

Scottish One Health AMR Register (SOHAR): Update to support and underpin UK AMR NAP 2024-2029 – Workstream 6 (Scotland) activities

Section 1: Project Overview

Introduction

The Centre of Expertise for Waters (CREW) intends to commission a **call down project** aligned with CREW's Water Quality and Health theme that supports the UK AMR NAP 2024-2029 Workstream 6 (Scotland) activities.

Background

Microbes (bacteria, viruses, fungi, and protists) that cause disease in humans, animals, or plants are typically treated with antimicrobial drugs. However, as living organisms, microbes adapt and evolve, developing resistance to these drugs. Misuse and overuse of antimicrobials have exacerbated this problem, leading to widespread antimicrobial resistance (AMR). The World Health Organization (WHO) has identified AMR as a global health security threat and published a [Global Action Plan \(GAP\)](#), focusing on five key areas: raising awareness and understanding of AMR, strengthening scientific evidence, reducing human infections by AMR microbes, optimizing the use of antimicrobial medicines and investment in new medicines diagnostics, vaccines, and interventions. The GAP called for all countries to develop and implement collaborative, multisectoral national action plans (NAPs) in line with the GAP to ensure action addressed individual country priorities and contexts.

As part of the delivery of the UK AMR NAP 2019-24 and accompanying UK 20-year Vision for Antimicrobial Resistance, a UK-wide One Health Research Programme (OHRP) was developed and implemented, which was supported by The Scottish Government. In signing up to the NAP, the Scottish Government committed to lower the burden of human and animal infections, minimise environmental contamination, maximise food safety, optimise the use of antimicrobials in humans and animals and improve surveillance of AMR in humans and animals, plants, food, and the environment.

To support the delivery of the UK National Action Plan 2019-24, the Scottish Government set out to build a register of AMR research undertaken in Scotland since January 2016 (including research undertaken in collaboration with partners outside Scotland). CREW commissioned the Scottish One Health AMR Register ([SOHAR](#) of AMR research) which has been available on the CREW website since October 2021. However, since its publication, the SOHAR resource has not been updated, and is consequently out-of-date.¹

Knowledge gap

There is a need for more recent data (2021-present) to be added to SOHAR to ensure relevance and alignment with the updated UK AMR NAP (2024-2029) and the action plan's revised / new commitments. It is essential that information collated and considered is functional, fit for purpose and promotes greater awareness and knowledge of Scotland's One Health AMR landscape. Academic expertise together with expert opinion from practitioners and policy makers is essential to confirm knowledge gaps and identify any pertinent studies and that these are mapped against the commitments contained therein.

¹ Please navigate to the Policy Relevance and ongoing activities section on page 2, for more information.

Policy Relevance and ongoing activities

In light of the development, publication and new commitments of the new UK AMR NAP 2024-2029 in May 2024, the Scottish Government is keen to advance work on refreshing and updating the data sources of the register, reflecting the One Health approach being applied and the inclusion of animal health, human health, plant health, food and the environment AMR under these commitments.

The enhanced development and realignment of the register will aid the Scottish Government in meeting its 4 Nations commitments under the 2024-2029 NAP and help ensure effective, evidence-based policy development. The specific commitment of relevance for this outcome is 7.1 – Evidence generation and use. This commitment states that “We will fund, collect, generate and use research, innovation and evidence to improve understanding of AMR, its impact and how to mitigate it, with a focus on enabling the necessary research infrastructure, knowledge transfer and disciplines to meet identified research priorities (including those set out in the ‘top 10’”).

The redrafting and renewal of SOHAR will result in the creation of a more optimised and accessible resource, which will in turn be of substantially increased value to a wide range of stakeholders across the four nations. The tool itself will also improve the quality of information available to Scottish Government officials, which will be used to report to senior internal colleagues and the UK NAP delivery boards on the current AMR research landscape in Scotland, to identify key priorities for development and to showcase existing and ongoing work with external stakeholders and colleagues from across the UK administrations.

