

<p>Institution: University of Dundee</p> <hr/> <p>Unit of Assessment: 17 Geography, Environmental Studies and Archaeology</p> <hr/> <p>a. Overview:</p> <p>The University of Dundee (UoD) has invested substantially in UoA17 since RAE2008. Following restructuring in 2011, Geography is part of the School of the Environment, along with the disciplines of Architecture and Town and Regional Planning. The research culture has been enriched by promoting engagement at the physical/social science interface within the UoA and championing the relevance of geographical perspectives within larger-scale interdisciplinary initiatives. This nested approach has two research groups (<i>Environment</i> and <i>Society</i>) providing disciplinary focus. External to these are larger scale multi- and inter-disciplinary collaborations which are vehicles to impact beyond the academy. Since 2007 Fyfe has led the <i>Scottish Institute for Policing Research</i> (SIPR) promoting national and international knowledge exchange between geography, sociology, social work and criminology. Since 2009 Rowan has led the <i>Centre for Environmental Change and Human Resilience</i> (CECHR), a strategic partnership between the UoD and the James Hutton Institute (JHI), addressing food, energy, health and water futures and cementing bonds with the University's <i>UNESCO Centre for Water Law, Policy and Science</i>. These along with other national initiatives, including the Scottish Funding Council's <i>Scottish Alliance for Geosciences, Environment and Society</i> (SAGES) (Fazey leads the Society theme) and the ESRC <i>Scottish Doctoral Training Centre</i> (Hall is Associate Director and national Human Geography lead 2009-13), have stimulated significant growth in research income and postgraduate numbers.</p> <hr/> <p>b. Research strategy</p> <p>The 14.3 staff (FTE) in this unit of assessment are informed and invigorated by international agendas and play a strong role nationally and internationally shaping research in the discipline. Our research groups are the level at which research is nurtured, discussed and internally evaluated, and through which peer support creates a sense of belonging to an energetic research community. Building on the principles set out in RAE2008, three strategic aims underpin our activities: (i) to advance theory connecting the areas of environmental change, social justice, security and resilience with social transformation and the interplay between environment and society; (ii) to develop innovative methodological approaches (modelling, spatial, participatory, qualitative) underpinned by sound ethical practice; (iii) to make evidence-based contributions to policy debates via close engagement, co-production and knowledge exchange with users. To advance these aims we support and encourage all researchers to obtain external funding, engage in networks of international standing and publish excellent outputs in international journals.</p> <p>Our approach is to create groups of research excellence, each with an intensity of effort producing original, robust and distinctive outputs with a strong emphasis on impact. These groups have intersecting agendas and porous boundaries permitting exchange of people, ideas, and methods, using theory to inform applied research and providing a coherent identity for UoA17 strengthened through engagement with wider networks including CECHR, SIPR and the UNESCO Centre. We have a strong impact agenda reflected in a high level of engagement with international, RCUK, Government (UK, Scottish and local), NGO and third sector research partners. The unit occupies a distinctive position where we integrate physical and social science in transforming societies, exemplified by growing capacity at the <i>society</i> and <i>environment</i> interface. Geddes' Joseph Rowntree Foundation work on the social dimensions of flooding, T Dawson's NERC-ESPA research on food security and van Blerk's ESRC-DFID research on sustainable livelihoods exemplify the vitality and relevance of this research agenda. Evidence of the strength of our research culture is found in the achievements of our research groups and leading roles within wider interdisciplinary networks.</p> <p>Environment Research Group (ERG)</p> <p>- Background: ERG comprises mainly physical geographers with an ongoing focus on the sensitivity of environmental systems to natural and anthropogenic changes. Established strength in hydrosystems remain, including fluvial, pluvial and coastal flood risk estimation and flood risk and insurance modelling, natural flood management as an ecosystem based adaptation strategy, hydromorphology and water resource management pertaining to implementation of the EU Water Framework Directive (WFD), and the role of climate change on changing water cycles (Ball, Black,</p>

Bonell, Rowan). *Environmental change dynamics* forms the other key theme for ERG focussing the development of methodologically innovative work on debris-covered glaciers, remote sensing and lake system dynamics, with new emphasis on biodiversity, environmental modelling, natural hazards and climate change adaptation, resulting from both new staff appointments and engaging in emerging national and international opportunities (**Cutler, S Dawson, T Dawson, Kirkbride**).

