and a unique research laboratory: the archaeological resource has well-preserved internationally important remains relating to all periods from the Mesolithic onwards; the upland and coastal/marine environments excite and underpin research; the region includes 63% of the UK's seas, most of its fisheries, over 20% of European marine renewable energy potential, and a large diversity of island and mainland cultures and communities with differing views on achieving sustainable use of ecosystem services. The Highlands and Islands inspire research and also underpin collaborations with staff from other institutions.

Income: The UHI strategy to promote collaborative research, together with the significant networks of staff in the research clusters, has led to successful joint applications from multiple UHI members and with organisations in the UK and globally, facilitated in part by c. £100k investment in a Research Information Management System, and encouraged by the routine sharing of research activity in the Research Practitioners' Group, which meets 3-4 times a year. Significant research funding has been secured from UK and international organisations, usually through competitive proposals (figures given are for total project budgets). At the **international** (non-EU) scale, this has included the marine component of a GEF study: Enhancing the use of science in GEF International Waters projects (US\$90k); 20 years of Sustainable Mountain Development - The Alps (Swiss Federal Office for Spatial Development: £21k). The **EU** has funded many projects. Within **FP6** and **FP7**, these have included Science and Policy Integration in Coastal System Assessment (SPICOSA: €15 million); Increasing Industrial Resource Efficiency in European Mariculture (IDREEM: €5.8 million); Knowledge-based management of Europe's Seas (KnowSeas: €5.4M); Mountain sustainability: Transforming Research Into Practice (Mountain.TRIP: €847k). Projects funded by the **Northern Periphery Programme** have included: Climate Change - Adapting to The Impacts, by Communities in Northern Peripheral Regions (Clim-ATIC: €2.4 million); Solutions for competitive pellet production in medium size enterprises (PELLETime: €1.8 million); New Plants for the Northern Periphery Market (€724k). Other European funding has been through **LIFE+** (The Celtic Seas Partnership, €4 million); European Observation Network for Territorial Development and Cohesion (**ESPON**) - Geographical specificities and development potentials in Europe (GEOSPECS: €900k), Territorial Indicators on Poverty and Social Exclusion (€750k); and the European Environment Agency (**EEA**) - Integrated assessment of Europe's mountains (€100k).

Funding from **UK Research Councils** has included **AHRC** (Rapa Nui Landscapes of Construction: £640k) and **ESRC** (Effectiveness of Eco-labelling and Fisheries and Aquaculture:

Environment template (REF5)

£128k). **Historic Scotland** and other institutions have provided £265k for archaeological research in the Orkney WHS; the **Heritage Lottery Fund** provided £47k for research around Scapa Flow; Project Adair (a partnership between **RCAHMS** and **Historic Scotland**) provided £26k to map marine heritage sites in the Pentland Firth and Orkney Waters. Other sources of funding include: **Henry Angest Foundation** (Sustainable estates for the 21st century: £285k); **Scottish Government** (development of social and economic objectives for a Scottish Marine Plan, £35k; Strategic Partnership on food and drink science, £29k; Food Processing and Marketing Co-operation Grant Scheme: £23k); **Joseph Rowntree Foundation** (Poverty and ethnicity in Scotland: £20k); National Ecosystem Assessment Follow-on Project: £40k for scenarios work; **commercial companies** (Boots, £219k; Highland Park Distillery, £25k).

Infrastructure and facilities: Across UHI, there has been major **capital investment** in facilities that overcome the challenges of geographic dispersal - including the most comprehensive virtual conference capability in UK higher education (over £1 million investment since 2008), complemented by online teaching material and library materials; centrally held documentation; state-of-the-art software; RefWorks; and general and specialist bibliographic databases, with a federated search tool allowing multiple simultaneous database searching. Special collections include archaeology (Orkney), marine science (SAMS), and mountain studies (Perth). Research students also have access to the online and physical library facilities of the University of Aberdeen.

Custom-built research facilities include a new £10M teaching and research facility at SAMS (a co-investment by SAMS, UHI, HIE, SFC and the EU) and a purpose-built wing for archaeologists on Orkney. The Marine Historic Environment Project (c. £500K, funded by ERDF, HIE, Orkney Isles Council & UHI) established research capacity, laboratories, and equipment to undertake and develop research in marine, coastal and environmental archaeology; also in Orkney, £141k research capacity funding from the UHI ARC project (SFC, HIE, ERDF) provided postgraduate bursaries, some staff costs, and equipment and machinery used for agronomic research trials and supply chain operations. Archaeological fieldwork benefits from a wide range of excavation and survey equipment and state-of-the-art geophysics equipment and software.

