

# Knowledge mobilisation in the NIHR Health Protection Research Unit in Environmental Change and Health (HPRU-ECH)

Version 3. July 2023

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This is a **draft strategy**

For questions and comments about the strategy please contact Dr Sari Kovats (Knowledge Mobilisation Lead) or Dr Kerry Broom (HPRU Knowledge Mobilisation Manager).

## About our HPRU

The NIHR Health Protection Research Unit (HPRU) in Environmental Change and Health (ECH) was established in 2020 as a collaboration between the London School of Hygiene & Tropical Medicine, UCL, the Met Office, and the UK Health Security Agency (UKHSA) (formerly Public Health England). HPRU-ECH supports UKHSA in its role in protecting the UK from environmental changes and increasing research capacity within this area.

The research will improve understanding of the impacts on health of climate change and other environmental challenges, the actions needed to protect health, and the opportunities for improving health of policies aimed at reducing emissions of greenhouse gases.

The research will be multi-disciplinary with inputs from researcher's expert in health, behavioural and social science, building science, climate change, health economics, insect biology, mathematical modelling and statistics.

HPRU research will focus on:

- Vector-borne diseases
- Floods and coastal change
- Heat, droughts and wildfires
- Housing and health
- The benefits of increasing natural vegetation and water bodies in cities
- Indicators for tracking the impact and responses to climate change
- Environmental and health benefits from food and agriculture policy
- Threats to health from climate change external to the UK

This strategy outlines our approach to mobilise knowledge generated by the HPRUs, and to developing expertise and establishing a culture in UKHSA, and other partner organisations to improve their capacity to draw on research evidence.

## Knowledge Mobilisation

### Aims

This tailored strategy for the HPRU has evolved from the pan-HPRU KM strategy. In addition, it has drawn on:

- research and experiential knowledge of effective knowledge mobilisation strategies
- conversations with HPRU-ECH affiliated academic and UKHSA colleagues
- conversations with KM leads from other HPRUs
- conversations with PLANET (Public Led And Knowledge Engagement Team).
- the HPRU-ECH Forward Business Plan

The three aims of KM in the HPRU ECH are:

1. Undertake effective knowledge mobilisation activity appropriate to area of research;
2. Increase knowledge mobilisation skills and capacity;
3. Contribute to the evidence base for effective knowledge mobilisation.

## Objectives and Targets

Objective	Aim	Details	Targets		
			Short Term (12-18 months)	Medium-Long Term (30-36 months)	Long Term/end of HPRU 2025 (5 years)
1. Consider where and how our research questions have been derived	1, 3	<ul style="list-style-type: none"> <li>What is the relevance of this research to specific partners in UKHSA? And to implementers of public health practice (DPHs, regional directors)</li> <li>What is the relevance of this research to patients/public through discussions with PLANET</li> <li>What is the relevance of this research to private industry and the non-governmental sector?</li> </ul>	<ul style="list-style-type: none"> <li>Consideration of these questions in Theme meetings, project meetings and HPRU team meetings.</li> <li>Engagement with PLANET</li> </ul>	<ul style="list-style-type: none"> <li>More explicit consideration in drafting research objectives and deliverables</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation of research findings and identification of key areas to take forward to implementers of Public Health Practice, the private industry and non-governmental sector.</li> </ul>
2. Identify and engage with key stakeholders and end-users of HPRU research	1	<p>Key stakeholders are</p> <ul style="list-style-type: none"> <li>UKHSA and DHSC</li> <li>DESNZ, DSIT, and Defra.</li> </ul> <p>Identify local stakeholders (subnational level)</p>	<ul style="list-style-type: none"> <li>Stakeholder mapping exercise.</li> <li>Identify key individuals in UKHSA</li> <li>Workshop leads to report on key stakeholders</li> <li>Impact statement by PhD students at upgrading.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure reporting and follow up from workshops.</li> <li>Evidence of action from workshops.</li> </ul>	<ul style="list-style-type: none"> <li>Input from Stakeholders throughout lifetime of research.</li> </ul>
3. Training staff and students in Knowledge Mobilisation	2	<p>Work with other HPRUs, and through pan-HPRU KM network</p> <p>Develop training and support to new and existing HPRU staff and RD students. Work with resources from LSHTM and other sources</p> <p>All new HPRU staff will have individual or group discussions with the HPRU Knowledge Mobilisation academic lead or the HPRU Knowledge Mobilisation Manager.</p>	<ul style="list-style-type: none"> <li>KM section published on the HPRU website.</li> <li>Regular attendance of KM Manager at Theme Meetings and Management</li> </ul>	<ul style="list-style-type: none"> <li>Session on KM led by KM lead and/or KM Manager at HPRU Annual meeting.</li> <li>Participation in NIHR Academy by PhD students and ECR.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation of training effectiveness and awareness of KM</li> <li>Evidence of KM implementation in UKHSA across the 10 topics.</li> </ul>
4. Maximise learning across HPRUs	2,3	<p>HPRUs will evaluate the effectiveness of their knowledge mobilisation approaches. Including evaluation of the changes in the culture and expertise in this area across partners, prospective studies of approaches employed and their effects, and observational studies including case studies.</p> <p>The NIHR Centre for Engagement and Dissemination (CED) Knowledge and Evidence team will support HPRUs to develop and disseminate outputs such as evidence synopses and lay summaries, also tracking the value and impact of outputs. This will be in parallel with submission of manuscripts for peer-reviewed publication</p>	<ul style="list-style-type: none"> <li>KM academic lead and KM Manager to attend the pan-HPRU KM Network meetings.</li> <li>KM Manager has role as Training lead on pan-HPRU KM Network to identify resources for the KM Network and HPRU staff.</li> </ul>	<ul style="list-style-type: none"> <li>Share good practice as it arises with other HPRUs.</li> <li>Share evidence base on KM with other HPRUs.</li> <li>Contribute to the collective synthesis and case studies across the HPRUs.</li> <li>Evaluate our KM – and feedback to pan-KM Network and HPRU.</li> </ul>	<ul style="list-style-type: none"> <li>Collection of positive and negative case studies and examples.</li> </ul>

