

AMR and the Environment: Implementing AMR solutions in LMICs

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Resistance Solutions

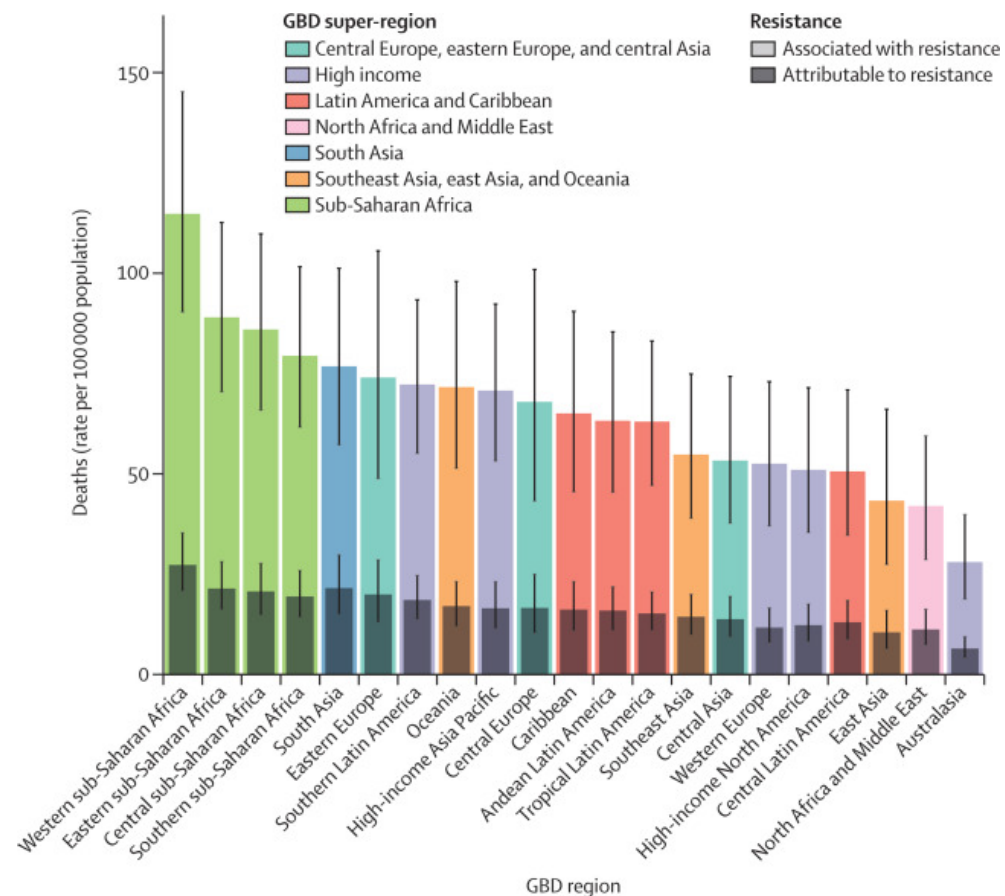


INTERNATIONAL
CENTRE FOR
**ANTIMICROBIAL
RESISTANCE**
SOLUTIONS

Estimates on the burden of AMR around the world



- In 2019, bacterial AMR directly attributed to the deaths of **1.27 million people**.
- The highest burden felt in **low- and middle-income countries**.
- **Sub-Saharan Africa has the highest death rate** attributable to drug-resistant infections.
- The drivers of AMR are varied and complex.





Implementation bottlenecks

Why are successful interventions not being implemented at large scale?

Insufficient political/policy commitment

- Poor understanding of the consequences of AMR
- Lack of a convincing “Business model/ROI”

Lack of local ownership, engagement or behavioral change from stakeholders for several reasons

- Insufficient knowledge, attitude & practices on AMR and its consequences
- Lack of acknowledgement of the importance for implementation research to get sustained change
- Lack of capacity in implementation research

Limited human, infrastructural and operational resources

Scalable successful interventions are based on research that has both an **intervention** AND an **implementation** component.