The **Research Office** plays important roles, particularly through subscription to (and targeted dissemination of) Research Professional, and engagement with Research Councils and research pools, consortia, and European organisations. The development of **networks with academia and industry** is a key strategy. For example, archaeologists lead or hold steering committee roles on networks funded *inter alia* by Historic Scotland (Downes, Card), AHRC (Downes), and NSF (Mainland, Downes). One benefit of this has been ESSENCE, the SFC-funded network on cultural environments established by Downes, which facilitated PhD studentships and research projects. Strategic infrastructure development has also stimulated income through the Marine Historic Environment project (£529k) which aims to establish research capacity within marine and coastal archaeology research and is attracting significant funding. The marine community is particularly well networked through the Pew Fellows in Marine Conservation (Mee), attendance at the University of the Arctic (Mee) and the Arctic Council (Potts). Also of importance are the many links to end-users of research, who frequently approach staff with research ideas in the knowledge that they will undertake high-quality research, often of high relevance for policy making and other types of knowledge exchange. In many cases, these end-users also fund the research.

e. Collaboration or contribution to the discipline or research base

Academic collaborations: Much of the research within this UoA is highly interdisciplinary, involving collaborators, based both in the UK and in other countries, from a wide range of social and natural science disciplines and the arts and humanities. The many conferences organised by staff within this UoA (see below) are important drivers for collaboration.

A key indicator of success is the number of projects in which UHI staff have been either the lead partner or in the coordinating group. These include three FP7 projects: IDREEM (15 partners, 8 countries, led by SAMS; **Potts** leads the social science component); KnowSeas (32 partners, 15 countries, coordinated by **Mee**); mountain.TRIP (6 partners, 6 countries), jointly coordinated by **Price**. Price also coordinated the NPP Clim-ATIC project (14 partners, 5 countries) and EEA Integrated assessment of Europe's mountains (5 partners, 5 countries) and jointly coordinated the ESPON GEOSPECS project (12 partners, 11 countries). This made significant use of GIS to analyse Europe's 125,049 municipalities according to a range of demographic and economic criteria, and used policy analysis, consultations, and case studies to develop an in-depth

Environment template (REF5)

understanding of these regions and make policy recommendations. Research collaborations bringing together archaeology with social and natural science disciplines have been supported by **Downes** and **Mainland**'s leading roles in research networks dealing with cultural environments, sustainability and related pedagogic research (e.g. Downes - steering committee of AHRC/EPSRC 'Transformation and resilience of our cultural landscapes, archaeology and built heritage'; Mainland, Downes - steering committee of NSF 'Global Long-term human ecodynamics research coordination network: assessing sustainability on the Millennial Scale').

Card's and **Downes**' excavations at the Ring of Brodgar are undertaken with the Universities of Manchester and Stirling and the Scottish Universities Environmental Research Centre. Downes is a partner in the AHRC-funded 'Rapa Nui Landscapes of Construction' project on Easter Island (Universities of Manchester and Bournemouth, UCL). **Mainland**'s research on animal diet, management and domestication involves collaboration with the Universities of Texas, Leuven, and Glasgow, CNRS and CUNY. **Strickland** is involved in 'Strengthening the Conservation and Management of Lumbini, Nepal', a collaborative UNESCO/JFIT funded field project involving architects, conservation scientists and archaeologists. Card's research at the Ness of Brodgar involves collaboration on two major NERC-funded projects (Universities of Cardiff, Bradford and Manchester) refining chronologies for the Neolithic. **Christie**'s research on the maritime archaeology of the Mafia Archipelago, Tanzania involves her in the ERC funded 'Sealinks Project'.

Other collaborations include: research at SAMS exploring the experiences of people living in remote maritime communities, especially on islands in Scotland and the Indian Ocean, with regard to conservation and policy making and bridging natural and social science to art and humanities (**Mee** with PhD student Brennan and artist in residence, Andy Crabb); **De Lima**'s membership of the Trans Atlantic Rural Research Network (a multi-disciplinary grouping involving Queens University Belfast, and Aberdeen, Cornell, Newcastle and Penn State Universities)

Research collaborations with the private and third sectors: Research also draws on many well-established networks beyond academia, which enrich the research environment through research innovation and funding for projects and studentships. Examples include the following. **Varley**'s networks with the tourism industry have facilitated his research on off-road cycling (for the NGO Developing Mountain Biking in Scotland) and have enabled Glencoe Mountain Resort and the Nevis Landscape Partnership to develop strategies to diversify their activities seasonally and for local people to engage with their mountainous hinterland. Varley also leads two projects with commercial outdoor experience providers in four Nordic countries, to develop 'Slow Adventure' focusing on human-powered journeys in 'wild' places. **De Lima**'s links with government institutions in Scotland led to agreements to provide research and analytical services to The Highland Council from 2010 to 2016. The advisory board for the 'Sustainable Estates for the 21st century' project (2007-13), coordinated by **Price**, ensured the on-the-ground and policy relevance of the project and led to a study by **Glass** and **McMorran** of land ownership by environmental NGOs, which funded the study. **Potts**' collaborations with the OECD Local Employment and Economic Development Program and the Green Growth Program resulted in a collaborative international project on the low carbon economy, with Potts leading marine case studies in Australia, Poland, and Scotland. **Martin**'s research with cell biologists at Imperial College and plant breeders at Rothamsted investigates factors which affect the viability of willow wood as a biofuel. **Downes**' collaboration with the Pier Art Centre led to Scotland's Islands Flagship Fund project 'Symbols in the Landscape: Art and Archaeology in Orkney's World Heritage Site.'

