



INTERNATIONAL
CENTRE FOR
**ANTIMICROBIAL
RESISTANCE**
SOLUTIONS



**Partnering to tackle
antimicrobial resistance**

**"ANTIMICROBIAL RESISTANCE IS A MAJOR
GLOBAL HEALTH THREAT THAT CALLS FOR
STRONG PARTNERSHIP AND CROSS-SECTORAL
COLLABORATION"**

- Renu Swarup, ICARS Board Vice-Chair

Antimicrobial resistance (AMR) is claiming more than a million lives every year and is considered one of the greatest global health threats of today and of the future. At ICARS, we work with committed low- and middle-income countries (LMICs) to generate new AMR-mitigation solutions that are cost-effective and feasible to implement at a large scale, while relying on national and international partners to maximise our impact.

ICARS was initiated by the Danish government in late 2018 with a mission to partner with LMICs to co-develop sustainable solutions to tackle AMR. Since our inception, many LMICs have shown interest in partnering with us to advance the implementation of their AMR National Action Plans. With more than ten projects being implemented and several more under co-development, ICARS has started with great momentum. However, in order to reach our ambitious mission and make a difference in LMICs and globally, we need countries and foundations to join in and support our efforts.

Therefore, we invite you to join forces with us as a partner. Read on to learn more about our work, different types of partnership and what they entail.

To find out more about ICARS, our mission, vision and activities, visit icars-global.org or get in touch with us at contact@icars-global.org.

Bringing evidence into action to reduce drug-resistant infections

Antimicrobial resistance (AMR) is a major threat to the health of humans, animals, crops and the environment. It is a One Health challenge that requires strong partnerships between government ministries and a range of national and regional stakeholders, including but not limited to research organisations, civil societies, and private and non-governmental sectors.

As of June 2022, 140 countries have developed National Action Plans (NAPs) for the mitigation of AMR according to the Tripartite global database for Antimicrobial Resistance Country Self-Assessment. This is a very positive development that stems from an increase in global awareness of the threat of AMR and in policies aiming to mitigate it. However, as prominently highlighted in the April 2019 final report of the UN Inter-Agency Coordination Group (IACG) on AMR, implementation remains a challenge, particularly in LMICs.

At ICARS, our mission is 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 NAPs, and informed by intervention and implementation research.



A One Health lens

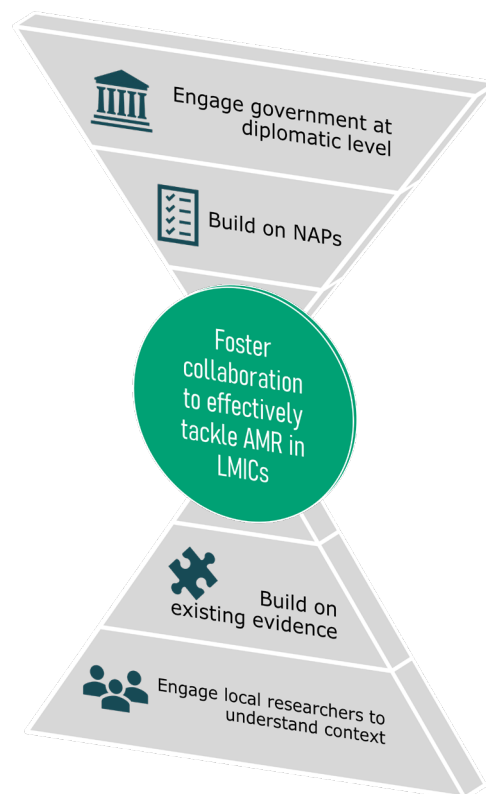
ICARS takes a broad definition of 'One Health'. This means that ICARS will develop projects in all sectors (human, animals, crops and the environment) and apply multidisciplinary approaches including but not limited to the biomedical, veterinary, agricultural and environmental disciplines. We further have a significant focus on social, behavioural and economic sciences. Projects and activities can have a monosectoral focus on AMR intervention and implementation research while recognising the impact of and on other sectors.

A UNIQUE APPROACH

It is the unique way of working, the “**how?**”, that distinguishes ICARS from others in the AMR landscape.

But how?

