

## 8.1 Antimicrobial resistance (AMR) – The silent pandemic

### Engaging globally to combat AMR via One Health approach in order to address transnational and multi-sectoral nature of this threat

#### What problem is your proposition addressing?

AMR presents a serious health, social and economic burden. It is estimated to be responsible for 700,000<sup>1</sup> deaths per year globally. Inaction is projected to cause millions of deaths globally: it has been estimated that AMR might cause more deaths than cancer<sup>2</sup> by 2050. Apart from the human suffering caused by that development, AMR also pushes up the cost of treatment and diminishes productivity due to illness. The World Bank<sup>3</sup> has warned that, by 2050, drug-resistant infections could cause global economic damage on a par with the 2008 financial crisis. In the high AMR-impact scenario, the world will lose 3.8 percent of its annual GDP by 2050, with an annual shortfall of \$3.4 trillion by 2030<sup>4</sup>. AMR also threatens the achievement of several of the United Nations' Sustainable Development Goals. Additionally the development and spread of antimicrobial resistance in the environment is of growing concern<sup>5</sup>.

At the same time, the discovery, development, manufacture and marketing of new antimicrobials has significantly slowed down in the past 20 years. A sustained One Health response with a shared vision and goals is essential to tackle AMR and achieve the Sustainable Development Goals. It is important to reduce the use of antimicrobials and combat the rising tide of antimicrobial resistance, where misuse and overuse of antibiotics are rendering standard treatments ineffective and once treatable infections can now kill.

#### How does your proposition address the problem?

This proposition addresses antimicrobial resistance through a One Health approach including different elements building towards enforcing global unify response to this slowly but constantly raising threat caused by overuse and misuse of antimicrobials in human, animal and plant sectors.

Good hygiene and biosecurity measures as well as strong environmental controls need to be implemented at scale, from farm to fork, as well as in human health systems.

These can be done through:

- updating of the 2015 Global Action Plan under the leadership of the Tripartite Plus in order to cover all the One Health dimensions: public health, animal health and welfare, but also plant health and the effects of the release of antimicrobials into the environment and their contributions to the global spread of AMR implementation of AMR National Action Plans. Major obstacles to change behaviours are lack of awareness, resources, capacity and incentives. Collaboration between sectors is required to ensure that strategies to implement sustainable changes take into account the needs and constraints of each sector.

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<sup>1, 2</sup> [https://amr-review.org/sites/default/files/160525\\_Final%20paper\\_with%20cover.pdf](https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf)

<sup>3</sup> World Bank, 2016, 'Drug-Resistant Infections: A Threat to Our Economic Future', Washington, DC

<sup>4</sup> <http://documents1.worldbank.org/curated/en/323311493396993758/pdf/final-report.pdf>

<sup>5</sup> <https://www.unep.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/antimicrobial-resistance-global-threat>

- prudent use of antimicrobials in food production is essential to minimize AMR in all foods. The “One Health” approach is key to achieve these targets. This interdisciplinary way of working ensures that AMR is mitigated through communication and cooperation between multiple sectors, and is highly scalable to ensure local, national and international needs.
- surveillance of AMU and monitoring of AMR in order to gain knowledge on the trends and impact concerning the risk posed to human health by foodborne AMR based on already existing tools like Danish “One Health” monitoring programme which serves as an important tool when identifying areas of concern and where efficient action can be taken.
- supporting the translation of policies and objectives into evidence-based practices towards sustainable solutions with a particular focus on the challenges in low- and middle-income countries as pursued by the International Centre for Antimicrobial Resistance Solutions (ICARS)
- developing new treatments for drug-resistant infections that pose the greatest threat to health as supported by the Global Antibiotic Research and Development Partnership (GARDP)
- the development and implementation of international standards and guidelines by Codex, OIE and IPPC are prominent examples of these ongoing efforts on the fight against AMR;
- strengthening AMR global governance structures, including the Global Leaders Group (GLG), Independent Evidence Advisory Panel (IPEA) and soon to be established Partnership Platform for Action against AMR;

**Is this a new solution or an existing solution that needs scaling?**

An existing solution that needs scaling.

**Which organisation/s, institution/s or groups of individuals are associated with the solution?**

Governments, relevant civil society organizations and initiatives, educational institutions and academia, international organisations and forums, including WHO, FAO, OIE, UNEP, G7, G20.

**What is the scientific evidence that supports your proposition?**

Antimicrobial resistance is well known and recognised as a global threat<sup>6</sup> that needs to continuously be addressed by international fora. The COVID-19 pandemic has shown the ease with which infections can spread, threaten global health security and destabilize economies, lives and livelihoods. As a present and growing pandemic, AMR may be considered a central part of future pandemic preparedness, and a topic relevant for the proposed Pandemic treaty discussions.

**Is this idea applicable to a particular geography, demography, landscape or other type of setting?**

The idea is global and should be adapted accordingly to the needs of the region or a country.

**Who are the main actors that would put this action into place?**

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<sup>6</sup> <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

Policymakers (governments), civil society organisations, veterinarians, doctors, farmers.

**Source and process**

Proposals submitted by the Tripartite, the European Commission, and Denmark for wave 2.  
All proposals are not necessarily supported by all parties.

