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INTERNATIONAL
CENTRE FOR
**ANTIMICROBIAL
RESISTANCE
SOLUTIONS**

ICARS STRATEGY 2022-2026



We envisage a world where drug-resistant infections no longer pose a threat to the health of humans and animals, the environment, global food security and economic prosperity.

www.icars-global.org

PREFACE

Since its inception in spring 2019, ICARS has bolted out of the starting blocks and achieved a great deal in its first years. These achievements were based on the strong strategic pillars that were developed in the early days to address the clear need, expressed by LMICs, for tailored solutions to support National Action Plan implementation.

Organising our efforts across these firm foundations has enabled us to develop a diverse portfolio of projects in Latin America, Africa and Asia, to test antimicrobial resistance (AMR) solutions across the One Health spectrum and translate existing evidence into action. We have developed productive partnerships to bring together complimentary efforts in the areas where we work, and collaborated with others to maximise our impact and avoid duplication of efforts. Drawing on the technical knowledge of our dynamic team, as well as our collaborators and allies, we have strengthened capacity and laid foundations for greater sustainability. But we are still at the beginning.

Following the establishment of ICARS Board of Directors in November 2021, we have revisited our original strategic framework and reflected on our unique offering, planned how to deliver on our ambitious agenda, and worked to mould a clear identity for ICARS that facilitates buy-in from funders, collaborators and partners.

In this, our first official strategy, we draw on the lessons we have learnt, and project ourselves into the future. Guided by our vision of a world without drug-resistant infections, we have revised our outcome framework and refined the scope and goals of each of our interconnected pillars.

In the following we are pleased to present a succinct overview of ICARS unique value proposition, followed by our overarching strategy that will run until 2026, as well as a roadmap that details our planned activities per pillar. We look forward to what the next four years hold and anticipate many fruitful partnerships and initiatives to deliver on our mission, working with low- and middle-income countries to tackle antimicrobial resistance.

Henrik C. Wegener, Chair, ICARS Board of Directors
Helle Engslund Krarup, ICARS Acting Executive Director



Georgia, 2022: Reducing the use of antibiotic growth promoters on poultry farms in Georgia

BACKGROUND

According to the World Health Organisation (WHO):



AMR threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi.



AMR occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death. As a result, the medicines become ineffective and infections persist in the body, increasing the risk of spread to others.



Antimicrobials - including antibiotics, antivirals, antifungals and antiparasitics - are medicines used to prevent and treat infections in humans, animals and plants. Microorganisms that develop antimicrobial resistance are sometimes referred to as "superbugs".

AMR is a threat to the health of humans, animals, crops and the environment.



It is a One Health issue that affects societies and economies worldwide. In 2019, an estimated 1.27 million deaths were directly attributed to AMR and 4.95 million deaths were associated with AMR around the world¹.



The World Health Organization (WHO) has classified AMR in the top 10 threats to global public health.



¹Murray, Christopher JL, et al. "Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis." *The Lancet* 399.10325 (2022): 629-655.

VISION

We envisage a world where drug-resistant infections no longer pose a threat to the health of humans and animals, the environment, global food security and economic prosperity.

MISSION

To partner with low- and middle-income countries' ministries and research institutions to co-develop and test cost-effective, context-specific AMR solutions with potential for scale-up across the One Health spectrum, building on National Action Plans, and informed by intervention and implementation research.

AMR is a development issue

A world without effective antimicrobials, such as antibiotics, would severely compromise healthcare as we know it. Millions of patients die each year due to resistant infections, lack of access to effective antimicrobials, inadequate diagnostics, or ineffective treatment. The implications of AMR go beyond health. In 2016, the World Bank estimated that by 2050, AMR may result in a further 28 million people living in poverty, a 7.5% decline in global livestock production, a 3.8% reduction in global exports and 1 trillion USD in additional healthcare costs².

AMR threatens global efforts to achieve 12 of the 17 Sustainable Development Goals (SDGs), largely affecting SDG 2 (no hunger), SDG 3 (health and well-being), SDG 6 (clean water and sanitation), SDG 14 (life below water) and SDG 15 (life on land). In addition, it affects SDG 1 (no poverty), SDG 8 (decent work and economic growth) and SDG 10 (reduced inequalities). Furthermore, AMR requires action on SDG 17 (partnerships for the goals) to mitigate its public health impact³.

²Jonas, Olga B. Irwin, Alec Berthe, Franck Cesar Jean Le Gall, Francois G. Marquez, Patricio V. *Drug-resistant infections : a threat to our economic future (Vol. 2) : final report (English)*. HNP/Agriculture Global Antimicrobial Resistance Initiative Washington, D.C. : World Bank Group.

³UN Interagency Coordination Group on Antimicrobial Resistance. 2019. *No Time to Wait: Securing the future from drug-resistant infections: Report to the Secretary-General of the United Nations*. Geneva: WHO.

Vietnam, 2022: Field visit to scope sites for potential aquaculture project

WHY ICARS?

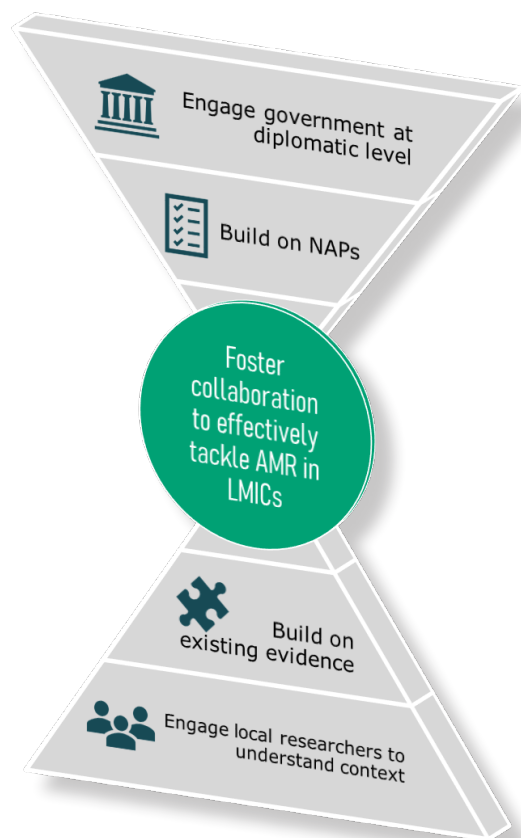
While drug-resistant infections pose a major threat everywhere, evidence shows that many low- and middle-income countries (LMICs) bear disproportionately greater burdens. Health systems in some LMICs face a myriad of issues including, but not limited to, inconsistent access to diagnostics and effective antimicrobials because of weak supply chains, inadequate infection prevention and control in healthcare facilities and poor water, hygiene and sanitation infrastructure. LMIC agricultural systems face similar challenges with an over-reliance on antimicrobials for food animal production due to inadequate biosecurity programmes, sub-optimal animal husbandry practices and minimal enforcement capacity for the regulation of antimicrobials in food and feed. AMR in the environment appears to be neglected in many LMICs AMR National Action Plans (NAPs). Given the complexity of AMR, the need for context-specific interventions that address multiple AMR challenges is imperative. This is where ICARS comes in.