Truly sustainable solutions need



Political will



Ownership throughout the whole stakeholder chain



To be context specific



To be evidence based



Country capacity



To understand people's behaviour



To be cost-effective



To span the One Health spectrum/be cross-sectoral

ICARS is...

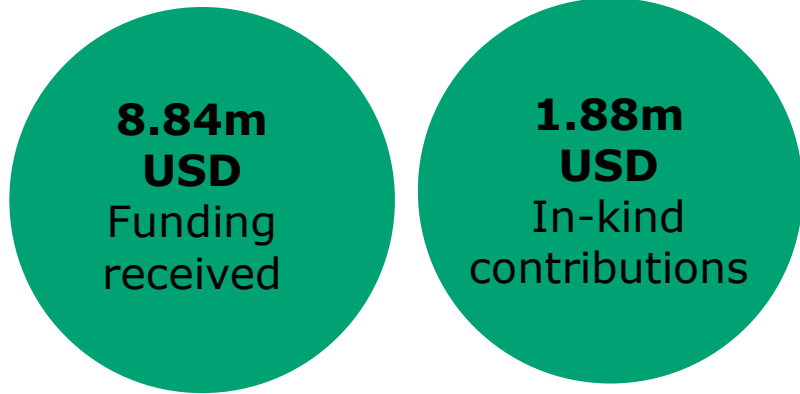
- An international organisation working in partnership with governments in LMICs to develop and test context-specific solutions for AMR.
- Providing funding and expertise across the One Health spectrum.
- Danish-initiated (2018), now an independent self-governed organisation (2021), attracting funding from member states as well as foundations.
- Presently 28 employees from 15 countries.



ICARS by numbers



FINANCE (2022)



**60m USD Danish commitment across ministries until 2026, providing core and research support to ICARS*

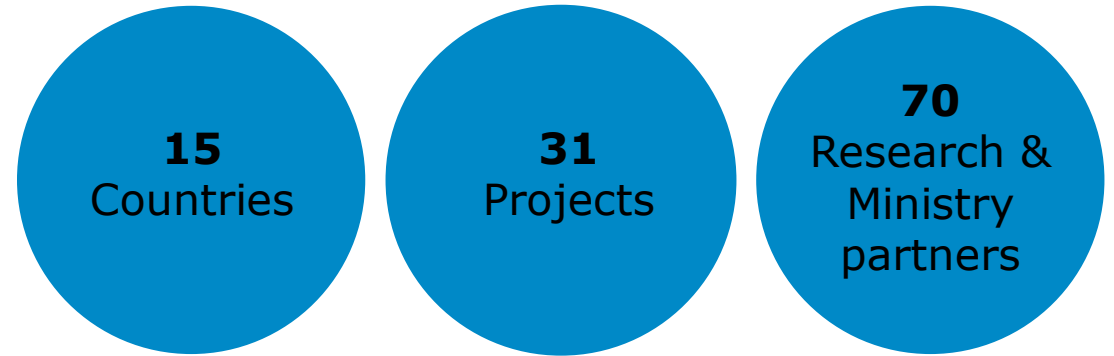
Funding partners

- Danish Ministry of Health
- Danish Ministry of Foreign Affairs
- UK Department of Health and Social Care (DHSC)
- Wellcome Trust
- Joint Programming Initiative on AMR (JPIAMR)
- International Development Research Centre (IDRC - Canada)
- European Health and Digital Executive Agency (HaDEA)

