

<b>Institution:</b> King's College London
<b>Unit of Assessment:</b> 17 - Department of Geography
<p><b>a. Context</b></p> <p>Impact is foundational to King's College London, as a university 'in service of society'. Accordingly, the Geography Department has a tradition of research with demonstrable impacts on improving quality of life and the effectiveness of public services, as evidenced in our Case Studies. Research engages with and is increasingly co-produced with societal stakeholders. Our aim is to inform and transform planning, policy and practice, with local, national and global reach. The generation of impact benefits from our large, broadly-based staff, a multi-disciplinary team deployed through four Research Groups (RGs): Cities, Earth and Environmental Dynamics (EED), Environment, Politics and Development (EPD) and Hazards and Risk (HRG). This structure focuses investment and concentrates expertise to build impact through inter-disciplinary, problem-oriented research (see REF5). Resulting targets for research impact include: international agencies, national bodies and local stakeholders, primarily in the public and charitable sectors, but with increasing emphasis on private sector collaboration, a future area for growth as detailed below.</p> <p><b>International agencies:</b> Conceptual and instrumental impacts are made possible through working with agencies on policy and strategy. For example, Mulligan's research on water quality in ecosystem service management has redirected policy priorities, with water quality now a more central priority amongst international conservation NGOs and the associated UN community including UNEP, World Bank, World Wildlife Fund and Conservation International. Working through international agencies such as Oxfam and the UN family also allows local impact, for example on climate change adaptation practice (Pelling). Allan's work has long engaged with global private sector interests in water consumption and is a model for further private sector engagement for impact. The <b>European Union</b> offers regional and international governance contexts where research in HRG and EED is targeted for impact. This includes instrumental impacts from integrated, cross-RG research, for example: in the enhanced visualisation of disaster risk for the European Space Agency and in two FP7 projects collaborating with European landslide risk managers to reduce losses (Malamud and Pelling); and conceptual and capacity-building impacts to the European Flood Alert System, including training managers in its use from the UK Environment Agency (Demeritt, and Cloke at University of Reading). Notable impacts from individual RGs include Malamud's collaboration with the EC Joint Research Centre to transform the reporting of wildfire statistics in the European Forest Fire Information System, impact that complements Wooster's collaboration with EUMETSAT in making global wildfire monitoring data available on the Web. <b>National bodies</b> targeted encompass risk managers and regulators, including the UK Government, Defra, DFID and HSE. Demeritt's research on probabilistic flood forecasting has changed policy and practice in Defra and has recently been adopted by the European Centre for Medium Range Weather Forecasting, and internationally by the Hydro Bureau of Arhui Province, China. Internationally, national institutions are targeted by EPD and HRG through collaborations with policy intermediaries, for example with DFID in sub-Saharan Africa, and through science-policy intermediaries such as Chatham House, the Woodrow Wilson Centre, Intergovernmental Panel on Climate Change (Pelling, Berkhout, Hulme) and via UN agencies. Mustafa's research has been instrumental in shaping institutional components of UNDP Pakistan's five-year strategic programme for flood management and UN-IOM's water access projects in Azerbaijan. <b>Local stakeholders</b> targeted directly include local water managers in Tanzania where Cleaver has successfully promoted a greater role for informal institutions in water management. Similarly, local reconstruction after Hurricane Katrina, New Orleans has been informed by Clifford's work with US Army Corps of Engineers on Mississippi sediment loads. A particularly strong concentration of local impact is led through Cities' strong London focus, including managing diversity in aquatic ecology through the London Climate Change Park Working Group, and London Invasive Species Initiative with the Crown Estate (Francis) and in housing and social policy with partners including the Local Government Association, Greater London Authority and through Hamnett's role as a Westminster and Ealing Housing Commissioner (2011). David Green's directorship of People's History of EC1 has increased public engagement with local history.</p> <p><b>b. Approach to impact</b></p> <p>Impact is nurtured, shaped and delivered through a range of networks, relationships and support structures which are numbered below to indicate impact pathways in section d.</p> <p><b>Building relationships with users. (1)</b> At project level, co-design of research, in which research</p>

