Sameeksha* – Antimicrobial Resistance (AMR)

Key highlights

- WHO India’s resources on WAAW 2023
- Global antimicrobial resistance and use surveillance system (GLASS) report 2022
- Global strategy on infection prevention and control
- AWaRe classification of antibiotics for evaluation and monitoring of use, and AWaRe antibiotic book
- Quadripartite One Health AMR research agenda
- People-centred approach to addressing AMR in human health

Strategic priority 1: Awareness and understanding

WHO India’s resources for WAAW 2023

- Campaign resources adapted to raise awareness about AMR in India.
- Includes social media infographics for WAAW 2023, and ideas for “Going Blue for AMR”.

Antimicrobial resistance and the climate crisis

- Highlights the complexity of threats posed by climate change on the emergence of new challenges of AMR.
- Futuristic policy-level considerations to better understand and respond to the converging threats.

World AMR Awareness Week 2023 campaign guide

- Campaign guide provides key information and ideas on celebrating WAAW 2023.
- Includes the campaign theme, calls to action, and links to various campaign resources.

Why should policymakers act on antimicrobial resistance in agrifood systems?

- Background information on the link between AMR & agrifood systems.
- Outlines priority actions that policymakers can take to control AMR.

Understanding antimicrobial resistance in aquaculture

- Shares insights and evidence-based recommendations for strengthening capacities, policies, and national action plans on the prudent and responsible use of antimicrobials in fisheries and aquaculture.
ACT now. Action to support implementation of Codex AMR Texts (ACT)

- Strategies implemented at global and local level to address foodborne AMR through Codex AMR texts.
- Outlines the steps and policies that decision-makers to take to protect the health of consumers and ensure fair practices in the food trade.

FAO | Information note | 2023 | Online link

Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries

- Technical modules and resources with instructions, definitions, photographs, posters and specific illustrations of recommended cleaning practices.
- Reference guide for on-site cleaning supervisors.

WHO | Modules and resources | 7 March 2023 | Online link

Environmental dimensions of AMR – summary for policy makers

- Technical summary for policy makers detailing development, spread and transmission of AMR in the environment, environmental impact of AMR and One Health actions needed to contain AMR.

UNEP | Summary | 2022 | Online link

Slowing down superbugs – legislation and antimicrobial resistance

- Details the connection between food safety legislation and AMR and their implications on each other.
- Also details institutional governance frameworks relevant for AMR.

FAO | Technical toolkit | 2021 | Online link

Strategic priority 2: Laboratories and surveillance

Surveillance of antimicrobial resistance and use

- Highlights the importance of AMR surveillance and use as an effective response to AMR across all sectors.
- Advocates a One Health approach to mitigate challenges in data sharing and harmonization across sectors.

GLG on AMR | Information note | 1 July 2021 | Online link

WHO integrated global surveillance on ESBL-producing E. coli using a “One Health” approach: implementation and opportunities

- Standard methodologies in the human health, food chain and environmental sectors to facilitate the establishment of the integrated multisectoral surveillance on AMR.
- The protocol outlines targeted monitoring of extended spectrum beta-lactamases (ESBL) producing E. coli

WHO | Technical document | 16 March 2021 | Online link

GLASS manual for antimicrobial resistance surveillance in common bacteria causing human infection

- This manual is to provide guidance for countries on the methods and metrics for the surveillance of AMR.
- Aims for national GLASS focal points, national public health professionals and health authorities responsible for AMR surveillance.

WHO | Technical document | 31 August 2023 | Online link
Global antimicrobial resistance and use surveillance system (GLASS) report: 2022

- Summary of five years of national AMR surveillance data derived from the data sets submitted by the countries participating in GLASS.
- Findings also include the antimicrobial consumption according to the WHO AWARe antibiotic classification.

**WHO** | Report | 9 December 2022 | [Online link](#)

The International FAO Antimicrobial Resistance Monitoring (InFARM) system and IT platform

- Highlights issues and challenges related to the quality of data and data-driven decision-making process in AMR surveillance.
- Introduces International FAO Antimicrobial Resistance Monitoring (InFARM) IT platform to develop the building blocks to regularly generate and analyze reliable and comparable data on AMR.