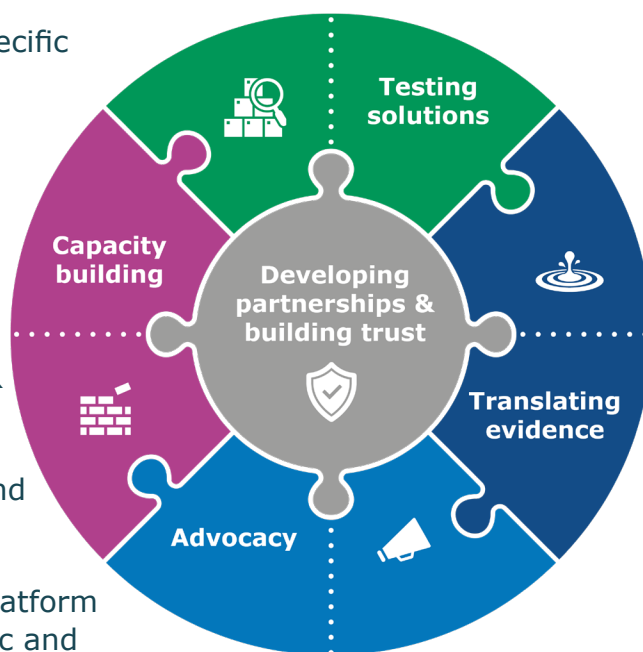
Each country is different both in its approach to tackling AMR and in the type of issues that accelerate AMR at a local level. National commitment is crucial to ensure uptake and translation of interventions into large scale sustainable actions including national policies, programmes and practices. By combining a **top-down and bottom-up** approach, ICARS secures commitment and ownership from the relevant government ministry (or ministries) while rooting the projects in scientific research conducted at local and national levels. Using this approach, ICARS works towards bridging the gap between policy and practice.



OUR STRATEGY

The ICARS strategy is based on the following interconnected 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 solutions



RESEARCH PROJECTS

Activities under strategy pillars 1 & 2

ICARS partners with LMICs to **co-develop and test solutions** and associated implementation strategies to mitigate AMR and generate new evidence that can be implemented at a large scale.

Following discussions with LMIC government ministries, ICARS initiates a co-development process to build a package of interventions to tackle AMR. To ensure buy-in and maximise the commitment for action from country partners, a wide range of stakeholders are involved in the process from the beginning, including practitioners, researchers and private sector stakeholders. The LMIC government ministries are responsible for the development and implementation of the research project, with advice and financial support from ICARS.



Antimicrobial resistance is a public health threat that requires immediate attention. A robust global action is needed. The consequence of our partnership with ICARS will be a strengthened antimicrobial stewardship in Georgia. (...) the outcome of the project will be beneficial and applicable beyond Georgia as well - for other countries in the region.

Giorgi Chakhunashvili MD., PhD.
NCDC Georgia

At ICARS, we also support the **translation of existing evidence** into country policies, programmes and practices to close the knowledge gap between evidence-based solutions and their practical implementation in LMICs. We do this by analysing and reviewing existing evidence and where appropriate engaging with and facilitating dialogue between the research community and the relevant government ministries to identify barriers and enablers for implementation.

ICARS supports AMR solutions that are...

Context-specific	Cost-effective	Sustainable
We tailor projects to respond to each country's individual needs and challenges by working with ministries and local-level stakeholders to understand the context. Research activities are guided by the problems and knowledge gaps that countries have identified and are committed to solve.	To be feasible we believe solutions must be cost-effective, especially in LMICs where resources can be scarce. Projects should provide an incentive for stakeholders to implement them in practice.	We pay close attention to the enablers of behaviour change in the specific context. We believe that only through behaviour change at the individual and systems level, can solutions be maintained and have true impact. Intervention and implementation research is an important tool for increasing the effectiveness of solutions in the long-term.

As of June 2022, ICARS is in the process of implementing nine projects across the One Health spectrum in Georgia, Vietnam, Kyrgyzstan, Tanzania, Zambia and Colombia, with many more projects currently under co-development.

