WRITING AN IMPACT PLAN
IN YOUR RESEARCH COUNCIL APPLICATION

INTRODUCTION

This note is to assist RHUL academic staff in preparing the Impact Summary and Impact Plan within their Research Council application. It provides guidance and examples.

BACKGROUND

Applicants need to convince the government and the taxpayer that their research has the potential to make a difference beyond a small group of researchers in the field. Most of the UK Research Councils now require proposals to include an Impact Summary, and a fuller Impact Plan. Framework Programme 7 applications also require information on how the proposal will benefit the EU; and proposals to other major funders, such as the MOD and Wellcome, will also be strengthened by drawing out impacts beyond the research community. Many funders already sought such information, for example on how Research Council funding would help 'beneficiaries'.

The Research Councils have now provided formal guidance on 'Impact Plans'. Applicants can seek additional resources to implement critical activities beyond the end date of the project where they are critical to the project, will enhance the impact, and are identified and justified in the Plan. Where the Impact Plan is required, each Research Council has provided specific guidance notes on their own web-site. The JES application system has clear guidance too, associated with the 'Attach Impact Plan' Help Page. A list of the web-links is below at Annex 1.

The Research Councils have stressed that the quality of the research will still be the primary factor for decision on funding. However peer reviewers and panel members will be asked to comment on the Impact Plan, and a good Plan could make a difference for proposals that are near the funding cut-off.

Funders recognise that each research project is unique, with the potential to reach different audiences appropriate to the project topic and type of funder. Also the timescales for impact will vary according to the project area.

HOW TO IMPROVE YOUR IMPACT SUMMARY AND IMPACT PLAN

- Draft the Impact Summary very early in your preparation, so that it informs the design of your research.
- Focus on who will be affected, not the work you will be doing, which is written about elsewhere in your application.
- Structure your Impact Plan and try to provide information using clear headings which correspond to the areas being asked to be addressed in the guidance. Example 3 in Annex 3 below provides a good example of such an approach. Make it easy for reviewers from a related field to see the broader benefits of your proposed work.

- Many academics have previously included similar information successfully in describing 'beneficiaries' and outcomes beyond academia. However, consider the Impact Plan and Impact Summary now as documents which demonstrate to the reviewer and the taxpayer the benefits of your project, and strengthen the hand of the Research Councils in seeking Government funds for research.
- Ask a colleague or Research & Enterprise to comment on your Impact Plan if you wish.
- The Impact Plan is limited to two pages, so do ensure you include only relevant information and don't pad it out just to use up the space.

ANNEX 1 RESEARCH COUNCIL GUIDANCE

Organisation	Weblink for information
BBSRC	http://www.bbsrc.ac.uk/funding/apply/economic_impact_faq.pdf
AHRC	http://www.ahrc.ac.uk/FundingOpportunities/Documents/ImpactFAQ.pdf
	AHRC Powerpoint presentation on impact
ESRC	http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Support/esrcexpectations/
EPSRC	http://www.epsrc.ac.uk/ResearchFunding/HowToApply/EIFAQs.htm
NERC	http://www.nerc.ac.uk/funding/application/keplans.asp
STFC	http://www.stfc.ac.uk/rgh/rghDisplay2.aspx?m=s&s=166
MRC	No change
JES	https://je-s.rcuk.ac.uk/jesHandbook/jesHelp.aspx?m=s&s=1202