The updated register will be uploaded and hosted to a relevant website, co-ordinated by NHS National Services Scotland colleagues (outwith the CREW project), acting as a portal for sharing the information further using appropriate means and methods.

Aim and key questions

The aim of this project is to refresh and update the existing Scottish One Health AMR Register to:

- encompass developments in the AMR research landscape over the last 3 years, taking into consideration relevant developments at pertinent levels;
- identify key priorities for development and progression of the register, such as refinement of purpose and potential utilisation for policymakers, practitioners, the public and other stakeholders, and;
- showcase existing and ongoing work and collaborations in Scotland as well as collaborations with partners outside Scotland, taking into consideration both research and relevant policy developments.

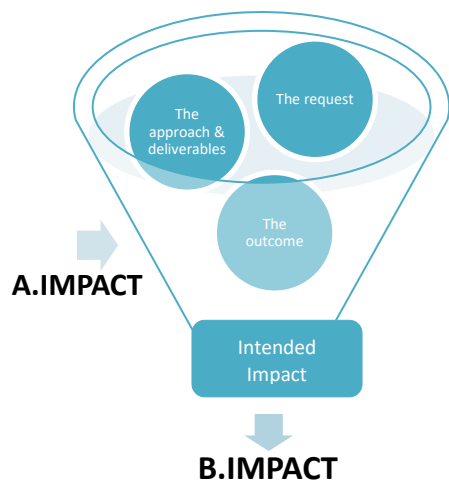
The key questions to be addressed are:

1. What published research has been, and what ongoing research projects and collaborations are being undertaken in Scotland² in the last 3 years, which will assist Scotland in meeting its research commitments under the UK Government AMR NAP 2019-24 in the areas of human health, animal health, plant health, food, and the environment?
2. What projects, researchers and collaborations within the above register can be mapped onto the NAP research commitments for UK AMR NAP 2024-29, with a particular focus on the commitments for which devolved administrations have a responsibility?

² We are looking for this project to list all research that is being undertaken by researchers in Scotland on AMR (e.g. research team from Edinburgh but location focus is China) with an aim to understand all ongoing work in the area from a Scottish perspective.

Intended impacts

There are multiple pathways for a project to achieve impact, and multiple factors that can impact the project’s ability to achieve what it intends to do; both along the project lifecycle (A.IMPACT) and beyond project completion (B.IMPACT) (Figure 1).



- **The request:** the problem/ gap that has been identified that drives the project.
- **The approach & deliverables:** the ‘methods’ that explain how the request is being answered and the ‘outputs’ that are tangible products delivered by the project.
- **The outcome:** this is directly correlated to the findings; this is short to mid-term change because of the research.
- **Intended impact:** Explicitly what this project intends to achieve to address, which is connected to the request.
- **Along impact:** the conditions and causal factors that can influence the project during its life cycle.
- **Beyond impact:** more significant wider change that occurs at a longer timescale following the project’s completion.

Figure 1: Pathways to impact

Along Impact (A.Impact):

The project steering group will consist of representatives from Scottish Government and its delivery partners plus a CREW project manager.

To support the update/refresh of the SOHAR register, input from sectoral leads from across the One Health agenda in Scottish Government is envisaged within: Human health, Animal health, Environment, Waste in water and Food Standards Scotland.

Beyond Impact (B.Impact):

Primary beneficiaries of the outputs from this project specifically include:

- The Scottish Government (particularly those colleagues with a One Health agenda interest)
- UK Government (including the Veterinary Medicines Directorate and Animal and Plant Health Agency)
- Scottish Environment Protection Agency
- Scottish Water
- Food Standards Scotland
- National ARHAI Scotland
- Scottish Antimicrobial Prescribing Group
- NHS Scotland
- Public Health Scotland
- Defra Antimicrobial Resistance Coordination Group.
- UK Health Security Agency

Deliverables

- Data spreadsheet³
- Policy brief (c.5 pages)
- A plain English summary (1-2 pages)
- Website summary (200 words)

Events/meetings

- 3 Project Steering Group meetings online (throughout the project lifecycle⁴)
- 1 Online stakeholder focus group with subject experts across Scotland to gain an understanding of the current research space and the collaborations

Section 2: Further information for applicants

Project management

Day-to-day communication will be between the research/review team (the contractor) and a CREW Project Manager and is likely to involve short catchups as agreed.