Closing the gap between policy and practice

Although extensive research has revealed successful solutions for mitigating AMR, there is a critical gap in translating these evidence-based solutions into action. Many countries have developed AMR NAPs, but in resource-poor settings the challenge remains how best to prioritise and implement solutions to mitigate AMR. ICARS specifically addresses the challenge of NAP implementation in LMICs by its unique value proposition of working with government ministries and in-country research institutions using the intervention and implementation research continuum, ensuring comprehensive stakeholder engagement.

Using top-down and bottom-up approaches, ICARS provides funding and technical expertise to co-develop and adapt context-specific, evidence-based and cost-effective solutions with potential for sustainable scale-up and transferability of findings within and across countries and regions. ICARS works top-down with governments and policymakers and bottom-up with practitioners and stakeholders to identify and address AMR priorities. This is accompanied by capacity building to deliver projects at a country level. ICARS not only partners with LMIC governments but works together with public and private, national and regional stakeholders to avoid duplication and support uptake of the evidence generated.

ICARS' top-down and bottom-up approach



CORE PRINCIPLES

01

Country ownership

ICARS' activities are designed to facilitate country leadership by engaging with and listening to local knowledge and experience. Our co-development process ensures AMR mitigation priorities are self-identified by country teams to address local and national needs, build on existing efforts, and feed into or build on existing National Action Plans.

02

One Health

As drug-resistant infections pose a threat to the health of humans and animals, the environment, global food security and economic prosperity, ICARS' collaborative activities span the One Health spectrum and work to boost investments and efforts within and across sectors.

03

Partnership

Partnerships strengthen our efforts and increase our impact. By working with national, regional and international partners, we champion a participatory, cross-disciplinary research approach that strives for alignment and collaboration across public, private, and philanthropic sectors, complementing and not duplicating existing efforts in the AMR space.

04

Solution-focused

Moving away from one-size-fits-all approaches, ICARS focuses on producing context-specific, evidence-based, real-world solutions that are sustainably scalable into policies, programmes and practices while simultaneously identifying the barriers to and enablers of implementation of existing solutions. ICARS' flexible approach combines immediate action with long-term vision.

05

Sustainability

To ensure that efforts have a life beyond ICARS engagement, we focus on cost-effective solutions that are technically and financially feasible, work in practice, and create long-term sustainable behaviour change. Through building capacity and capability among local teams, we increase opportunities for project expansion, scale-up and complementary initiatives.

WHAT DISTINGUISHES ICARS?

ICARS occupies a unique space in the global AMR landscape because of our novel framework for engagement which includes:

Solutions led by LMICs

As outlined in our core principles, ICARS supports country-determined and country-owned projects that address local AMR priorities and needs. Research questions are defined by country partners and align with NAPs. ICARS thus has a flexible project portfolio in diverse geographical locations. The spectrum of countries represented demonstrates a keen interest and strong commitment to collaborate with ICARS to advance NAPs. Solutions should align with core principles and drive forward the ICARS mission. Through iterative learning, ICARS integrates previous experience and lessons learned, to inform future interventions and scale-up to create tangible change in AMR.

Solutions through comprehensive ICARS support

ICARS provides a range of support, including but not limited to technical expertise and financial assistance. The engagement takes place from conceptualisation to dissemination of results as well as informing scale-up. ICARS is involved across the entire project lifespan, from the first interaction with the relevant ministry to identify an AMR challenge and co-develop an intervention and/or implementation research project, during the implementation and testing of solutions, through to the development of guidance for scale-up. ICARS projects include behavioural, economic and policy components to enhance proof of concept and inform scale-up. Countries are strongly encouraged to co-fund the implementation of projects and activities.

Solutions informed by implementation and intervention research

There are numerous evidence-based interventions to mitigate AMR in humans, animals and the environment. However, AMR is escalating globally, in part because of implementation challenges that often arise as a result of contextual factors that policymakers, researchers and implementers may not have even considered. ICARS supported projects use implementation research to develop evidence-based, context-specific solutions to mitigate AMR challenges in real-world situations, bridging the gap between theory and practice.

WHY IMPLEMENTATION AND INTERVENTION RESEARCH?

Implementation research is “the scientific inquiry into questions concerning implementation — the act of carrying an intention into effect”. This means both investigating the barriers and facilitators to uptake, as well as adapting interventions to fit specific settings. Implementation and intervention research ensures intentional consideration of how an intervention works within the wider social, political, economic and health context.⁵



Tanzania, 2022: Optimising vaccination and biosecurity regimes to enhance fight against AMR in commercial poultry production

⁵Peters D H, Adam T, Alonge O, Agyepong I A, Tran N.
Implementation research: what it is and how to do it BMJ 2013; 347 :f6753

WHAT HAPPENS AFTER AN ICARS PROJECT ENDS?

Proving the effectiveness of specific AMR solutions in a specific country context does not signal the end of ICARS projects' ambitions.

Aiming for scale-up

ICARS co-developed solutions to AMR problems will only achieve country-wide impact if they are implemented at scale across communities, regions, health systems or economic sectors. Thinking ahead to sustainable scale-up is therefore always an integrated part of ICARS' projects.