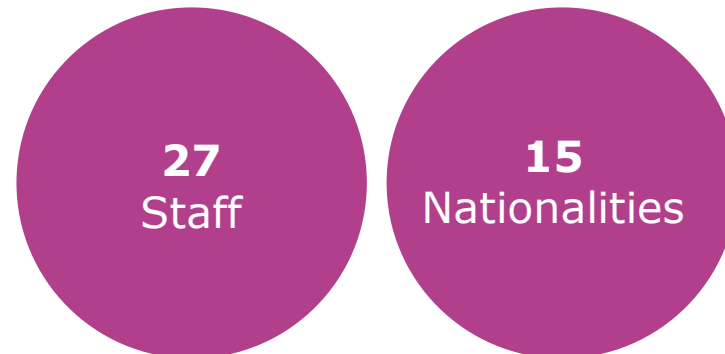


PROJECTS

(Including projects in development)



SECRETARIAT



ICARS' interconnected strategic pillars



Pillar 1: Develop and test context specific solutions for AMR mitigation



Pillar 2: Support the translation and uptake of existing evidence and innovation into policies, programmes and practice



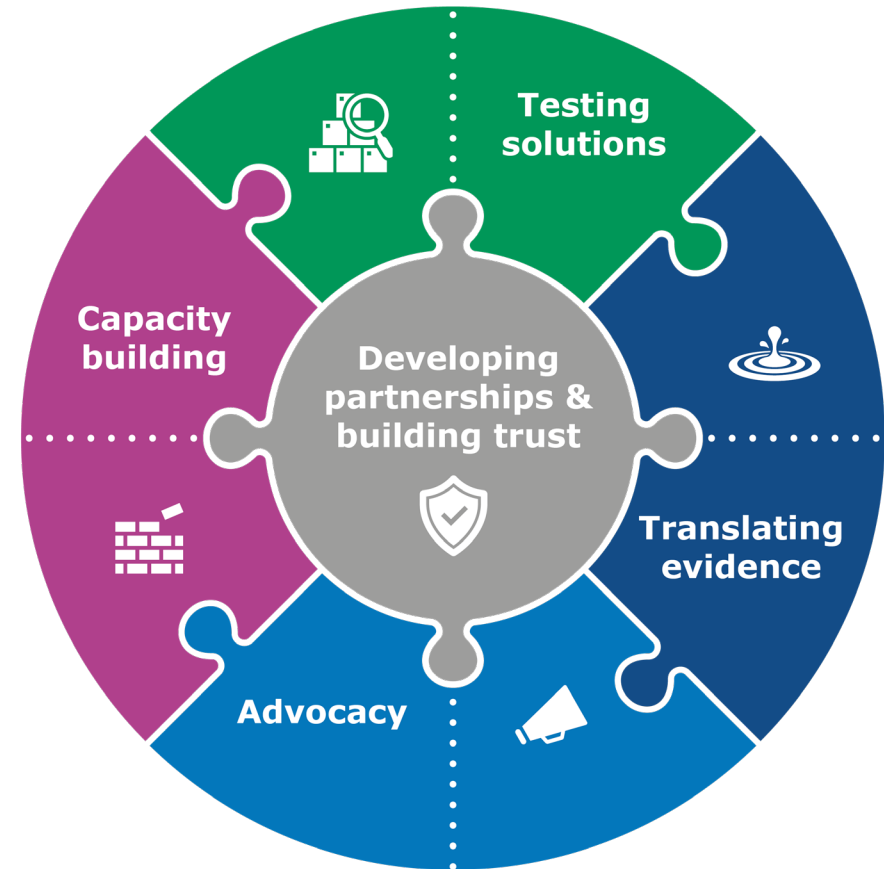
Pillar 3: Advocate for context-specific, country-owned AMR mitigation solutions