- **Achievements and developing initiatives:** Since RAE2008, the ERG has seen the outputs of its research achieve significant national and international impact. Over the next five years, the ERG will consolidate existing areas of expertise through continuing its high-quality published output from on-going projects, while developing strategic themes to a higher level funded by international, governmental, commercial and RCUK sources. Early funding success since RAE2008 was achieved with the €6.5M EU FW7 Integrating Project ACQWA: *Assessing Climate Impacts on the Quantity and quality of WAter* (**Kirkbride**). NERC Consortium Grants were awarded to **Cutler, Rowan** and **T Dawson** for *GloboLakes: Global Observatory of Lake Responses to Environmental Change* (£2.4M, 2012-16) and to **S Dawson** within the Arctic Research Programme: *Will climate change in the Arctic increase the landslide-tsunami risk to the UK?* (£2.1M, 2012-16). **T Dawson** secured further NERC support under the Ecosystem Services and Poverty Alleviation ESPA Programme, in the form of a Framework Grant: *Poverty and ecology: developing a new evolutionary approach* (£250K, 2011-13) and a Consortium Grant: *Attaining Sustainable Services from Ecosystems through Trade-off Scenarios* (ASSETS, awarded £2.4M, 2012-16). Since 2011 **Black** and **Kirkbride** have been collaborating on the newly created NERC/BGS *Virkisjokull Glacier monitoring and modelling project* examining rapid glacier response to warming climate (£750K). National and Scottish Governments and their agencies have also funded several projects during the current REF period, including DEFRA awards to **T Dawson** through the UK Darwin Initiative in marine biodiversity sciences: *Developing a community-led marine management action plan for the Pitcairn Islands* (£25K, 2010-11) and *Galapagos marine invasive species* (£252K, 2012-15). In the hydromorphology area, £65K was awarded to **Rowan** (SNIFFER, 2008-11) to continue with the development of decision-support tools evaluating lake condition, whilst **Ball, Black** and **Bonell** received £300K from the Scottish Government for the establishment of a new research hydrometric network in the Eddleston Water (Tweed Basin) to evaluate natural flood management strategies. Research in global food security has resulted in the launch of the *Scottish Food Security Alliance* (SFSA) in 2013, bringing together CECHR (**T Dawson, Rowan**) and the University of Aberdeen.

Society Research Group (SRG)

- **Background:** SRG is a dynamic research group, comprising mainly human geographers, whose research aims to offer insight into the transformation of communities in diverse contexts and at a range of scales. SRG achieves this through three connected research themes: social justice (**van Blerk, Hall, Searle**), security (**Fyfe, O'Neill**) and resilience (**Fazey, Geddes**). In reality SRG's work is highly integrated with people, ideas and projects spanning all themes.