'Scale-up' is defined as "the deliberate efforts to increase the impact of successfully tested [human, animal and environmental] health innovations so as to benefit more people and to foster policy and programme development on a lasting basis."⁶

ICARS' projects model is intended to maximise impact via its intervention and implementation methodology which incorporates the vital components needed for sustainable scale-up:

- Commitment at the political/government/ministry level (policy and regulation)
- Multiple stakeholder engagement throughout the project life-span
- Capacity and capability building
- Behavioural change (individual and systems-level)
- Cost-effectiveness and economic analysis of scale-up requirements

Concretely, ICARS will work to secure sustainable scale-up by building on the partnerships and commitments established as part of the co-development phase, including with ministries and agencies, and based on the Memorandum of Understanding or other agreements signed with the government.

Transferability of findings

Open Source dissemination of project results is part of every ICARS funded project. In order to ensure that project research can inform interventions across country borders or the development of new innovations, as projects start delivering results ICARS will build a repository of graded evidence around successful AMR mitigation interventions and implementation experiences.

⁶World Health Organization, *ExpandNet. Nine steps for developing a scaling-up strategy.* Geneva: World Health Organization; 2010

WHAT DOES SUCCESS LOOK LIKE FOR ICARS?

The threat of drug-resistant infections to the health of humans and animals, the environment, global food security and economic prosperity is reduced.

LMICs have adapted, adopted and sustainably scaled-up evidence to mitigate AMR.

Implementation and intervention research in AMR as a means to deliver on NAPs is widely recognised and supported financially in LMICs.

LMICs have increased and capacity to implement context-specific and country-owned solutions

Channel evidence from ICARS' projects into LMIC systems, policies, programmes and/or practices.

TESTING SOLUTIONS

Support the integration of existing evidence and uptake of innovation into LMICs systems, policies, programmes and practices.

TRANSLATING EVIDENCE

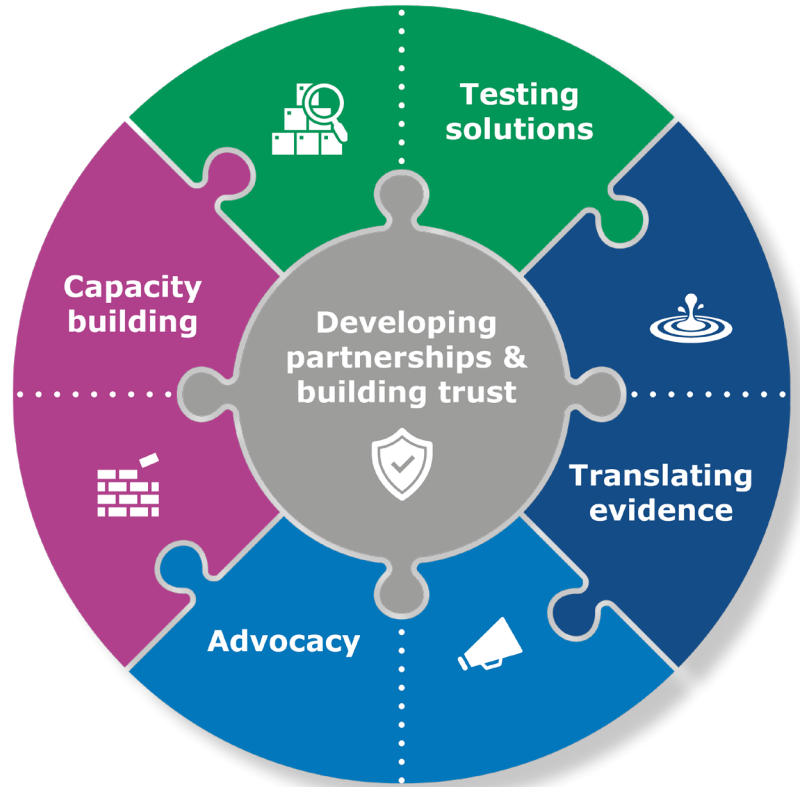
Influence actors to recognise the need for context-specific, country-owned solutions informed by implementation and intervention research as a means to mitigate AMR, and mobilise more funding and support for this area of research and implementation.

ADVOCACY

CROSS CUTTING PILLAR

Achieve recognition as a trustworthy partner and implementation specific and country-owned AMR solutions informed by intervention

ICARS' INTERCONNECTED STRATEGIC PILLARS



GOAL

ave
d capacity
ability
ment
specific
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S.

IMPACTS

Strengthen the capacity of people and health systems (human, veterinary, and environmental) in partner countries to mitigate AMR using intervention and implementation research.

CAPACITY BUILDING

h platform for developing context-
ion and implementation research.

OUTCOMES

PILLARS

1 DEVELOP AND TEST CONTEXT-SPECIFIC SOLUTIONS FOR AMR MITIGATION

Each country is different both in its approach and resources to mitigate AMR and in the type of issues that drive AMR at a local level.

To co-develop tailored and sustainable solutions, ICARS engages at a regional level through scoping meetings and activities to identify the AMR needs and gaps and to ensure uptake of regional learning. ICARS simultaneously uses top-down and bottom-up approaches, engaging with ministries and central agencies, research institutions and other stakeholders (e.g. medical practitioners, farmers, implicated communities, civil society organisations) to co-develop and implement research projects. Through visits, workshops, frequent discussions and reviewing existing efforts, ICARS and the country partners gain a deep understanding of the context surrounding the key AMR challenges at the country level. By working with ministries and local-level stakeholders to understand the context, ICARS ensures that projects are tailored to respond to each country's individual AMR priorities, needs and challenges. Project activities are guided by the AMR challenges that countries are committed to solving, rather than a one-size-fits-all approach. ICARS' co-development process culminates in a project proposal and a roadmap for implementation, developed with the country stakeholders to ensure buy-in and ownership from inception. Moreover, ICARS ensures that new projects build on the learnings and experiences from similar ongoing projects in other LMICs. Outcomes are fed back to intervention developers to inform future efforts.