**FAO** | Information note | 2022 | [Online link](#)

Foodborne antimicrobial resistance – compendium of Codex standards

- A compendium of three Codex texts, two guidelines and a code of practice, to support governments in designing and implementing strategies to tackle foodborne AMR.
- Highlights One Health in addressing AMR in animal, plant and human health.

**FAO** | Technical document | 27 February 2023 | [Online link](#)

### Strategic priority 3: Infection prevention and control

Global strategy on infection prevention and control

- WHA resolution to Member States to improve IPC at the national, subnational and facility levels.
- Provides strategic directions to reduce risk of health care-associated infections (including resistant infections) and limit infectious disease outbreaks by 2030.

**WHO** | Technical document | 12 September 2023 | [Online link](#)

Technical brief on water, sanitation, hygiene (WASH) and wastewater management to prevent infections and reduce the spread of antimicrobial resistance (AMR)

- Summary of evidence and rationale for WASH and wastewater actions within AMR NAPs and sector specific policies to combat AMR.
- Defines key domains like coordination, surveillance, research etc., to be taken in account to effectively combat AMR.

**WHO-FAO-WOAH** | Technical brief | 18 November 2020 | [Online link](#)

Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the health care facility level

- Resource toolkit with guidance for specific actions for infectious diseases and/or MDRO outbreak management phase at healthcare facilities (HCFs).
- Specifically tailored for IPC focal points, epidemiologists, public health experts, outbreak response incident managers etc.

**WHO** | Toolkit | 6 September 2022 | [Online link](#)
Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries

- This training package aims to address critical gaps in the training and capacity of those involved in cleaning processes in HCFs.
- Support the trainers in development and delivery of training programmes intended to improve environmental cleaning at HCFs.

**WHO** | Training resource | 7 March 2023 | Online link

Bracing for superbugs: strengthening environmental action in the One Health response to antimicrobial resistance

- Provides an overview of the environmental dimensions of AMR and the strategic actions required to reduce the risk and burden of AMR and help address the triple planetary burden.

**UNEP** | Report | 7 February 2023 | Online link

Strategic priority 4: Optimise use of antimicrobials

**WHO policy guidance on integrated antimicrobial stewardship activities**

- Set of evidence-based and pragmatic recommendations to drive comprehensive and integrated AMS activities at the national level.
- Aimed at national policymakers at ministries of health, national AMR focal points and others who are responsible for implementation of NAP-AMR.

**WHO** | Technical document | 20 May 2021 | Online link

**Antimicrobial stewardship programmes in health-care facilities in low-and middle-income countries**

- Practical guidance on implementation of antimicrobial stewardship (AMS) programmes in the human health sector.
- Outline core elements, structures and resources required at the national and health-care facility level to facilitate AMS programmes.

**WHO** | Technical document | 22 October 2019 | Online link

**AWaRe classification of antibiotics for evaluation and monitoring of use, 2023**

- Developed by the WHO Expert Committee on Selection and Use of Essential Medicines as a tool to support antibiotic stewardship efforts at local, national and global levels
- Antibiotics are classified into three groups — Access, Watch and Reserve — to emphasize the importance of their appropriate use.

**WHO** | Guidance document | 26 July 2023 | Online link

**Animal health and welfare and antimicrobial resistance and use**

- Highlight key aspects of animal health including responsible use of antimicrobials and reducing the risk of the emergence and spread of AMR.
- Key action points for different sub-thematic areas of animal health, biosecurity, infection prevention and control measures, and good animal husbandry practices.

**GLG on AMR** | Information note | 28 November 2022 | Online link
The WHO AWARe (Access, Watch, Reserve) antibiotic book
- Concise, evidence-based guidance on the choice of antibiotic, dose, route of administration, and duration of treatment in children and adults in both primary health care and hospital settings.
- Summary infographics for infection among both adults and children provide a quick-reference guide for health care workers at the point of care.

WHO | Infographics | 9 December 2022 | Online link

The selection and use of essential medicines 2023. Executive summary of the report of the 24th WHO expert committee on selection and use of essential medicines
- Recommendations on the use of essential medicines for 2023.
- Based on scientific evidence around comparative effectiveness, safety and cost-effectiveness of the medicines.