ANNEX 2. MATRIX OF POTENTIAL BENEFICIARY GROUPS

	AHRC	BBSRC	EPSRC	ESRC	MRC	NERC	STFC	EU FP7
Who will benefit from this research? (examples)								
Academic community (Discipline? UK? EU?)	Y	Y	Y	Y				
Large industry (specify sector)		Y	Y					Y
Small and Medium Companies (SMEs) (specify		Y	Y					Y
Health professionals (specify sector)		Y						
Society (children? Local communities? Parent	Y			Y				Y
Overseas communities (which? Show link to UK benefit too)				Y	Y	Y	Y	Y
Cultural industries	Y			Y				
Entrepreneurs, start up companies, spinouts		Y	Y					Y
Public sector (Schools? Emergency services?)				Y				Y
Policy makers				Y				Y
UK economy		Y	Y	Y				
UK/EU security			Y				Y	Y
Undergraduate students			Y	Y		Y		
How will they benefit?								
Cost savings			Y		Y			
Access to new technology		Y	Y		Y	Y	Y	Y
Information to support decision-making				Y	Y		Y	
Information to support policy decisions			Y		Y			Y
Evidence to inform healthcare funding		Y	Y		Y			
Technological advance (field of application)		Y	Y		Y	Y	Y	Y
Knowledge to select new avenues of research	Y	Y	Y	Y	Y	Y	Y	
Evidence to inform economic decisions				Y				Y
More efficient use of energy		Y	Y	Y		Y		Y
How will you ensure they have the opportunity to benefit?								
Seek their views on the structure of the research	Y			Y	Y			
Involve them in the research	Y			Y	Y			
Produce output the generalist can access (website, article in popular press, general public performance, TV and radio interviews, popular exhibition	Y		Y	Y	Y	Y		Y
Produce output for academic consumption	Y	Y	Y	Y	Y	Y	Y	
Seek IP protection and licensees for equipment or software		Y	Y		Y	Y	Y	Y
Produce teaching and learning materials	Y	Y	Y	Y		Y		
Produce prototype equipment			Y					Y
Seek industry partner for commercial development and exploitation		Y	Y		Y			Y
Exhibit at Trade Fairs (location)			Y					
Speak at public events organised by others	Y	Y	Y	Y	Y	Y	Y	
Appear on major TV or radio programmes	Y	Y	Y	Y	Y	Y	Y	
Host workshop for users	Y	Y	Y	Y	Y	Y	Y	
Put on special performance or event for defined	Y			Y				
Attend training on Public Communication	Y	Y	Y	Y	Y	Y	Y	
Include dissemination costs in application	Y	Y	Y	Y	Y	Y	Y	
Share cost of dissemination with beneficiaries or other partners	Y	Y	Y	Y	Y	Y	Y	Y
What is the European Added Value?								
Increase industry competitiveness								Y
Mutual recognition of qualifications								Y
Reduce social exclusion								Y
Improve citizens' quality of life								Y

ANNEX 3. EXAMPLES

EXAMPLE 1: AHRC SMALL RESEARCH GRANT. RELIGION & SOCIETY PROGRAMME. IMPACT SUMMARY

"This research project has been designed to have an impact beyond its immediate academic environment. Its influence, while intended to be significant within academia, is planned to extend to the local communities (both Muslim and non-Muslim) living and working in today's East End of London.

This engagement will be facilitated by the close collaboration between the PI and the present-day East London Mosque Trust, which has resulted in the latter giving its permission for researchers on the project to access and make use of the historic Minutes in its possession. Indeed, in constructing the project, the PI has been concerned throughout to involve the Trust as much as is reasonably possible, while not compromising the academic credibility of the outcomes. Hence, in addition to the critical edition of the Minutes that is its primary output, the project will organise a workshop to which not just academic experts but Trust members, ordinary members of the Mosque's congregation, practitioners and representatives of local government will be invited. Likewise, the project will share its research-related knowledge with local communities in Tower Hamlets by advising the Trust on the public exhibition based on the Minutes that will form part of the Trust's centenary celebrations in late 2010. Finally, the project's website will target its content to engage with the broader audiences that exist outside the relatively narrow confines of academia, and thus allow for a wider circulation of its outcomes than a lone monograph alone would achieve. By disseminating its research findings in these ways, the project seeks to foster within the local community a positive sense of ownership in the historical processes under scrutiny. It also intends that these research findings will inform public policy-makers, and hence contribute to processes intended to improve community cohesion and social inclusion. By building trust between academics and local communities in this way, it is hoped that future constructive partnerships along similar lines will be encouraged and facilitated."