Pillar 4: Support targeted capacity and capability building

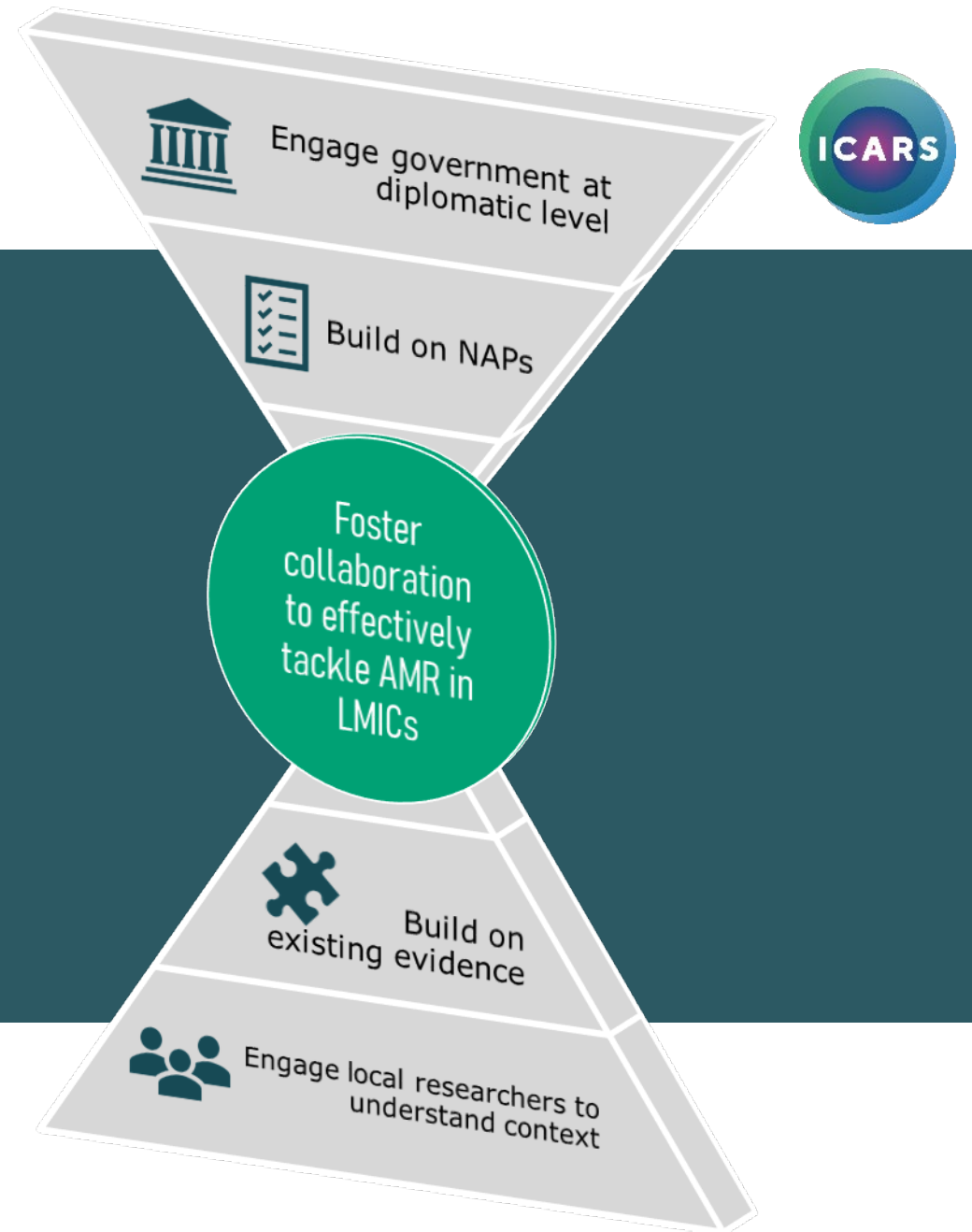


Cross cutting pillar: A trustworthy partner and platform for delivering context-specific and country-owned AMR solutions



Our unique approach

- ✓ A mix between **top-down** and **bottom-up** engagement with LMICs
- ✓ Securing commitment from the **ministerial level**
- ✓ Projects are co-developed and executed by **local universities /research institutions**
- ✓ International and national partnerships with implementing partners (ReAct, ILRI, Fleming Fund, WHO, GAMRIF, GARDP etc.) to **avoid duplication and to build on existing initiatives**