- **Achievements and developing initiatives:** SRG has significantly achieved the goals set out in the RAE 2008 through attracting research income and producing excellent published papers, while continuing to drive forward the aims of advancing theory, methodological innovation and contribution to knowledge exchange and policy impact. A reappraisal of the group's aims following staff changes has resulted in a collaborative re-shaping of the research agenda, stemming beyond the previous foci on population and welfare to focus more on the common themes of social justice, security and resilience. Our social justice research includes **van Blerk's** leadership role in the *Consortium for Street Children's Research Strategy* (established 2012) and as PI on the £1.5M *Growing Up On the Streets Project* (StreetInvest, 2012-16), ESRC CASE studentship (2013-16) and current ESRC funding bid (£548K, under review) on *Policing Street Children in Brazil*; and more broadly through **Hall's** Care Space Research, including *Routes into employment for people with learning disabilities: the role of self-directed support* (£50K, Scottish Government, 2010-11) and on-going collaboration with 'V&A Dundee' researching cultural regeneration around the waterfront development on Dundee's diverse communities. **Searle** provides leadership on *Mind the (Housing) Wealth Gap: Intergenerational Justice and Family Welfare* (£0.7M, Leverhulme Trust, 2012-15) and is Lead Coordinator of INTEGRATE, an ESRC-funded international network focusing on the transfer of wealth and poverty across generations (established 2012, £25K). Research in the security theme is exemplified by **Fyfe**, Co-I on the ESRC £3M programme *What Works Centre for Crime Reduction* (2013-16), and **O'Neill's** Leverhulme-funded Fellowship entitled *Police Community Support Officers* (£15K, 2012-13). In relation to the resilience theme, **Fazey** has a new

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ESRC studentship and is collaborating with the Scottish Government Resilience Division informing new research agendas leading to the IPCC supported International Biennial Transformation Conference in 2017, Dundee. **Geddes** is exploring the *Geographical differences in cancer screening uptake* funded by the Chief Scientist Office/Scottish Government (£180K, started 2013). **Geddes** is also a co-investigator for the ESRC/SFC funded *Applied Quantitative Methods Network* (AQMeN) building capacity in quantitative methods amongst the social science community in Scotland (£1.3M, 2009-12).

Centre for Environmental Change and Human Resilience (CECHR)

- **Background:** CECHR was established in 2009 as a strategic partnership between the UoD and the Scottish Crop Research Institute (now JHI). Founded to foster internationally significant interdisciplinary research this was a timely and coordinated response to tackling the complex global and local challenges arising from consumption of natural resources, unequal social and economic development and threats from climate change. Critical to the development was the recognition that access to increasingly competitive external funding and achieving more effective impact demands better coordination, focus and a critical intensity of research excellence. UoD/JHI invested £1.2M (2009-14) to underpin CECHR's foundation and foster growth in the academic network, including 10 PhD studentships. UoA17 staff were first supervisors on seven of these cognate topics including *Drought and food security in Malawi*, *Virtual water as an issue of UK food security*, *Soil erosion and biodiversity loss in agro-ecosystems*, *Climate change and health*, and *Resilience of machair coastlines to sea level and climate change*.

- **Achievements and developing initiatives:** CECHR has made substantial progress in three years creating a credible and recognisable research entity with a distinctive presence, culture and growing external profile. The key lesson from the first phase was having a strategic vision supported by enabling mechanisms (networking events, funding workshops, visiting lectures/seminars and an annual symposium) to build trust and galvanise the full potential of an integrated community of practice. A major success has been in the growth of the Graduate School (XCECHR), which rose from the three students enrolled in 2009 to over 30 currently researching across the University and JHI (15 based in UoA17). Examples of where Geography and JHI staff are collaborating include the Scottish Government's Centre for Expertise on Climate Change (ClimateXChange) where **Rowan** is co-lead of the £4.2M (2011-14) Climate Change Adaptation Workstream. Other examples of large scale collaborative programmes, supported through CECHR facilitation, include: **Bonell's** *Hydrologic and carbon services in the Western Ghats (India): Response of forests and agro-ecosystems to extreme rainfall events*, funded through NERC's Changing Water Cycle Programme (£1.8M 2011-14); **T Dawson's** UK Darwin Initiative A *sustainable marine and fisheries management plan for the Pitcairn Islands* (£250K, 2013-16); and **van Blerk's** ESRC-DFID *Averting new variant famine in southern Africa: building food secure livelihoods with AIDS-affected young people* (£202K, 2007-10). A tangible measure of CECHR's added value to UoA17 has been in attracting new staff, building mass and extending our reach into the social dimensions of environment change themes illustrated by **Fazey's** *Fostering Sustainable Development in Eastern Europe* funded by the Alexander von Humboldt Foundation (€1.5M, 2010-ongoing), and **Searle's** EPSRC/ESRC Consortium *Resilient Futures* examining resilience of UK infrastructure to natural and malicious hazards (£1.4M, 2010-13).