WHO | Report | 26 July 2023 | Online link

GLASS methodology for surveillance of national antimicrobial consumption
- Overview of methodology for the national surveillance of AMC and data collection & reporting.
- Outlines setting up national surveillance system for AMC, data flow and GLASS-AMC IT platform.

WHO | Technical document | 1 January 2020 | Online link

GLASS guide for national surveillance systems for monitoring antimicrobial consumption in hospitals
- Guidance for national surveillance systems to monitor antimicrobial consumption in hospitals.
- Recommendations for countries in establishing national mechanisms to enable routine AMC monitoring in hospitals.

WHO | Technical document | 1 January 2020 | Online link

WHO methodology for point prevalence survey on antibiotic use in hospitals
- Protocol for point prevalence surveys on prescribing practices of antibiotics and management of infectious diseases in hospitalized patients.
- Standardized methodology to estimate the prevalence of antibiotic use.

WHO | Technical document | 1 February 2019 | Online link

Responsible use of antimicrobials in beekeeping
- Guideline focuses on responsible use of antimicrobials in apiculture through the application of good beekeeping practices and biosecurity measures.
- Outlines progressive management pathway (PMP) in beekeeping practices and general awareness of topical issues like AMR.

FAO | Guidance document | 2021 | Online link

How to reduce the use of antibiotics in dairy cattle
- Key recommendations for dairy farmers and dairy veterinarians, related to husbandry and animal health management to reduce need, and use of antibiotics in dairy cattle.

FAO | Information note | 2021 | Online link
How to reduce the use of antibiotics in poultry production
- Resource leaflet for poultry farmers and poultry veterinarians on husbandry and animal health management for reducing the use of antimicrobials in poultry production.

FAO | Information note | 2021 | Online link

How to use antibiotics effectively and responsibly in dairy production
- Practical tips for livestock producers in improving animal health by reducing the need for antibiotics in dairy farming and its responsible use when needed.

FAO | Information note | 2021 | Online link

International instruments on the use of antimicrobials across the human, animal and plant sectors
- Overview and analysis of international instruments on standards related to the use of antimicrobials.
- Aims to identify existing instruments and standards in order to guide implementation of future international instruments related to antimicrobial use in human, animal and environmental health.

FAO | Guidance document | 2020 | Online link

How to use antibiotics effectively and responsibly in poultry production – for the sake of human and animal health
- Technical advice on reducing need for antibiotics in poultry production.

FAO | Guidance document | 2021 | Online link

Strategic priority 5: Research, innovations and finance

A One Health priority research agenda for antimicrobial resistance
- A joint initiative by the Quadripartite to catalyze scientific interest and financial investments for the priority research across sectors.
- Outlines five key pillars – transmission, integrated surveillance, interventions, behavioural change, and economics and policy.

Quadripartite | Guidance document | 3 July 2023 | Online link

WHO fungal priority pathogens list to guide research, development and public health action
- First global effort to prioritize fungal pathogens, considering unmet research and development needs and perceived public health importance.
- Categorizes fungal pathogens into critical, high and medium priority groups.

WHO | Guidance document | 25 October 2022 | Online link

Bacterial vaccines in clinical and preclinical development 2021
- Reports vaccine candidates in preclinical and clinical development in the context of AMR.
- Highlights 61 vaccine candidates in various stages of clinical development, and 94 candidates in preclinical development.

WHO | Technical document | 12 July 2022 | Online link
**Financing to address antimicrobial resistance**

- Outlines the challenges in financial support for sustainable implementation of national action plans on AMR in LMICs.
- Signifies investment in AMR and integration into national pandemic preparedness and response plans.

*GLG on AMR* | Information note | 1 July 2021 | Online link

**Foodborne antimicrobial resistance (AMR): an economic concern**

- Highlights the economic burden of foodborne AMR including productivity losses and premature deaths.
- Warrants evidence-based policies to minimize AMR, strengthen food control systems, responsible antimicrobial use, and promote data sharing.