While bringing together multiple stakeholders to address AMR together is not easy, ICARS believes that such a comprehensive approach is essential for bringing evidence into action leading to sustainable behaviour change to mitigate AMR.

We will:

Produce new evidence-based and context-specific solutions for AMR mitigation in LMICs via a portfolio of projects (Output 1.1)

Generate support for the uptake, implementation and scale-up of solutions in LMICs (Output 1.2)

Channel evidence from ICARS' projects into LMIC systems, policies, programmes or practices (Outcome 1)



PILLAR 1 IN PRACTICE

OPTIMISING THE USE OF ANTIBIOTICS FOR SURGICAL ANTIBIOTIC PROPHYLAXIS (SAP)

Country: Georgia

Start date: Autumn 2021

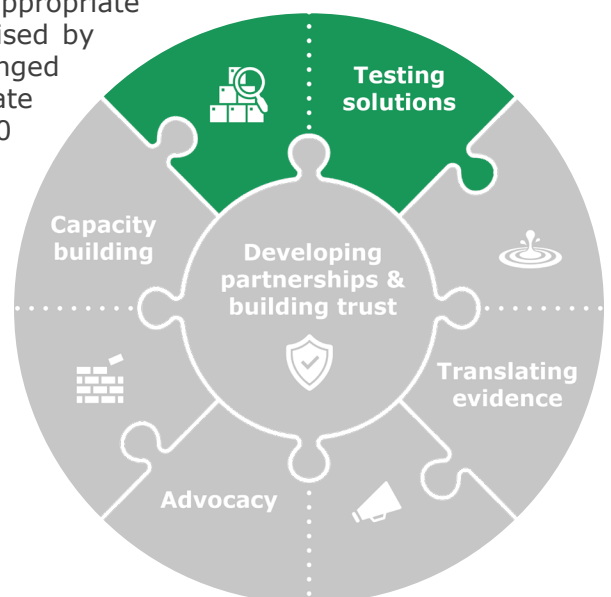
Partners: Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs, National Center for Disease Control and Public Health, WHO Europe, Healthcare professionals from selected hospitals, Georgian academic institutions

Project summary

Georgia, like many other LMICs, has a worrisome inappropriate use of antibiotics for surgical prophylaxis characterised by a high use of broad-spectrum antibiotics and prolonged dosing. This project aims to foster the appropriate use of antibiotics in selected departments of 10 Georgian hospitals by implementing an antimicrobial stewardship program (ASP) developed from the WHO antimicrobial stewardship toolkit.

Project outcomes

- Achieve 60% SAP guideline compliance within 12 months of launching the ASP
- Increase understanding of the context-specific organisational, behavioral and economic factors that support implementation and scale-up of the ASP



2 SUPPORT THE TRANSLATION AND UPTAKE OF EXISTING EVIDENCE AND INNOVATION INTO POLICIES, PROGRAMMES AND PRACTICE

There is a wealth of existing research evidence as well as tools and methodologies that have been successful in mitigating AMR. However, such evidence has primarily been produced in high-income settings and/or by academics and researchers with minimal engagement and input from practitioners, ministries and policymakers. Consequently, much of the evidence has not been translated into action, policies, and practices.

We identify opportunities where ICARS can help to translate existing evidence into action or support the uptake of innovation (particularly from other LMICs) in partnership with LMIC ministries and other stakeholders. We do this by analysing and reviewing reports of previous efforts, completed research and scientific publications, and evaluating which solutions could be potentially suitable for national and regional needs including cost-effectiveness. We aim to identify enablers of and barriers to uptake, build mutual trust between stakeholders and create the additional evidence needed to close the gap between evidence and its practical implementation in LMICs. This is primarily done in partnership with other funders and relevant stakeholders to avoid duplication and facilitate complementarity.

We will:

Identify existing evidence (research evidence, tools and methodologies) and engage scientists and stakeholders in the development of projects/activities to support adaptation and uptake in LMICs (Output 2.1)

Partner with LMIC governments on projects/activities to support adaptation and uptake of solutions (Output 2.2)

Support the integration of existing evidence and uptake of innovation into LMICs systems, policies, programmes and practices (Outcome 2)



PILLAR 2 IN PRACTICE

TACKLING AMR IN COLOMBIA VIA BETTER DIAGNOSTICS OF DISEASES AT PIG FARMS

Country: Colombia

Start date: Autumn 2021

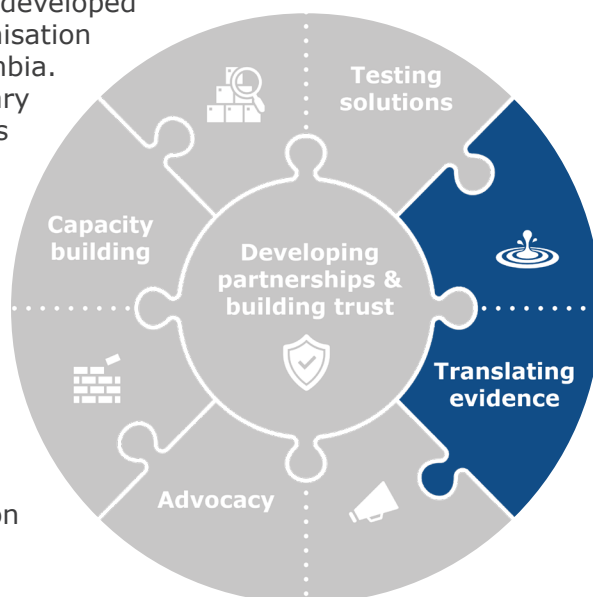
Partners: Porkcolombia, UK Global AMR Innovation Fund (GAMRIF)

Project summary

It is important that pig producers can carry out timely diagnoses to reduce the inappropriate use of antimicrobials. This is the rationale behind a new diagnostic platform for swine health and diagnostic services, developed and launched by Porkcolombia, a private sector organisation representing more than 80% of pig producers in Colombia. With funding from ICARS and GAMRIF, interdisciplinary experts on the ground are assessing the challenges and opportunities around the uptake of diagnostic veterinary services in Colombia and their potential impact on the reduction of antibiotic use in farming.