Scottish Institute for Policing Research (SIPR)

- **Background:** Established in the last RAE (2006) and led by the UoD (**Fyfe**), SIPR is a collaboration between 12 of Scotland's universities and Police Scotland. The strategic aims of SIPR are (i) Facilitating the development of evidence-based policing; (ii) Supporting innovation and knowledge exchange; (iii) Supporting professional development and organizational learning, and (iv) Building research and analytical capacity within Police Scotland and the higher education sector. SIPR connects a large (c. 100 academic staff and research students) inter-disciplinary research community networked across Scotland conducting high quality, relevant, and independent research co-produced with the police. This has been underpinned by a £1.2M investment from the SFC, an investment of over £7M in terms of academic staff time over the last six years, and success in winning over £6M of external research funding for projects focused on policing. As Director of SIPR, **Fyfe** has provided strategic leadership for this initiative at national and international levels and engaged in specific research and knowledge exchange projects with colleagues in Dundee. The latter include contributions to the evidence base for the most radical

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programme of police reform in Scotland for a generation and establishing a programme of research to track the internal (police) and external (community) impacts and implications of reform over the next five years. Fyfe has also played a key role in increasing the international presence and visibility for policing research in Scotland via the European Police Research Institute's Collaboration and the transatlantic network linking SIPR and the Centre for Evidence-Based Crime Policy at George Mason University in the USA.

- **Achievements and developing initiatives:** Over the next five years, Dundee will continue to play a key role in the strategic development of SIPR. Projects are already underway to track the impacts and implications of police reform in Scotland and place these in an international comparative perspective e.g. ESRC CASE funded studentship (2012-15). Several projects focussed on contemporary policing are also being taken forward including **Fyfe's** £0.5M ESRC funded *Research on missing people* (2011-14). The recent appointment of **O'Neill** offers new complementarity through research interests in crime control and community safety in urban areas.

c. People, including:

i. Staffing strategy and staff development: The UoD is recognised by the European Commission for its "HR Excellence in Research" as an environment that supports excellence and increases focus and impact. As an equal opportunities employer, the UoD is committed to the Athena SWAN charter. The Unit fully supports the principles of the Concordat to Support the Career Development of Researchers and is dedicated to supporting the development of its research staff and postgraduate researchers. As a result of the establishment of interdisciplinary centres (CECHR and SIPR), strategic investment from SAGES and the UoD, and implementation of the recruitment strategy following a successful RAE2008 outcome, UoA17 is now more vibrant than ever. For example, the administrative unit of Geography now has the highest complement of research active staff in its history (20.5), supported by 6 (full and part-time) postdoctoral research assistants and 22 PhD students, compared with 13.3 staff and 13 Ph.D. students FTE in 2008. The SAGES funding initiative resulted in the appointment of **T Dawson** to the SAGES Chair of Global Environmental Change, following Werritty's retirement in 2011. Dawson's interest in sustainability and resilience adds to growing strength within this arena through CECHR. This was enhanced by the appointment of **Fazey** in 2013 to a Chair in Social Dimensions of Climate Change with funding from the University's Strategic Investment Fund. Following Findlay's departure, **O'Neill** and **Searle** were recruited bringing research interests that build upon strategic research foci identified within SRG; **O'Neill's** work on community policing complements research led by **Fyfe**, whilst **Searle's** work on housing policy and quantitative methods links to issues of resilience, complementing the interests of **Geddes**. Recognising the strength and position of UoA17 to contribute to its 'Transformation' vision, particularly *Promoting the sustainable use of global resources*, the UoD has directly supported replacement of other staff who departed during the REF period. Contributing to the key strategic aims of SRG, Houston, Parr, Brown and Maddern have been replaced by Mendel, Mains and **van Blerk**. In ERG, Brock was replaced by **S Dawson**, whose research on sea level change and hazards contributes to the *Environmental change* theme and enhances *Environment* and *Society* linkages on issues of population vulnerability and sustainability. As an example, in 2012, **S Dawson** and **Hall** led a public workshop on *Increasing the Resilience of Vulnerable Citizens to Natural Hazards and Disasters* in collaboration with the Social Dimensions of Health Institute and CECHR. Staff appointed within three years of completing their PhD are given a light teaching load (coordinated through a formal workload model), and allocated a mentor to assist in establishing an independent research programme. All staff can significantly advance their research through an opportunity for sabbatical leave and participation in the University Objective Setting and Review (OSAR) process to ensure that clear research goals are set for the medium term and longer career trajectory, which is reviewed annually. Since RAE2008, the University has also helped to motivate staff research through internal promotions - **Hall** to Senior Lecturer, **van Blerk** to Reader and **Rowan** to a personal chair.