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Projects

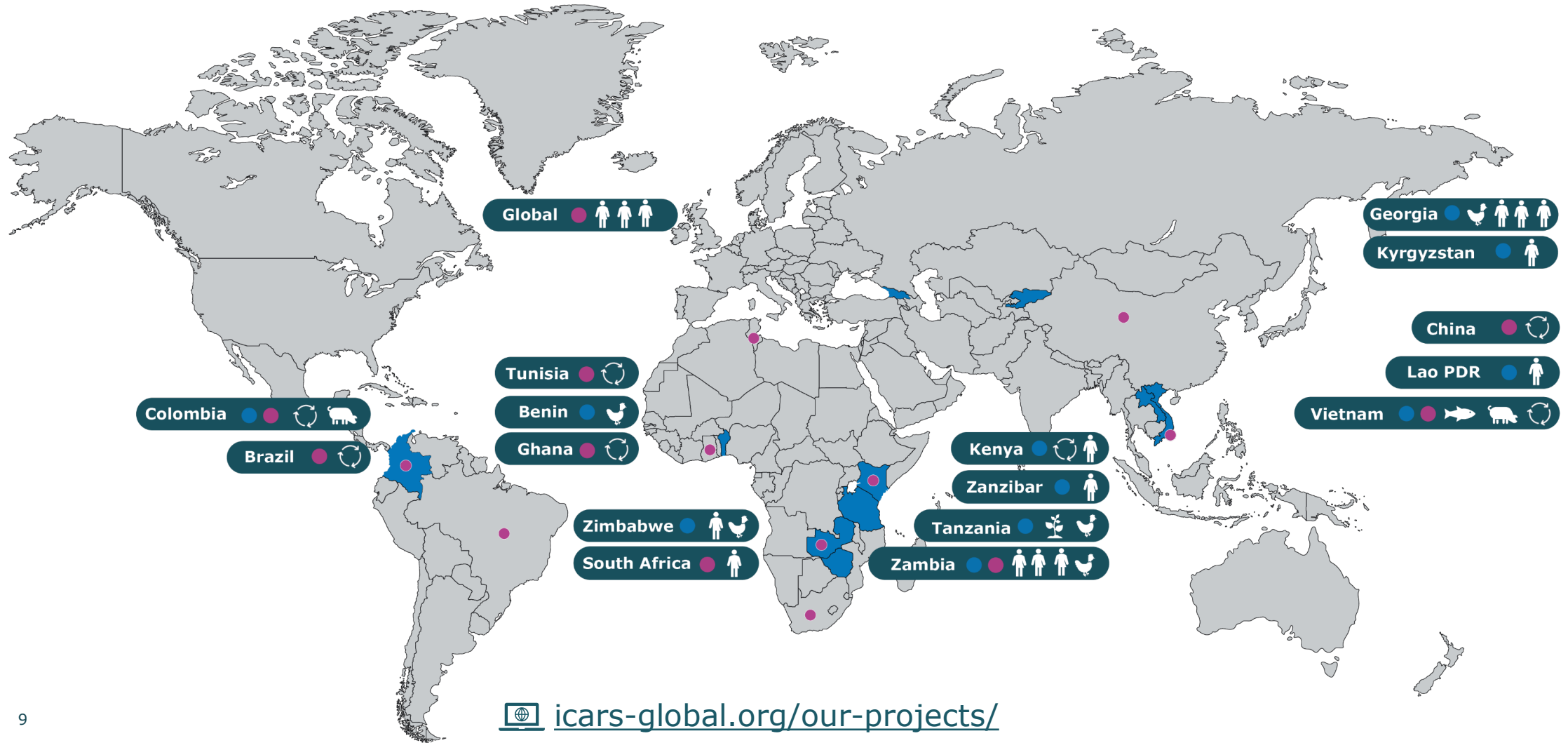
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Countries

ICARS-funded
Co-developed between ICARS and LMIC ministries to tackle a specific AMR challenge and contribute to NAP implementation.