Intended outcomes

- Pilot results will serve as an example for other countries to consider how to improve access to veterinary diagnostics to improve the sanitary status of farms
- Better understanding of the challenges and opportunities around the uptake of diagnostic services in Colombia and their potential impact on the reduction of antibiotic use in farming.



3 ADVOCATE FOR CONTEXT-SPECIFIC, COUNTRY-OWNED AMR MITIGATION SOLUTIONS

ICARS engages with national and international partners to identify gaps and scope opportunities to test and develop context-specific AMR solutions. In addition, we are working to raise awareness of and mobilise international commitment for solutions, informed by intervention and implementation research, as a means to deliver on AMR National Action Plans. We aim to influence funders and policymakers, at a national and international level, to prioritise and increase their investment especially in LMICs with a high burden of AMR.

With our comprehensive approach to the implementation of projects (pillar one), we gather evidence on how to mitigate AMR across many different country contexts by using intervention and implementation research. Our LMIC focus also allows us to provide a platform for south-south knowledge exchange, whereby countries and regions in the global south can share learnings via ICARS facilitated/convened engagements, networks and events. ICARS will create regional knowledge exchange hubs that include but are not limited to regional conferences/webinars, platforms for the exchange of adaptable, good practice AMR solutions, repositories of tools and resources to support virtual communities of practice.

We are in a unique position as an independent organisation to forge partnerships with both AMR specific and AMR sensitive players such as UN bodies, national and international donors, private organisations such as pharmaceutical companies, civil society organisations, charities, foundations and research organisations to get their support and expertise to advocate for implementation and intervention research to address AMR. We will strengthen our position as a thought leader and communicate to stakeholders the value of this approach for mitigating AMR.

| We will: | |
|--|---|
| Advocate and help mobilise political commitment for LMIC governments to prioritise context-specific solutions informed by intervention and implementation research to mitigate AMR (Output 3.1) | Influence actors at national and international levels to recognise the need for context-specific, country-owned solutions informed by intervention and implementation research as a means to mitigate AMR, and mobilise more funding and support for this area of research and implementation (Outcome 3) |
| Encourage investments and influence research funders, UN agencies and other stakeholders to support context-specific solutions using intervention and implementation research for the mitigation of AMR (Output 3.2) | |

The 2021 Call To Action conference brings together stakeholders from around the world to share evidence and best practice on antimicrobial resistance



PILLAR 3 IN PRACTICE

THE THIRD CALL TO ACTION CONFERENCE ON AMR

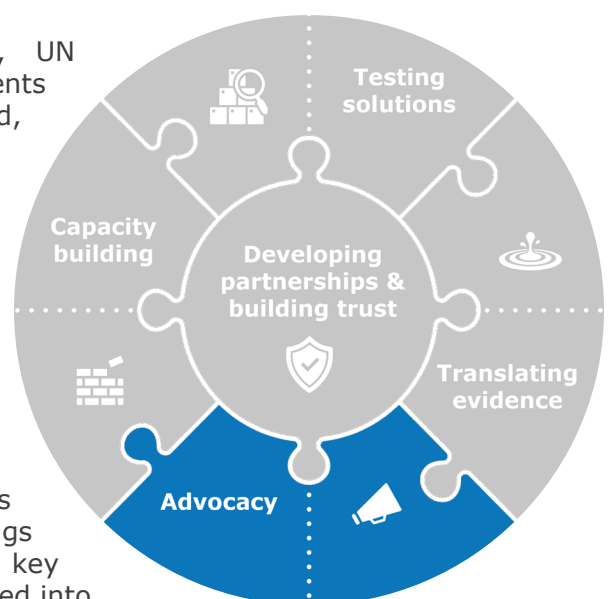
Date: November 2021

Co-hosts: Wellcome Trust, the Fleming Fund, UN Foundation, UNICEF, World Bank and the governments of Colombia, Denmark, Ghana, Indonesia, Thailand, and Zambia

Event summary

ICARS joined co-hosts to organise the third Call to Action on AMR conference held virtually from 15-17 November 2021. The event gathered 400+ participants, from more than 68 countries to identify the most impactful and actionable solutions for AMR at a time of significant pressure on healthcare resources.

Pioneers from a wide range of countries and across the One Health spectrum shared evidence and learnings from AMR programs that have been effective. The key takeaways from the event have since been synthesised into a report and case study series that showcase country solutions, to promote cross-regional learning.



4 SUPPORT TARGETED CAPACITY AND CAPABILITY BUILDING

Capacity and capability building is essential to the process of creating a critical mass of government, central agencies, and research personnel equipped with the knowledge, skills and competencies to implement AMR solutions that advance NAP implementation. Under this pillar, ICARS facilitates capacity and capability building of LMIC policymakers, champions, prescribers, dispensers, consumers, and users of antimicrobials, amongst others, through relevant training and engagement as well as strengthening of human, veterinary and environmental health systems to address AMR. ICARS aims to fill gaps identified in relation to the activities performed under pillars 1 and 2 by supporting targeted knowledge exchange and training. We aim to improve skills and competencies around implementation and intervention research and the scale-up of ICARS co-developed solutions to tackle AMR.

NAPs on AMR require technical capability and capacity to effectively implement AMR solutions. We want to participate in the development of educational and awareness-raising resources that enable countries to translate their NAPs into practice. In the first instance, we will target researchers and individuals that are part of ICARS projects, as well as staff in Ministries of Health/Agriculture/Environment who are partnering with ICARS. We also want to work with other AMR-specific players who are developing capacity building tools and approaches to strengthening health systems in countries. Capacity building ensures the sustainability of mitigating AMR and other related public health issues in countries' health systems.

| We will: | |
|---|--|
| Provide training and share knowledge on best practices to local researchers and policymakers in partner countries to support NAP implementation through intervention and implementation research (Output 4.1) | Strengthen the capacity of people and health systems (human, veterinary and environmental) in partner countries to mitigate AMR using intervention and implementation research (Outcome 4) |
| Strengthen human, veterinary and environmental health systems' capacity to deliver on ICARS projects in partnership with LMICs (Output 4.2) | |