ii. Research students: Postgraduates, as well as staff/post-docs, have access to training provided by UoD's Organisational and Professional Development (OPD) unit through the researcher development programme. Workshops include writing, research funding, enterprise and presentation skills and offers coaching as well as career advice, which are mapped to the Vitae Researcher Development Framework and meets QAA Quality Code of Practice for Research Degrees programmes requirements and the Roberts recommendations on training for research staff and postgraduate researchers. The MSc in Social Research Methods specialises in preparing

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for doctoral research as part of an ESRC 1+3 recognised unit and is eligible for the ESRC one year Population Investigation Council (PIC) funding (providing four PhD Studentships over the REF period). Our postgraduates have been involved in national events organised under the ESRC Research Methods Programme and under the AQMeN initiative. Since 2011, **Hall** has been Associate Director and Human Geography lead 2009-13 of the ESRC Scottish Doctoral Training Centre which runs advanced training courses in human geography. All staff (for whom training is also mandatory) supervised PhD students during the REF period. The high quality of training and supervision is reflected in a completion rate of 21 out of 22 PhD candidates (one non-completion for health reasons), equating to an average of 1.5 PhDs per FTE. Student progress is monitored through the Thesis Monitoring Committee (TMC) which meets twice-yearly to monitor student progress. The UoA has a strong record of winning Research Council studentships from ESRC, whilst other key sources include NERC, DEFRA, SEPA/SNH, ClimateXChange, overseas governments (*Teagasc* Walsh Fellowship), industrial partners (Forth Ports), charitable trusts (Durham Bequest) and collaborative studentships with ESRC. Our engagement with interdisciplinary initiatives also provided funding for seven CECHR Scholarships and three through SIPR. Over the current REF period annual PhD recruitment rates have effectively tripled. The research groups have dedicated postgraduate fora, and students also present to regular Round Table meetings in each group as well as the annual *environment* and *society* joint meeting. Postgraduate research contributes strongly to peer-reviewed publications, reflecting its quality, with recent journal outlets including *Area*, *Biogeosciences*, *Prog. Phys. Geog.*, *Rem. Sens. of Environ.*, and *J Glaciology* (2012). Through XCECHR our PhD students have also organised national conferences such as the transdisciplinary symposium *Facing the Future* 2013. Facilities for postgraduates include networked PCs in customised accommodation permitting immediate access to the University's rapidly expanding e-library and other specialist geospatial and analysis data resources. Specialist software includes large data resources, many of which have been compiled in Dundee, including the National Flood Insurance Claims Database and the British Hydrological Society's Chronology of UK Hydrological Events.