*FAO* | Information note | 7 September 2023 | Online link

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**Strategic priority 6: Collaborations**

**People-centred approach to addressing antimicrobial resistance in human health**

- Outlines a people-centred approach to address the challenges and health system barriers in tackling AMR in human health.
- Recommends core package of interventions to design and prioritize actions at different levels.

*WHO* | Technical document | 19 October 2023 | Online link

**Strategic framework for collaboration on antimicrobial resistance**

- Outlines joint work of the Quadripartite organizations to advance One Health AMR agenda at the global, regional and country level.
- Supports implementation of the five pillars of the Global Action Plan on AMR and global AMR governance.

*Quadripartite* | Technical document | 6 April 2022 | Online link

**Guidance to facilitate monitoring and evaluation for antimicrobial resistance national action plans**

- Reference document to guide the development and delivery of national action plans on AMR.
- Targeted at members of the AMR multisectoral coordination committee or working group, persons responsible for M&E in AMR NAPs and other key actors involved in NAP implementation.

*WHO* | Guidance document | 3 August 2023 | Online link

**WHO implementation handbook for national action plans on antimicrobial resistance: guidance for the human health sector**

- Provides a practical, stepwise approach to the implementation of the NAP on AMR within the human health sector.
- Targeted at national/subnational stakeholders working on AMR within the human health sector – national health authorities, national multi-sectoral coordination groups, AMR technical experts and policymakers and implementation partners.

*WHO* | Guidance document | 28 February 2022 | Online link
WHO strategic priorities on antimicrobial resistance

- Highlights the key achievements and next steps of the AMR Division at WHO Headquarters, across four priority areas.

WHO | Technical document | 21 February 2023 | Online link

WHO Strategic and Technical Advisory Group for Antimicrobial Resistance (STAG-AMR)

- Report of the second meeting of the STAG-AMR organized in June 2022.
- Outlines progress on various activities including fungal priority pathogen list, AMR research agenda, national periodic AMR prevalence surveys, infection prevention and control, etc.

WHO | Report | 21 February 2023 | Online link

The Global Leaders Group on antimicrobial resistance

- Provides an overview of the Global Leaders Group on AMR including their mission, aims and activities for a global response for AMR containment.

GLG on AMR | Information note | 1 April 2021 | Online link

Global action plan on antimicrobial resistance

- Outlines five key objectives – awareness and understanding of AMR; surveillance and research; infection prevention; optimal use of antimicrobials; and developing an economic case for sustainable investment for AMR containment interventions.

WHO | Technical document | 1 January 2016 | Online link

One Health joint plan of action (2022–2026)

- Aims to create a framework to collectively prevent, predict, detect, and respond to health threats.
- Provides a set of activities that aim to strengthen collaboration, communication, capacity building, and coordination across all sectors.

Quadripartite | Technical document | 2021 | Online link

The FAO action plan on antimicrobial resistance 2021–2025

- Provides a roadmap for focusing global efforts to address AMR in the food and agriculture sectors.
- Aims to help accelerate progress in developing and implementing multi-sectoral NAPs to tackle AMR by calling attention to strategic priorities and areas of expertise for FAO support.

FAO | Technical document | 2021 | Online link

Tracking AMR country self-assessment survey 2022

- Report by the Quadripartite on annual AMR country self-assessment surveys (TrACSS) to monitor country progress in the implementation of the NAPs.
- Provides the results of the sixth round of the survey.

Quadripartite | Report | 2022 | Online link
WHO costing and budgeting tool for national action plans on antimicrobial resistance

- Tool to support countries in costing prioritized NAP activities, map funding sources and gaps, and promote resource mobilization and sustainable implementation.
- Targets national policy makers and designated costing coordinators for NAP AMR.

*WHO | Technical document | 13 October 2021 | Online link*

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World AMR Awareness Week #WAAW | 18–24 November 2023

*Preventing Antimicrobial Resistance Together* (theme)

*Go Blue for #AMR on 24 November*

*Antimicrobials: Handle with Care* (slogan)

*Sameeksha* is a Hindi word, meaning review. This special volume is a compilation of high-level, open access publications and resources on One Health containment of AMR (along with a brief summary) – grouped according to the strategic priorities of India’s National Action Plan on Antimicrobial Resistance.