## Knowledge mobilisation in NIHR Health Protection Research Units

Knowledge mobilisation is about bringing together different communities to share knowledge to catalyse change, particularly health protection policy and practice. Knowledge mobilisation is a two-way process which enables advances in health protection research to create benefits for the public; supporting research informed and cost-effective decision-making by policy makers, public health practitioners, the public, and other stakeholders.

Effective knowledge mobilisation involves:

- Facilitation of long term engagement of researchers with the policy and practice communities where their research can make a difference
- Enabling policy and practice communities to have a role in the devising of research questions, to ensure that they address important questions in a useful way
- Enabling researchers to influence decision-making processes in policy, practice and elsewhere through having a 'seat at the table' alongside other approaches to dissemination
- increasing understanding of research, limitations and uncertainties among those who can use research findings.

## Applying and developing evidence and theory informed approaches to KM

### Theory and evidence informed approaches

We aim to apply evidence or theory-based approaches to knowledge mobilisation, building this evidence in the process.

One framework within which evidence-based approaches to knowledge mobilisation is presented in [Using Evidence: What Works](#) (Breckon and Dodson, 2016; Langer et al, 2016). The aim of The Science of Using Science project was to review which interventions are most effective at increasing decision-makers' use of research evidence in various decision arenas. The project involved two "review of reviews".

1. A systematic review of systematic reviews of the evidence-informed decision making literature, which included 36 reviews of 91 interventions;
2. A scoping review of other social science interventions that might be relevant to knowledge mobilisation which identified more than 100 interventions.

Identified interventions were grouped within six underlying mechanisms of enabling research-informed decision-making. These are:

1. Awareness: building awareness and positive attitudes towards evidence use
2. Agree: building mutual understanding and agreement on policy-relevant questions and the kind of evidence needed to answer them
3. Access and communication: providing communication of and access to evidence
4. Interact: facilitating interactions between decision-makers and researchers
5. Skills: supporting decision-makers to develop skills in accessing and making sense of evidence
6. Structures and processes: influencing decision-making structures and their processes.

We will identify evidence-based approaches within this and other frameworks to promote knowledge mobilisation of the findings of our HPRUs.

Knowledge mobilisation in health protection and environmental change has some specific aspects. We will therefore evaluate the effectiveness of new knowledge mobilisation approaches. This would include the evaluation of the changes in the culture and expertise in mobilising knowledge across researchers and other partners, prospective studies of approaches employed and their effects, and observational studies including case studies.

### Capacity building and training

The KM team will conduct training on KM and join the HPRU and theme meetings. The KM team will identify best training resources available, particularly those through pan-HPRU network and those through KM team in LSHTM. We will use online-training resources in knowledge mobilisation accessible across the HPRU network.

The knowledge mobilisation partnerships across HPRUs will use the full range of relevant technologies to support knowledge mobilisation. As noted above, collaborative relationships across research, practice and policy process are at the centre of this. However more specific tools including accessible data sets, data visualisation interfaces, easily usable software implementations of methods, policy papers, and briefing documents including lay summaries, and social media communication will be co-produced in support of mobilising knowledge generated by the HPRUs.

### Researchers @ LSHTM and UCL

The HPRU knowledge mobilisation team will work with HPRU researchers to improve understanding of KM and identify stakeholders. The team will engage in the planning, implementation and documentation of knowledge mobilisation activities, particularly in relation to the topic **Workshops**.

All new staff members will have individual or group discussions with the HPRU knowledge mobilisation leads, as appropriate.

We will design appropriate fuller capacity development activities.

- Attachments in a practice or policy environment relevant to their research (RD students/ECRs).
- Small projects on the evaluation of knowledge mobilisation activities in their area of work.

We would support placements to work within partner institutions and settings where appropriate to achieve mobilisation of our research findings there and knowledge mobilisation capacity development for the HPRU-ECH researchers and staff in that setting.

PHD students. PhD students supported by the HPRU should have joint supervisors at UKHSA) and LSHTM. PHD students within the HPRU will be asked to include a statement of impact in their upgrading.