d. Income, infrastructure and facilities

The University provides dedicated support to staff in their bidding for funds linked to specific projects through its Research and Innovation Services (RIS) unit, with which the UoA works closely. Relationships and collaborations with research users play an important role in focussing much of the UoA's research and enhancing its opportunity for impact. At the University level, CECHR and the *Pollinate workshop series* were conceived as enabling mechanisms for promoting interdisciplinary research collaboration across the University. The challenge and opportunity is to promote a progressive research culture with a winning mentality which builds on successes to stimulate and energise staff and gives them the necessary time and freedom to be creative and innovative. Providing resources (networking and incubator funds, effective teaching and administrative support) is key to building a common goal amongst UoA17 staff and giving flexibility to respond to short-term opportunities as well as building on our earlier stated strategic aims.

Research income generation: Our primary goal in this area has been to encourage staff to apply for RCUK grants. Since 2008 the UoA17 has achieved a wide portfolio of income from this source (NERC, ESRC, BBSRC and associated Programmes such as ESPA). This goal was set to ensure that research is primarily orientated towards academic agendas using rigorous methods approved by the peer review process, rather than to maximise income streams. Emphasis has been given to ensuring a wide spread of research income across staff which has been achieved, not by one or two large grant earners but by most staff winning medium-size grants. A second goal has been to encourage collaborative research grant applications to help younger staff engage in group projects with more senior researchers, thus contributing to a positive and inclusive research environment. A third goal has been to build stronger external networks (often facilitated by CECHR and SIPR) promoting engagement with consortia connecting with key high level European and RCUK agendas, including promoting impact. A bonus from earning significant Government grants, which endorse the policy relevance of our research, has been the targeted use of overheads to co-fund Research Studentships.

Development of research capacity and enhancement of research infrastructure: Targeted investment in the research infrastructure has provided a well-founded laboratory and fieldwork resources primarily to support physical geography research. The Environmental Diagnostics

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Laboratory houses specialist equipment for radiometric dating and tracer-based research such as an Ortec low energy gamma spectrometer and a Coulter LS13-320 for laser granulometry. Field-based infrastructure is focused on a NERC-JIF investment in the River Feshie (one of four CHASM catchments) with streamflow measured using an Acoustic Doppler Current Profiler (ADCP), water quality by ISCO samplers and water fluxes determined from a network of automatic weather stations and precipitation gauges. Glaciological, estuarine and freshwater research makes use of specialist equipment including Leica dGPS, Heucke thermal drill and automatic weather stations. Research in remote sensing is supported by our own Ocean Optics spectroradiometer, and a Pulse-Amplitude-Modulation fluorometer (funded by the Royal Society to **T Dawson**), which we have made available to the wider community through the NERC FSF) and a TRAC measuring LAI/fPAR, as well as through successful applications to NERC's remote sensing facilities for field spectroscopy airborne hyperspectral and conventional imagery, enhanced by data and staff expertise from the NERC-funded Dundee Satellite Receiving Station. These laboratory and field-based facilities have significantly enhanced staff research outputs and have provided a valuable interface between staff and postgraduates.

e. Collaboration or contribution to the discipline or research base:

- Wider contributions and leading interdisciplinary research: Dundee is leading and contributing to multiple major interdisciplinary programmes and networks at both international, national and local levels including: European Police Research Institutes Collaboration (**Fyfe**, Executive); ESRC/College of Policing funded *What Works Centre for Crime Reduction* (**Fyfe**); ESRC funded *INTEGRATE: a new international network on generational transfers* (**Searle**, Director); ESRC funded AQMen (**Geddes**); NERC funded BRIDGE, LWEC Funded *Transforming Knowledge Exchange*, and SAGES *Environment and Society* Theme Leader (**Fazey**); Scottish Government's ClimateXChange (**Rowan**, Adaptation Lead); SIPR (**Fyfe**, Director); Scottish Food Securities Alliance (**T Dawson**, **Rowan**); UoD/JHI/CECHR (**Rowan**);

