

National and State Action – for AMR containment



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National Conclave on Sustainable Food Systems

Sustainable food from animals to keep antibiotics effective | 21 April 2022 | AAETI, Neemli



Ten threats to global health in 2019

Antimicrobial resistance

The development of antibiotics, antivirals and antimalarials are some of modern medicine's greatest successes. Now, time with these drugs is running out. Antimicrobial resistance – the ability of bacteria, parasites, viruses and fungi to resist these medicines – threatens to send us back to a time when we were unable to easily treat infections such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis. The inability to prevent infections could seriously compromise surgery and procedures such as chemotherapy.

Resistance to tuberculosis drugs is a formidable obstacle to fighting a disease that causes around 10 million people to fall ill, and 1.6 million to die, every year. In 2017, around 600 000 cases of tuberculosis were resistant to rifampicin – the most effective first-line drug – and 82% of these people had multidrug-resistant tuberculosis.

Drug resistance is driven by the overuse of antimicrobials in people, but also in animals, especially those used for food production, as well as in the environment. WHO is working with these sectors to implement a global action plan to tackle antimicrobial resistance by increasing awareness and knowledge, reducing infection, and encouraging prudent use of antimicrobials.



Urgent health challenges for the next decade

13 January 2020

As a new year and a new decade kick off, we have developed with input from our experts a list of 10 health challenges for the next decade. Some of these issues are simple to address, but others are more complex.

We need to realize that health is an investment, not a cost. It is not just about preventing terrorist attacks, but not against the attacks of economic and social crises. A pandemic of health security cannot be a matter for ministers alone.

All the challenges in this list demand a response. We have a shared responsibility to act. In approaching, the United Nations General Assembly, we will present a global action plan for health security.

This means advocating for national funding, providing support to the most vulnerable, and doing nothing is one we cannot afford. To achieve these critical goals, there are no shortcuts. Our leaders are accountable for their commitment.

Dr Tedros Adhanom Ghebreyesus, WHO Director-General

NOTE: The challenges are not listed in order of priority. All are urgent, and many are interlinked.



Pill bottle with antibiotics

Protecting the medicines that protect us

What's the challenge?

Anti-microbial resistance (AMR) threatens to send modern medicine back decades to the pre-antibiotic era, when even routine surgeries were hazardous. The rise of AMR stems from myriad factors that have come together to create a terrifying brew, including unregulated prescription and use of antibiotics, lack of access to quality and affordable medicines, and lack of clean water, sanitation, hygiene and infection prevention and control.

What is WHO doing?

WHO is working with national and international authorities in the environment, agriculture and animal sectors to reduce the threat of AMR by addressing its root causes, while advocating for research and development into new antibiotics.