## Impact template (REF3a)

users help identify research priorities and empirical direction, and collaborate in dissemination is embedded in the department's research practice. In human geography, this is evidenced through a strong commitment to participatory research, user group collaboration and policy engagement (e.g. Garmany's research on urban inequality in Brazil has shaped partner policy, including the Landless Rural Workers' Movement). In physical geography, there is a prioritising of work that engages with environmental management through novel research on monitoring and modelling (e.g. Mulligan's research on water and forest ecosystem services has shaped international conservation policy through novel modelling tools). **(2)** Building research-user relationships is a long-term investment. This is increasingly supported by concentrated research activity organised by RGs to support early career researchers. Further testament to our collaborative research and impact culture is the retention of relationships when staff retire or leave. Examples include work by Pelling and Grimmond (Reading) on climate adaptation with the London Mayor's Office and London Climate Change Partnership; and Demeritt and Cloke (see above).

**The nature of relationships.** Beyond the project level, relationships are strategically cultivated through the advisory roles of senior staff, past and present (see REF5, Section d and below), and commissioned research. **(3)** Many senior researchers work with key user groups through advisory roles (e.g. Löfstedt to the European Food Safety Agency and UK Government; Potts to FCO; Hamnett to the Hong Kong Central Policy Unit, and Cleaver to the Dutch Ministry of Foreign Affairs) and capacity-building activity (Mulligan's research on watershed management has incorporated training with research-users, amplifying impact through collaboration with global reach). Across career stages, workshops provide a common tool for building impact coalitions (e.g. Butler on gentrification and social mixing; ESRC) and enhancing future impact (Herrick's participation in the RGS submission on alcohol policy to UK government). RCUK CASE studentships have also provided a bridge between practice and research. Other examples include the London Water Research Group, co-hosted by King's, which is a network for capacity building on water security for researchers and users. **(4)** Commissioned research is increasingly used to transfer research into policy impact, particularly with UN agencies, Development Banks, international and domestic NGOs and government agencies (Cabinet Office, DFID, Defra, DECC, UNDP and others).

**Departmental support for impact. (5)** RG chairs meet each term in the Departmental Research Committee to report on impact strategy, impacts and challenges. The Research Support Officer (RSO) supports research, impact and information management, and facilitates interaction between these. The RSO undertakes workshop planning, impact data management and external liaison including through our Facebook and Twitter sites. These sites stream news of activity, including that of RAs and PGRs, revealing a wide and interactive community of practice with research users and producers. The Department also builds user relationships through secondments (e.g. of Defra staff) and by hosting RG visiting scholars and practitioners, such as Josef Konvitz (ex-OECD) with Cities, who convened 'New Limits to Growth', a policy-oriented urban seminar.

**Access to College support. (6)** College training on 'Engagement, influence and impact', as well as media training has been followed by department staff. The latter has helped to deliver a large range of international and national media appearances. In addition, King's Policy Institute (KPI) and King's Cultural Institute (KCI) provide resources to support user-academic workshops, targeted advocacy, and public/policy exposure. This includes building conceptual impact, as seen in Malamud's collaboration with KCI and the performance collective Tipping Point on climate change science and policy in an interactive public event on 'representing uncertainty'.

### c. Strategy and plans

Our strategy for future research impact is guided by a commitment to increase Departmental resources deployed across the impact-making process. Our vision is that individual effort will be complemented and supported by shared responsibility for impact. Reflecting the rebalancing of the Department's demography and research strategy, this commitment will focus on earlier-career colleagues and for those opening new research/policy domains. Berkhout will become the Department Impact Champion (liaising with a new School Impact Committee), with three aims: (i) to increase interaction between researchers and users, for example through policy workshops or secondments and researching new impact opportunities; (ii) to augment internal strategy and training, through formation of an impact advisory group of external academics and practitioners; and (iii) to better track impact auditing and evaluating existing contributions with the RSO.