EXAMPLE 2. BBSRC – NEW INVESTIGATOR APPLICATION. EXTRACT FROM IMPACT SUMMARY

"What will be done to ensure that they benefit from this research?
Information on the research will be disseminated at public engagement events including Science Open days for the general public and Sixth Form students interested in pursuing a degree in Biosciences. These events provide an opportunity for researchers to interact with the public and communicate general scientific topics and their scientific work. Scientific work will also be communicated to local schools by giving talks on science to a general audience.
Some general information about the scientific work will be provided on websites for interested members of the public as well as potential research students and collaborators (academic and non academic). In addition work can be publicized by the host institution's press office and website.

Data will also be published in scientific journals most of these are accessible to the general public after a certain period of time or can be requested from the PI. Data will be presented at scientific conferences and workshops. This provides an opportunity for communication and interaction with academic and industrial non-academic beneficiaries."

EXAMPLE 3. NERC – STANDARD GRANT. IMPACT PLAN

"1 Who will benefit and how

The first group to benefit from this research includes academic and industry scientists studying natural gas-hydrate systems. The UK science community working on aspects of natural gas-hydrate systems includes researchers in Southampton, Birmingham, and Edinburgh Heriot-Watt Universities as well as Royal Holloway. NERC recently funded a consortium proposal to investigate gas hydrates in the Arctic through the International Polar Year initiative. Internationally, there is significant interest in the US (largely government funded through the geological survey and the department of energy), Canada, Japan, Korea, India, China and Norway. Interest is driven mainly by government funding through national research & development programs that aim to exploit gas hydrate as an energy resource. Notably, gas-venting systems represent the most prospective forms of gas hydrate accumulation in nature due to the highly concentrated hydrate within them and their proximity to the seabed. Consequently, there is considerable interest in such gas-venting systems from the energy industry, including Statoil Hydro, Total, Chevron etc (see the Joint Industry Projects in the Gulf of Mexico or the North Slope of Alaksa).

The first group will benefit from the proposed research through an improved understanding of the basic mechanics of gas-hydrate systems, how and where gas-venting systems form in the marine environment, and how they will respond to environmental changes or to pressure and temperature perturbations induced by human activity. This research will enable more accurate and sophisticated interpretation and analysis of experimental data from gas-hydrate systems, and will lead to better predictions of how these systems respond to environmental changes. The benefits will contribute to safer and more effective exploitation of gas hydrate as a resource when the associated engineering problems related to its extraction are solved. More efficient and successful exploitation of gas hydrate as an energy resource will lead to more tax revenue for governments (and thus an improved quality of life for those nations), a cheaper and more secure supply of energy to the public, and less reliance on dirty forms of fossil fuel (the gas in gas hydrate burns much more cleanly than coal, for example).

The second group to benefit from this research includes scientists studying methane in the oceans or the atmosphere. Methane is a powerful, although short-lived, greenhouse gas. It also oxidizes when in the ocean, leading to ocean acidification. This research will help quantify the flux of methane entering the ocean, and the global carbon cycle in general, through the hydrate-bearing parts of the seabed. The results can be used as input to climate models, or to models of oceanic chemistry and biology. In particular, the results will guide thinking on the role of gas hydrate in these systems as the oceans warm, leading to more accurate modelling of climate change.

The final group to benefit directly from this research includes industry scientists and engineers interested in the role of gas hydrate as a geohazard. Improved understanding of the mechanics of hydrate formation and dissociation, and of the evolution of pressure and temperature inside gas vents will lead to more sophisticated

and more accurate assessment of such vents as a potential source of hazard. Drilling through such features, for example, perturbs the pressure and temperature states in these systems, which respond by forming or melting hydrate and consuming or releasing gas respectively, thus altering the pressure state. It is important to know how gases behave in the seabed in order to assess the potential for gas blowout during drilling, or the potential for slope failure or subsidence.