THE IMPACT OF AMR BY 2050 WOULD BE WIDE-RANGING

**28 MILLION
PEOPLE**

projected to fall into poverty
because of AMR



UP TO 7.5%

decline in global
livestock production



UP TO 3.8%

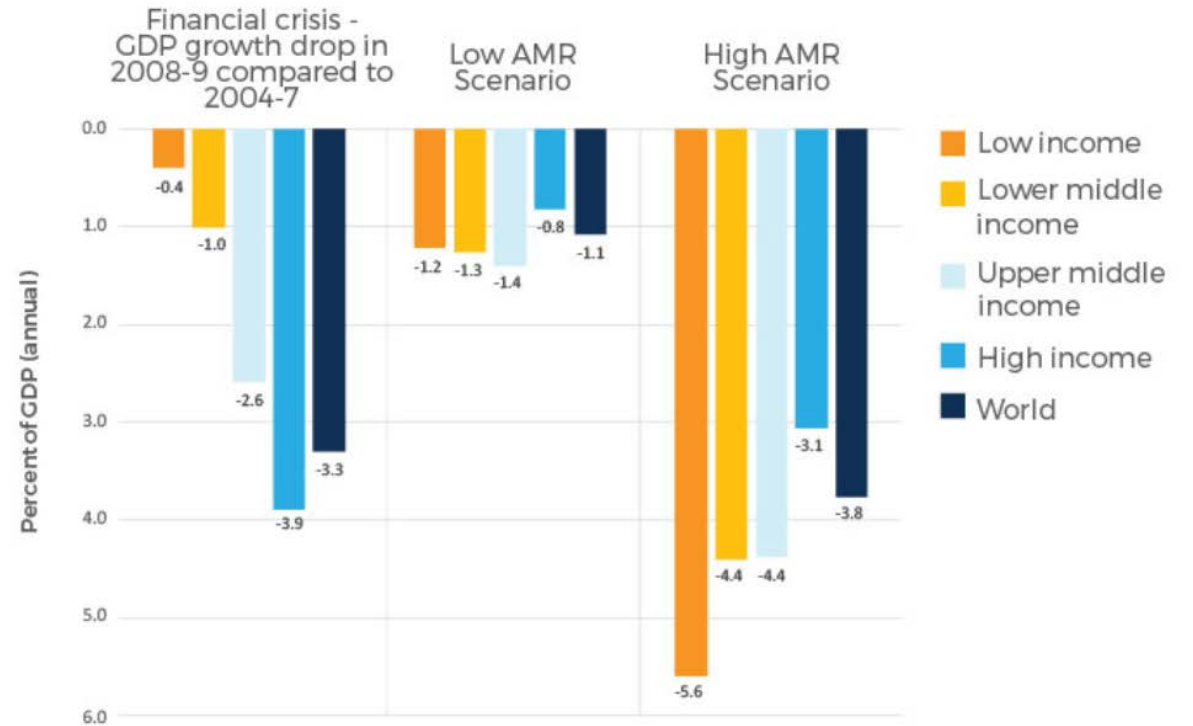
decline in global exports



**UP TO 1 TRILLION
US \$**

global increases in
healthcare cost

AMR WILL AFFECT THE POOREST COUNTRIES THE MOST



ECONOMIC IMPACTS OF DRUG-RESISTANT INFECTIONS

Under a worst-case scenario, AMR could cause a reduction in global GDP equal to that of the 2008 financial crisis. However, the economic impacts would be worse in lower income countries and would likely last longer.