ICARS PROJECTS IN IMPLEMENTATION PHASE

Examples from Africa, Asia, and Latin America



Colombia

Reducing weaning diarrhea and antimicrobial use in piglets by improving provision of colostrum and use of vaccines



Georgia

Improving antimicrobial stewardship in hospital settings



Tanzania

Introducing a simple on-farm composting solution to reduce antibiotic levels in soil and fertiliser



Vietnam

Reducing the use of colistin in pig production, through alternatives (e.g vaccination, less-critical antibiotics, zinc oxide)



Zambia

Improving the appropriate use of antibiotics for BSIs and UTIs by prescribers across the continuum of care

SUPPORTING ACTIVITIES

Activities under strategy pillars 3 & 4

ICARS engages with national and international partners to raise awareness and promote the need for context-specific and country-owned solutions with the relevant capacity to deliver them.

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, by relevant training and engagement as well as strengthening of human, veterinary and environmental health systems to address AMR.

To deliver long lasting change, and to increase the impact of our project portfolio, ICARS is collaborating with a range of stakeholders to build on existing national and international initiatives, while boosting investments and efforts across sectors. Below are some examples of our initiated partnerships and collaborative activities.



CO-DEVELOPING AN E-LEARNING TOOL

In partnership with the British Society of Antimicrobial Chemotherapy (BSAC), we are developing a Massive Open Online Course (MOOC) on antimicrobial stewardship for Surgical Antibiotic Prophylaxis. The course will include a general module, and two modules adapted to the Georgian context, we have targeted specific modules in the MOOC to support the successful implementation of our existing stewardship project in Georgia.



THE GLOBAL AMR R&D HUB

ICARS and the Hub have signed a Collaborative Agreement that aims at analysing existing investment in intervention and implementation research, presented through their research funding dashboard. Outcomes would include generating recommendations to research funders in relation to intervention and implementation research, as well as scoping opportunities to move existing evidence, generated out of the funding, into action.



WORLD HEALTH ORGANISATION

In November 2020, the WHO and ICARS signed a Memorandum of Understanding (MoU) paving the way for joint efforts to strengthen One Health implementation and operational research. Within the MoU framework, ICARS has seconded an expert from our team to the AMR Global Coordination Department at WHO. Over two years, the secondee will lead and coordinate the development and prioritisation of a One Health implementation and operational research agenda for AMR.



REACT

ReAct and ICARS signed an MoU in December 2020 to focus efforts on AMR mitigation in LMICs through an interdisciplinary approach that inspires action. Under this agreement, ICARS and ReAct are partnering to develop a context-specific guide for National Action Plan implementation in sub-Saharan Africa, which will build on the ReAct Toolbox focusing on country-identified implementation challenges.



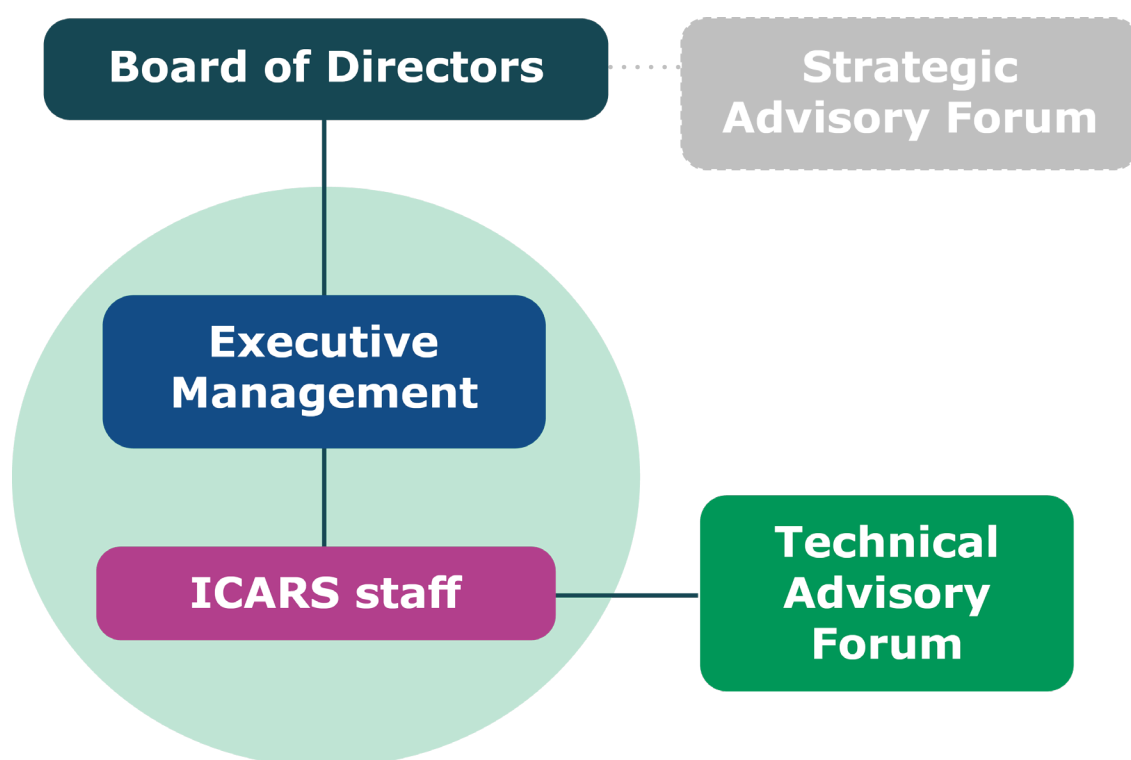
INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