All three of the groups identified above will benefit through improved conceptual understanding of gas-venting systems, as well as through the availability of sophisticated software that models these systems.

1.1 Plan for maximizing impact

Engagement with the above three groups will be achieved, and impact maximized, through standard academic channels in addition to some non-standard methods. The methodology and results will be published in high-impact peer-reviewed journals (articles written by the PDRA and PI). Press-releases will help drive further exposure through the scientific news media (distributed through Royal Holloway's press office). This is also true of international conferences; three high-profile conferences (AGU, EGU, specialist hydrate conference) will be used to disseminate the methods and results of this research and to engage with the academic community (to be attended by PDRA and PI). Short articles in non-reviewed newsletters, such as the US Department of Energy's 'Fire in the Ice' newsletter, will be used to reach both the academic research community and the less accessible industry community working on Joint Industry Projects and with government scientists (written by the PI).

The results of the proposed research and the software (with examples and documentation) will be made available for free download from a website held on Royal Holloway's server. In addition to download, the website will provide users with communication routes to the PI to be used as a source of information and help for using the codes in their own work. Written documentation (produced by the PDRA) that describes how to run the codes, with examples, will be made available to enable other users to apply the codes to their own projects. If interest is high enough, a training workshop could be held (delivered by PDRA and PI), although it is impossible to determine what level of interest the code will attract in the lifetime of the proposed project (or in reasonable time thereafter), so funding for this has not been requested. The website will be produced by the PDRA using Dreamweaver software.

Finally, the PI has established good contacts with many academic groups studying natural gas hydrate in the UK, the USA, and in Canada, and these relationships will be used to informally disseminate the results of this research, to raise awareness of the open-source code, and to provide training in its use when required.

2 Wider user interest

Other users include the general public (who may simply be interested in deep-water gas venting), fisheries and other aquaculture groups (methane is a source of energy for some marine life, helping sustain eco-systems on the seabed), geochemists and biogeochemists interested in the sources and characteristics of fluids migrating through the seabed, and naval or shipping groups who see the evidence of deep-water gas vents on their echo-sounders (gas bubbles venting through the seabed are often evident on echo-sounders running at 10-30 kHz).

2.1 Disseminating information to this group

Short news articles in relevant media, such as 'Fire in the Ice' or the AGU's EoS, will help broaden the range of scientific users engaged with this research. Press releases

will also be arranged through the press office at Royal Holloway, which typically reaches scientific and general news outlets across the world including such organizations as the BBC.

A section of the website mentioned above will be set aside for communication with the general public. This part of the website will be used to describe gas hydrates in general, the venting systems they occur in, and the implications of deep-water gas venting that may be of interest to the public. This section of the website will be written in language understandable by a 14 year-old. The pages will be illustrated with diagrams produced by the PI and the PDRA, and by photographs and videos of activities onboard the CCGS Tully taken by the PI in August 2008 during a cruise collecting seismic, coring/geochemical, and echo-sounder data over hydrate-filled gas vents offshore Vancouver Island. The material includes video footage of a hydrate-bearing core being split on deck, revealing bubbling hydrate and exciting pink slime within the sediments.

3 Milestones and measures of success

Website design and implementation: this will be conducted throughout the lifetime of the grant. Initially, the section dealing with the general public will be produced as this relies mostly on background material and less on the results of the proposed research. The latter stages will include the design and implementation of the code-distribution aspects of the website and the organization of documentation and examples. The documentation will be produced in the latter stages of code development, when the style of the user-interface is relatively stable. The examples will be produced at the end of the project, when the code is fixed in its final form. These outputs will be produced by the PDRA in parallel with scientific tasks.

4 Summary of resources

Resources of £ 200 have been included for web-page software and design costs. “