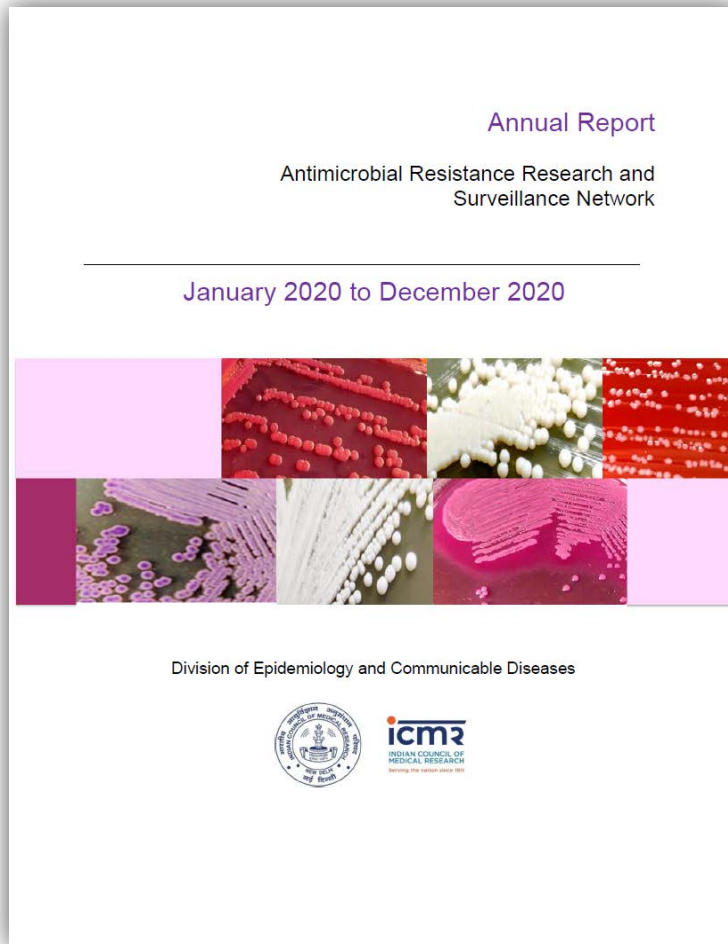
IACG Recommendations

to the Secretary-General of the United Nations, April 2019



... IACG calls on all Member States to **phase out the use of antimicrobials for growth promotion**, consistent with guidance from the Tripartite agencies (FAO, OIE and WHO) and Codex Alimentarius, starting with an **immediate end to the use of antibiotics categorized as the Highest Priority Critically Important Antimicrobial Agents** on the WHO List of Critically Important Antimicrobials for Human Medicine

AMRSN 4th report, 2021 (65,561 isolates)



- ➔ Imipenem susceptibility
 - *E. coli* 72%
 - *Klebsiella pneumoniae* 45%
- ➔ *A. baumannii*
 - 10-20% susceptibility against cephalosporins, carbapenems, monobactams and β -lactam- β -lactamase inhibitors
- ➔ *Pseudomonas aeruginosa*
 - 40% susceptibility for fluoroquinolones
 - 60-70% to cephalosporins, carbapenems, and aminoglycosides

NARS-NET 4th report, 2021 (57,282 isolates)



National Antimicrobial Resistance
Surveillance Network
(NARS-Net India)