Project steering group

A small group including representatives of Scottish Government and its delivery partners plus a CREW representative, will meet with the preferred bidder for a pre-contract start-up meeting and then at intervals at Project Steering Group meetings throughout the project. The Project Steering Group will also provide feedback on draft deliverables.⁵

Anticipated timescale

- A precontract start-up meeting with the Project Steering Group will be held **end of February 2025**.
- The project will commence **early March 2025** depending on contract processing and signage, and CREW Year 4 budget approval.
- Project Steering Group meeting **c. late April 2025**.
- Focus Group **May 2025**.
- A draft version of the project data spreadsheet and policy brief should be submitted for review by the Project Steering Group no later **than the 26th May 2025**.
- Project Steering Group meeting **c. early June 2025**.
- The final project data spreadsheet, policy brief, plain English summary and website summary should be submitted no later than **the 13th June 2025**.
- Project deliverables will be signed off by the Project Steering Group and CREW Director end of **June 2025**.

³ At the precontract project meeting there will be initial discussions with the Project Steering Group for this project to determine the format of the excel data spreadsheet.

⁴ Please include these meetings as part of the project milestones. Note, CREW requests a brief written update approx. two weeks prior to project steering group meetings.

⁵ Please allow 2 weeks for PSG review of draft deliverables. This should be reflected within your milestone table in your application.

Funding

The anticipated funding available is a maximum of £57,000 **exclusive of VAT** (where applicable), subject to CREW Year 4 budget approval.

Submitting a proposal

Please send a completed **call down** application form using the most recent version (the link to this form is available on the CREW Call for Proposal webpage ([Call for Proposals | CREW | Scotland's Centre of Expertise for Waters](#)) addressing the project requirements. A copy of expectations and the award criteria are provided below for reference.

Proposals need to be submitted to Procurement@crew.ac.uk for evaluation **by noon on 23rd January 2025**. We aim to notify the successful bidder by **mid February 2025**.

If you would like any clarification on any of the above information, please contact Procurement@crew.ac.uk by **16th January 2025**.

You should highlight any potential conflicts of interest in your proposal. For queries about what may constitute a potential conflict of interest please contact the CREW Manager (Nikki.Dodd@hutton.ac.uk).

Expectations

No.	Criteria	Descriptor
1	Duration	The proposed duration will align closely to the details provided in the anticipated timescales section of the specification.
2	Staff time and effort	The proposed allocation of staff time and effort is appropriate and includes all deliverables. The proposal provides a commitment that named staff members will be available to work on the contract if the bid is successful. For any unnamed staff, appropriate risk identification and mitigation measures are provided.
3	Project costs	The estimated breakdown of project costs is realistic and inclusive of all deliverables.

Award criteria

No.	Criteria	Descriptor
1	Understanding the project ask and policy background	The proposal should include an introduction which demonstrates a clear understanding of the project requirements. This should include an understanding of the policy background and the supporting role of this project; the need for this research; the project aim; and how the proposal will address this aim.
2	Proposed methodology	The proposal should demonstrate a high quality and workable methodology, including how the evidence will be identified, reviewed, and assessed; consulting relevant stakeholders and/or experts where appropriate to address the key questions and produce the deliverables in the timescales required. It should explain the suitability, robustness, and limitations of the proposed methodology.
3	Milestones	The project milestones are logical, practical and include all deliverables.
4	Project Management	The staff, resources and expertise are appropriate for conducting the proposed project. The proposal should name the project lead and outline their project management experience.