Dissemination and knowledge exchange: Key meetings organised by staff within the UOA since 2008 include:

- **Price** (2010): 'Global change and the world's mountains' (450 participants, 60 countries), resulting in a special issue of the peer-reviewed journal 'Mountain Research and Development' (Price ed.) and direct input to the strategy of the global Mountain Research Initiative;
- **Mainland, Downes** and **Price** (2012): 'Sustainability and heritage: how can the past contribute to a sustainable future' (190 participants, 10 countries);
- **Varley**: International adventure tourism conferences in 2012 (49 participants, 8 countries), resulting in a book published by Routledge, and 2013 (70 participants, 12 countries);
- **McMorran** (2010): 'Scotland's Wild landscapes – New Ways Forward' (100 UK

Environment template (REF5)

participants);

- **Downes** (2010) – *WHS Research Symposium* (with Historic Scotland) on Neolithic Orkney (80 UK participants)

Price has given keynote presentations at conferences in Austria, Germany, India, Poland, Sweden, Switzerland; Mainland has given invited presentations at conferences in Canada, USA and Iceland.

Positions on editorial boards include: **Price** (International Journal of Biodiversity Science, Ecosystem Services and Management [Editor-in-Chief until 2009], Journal of Mountain Science [Associate Editor-in-Chief], Norwegian Journal of Geography, Mountain Research and Development, Journal of Alpine Research); **Downes** (Journal of North Atlantic, Research in Archaeological Education); **Mainland** (Environmental Archaeology). Other examples of knowledge exchange include: **Martin's** guidelines to growers and SMEs for growing and utilising specialist crops and the provision of contemporary and historical information about crops (e.g. bere) to support marketing of the final products; **Potts'** Sustainable Seas blog, attracting 3000 hits per month; **Mee's** 'From the Crow's Nest' blog, syndicated on the US Open Channels site.

Contributions to the profession: **Price's** contributions to geography and related disciplines were recognised by the 2012 King Albert Mountain Award (the first to a British scientist) by the King Albert I Memorial Foundation: the citation states that he "with his exceptional knowledge and his editorial competence, has played a vital role for the mountains of the world". Current global responsibilities include: Chairholder, UNESCO Chair in Sustainable Mountain Development; International Coordinating Council, UNESCO Man and the Biosphere programme (Vice-chair of Bureau); Commission on Ecosystem Management, IUCN (Thematic Group Leader, mountain ecosystems); Member, Commission on Mountain Response to Global Change, International Geographical Union. **Mee**, a Pew Fellow in Marine Conservation, leads the Scottish Association of Marine Science, one of the oldest learned societies in marine science; was on the International Scientific Steering Committee of the IGBP/IHDP Land-ocean Interactions in the Coastal Zone (LOICZ) until 2011; is on the Advisory Committee for the Gulbenkian Foundation's initiative on valuing marine ecosystem services; and advises the Swedish EPA on integrated research in the Baltic Sea region. **Potts** is deputy convener of the MASTS Coastal Zone Theme; founding member of the International Network for the Social Studies of Marine Energy; and member of the NERC Valuing Nature Network.

UHI archaeologists held key roles within the Scottish Archaeological Research Framework (a partnership involving universities and other research institutions with Historic Scotland and the Society of Antiquaries of Scotland): **Downes** (chair, Bronze Age Panel; editor, Panel Report); **Mainland** (member, Archaeological Sciences Panel). **Mainland** is on the Steering Committee of the Association for Environmental Archaeology. **Downes** and **Mainland** led two HEA-funded projects on ESD and the Humanities in 2009-10 which established an interdisciplinary network for ESD in archaeology, anthropology, environmental science, history, and social sciences, with workshops into embedding of ESD in higher education. This has led to participation in the ESD steering group in the NSF/RCN project 'Global Long-term human ecodynamics research coordination network: assessing sustainability on the Millennial Scale'. **Christie** is co-coordinator of the ICAZ Archaeo-malachology Working Group.

Collaborative postgraduate training: SAMS provides the Postgraduate School for MASTS: the joint multidisciplinary MRes with the University of St Andrews focussing on **Marine Systems Science** recruited its third cohort of students in 2013. Many of the MRes students continue as PhD students in the UK and abroad. SAMS will also provide support to postgraduate students through the UNU, for which it is the only associate institute in marine science. Other examples include de Lima's involvement in the International Comparative **Rural Policy** School, a 15-day residential held each summer in Europe or North America for Masters, PhD and CPD students registered at universities in North America, Mexico and Europe; and the participation of Price and postgraduate students in a summer school on **climate change and mountain regions**, funded through the EU Erasmus programme and organised by the University of Salzburg. ORCA Marine's **Nautical Archaeology** Society (NAS) new CPD courses attracted 13 students, including dive boat operators, marine biologists, students, and commercial divers in 2013. McMorran's masters-level CPD module on **sustainable deer management** has attracted 30 students in the first two years of delivery.