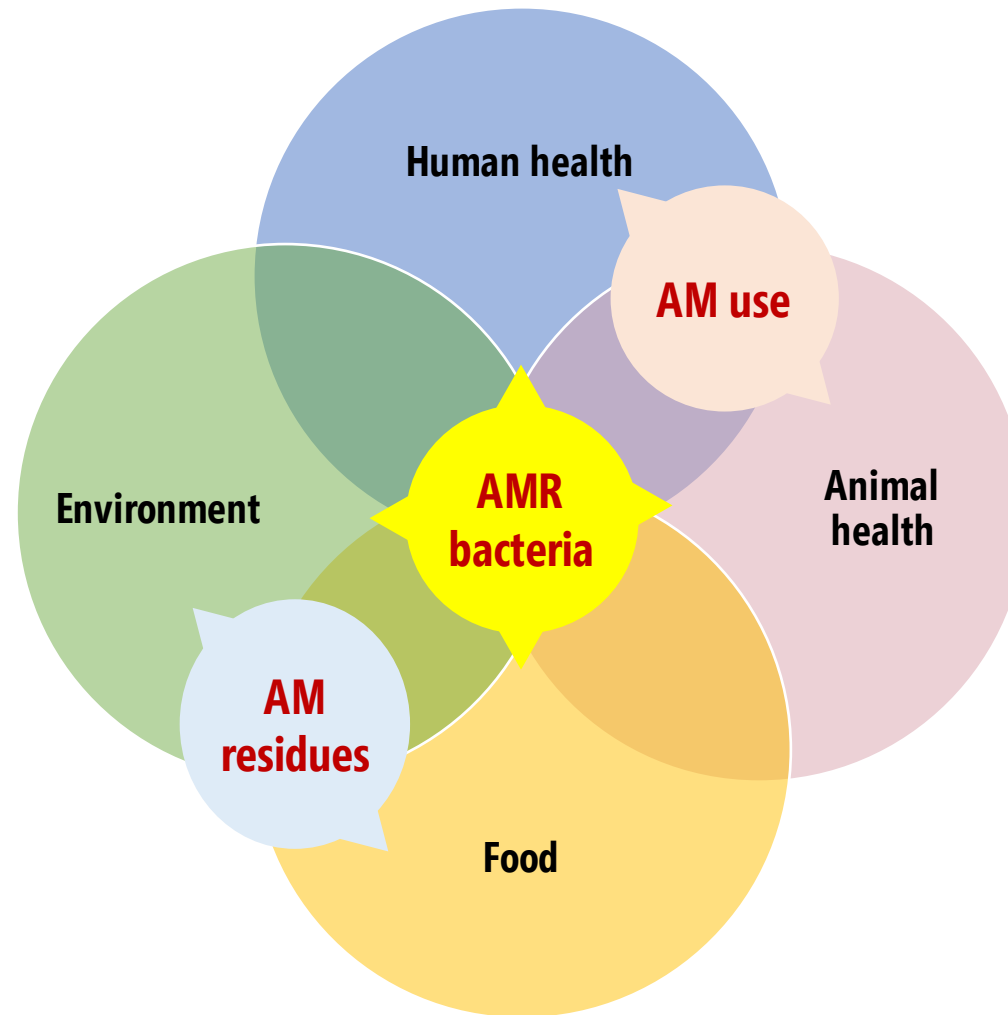
Annual Report-2021

Reporting Period- January to December 2020

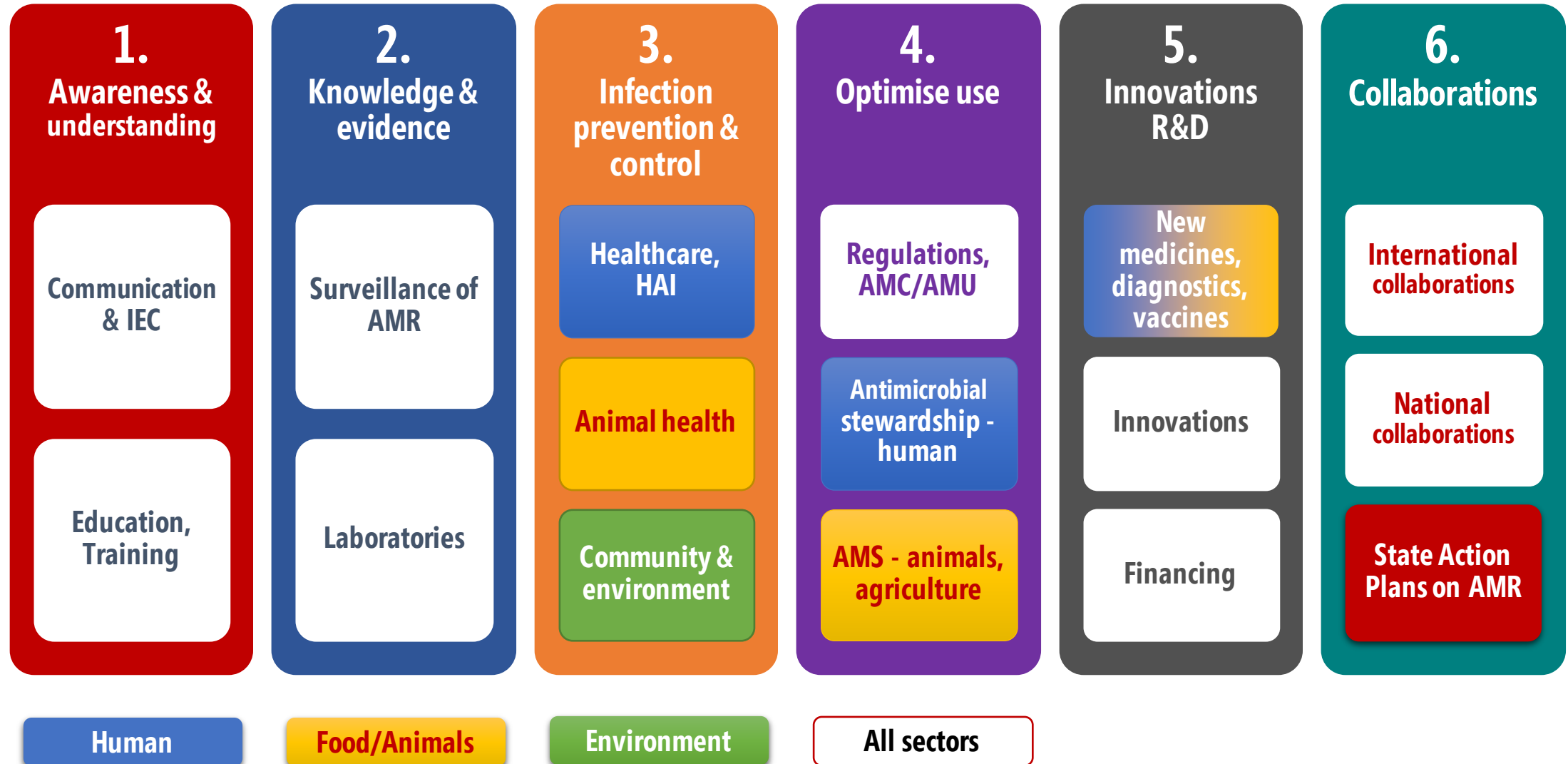
National Programme on AMR Containment
National Centre for Diseases Control
Directorate General of Health Services, Ministry of Health and Family Welfare
Government of India