Kyrgyzstan, 2022: Use of MALDI-TOF and Rapid Antimicrobial Susceptibility Testing to manage bloodstream infections

PILLAR 4 IN PRACTICE

ESTABLISHING AN ANTIMICROBIAL SUSCEPTIBILITY TESTING (AST) CENTRE OF EXCELLENCE

Start date: June 2021

Country: Kenya

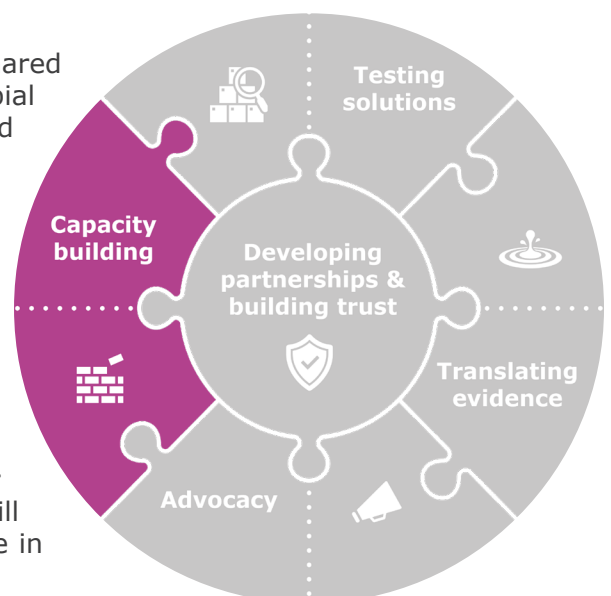
Partner: International Livestock Research Institute

Project summary

ILRI and ICARS signed an MOU to mark a shared commitment to establishing an antimicrobial susceptibility testing (AST) centre of excellence based at the ILRI AMR Hub in Kenya. The AST center will fill a gap in the region, provide an important resource for laboratory capacity-building in LMICs in Africa, and support high quality AST across One Health projects.

Project outcomes

The centre will serve both as a reference laboratory for the CGIAR system, and as a training centre to provide valuable training for laboratories participating in ICARS' projects. As AST is a critical function for good antimicrobial stewardship practices, this will strengthen ICARS' projects as well as build expertise in LMICs.





CROSS
CUTTING
PILLAR

A TRUSTWORTHY PARTNER AND PLATFORM FOR DELIVERING CONTEXT-SPECIFIC AND COUNTRY-OWNED AMR SOLUTIONS

In November 2021, ICARS became an independent self-governing organisation with its own legal identity by Danish law. It is governed and led during its inception phase (2022-23) by an international Board of Directors appointed by the Danish government. The Board of Directors is anticipated to grow during the inception phase as other countries and foundations join ICARS as Strategic Funding Partners and are offered a seat on the Board in that capacity. ICARS thus actively seeks to attract funding from a range of countries and foundations.

As a new and functionally independent organisation, it is important to establish strong policies, processes and activities that translate ICARS' mission and values within the legal framework and statutes that ICARS is bound by. We commit to transparent and effective operational procedures that comply with fit-for-purpose policies.

The headquarters in Copenhagen is augmented by our global presence, network and strong in-country presence. Partnerships constitute the most critical foundation for building a global profile, strengthening our credibility and reputation, and achieving the ICARS mission. We will continue to establish partnerships with LMIC implementing partners such as governments and researchers, as well as partnerships to attract members aligned to our mission that can co-fund and support AMR mitigation.

We will:

Operate as a well-functioning organisation working at an international level, with the ability to attract and retain the best of talent while maintaining an agile structure seeking partnerships with a range of stakeholders (Output X.1)

Ensure that ICARS fulfills a niche gap in AMR mitigation worthy of investment by donors (Output X.2)

Achieve recognition as a trustworthy partner and implementation platform for developing context-specific and country-owned AMR solutions informed by intervention and implementation research with a strong, well-functioning governance structure (Outcome X)



Kyrgyzstan, 2022: Facilitating appropriate antibiotic use in respiratory tract infections in children

THE IMPORTANCE OF PARTNERSHIPS

To deliver on our mission, we are continuously strengthening the initiation and development of strategic partnerships with governments, foundations, civil societies, the private sector, other agencies and international organisations. We believe that collaborations strengthen our projects and increase their impact.

For that reason, ICARS partners with the following key stakeholder groups:

LMIC Partners

ICARS strongly believes that when it comes to identifying and developing solutions to tackle AMR, the local context and country ownership are crucial for the highest impact. ICARS works closely with the local LMIC ministries and AMR focal contacts using a top-down and bottom-up approach to secure government commitment while engaging researchers and stakeholders on the ground. As such, we are generating evidence for policy and practice, and advancing the National Action Plans of LMICs. LMICs are not only partners in developing and delivering on the projects but can also be Mission Partners, playing a critical role in providing input into ICARS' strategic direction, advocacy and outreach activities.

Implementing Partners

Long-lasting, sustainable change can only be achieved when we collaborate and build on existing national and international initiatives, expanding the scale and the scope of the AMR response and boosting investment and efforts across sectors. ICARS acknowledges the effort that many national, regional and international stakeholders and funders have invested in AMR-specific and AMR-sensitive solutions and is committed to working in partnership with them to build complementarity and avoid duplication.



Funding Partners

Funding partners that provide financial and in-kind support are crucial to help deliver on the ICARS mission and provide input into its strategic direction. Through their contribution, our impact and capacity to act are increased. ICARS is and will continue working closely in partnership with a range of funders (countries and foundations) inviting them to join our mission to support AMR mitigation in LMICs.