Co-funded
Developed with funding partners and local research institutes to generate evidence and advance AMR mitigation nationally and globally.

One Health 
Environment 
Animal 
Human 
Aquaculture 



icars-global.org/our-projects/

Mitigating the spread of antimicrobials and resistant microbes through manure treatment

Problem

- Poultry manure is a desirable fertiliser used in food production
- Overuse of antibiotics risks AMR transmission (pathogens, residues & genes) across the food chain.

Project

To mitigate the spread of antimicrobials and resistant microbes through treatment of manure.

Partners

Tanzanian Ministry of Livestock and Fisheries, Sokoine University of Agriculture (SUA), Zanzibar Livestock Research Institute (ZALIRI), Ministry of Agriculture, Irrigation, Natural Resources and Livestock, Zanzibar

Expected output

- Introduce manure processing technology to treat manure in Tanzania, leading to safer fertiliser and food products.
- Create employment opportunities for small businesses for manure composting and fertiliser sales
- Inform and lead to revision of national policies with recommendations regarding the safe use of poultry manure in short cycle horticultural crops





ICARS co-funded JPIAMR projects

Country	Project Title	Country partner
Ghana	Removal of AMR genes and bacteria from wastewater using modular advanced treatment solutions (HOTMATS)	University of Ghana, College of Health Sciences
Tunisia	Interventions to control the dynamics of antimicrobial resistance from chickens through the environment (ENVIRE)	Faculty of Medicine Ibn Al Jazzar, Tunisia
Brazil	Microbiota intervention strategies limiting selection and transmission of antibiotic resistance burden (MISTAR)	São Carlos Institute of physics, University of São Paulo

Partnerships for Impact

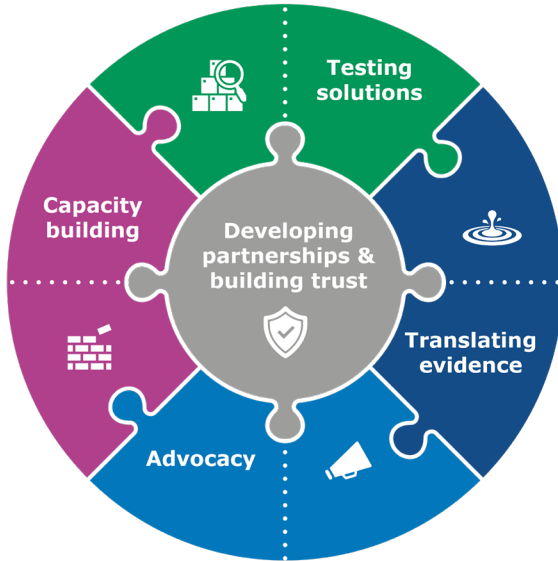


IDRC Canada
Gender-sensitive interventions

ReAct Africa
Toolkit for NAP prioritisation

ILRI/AST Center of Excellence
Strengthening Capabilities

Radboud UMC
Strengthening Capacity in Stewardship



UK DHSC GAMRIF
Uptake of Innovations

Wellcome
Toolkit for Community Engagement

Call to Action Global Conference

UN Quadripartite
AMR One health Research Agenda

AMR R&D Hub
Funding gaps in IIR



Invitation to partner

We wish to partner with countries and organisations that are committed to mitigating AMR through the development of interventions that inform action and advance NAP implementation.

LMIC Governments

Co-development of AMR mitigation projects through a funded partnership with ICARS

Funding Partners

Governments or foundations that wish to join ICARS and support our efforts

Implementing Partners

Organisations with aligned goals that complement our efforts

Thank you!



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ICARS



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