- Existing networks/clusters and research collaborations with industry and third sector: UoA staff contribute significantly to working with non-academic partners. Examples of our collaborations connecting to our research themes include engagement with: Shelter, AgeUK, Government and Finance sector for research on asset based welfare; Housing Statistics Network and Housing Associations to enhance availability of housing data and policy development and strategies for flexible tenures (**Searle**); Action for Brazil's Children Trust; Signpost International (**van Blerk**). Police Scotland, Greater Manchester Police and Scottish Government (**Fyfe**, **O'Neill**); UK environment and conservation agencies and CEN Standards Agency undertaking research aiding implementation of the EU Water Framework Directive (**Ball**, **Black**, **Rowan**); flooding risk management research for Scottish Government, SEPA, Scottish Borders Council and Tweed forum (**Ball**, **Black**, **Bonell**, **S Dawson**). UK Cabinet Office, Government Departments and Emergency Services developing resilience in UK infrastructure (**Searle**); Collaborations with Scottish Government Resilience Division, Local Authorities and Adaptation Scotland developing resilience and adaptive capacity (**Fazey**); Catholic Church, EU development programme, and communities in the Solomon Islands for understanding vulnerability and adaptive potential to social and environmental change (**Fazey**); TAYplan Strategic Planning Authority: land use futures to 2050 (**Rowan**); Scottish Government's Centre for Research Expertise on Water (**Ball**, **S Dawson**).

- National and international collaborations: Collaborating with national and international partners is a defining feature of UoA staff research, with examples including: Core membership of NERC/BGS *Virkisjokull Glacier project* with Icelandic and UK partners (**Black**, **Kirkbride**); NERC ESPA programmes involving teams from China, Malawi, Colombia, South Africa and Peru (**T Dawson**); NERC Anglo-Indian *Hydrologic and carbon services in the Western Ghats*, and *Hydrological impact of reforesting degraded lands in Nepal* with UK, Dutch and Nepalese partners (**Bonell**); NERC GloboLakes has a six partner UK consortium (**Cutler**, **Rowan**, **T Dawson**), whilst **S Dawson** is working with nine UK and Canadian partners on the *Arctic climate change and tsunami risk project*; **Fazey's** Humbolt Foundation project *Sustainable development in Transylvania* with Romanian partners (**Fazey**); *National Ecosystem Assessment (NEA)* with multiple national partners and *Development of a CEN Guidance Standard on lake hydromorphological assessment*, with 10 European environment agency and university partners (**Rowan**); Leverhulme Trust Programme Grant *Mind the (Housing) Wealth Gap*, three UK partners; EPSRC/ESRC *Resilient Futures* with seven UK partners, ESRC/ARC bi-lateral collaboration, *Pathways of Housing Wealth*

and Wellbeing with four UK and Australian partners, INTEGRATE with one UK, one Japanese and three European partners (**Searle**); *StreetInvest: Growing up in the Street*, multipartner study across three African countries, ESRC-DFID: *Averting new variant famine in southern Africa: building food secure livelihoods with AIDS-affected young people* with Brunel University (**van Blerk**).