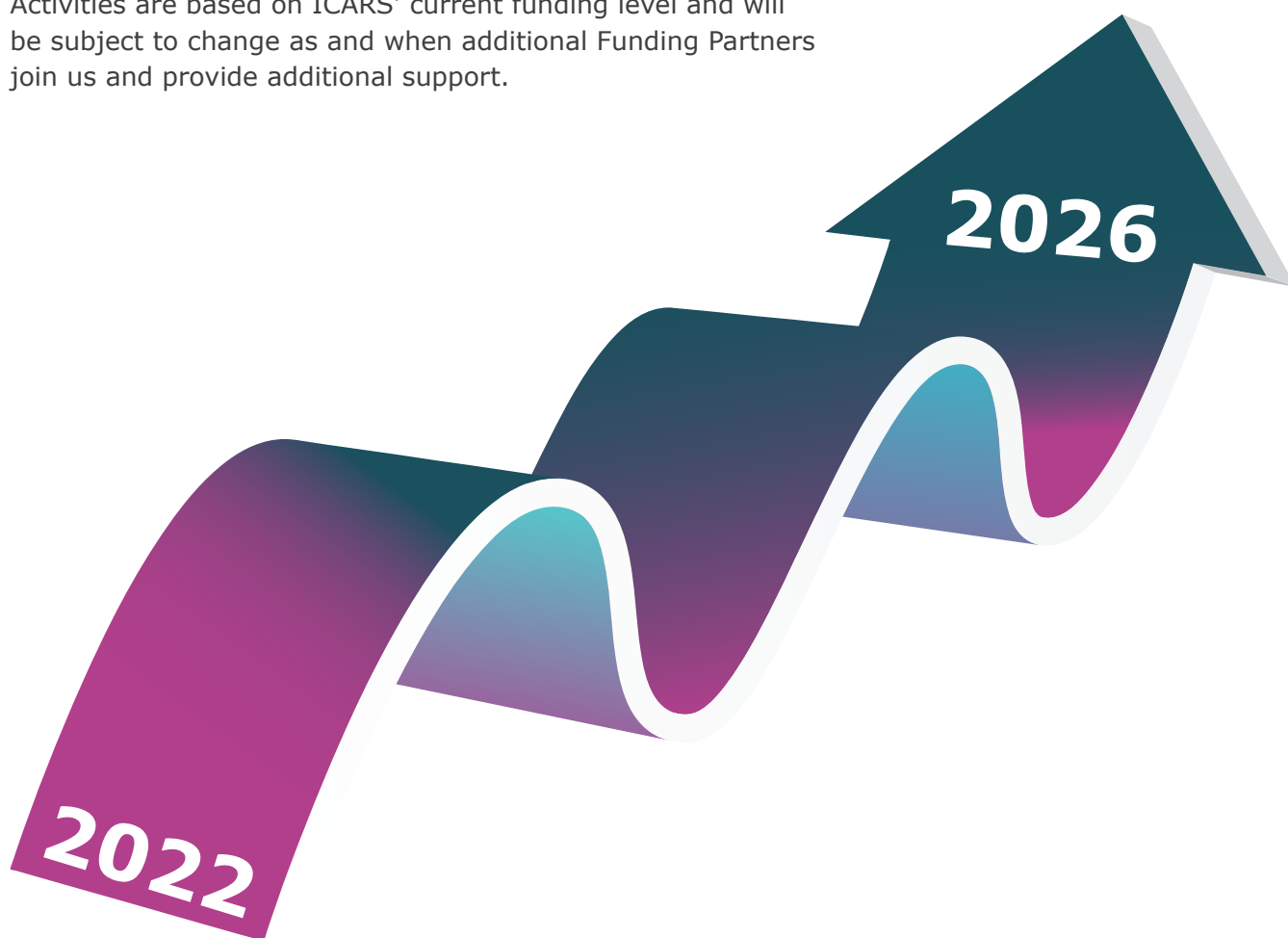
Global Health Partners

Many initiatives over the years have invested in tackling global health challenges through investments in health system strengthening, access to quality-assured antimicrobials and infection prevention and control (IPC). ICARS acknowledges the importance of engaging with global and regional stakeholders who can provide a fresh outlook on AMR and share and exchange lessons learned from other global health initiatives and programmes which could indirectly mitigate AMR (AMR-sensitive), including key development agendas such as water, sanitation and hygiene (WASH), IPC, food safety and security, and environmental protection.

ROADMAP TO DELIVERING ON ICARS STRATEGY

This section provides an outline of how ICARS aims to achieve its strategy and the intended outcomes under each pillar. It introduces the relevant stakeholders to engage with as well as specific activities that we will develop.

Activities are based on ICARS' current funding level and will be subject to change as and when additional Funding Partners join us and provide additional support.



1 DEVELOP AND TEST CONTEXT-SPECIFIC SOLUTIONS FOR AMR MITIGATION

OUTCOME 1

Channel evidence from ICARS' projects into LMIC systems, policies, programmes or practices

OUTPUT 1.1

Produce new evidence-based and context-specific solutions on AMR mitigation in LMICs via a portfolio of projects

OUTPUT 1.2

Generate support for the uptake, implementation and scale-up of the solutions in LMICs

Stakeholders involved

ICARS will work in partnership with the following stakeholders:

- LMICs (ministries and central agencies, research institutions and other stakeholders e.g. medical practitioners, farmers, implicated communities) who engage with ICARS on open calls, and via outreach efforts: ICARS networks, regional UN bodies, international partners and regional events and advocacy efforts (Pillar 3).
- National and regional stakeholders (public and private) including researchers and local champions
- UN regional and country offices as well as other research funders in countries

Activities

- Attract LMICs through outreach to engage with ICARS and partner on projects (facilitated through Pillar 3 activities on regional meetings)
- Facilitate and support the co-development of the projects through scoping visits and workshops to identify the country's needs and priorities, develop concept notes and proposals and provide technical expertise where necessary

- Optimise the framework of engagement with countries including procedures and guidelines (templates for Expression of Interest, Concept Notes, proposals, Memorandum of Understanding and Monitoring and Evaluation)
- Design in partnership with countries the methods and indicators for influencing decision-making (country/regional level) and amplifying impact (facilitated through advocacy and capacity building activities from Pillar 3 and 4)
- Develop roadmaps for stakeholder engagement during and beyond the project
- Identify supporting activities to strengthen projects
- Synthesise the evidence and lessons learned from different projects to facilitate and increase the regional (and potentially global) scale-up of proven AMR solutions
- Undertake a longer-term evaluation of ICARS projects to understand the extent to which LMIC systems, policies, programmes or practices have been informed by or have integrated outcomes of these projects