- ➔ *E. coli* and Klebsiella spp.
 - 3rd gen Cephalosporins – 77-79% R
 - 4th gen Cephalosporins – 63-69% R
 - High carbapenem R
 - 4% colistin R
- ➔ Pseudomonas spp. in ICU patients
 - Ceftazidime – 60% R
 - Piperacillin/tazobactam – 49% R
- ➔ Acinetobacter spp.
 - >50% resistant to almost all antibiotics tested
 - Minocycline – 26% R

AMR containment needs **One Health** action



NAP-AMR strategic priorities



Union List

97

State List

61

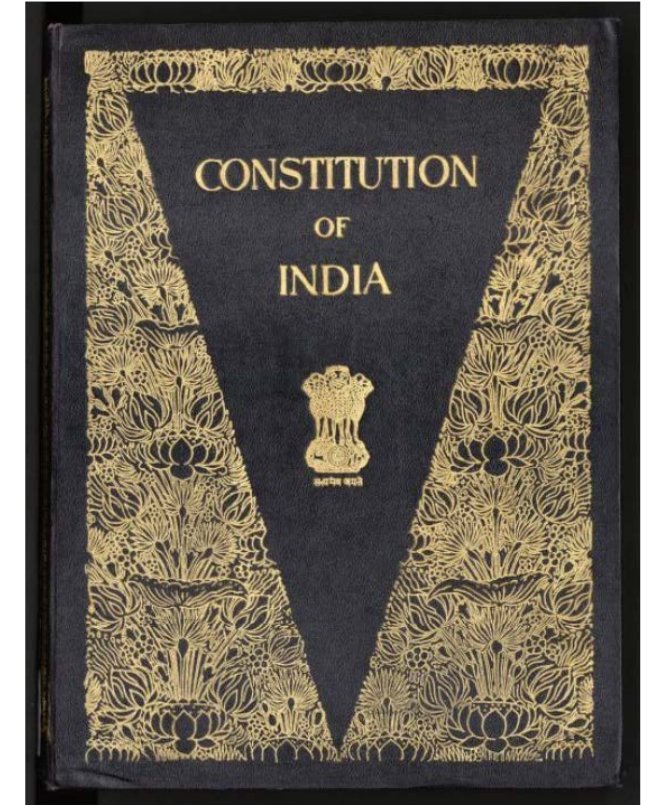
Concurrent List

52

Indian constitution

- 6. **Human health** and **sanitation**, hospitals & dispensaries
- 14. **Agriculture**, agricultural education and research
- 15. **Animal diseases**, veterinary training and practice
- 17. **Water** (environment)
- 21. **Fisheries**

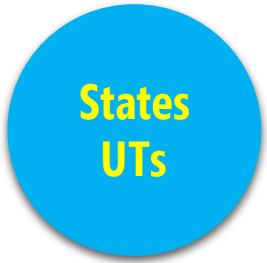
18. Adulteration of **Food**



→ India needs **National** and **State** Action Plans on AMR

AMR containment in India

- ➔ NAP-AMR 2.0 and SAPCAR (all states)
- ➔ Ministry – Department – Organization specific action plans
- ➔ Government leadership
- ➔ AMR governance mechanisms
- ➔ AMR focal points – full-time nodal officers
- ➔ Public awareness and civil society engagement
- ➔ Mission AMR



Health & Family
Government of India



AatmaNirbhar
Bharat Abhiyan