### HPRU members @ UK Health Security Agency and DHSC

We will engage with UKHSA staff to disseminate knowledge generated through the HPRU. We aim to for the iterative development of tools and interfaces to increase capacity.

Participation in the pan-HPRU Knowledge Mobilisation network will iteratively develop a knowledge mobilisation framework for health protection incorporating learning across the area and improve engagement across UKHSA.

Evaluation and feedback will include (i) sharing our learning of what works and is difficult, (ii) learning from knowledge mobilisation approaches, experience, and evaluation of other HPRUs, (iii)

jointly identifying learning needs and developing training materials and events, and (iv) participating in joint knowledge mobilisation initiatives as appropriate.

#### Across the environmental HPRUs

Specifically, Kerry Broom will coordinate KM across the three environmental HPRUs these include our HPRU, the HPRU in Environmental Exposures and Health and the HPRU in Chemical and Radiation Threats and Hazards.

#### Across all HPRUs

The KM Team will facilitate the transfer of knowledge between the HPRUs to further research. This may include activities such as arranging and chairing meetings areas where the KM Team considers there may be benefits from collaboration. The KM team will liaise with other KM teams to share knowledge and identify opportunities across the HPRUs.

The pan-HPRU KM network will

- curate and develop online-training resources in knowledge mobilisation accessible across the HPRU network.
- maintain a network that will iteratively develop a knowledge mobilisation framework for health protection incorporating learning across the area.

We will engage with potential users through workshops and iterative development of tools and interfaces to increase their capacity to guide and use our work.

### Knowledge mobilisation in UKHSA

As a principal user of research evidence generated by HPRUs, knowledge mobilisation partnership among groups and teams in UKSHA is critical. This will include:

- development of relationships to support joint working in the area
- engaging UKHSA stakeholders in framing the research questions addressed so that results will fit to policy and practice needs,
- researcher input into policy and practice innovation and planning informed by research findings and expertise.

UKHSA Knowledge and Library Services, and the UKHSA Research and Governance Teams have committed to collaboration with HPRUs to mobilise HPRU generated knowledge across UKHSA and a similar relationship is planned with these functions evolving in UKHSA.

For the cross-cutting HPRUs (e.g., Behavioural Science and Evaluation) a similar relationship with subject area HPRUs will target method development to meet the needs of these users. Examples will include co-production of user-guides and interfaces with these users to increase and improve the implementation of these methods.

Effectiveness in this area of strategy will be evidenced by overall collaborative structures and processes as well as the role of these in case study examples.

## Engagement with wider policy-makers, industry and civil society

This will include identification of stakeholders for and on whom the research of each HPRU has the potential to impact, and developing relationships to allow their expertise in and engagement with the research from planning to dissemination.

We will also work closely with our panel (PLANET) when considering knowledge mobilisation with the public. [see PPIE strategy]]

When identifying new stakeholders, the following will be taken into account:

- The level of stakeholders' interest in the project
- Aspects of the research they are interested in
- The level of influence to generate impact.

Stakeholder mapping will be conducted. By identifying end-users and other stakeholders at the project and theme level, the HPRU-ECH can map them to provide a visual representation of the people/organisations that will both benefit from and influence research and reach out to these groups to facilitate knowledge transfer and identify areas for new work where there are evidence gaps. This can enable knowledge mobilisation activities to be effectively planned and allow for cross-project/theme activities where appropriate. This may include stakeholder workshops to steer research directions, perhaps using approaches such as a [Theory of Change](#) in setting out assumptions, preconditions, interim steps and outcomes needed to reach the impact. These will also increase appreciation of differences of understanding and mental maps and mindlines across groups and individuals, as well as varying organisational cultures, to guide effective communication.

Planning, implementing and reflections on this activity will provide a record for reporting and material to allow improvement in these approaches.

## Measuring impacts and the role of knowledge mobilisation

HPRUs will evaluate their knowledge mobilisation activity annually. By capturing the breadth of knowledge mobilisation activities and impact, Researchers are required to report all knowledge engagement and mobilisation activities undertaken. Where available, supporting evidence will be submitted by researchers to strengthen case studies and to enable follow-up actions where required.

Examples include but are not limited to:

- Use of research to inform national guidelines
- membership of and contribution to Government advisory groups (e.g. SAGE) or local Government advisory groups (e.g. outbreak management group)
- submissions to Parliamentary Select Committees (written or oral), or other parliamentary knowledge exchange activities
- advising organisations or governing bodies on Covid-19 strategies (e.g. national governing bodies, sports teams, businesses).

In-depth case study. NIHR requires at least one in depth case study per year within each HPRU, or jointly across more than one HPRU. This will be selected to consider the approaches to knowledge mobilisation for a piece of work that offers substantial added value or impact.

Reporting will include following areas:

- Reflections on knowledge mobilisation and monitoring of activity
- Collaboration with UKHSA
- Engagement with stakeholders
- Dissemination and communication of research activity
- Capacity building and training on knowledge mobilisation.

## References

Breckon and Dodson, 2016

Anger et al, 2016