- **Seminars, journal editorship, conferences and research based CPD:** Scholarly and research activity is promoted through mechanisms including: diverse internationally relevant **Seminars:** ESRC Series 'Rethinking Learning Disability' (**Hall**); CECHR Global Future Lectures - scholars of international significance (**Rowan**); Co-organiser of FBI Knowledge Transfer Seminars (Budapest, Munster, Brussels and Edinburgh) (**Fyfe**); Co-organiser AQMeN (**Geddes**); INTEGRATE Ideas Event, Prague (**Searle**). **Editorships and board members:** *Hydrology Research, Scottish Geographical Journal* (**Black**); *Journal of Hydrology* (**Bonell**); *Animal Conservation* (**Fazey**), *Areas Studies Journal, Children's Geographies* (**van Blerk**); *Urban Studies, Policing, the European Journal of Police Studies* and *Policing and Society* (**Fyfe**), *Sociology* (**O'Neill**); *Social and Cultural Geography* (**Hall**); *Canadian Journal of Remote Sensing* (**T Dawson**), *Earth Surface Process and Landforms* (**S Dawson**); **Keynote speakers:** XXV IUGG General Assembly in Melbourne, and Hydrology Conference 2010, San Diego (**Bonell**); Embedded Research Conference, Manchester, 2012. (**O'Neill**), Invited speaker, IPCC Expert Meeting, Japan (**Cutler**). **Scientific and organising committees for conferences:** RSPSoc Annual Conference 2011 and 2012 (**Cutler, T Dawson**); Transformation in a Changing Climate (Oslo), and Transformation Biennial Conference (**Fazey**); Consortium For Street Children, London (**van Blerk**); Hydromorphology of Lakes and Reservoirs' BHS, 2009 (**Black, Rowan**); European Police Research Institutes Annual Conference, Edinburgh 2010 (**Fyfe**). **Research based CPD:** Provided multiple research-based CPD workshops to the Scottish and European Police Colleges e.g., *Diversity 2011, Witness Protection 2012, Missing Persons 2013* (**Fyfe**); RESCUE ESF funded project: Towards a Revolution in Education and Capacity Building (**Fazey**). **Other:** NERC Peer Review College (**Kirkbride**); Panel member, NERC Programme Reviews (**Kirkbride, Cutler, T Dawson**), ESRC Peer Review College (**Searle, Hall**).

- **Contributions to professional associations and learned societies:** UoA17 staff contributing to learned societies include: Member, UK Biodiversity Science Committee of the Royal Society, Member of the British Ecological Society Scottish Policy Committee (**T Dawson**); President of the British Hydrological Society 2009-11 (**Black**); Council of the Remote Sensing and Photogrammetry Society and Chair of the publications Committee, GOF-C-GOLD Report presented to COP18-1 (Doha 2012) (**Cutler**); Committee member RGS-IBG Geographies of Children Youth and Families and Geographies of Justice research groups (**van Blerk**); Chair, Policing Working Group of the European Society of Criminology, Trustee and Board Member, Police Foundation, Chair, Urban Studies Foundation, Scottish Crucible Programme of the RSE (**Fyfe**); Italian Glaciological Committee elected international member (**Kirkbride**); Chair, Policing Network and Member, Publications Committee, British Society of Criminology (**O'Neill**); Treasurer, Housing Studies Association, Committee of Management Member, Abertay Housing Association (**Searle**); Board Member of the Royal Scottish Geographical Society (**Rowan**); Executive Committee (Publications) for the British Society for Geomorphology (2013-16) (**S Dawson**).

- **Co-operative and collaborative arrangements for PGR training:** Engagement with doctoral training has been enhanced by **Hall's** appointment as Associate Director of the Scottish Doctoral Training Centre and Leaders of the Human Geography Pathway (**Hall**) and Families and Demography Pathway (**van Blerk**) and PIC funding (**van Blerk**). End-user engagement in PGR training is exemplified by development of the MSc in Sustainable Catchment Management in collaboration with SEPA's Flood Risk Training Programme (**Black, Cutler**). UoA staff acted as external examiners for 8 MSc and 2 MA programmes and external examiners for 48 PhDs. Staff have also been instrumental in founding and coordinating interdisciplinary PhD training across Dundee and the James Hutton Institute through CECHR (**Rowan**) and SAGES (Scottish universities co-supervision), whilst SIPR has directly supported 50 PhDs, and established Scotland's first postgraduate programme in policing for police practitioners (**Fyfe**). Moving forwards we will seek to build on international PGR collaborations exemplified by our academic exchange GESP (Global Environmental Sustainability Project) and the recently completed Sustainable Water Resource Management (SWaRM) project, which together accessed nearly £1M of funding from the EUs ICI-ECP programme for student and staff exchanges across HEIs in Europe and Australia.