5	General and specific topic expertise and experience	The proposal should provide details of individual staff members who will work on this project and demonstrate how they will meet the project requirements, specifically: - general research experience and expertise; - specific experience and expertise on the topic of AMR.
6	General communication and deliverables	The proposal should describe the approach to producing the deliverables, which will be published on the CREW website. It should detail who will take lead responsibility for report-writing and overall report quality. It should provide examples of previously published policy briefs and reports in which they have been involved.
7	Quality assurance	The proposal should provide details of quality assurance procedures to demonstrate how the contract will be continuously delivered to a high standard. It should specifically address issues of quality control at different stages of the project, including evidence gathering, analysis and report writing. It should include a timetable for delivery of tasks, project milestones and allocation of staff and staff time against each task, covering the duration of the contract.
8	Risk	The proposal should provide a risk assessment matrix detailing any risks identified in relation to the delivery of this contract, and proposed mitigation measures to minimise their probability and impact, focused particularly on risk to completion on time.

Annex A. Relevant reports, studies, and policies

Relevant policy/regulation to be aware of:

- UK AMR National Action Plan (NAP) 2019-24
- UK AMR NAP 2024-2029
- Global Action Plan on antimicrobial resistance
- UK 20-year Vision for Antimicrobial Resistance
- HCAI Strategy
- SAPG Strategy
- IPC Workforce Strategic Plan
- Water Pathways
- Scottish Pathogen Genomics Strategy
- HCAI Strategy 2023-25

Relevant work to be aware of:

- [Converting the Scottish One Health AMR register into an Online Resource | SEFARI](#)
- [Antimicrobial resistance: bringing Scottish expertise together to find the solutions | SEFARI](#)
- [AMAST Network launches to battle AMR in the agrifood system | SEFARI](#)
- [A feast for OnFARM listeners' ears | SEFARI'](#)
- [Pathogen Surveillance in Agriculture, Food and Environment \(PATH-SAFE\) Programme | Food Standards Agency](#)
- UKRI is funding a total of eight networks (see [UKRI AMR Networks](#)), some of which are relevant for AMR and the environment
- [One Health Breakthrough Partnership](#)

- [Pathogen Surveillance in Agriculture, Food and Environment \(PATH-SAFE\) Programme | Food Standards Agency](#)

Further background on the new National Action Plan 2024-2029:

Of the 30 commitments in the UK AMR National Action Plan, there are 7 relating to research. Devolved Administrations are named as partly responsible (alongside UK Research and Innovation, Department for Health and Social Care, Department for Environment, Food and Rural Affairs, Department for International Development) for commitments 1.1, 1.3, 3.1, 3.2, 5.1, 5.4, 6.1, 6.2, 6.3, 6.4, 7.1, 7.2, 8.1, 8..2 9.1; and Food Standards Scotland (alongside Food Standards Agency) for 7.1. As such, research is embedded throughout the NAP – as specifically mentioned in these particular commitments.

These commitments are shared across the UK, a shared ambition – equally managed across the different workstreams. Of specific note is 7.1 (***Evidence generation and use: We will fund, collect, generate and use research, innovation and evidence to improve understanding of AMR, its impact and how to mitigate it, with a focus on enabling the necessary research infrastructure, knowledge transfer and disciplines to meet identified research priorities (including those set out in the ‘top 10’), establishing and promoting the opportunity to share research priorities across the UK.***

For background, the “top 10” research priorities as listed in the UK AMR NAP are as follows:

1. *What is the cost of AMR?*
2. *What is the relationship between AMR and health disparities?*
3. *How to influence public awareness and behaviour on AMR?*
4. *How to address AMR in international settings*
5. *What are the basic drivers and effects of AMR, and how does it spread?*
6. *How can we prevent AMR from spreading?*
7. *How can we optimise the use of antimicrobials?*
8. *What methods can be used to prevent, treat, and manage infections without antimicrobial medicines?*
9. *How can we drive innovation of new products for tackling AMR?*
10. *How can we ensure that what is known to work is implemented?*