ILRI and ICARS signed a collaborative agreement in 2021 to support the establishment of an Antimicrobial Susceptibility Testing (AST) Centre of Excellence, covering pathogens in humans, livestock and aquaculture. The Centre will support clinical microbiology laboratories primarily related to ILRI / CGIAR as well as ICARS activities on AST, including standard operating procedures, training, troubleshooting, breakpoint setting and comparison and quality control. Over time, the laboratory may also offer its expertise more broadly. Three partners will be involved in the implementation of this project: ILRI, ICARS, and the EUCAST Development Laboratory (EDL).



GOVERNANCE

In November 2021, ICARS evolved from an organisation embedded in the Danish Ministry of Health into an independent organisation with its own legal identity in accordance with Danish law governed by an international Board of Directors. The inaugural Board, appointed by the Danish government, will operate until the end of 2023. 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 at the Board in that capacity.



Building the ICARS team

As of June 2022, ICARS staff consists of an international team of 25 dedicated and skilled employees, including an Executive Director, Scientific Director and a Director of Operations, working either at ICARS headquarters in Copenhagen or remotely across the globe as independent consultants. Depending on funding, ICARS will continue to grow within the next couple of years as the project portfolio expands and as ICARS becomes increasingly present in the global AMR landscape.

PARTNERSHIP

Join ICARS

ICARS is inviting governments, international institutions and private foundations that are committed to changing the course for AMR to join ICARS as a Strategic Funding Partner, Funding Partner or Mission Partner. This is a rare opportunity to join an international organisation in its early days.



STRATEGIC FUNDING PARTNER

Commitment

- 3-year+ engagement and multi-year financial contribution to ICARS

Benefit

- Co-ownership of ICARS' development
- Nominate member for ICARS Board of Directors
- Participate in ICARS Strategic Forum



FUNDING PARTNER

Commitment

- Financial contribution that can be earmarked for specific projects, focus areas or regions

Benefit

- Influence on ICARS' development
- Invitation to participate in the ICARS Strategic Advisory Forum that meets 1-2 times a year headed by ICARS' Executive Director

ICARS FUNDING PARTNERS INCLUDE:

- Wellcome Trust
- The Global AMR Innovation Fund (GAMRIF) through the UK Department of Health and Social Care (DHSC)
- Danish Ministry of Foreign Affairs (MoFA)



MISSION PARTNER

Commitment

- Actively supporting ICARS' mission nationally and regionally

Benefit

- Regional ICARS seminars once a year focusing on presentation of best practices and exchange of experiences on AMR mitigation and ways to push the AMR agenda for their region
- Invitation to participate in the ICARS Strategic Advisory Forum that meets 1-2 times a year headed by ICARS' Executive Director

ICARS MISSION PARTNERS INCLUDE:

- Government of India
- Government of Zambia
- Government of Georgia

We want to hear from you!

If your country or foundation is interested in joining ICARS to support our efforts to mitigate AMR in low- and middle-income countries, please do not hesitate to contact us. We are currently expanding our portfolio and we are always happy to discuss a possible partnership.

If you have any questions about our work or partnership opportunities, please write to us at **contact@icars-global.org**.

Visit **icars-global.org** to find out more.

You can also find us on social media:



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