2 TRANSLATING EXISTING EVIDENCE AND INNOVATION INTO POLICIES, PROGRAMMES AND PRACTICE

OUTCOME 2 Support the integration of existing evidence and uptake of innovation into LMICs systems, policies, programmes and practices

OUTPUT 2.1 Identify existing evidence (research evidence, tools and methodologies) and engage researchers and stakeholders in the development of projects/activities to support adaptation and uptake in LMICs

OUTPUT 2.2 Partner with LMIC governments on projects/activities to support adaptation and uptake of solutions

Stakeholders involved

ICARS will work in partnership with the following stakeholders:

- LMICs where the evidence exists
- National and regional stakeholders (public and private) including researchers and local champions
- UN regional and country offices as well as other research funders in countries

Activities

- Curate a living evidence repository of graded existing evidence around successful AMR mitigation interventions and their implementation through stakeholder engagement and literature review (aligned with activities under Pillar 3)
- Identify barriers to and enablers of implementation and scale-up of evidence in LMICs (aligned with activities under Pillar 1)
- Engage with in-country stakeholders to advocate and facilitate for uptake and scale-up of AMR solutions with the required relevant capacities (aligned with activities under Pillar 3 and 4)

3

ADVOCATE FOR CONTEXT-SPECIFIC, COUNTRY-OWNED AMR MITIGATION SOLUTIONS

OUTCOME 3

Influence actors at national & international levels to recognise the need for context-specific, country-owned solutions informed by implementation and intervention research as a means to mitigate AMR, and mobilise more funding and support for this area of research and implementation

OUTPUT 3.1

Advocate and help mobilise political commitment for LMIC governments to prioritise context-specific solutions informed by intervention and implementation research to mitigate AMR

OUTPUT 3.2

Encourage investments and influence research funders, UN agencies and other stakeholders to support context-specific solutions using intervention and implementation research for the mitigation of AMR

Stakeholders involved

ICARS will work in partnership with the following stakeholders:

- LMICs ministries who will partner with ICARS and co-develop context-specific solutions using intervention and implementation research
- Research institutes that will support training in intervention and implementation research for more sustainable solutions
- UN bodies globally and regionally who will include context-specific solutions informed by intervention and implementation research as part of their efforts to advance NAP implementation
- National and international research funders who will provide more funding for context-specific solutions informed by intervention and implementation research

Activities

- Outreach and advocacy to policymakers and research funders via ICARS-hosted, national, regional and international events (technical and policy-focused meetings and conferences) (aligned with Pillar 1 and 2)
- Develop a multimedia communication strategy and a set of resources to support advocacy efforts (communication materials, website, social media, technical and policy papers, podcasts, videos and graphics, etc.) (Pillars 1-4)
- Establish partnerships with AMR sensitive players to broaden advocacy outreach (Pillar 1 and 2)
- Identify platforms to showcase the ICARS value proposition and model, and advocate the need for sustainable interventions to mitigate AMR

4 SUPPORT TARGETED CAPACITY AND CAPABILITY BUILDING

OUTCOME 4 Strengthen the capacity of people and capability of health systems (human, veterinary and environmental) in partner countries to mitigate AMR using intervention and implementation research

OUTPUT 4.1 Share knowledge and provide training on best practices to local researchers and policymakers as AMR champions in ICARS LMIC partner countries to support NAP implementation through intervention and implementation research

OUTPUT 4.2 Strengthen human, veterinary and environmental health systems' capacity to deliver on ICARS projects in partnership with LMICs

Stakeholders involved

ICARS will work in partnership with the following stakeholders:

- Researchers and individuals that are part of project teams for ICARS-supported projects.
- Staff in Ministries of Health/Agriculture/Environment who have signed MoUs with ICARS
- Institutional partnerships for knowledge exchange and training activities for a more global reach

Activities

- Define the competencies of intervention and implementation research for which ICARS will facilitate education and training (Pillars 1 and 2)
- Facilitate shared learning and experience exchange opportunities between ICARS (Pillar 3)
- Formalise strategic partnerships where ICARS staff participate as part of the curriculum development or faculty of formal training options around AMR and One Health (antibiotic stewardship, microbiological diagnostics, infection prevention and control, etc.) (Pillar 3)
- Supporting the next generation of early career researchers from ICARS projects through studentships, postgraduate and post-doctoral training opportunities (Pillars 1 and 2)
- Identify supporting activities to strengthen local capabilities to deliver on our projects (Pillar 2)



A TRUSTWORTHY PARTNER AND PLATFORM FOR DELIVERING CONTEXT- SPECIFIC AND COUNTRY- OWNED AMR SOLUTIONS

OUTCOME X Achieve recognition as a trustworthy partner and an implementation platform for developing AMR context-specific and country-owned solutions informed by intervention and implementation research, with a strong, well-functioning governance structure

OUTPUT X.1 Operate as a well-functioning organisation working at an international level, with the ability to attract and retain the best of talent while maintaining an agile structure seeking partnerships with a range of stakeholders

OUTPUT X.2 Ensure that ICARS fulfills a niche gap in AMR mitigation worthy of investment by external donors

Activities

- Further refine a governance structure that inspires trust in all employees, partners and collaborators; and follows a transparent, accountable and just decision-making process (Pillars 1-4)
- Keep a transparent and robust system in alignment with existing ICARS policies for management of grants, reporting to donors, and monitoring and evaluation of activities (Pillars 1-4)
- Leverage in-house expertise to implement ICARS vision, mission, and pillars (Pillars 1-4)
- Develop a strategy on when and how to engage global experts or research organisations to complement in-house expertise and to solve complex multi-sectoral implementation challenges in LMIC contexts (Pillar 3)
- Ensure a well-functioning work environment that enables us to attract, develop and nurture the right staff (expertise and globally representative) and have good, open, and productive work environment (Pillars 1-4)



icars-global.org

twitter.com/ICARS_global

[linkedin.com/company/icars-global](https://www.linkedin.com/company/icars-global)

contact@icars-global.org

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