## Impact template (REF3a)

Achieving this vision builds on trajectories already in place, namely:

(1) *Promoting a culture of impact through staff changes and development.* (i) Four chair appointments have been made to maintain and strengthen leadership for impact across the Department (Berkhout - climate policy, environmental security and risk; Cleaver - livelihood, water and development; Clifford - rivers and water-resource management; and Hulme - climate policy, culture and environment). These bring considerable leadership in impact reach, enhance existing impact strength in EED, EPD and HRG, and further position the Department to address 'transdisciplinary' questions of enhanced scale, complexity, hybridity and uncertainty. Berkhout, as Interim Director of Future Earth is a global champion for transdisciplinary engagement with stakeholders. (ii) Early career appointments deepen impact through new expertise, critical perspectives and engagement with existing impact streams, e.g. in EPD water (Matthews, Mirumachi and Loftus complement Allan) and climate (Adamson complements Hulme and Pelling) policy; in EED wildfires (Smith, complements Wooster). (iii) In Cities, a cohort of newly appointed staff (Andersson, Barbu, Caprotti, De Genova and Reades) open new impact opportunity on the related, rising policy priorities of social diversity and migration, eco-cities, transport policy and regional transformation.

(2) *Investment for Impact.* The Department Research and Impact Fund (DRIF), started in 2011, has supported impact activity for initiatives up to £2,000 each. Its original annual budget of £6000 was increased to £8,000 in 2012. DRIF will be augmented this year by a further 50% to target new impact. Indicative initiatives include: (a) Smith extending the reach of his NERC Knowledge Exchange grant through participatory research and relationship building with UK fire managers; and (b) Cleaver bridging science-policy gaps through a workshop building on a British Academy grant on formal and informal institutions for WWF water management in Tanzania.

(3) *Impact mentoring* provides support and feedback for all staff but is especially important for early career researchers. The quality of existing mentoring is indicated by Pelling's appointment by NERC as a social science mentor for their natural hazards Knowledge Exchange Fellows (KEF) programme (2013 onwards) and by Wooster's membership of the NERC KEF advisory board. Impact mentoring will be integrated into the formal annual staff development review.

(4) *Strengthened monitoring.* Tracking of activity to support impact is an increasingly important role for the RSO and the new Impact Champion. This is especially so, as experience builds with the DRIF, through modified annual staff review and through experience of external practice, e.g. through leadership experience with NERC's Knowledge Exchange Fellows. Key areas for analysis have been identified: the relationship between conceptual, instrumental and capacity-building impacts and how these can support one another; reviewing engagement strategies to encourage best practice; and promotion of secondary impact, e.g. training of trainers.

(5) *Enhancing opportunity for impact through collaboration.* The Department's external linkages are being deepened and extended for impact. Key linkages include recent MoUs with UNESCO-IHE (for water education and research) and UN Global Compact Cities (see REF 5) and closer working with KPI and KCI.

#### d. Relationship to case studies

Case studies exemplify the range of our research modes and subjects at the interface of society and the environment. Each case has benefited from the range of impact mechanisms presented in *Section b*. Here we revisit these to illustrate their effectiveness and demonstrate relationship to the cases. **Risk-Based Regulatory Reform** highlights integrated impact across a range of high-level policy work, culminating in Löfstedt's 2011 *Independent Review of Health and Safety Regulation*. This is an exemplary case of underpinning conceptual development, advisory work (paragraph b3) and consultancy (b4) building to sustained impact through close academic-user interaction (b1) and the long-term promotion of research-user relations (b2, b6). **Fire Radiative Power** is built from an original technical innovation and knowledge exchange (b4) allowing innovation to be amplified (b5, b6) through the work of European Union agencies utilising Wooster's group's research to enhance policy (b1, b2). **Permanent Court of Arbitration** exemplifies impact built around the expertise of a single scholar, with RG support (b5), whose contribution is both focussed and significant, with concentrated user engagement (b3). **Virtual Water** draws from a wealth of competitive and commissioned research and collaboration (b1, b4) over an extended period (b2) undertaken alongside advisory work (b3) to produce impact of wide significance and reach.