

India's National Action Plan on Antimicrobial Resistance (2017–21)

CSE assessment on progress of key activities
planned to contain AMR from animal and
environmental sources
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Centre for Science and Environment

Antimicrobial resistance (AMR) is expected to become a global health crisis of an unprecedented scale, impacting food security, livelihood and attainment of sustainable development goals (SDGs). Developing countries like India are expected to be heavily impacted. Responding to the global momentum on efforts to contain AMR after the Global Action Plan on AMR in 2015, India came up with its 'National Action Plan on Antimicrobial Resistance (2017–21)' in April 2017. This was released along with the 'Delhi Declaration on Antimicrobial Resistance', a joint declaration endorsed by 12 stakeholder ministries to adopt a collaborative approach on prevention and containment of AMR in India. The National Action Plan (NAP) calls for all concerned ministries, departments and other stakeholders to come together and implement activities outlined in the plan.

In order to understand the progress on activities planned to contain AMR from animal and environmental sources, the Centre for Science and Environment (CSE) conducted this assessment, based on the information available in public domain and CSE's understanding gleaned through interactions as a stakeholder. The assessment attempts to develop a broad sense on the status of key activities planned to be completed in the short term (i.e. within a year) and progress made on activities planned to be completed in the medium term (i.e. one to three years).

1. KEY ACTIVITY COMPLETED

- The Food Safety Standards Authority of India (FSSAI) notified tolerance limits for antibiotic residues in food from animals such as meat, milk, egg and fish.

2. KEY ACTIVITIES INITIATED (WORK IN PROGRESS)

- As part of AMR surveillance in livestock and fisheries, the Indian Network for Fisheries and Animals Antimicrobial Resistance (INFAAR) has been formed by the Indian Council of Agricultural Research (ICAR) with support from the Food and Agriculture Organization of the United Nations (FAO). The network comprises select ICAR laboratories (10 veterinary and eight fisheries labs) and three universities. A time-bound work plan to ensure efficiency and effectiveness of the newly established network has been recently developed.
- Draft standards for antibiotic residues in pharmaceutical industrial effluent and common effluent treatment plants have been developed by the Central Pollution Control Board (CPCB). The draft is currently under review of the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Out of planned state-level action plans in five states in phase 1 of NAP, one state (Kerala) has so far released its state action plan (Kerala Antimicrobial Resistance Strategic Action Plan).

3. KEY ACTIVITIES THAT SHOULD HAVE BEEN COMPLETED (WITHIN A YEAR) OR SHOWN PROGRESS IN LINE WITH TIME LINES (ONE TO THREE YEARS)

3.1 Awareness, education and training

Several activities are focused around behavioural and Knowledge, Attitude and Practice (KAP) studies, communication programmes, revision of curricula, training needs analysis, training and orientation. Most are planned to be completed within a year; some are planned to be completed between one and three years. While some momentum on these activities is observed at different levels/departments, it is yet to be coordinated and consolidated towards achievement of key planned outputs, which include:

- Baseline and trends in knowledge, attitude, practices and behaviour of different segments of populations on AMR and its use, in general population, farmers, professionals and industry;
- Consolidated communication and information resources on AMR;
- Professional curricula revised;
- Module on AMR and antimicrobials developed for schoolchildren; and
- National AMR training plan and information products developed for key stakeholders in human health, animal health, food industry, feed industry, agriculture, environment and pharmaceutical industry.

3.2 AMR surveillance in animal, environment and food sectors

Key activities: Within a year

Laboratory capacity

- National strategy (based on systems/lab assessments) to strengthen microbiology laboratories (including private sector) for surveillance of antimicrobial resistance and antimicrobial residues in the environment, including waste from farms, factories and healthcare settings.

Surveillance of AMR

- Establishment of an inter-sectoral expert group on integrated AMR surveillance;
- Comprehensive standards for national coordination of AMR surveillance in a phased approach for strengthening AMR surveillance;
- Mechanisms and modalities for data analysis and information management at central, state and district level for AMR surveillance in environment; and
- National framework for surveillance of antibiotic residues and contaminants in food from animals.

Key activities: One to three years

Laboratory capacity

- National strategy (based on systems/lab assessments) to strengthen microbiology laboratories (including private sector) for surveillance of antimicrobial resistance and antimicrobial residues in animals, food.

Surveillance of AMR

- National framework for surveillance of antibiotic residues and contaminants in environment including waste from farms, factories (pharmaceutical industry, feed manufacturers, meat, dairy and fish processing units), veterinary care settings.

3.3 Infection prevention and control

Key activities

Reduce environmental spread of AMR

- Development of a strategy and operational plan to reduce environmental impact of AMR with regard to:
 - Disinfection at treatment plants to remove bacteria (within a year);
 - Inclusion of biosecurity in farmer field school curriculum (within a year);
 - Using waste from unorganized sector for biogas generation (one to three years); and
 - Sector-specific manuals and guidelines to improve environmental management of AMR (one to three years).

3.4 Optimize antimicrobial use in animals and food

Key activities: Within a year

Regulated access to high quality antimicrobials

- Restrict antibiotics in animal feed and feed premix; ensure registration and use of registered products only; regulate their importation, direct distribution and online marketing; ensure appropriate labelling;
- Ensure prescription sale of antibiotics and their use under supervision; regulate bulk selling importation and labelling for species-specific use;
- Ensure labelling of food from animals produced with or without routine use of antibiotics; and
- Develop policy for freshwater/inland fisheries to regulate freshwater/inland fisheries.

Surveillance of antimicrobial use

- Develop methodology to estimate national consumption of antibiotics through a consultation; and
- Ensure registration of and data collection from manufacturers, sellers, prescribers, bulk users (farmers and feed manufacturers) of antibiotics.

Key activities: One to three years

Regulated access to high quality antimicrobials

- Establish independent Veterinary Regulatory Authority;
- Foster development of antimicrobial policies and evidence-based standard treatment guidelines for food animals; and
- Standardize tools to measure consumption of antibiotics in animal health facilities, food and agriculture.

Antimicrobial stewardship and policies in animal husbandry and food

- Develop national plan on restricting (ban/phase off) use of critically important antibiotics.

Note: There is limited progress seen to restrict/phase-out non-therapeutic use of antimicrobials, such as their use as growth promoters and for disease prevention in animals. While this activity is planned to be completed within five years, but a clear roadmap, modalities and approaches to be adopted to achieve this goal must have been finalized by now.

3.5 Investments for AMR activities, research and innovations

(Activities not limited to animal and environmental aspects of AMR)

Key activities: Within a year

Financing for AMR

- Assess impact of AMR—morbidity, mortality and cost of AMR in India;
- Estimate the investment gap for NAP–AMR and develop resource mobilization plan for sustainable action against AMR; and
- Define Centre–state and other stakeholders' roles in implementation and financing.

Note: The Union budget for 2018–19 had no separate head for AMR under the Ministry of Health and Family Welfare, despite several activities planned for multiple stakeholder ministries in the National Action Plan. The focus on AMR was downgraded by merging a centrally sponsored scheme on AMR with other zoonotic disease programmes.

Key activities: One to three years

Financing for AMR

- Develop a long-term resource mobilization plan with clear roles of different stakeholders.

4. NATIONAL AUTHORITY FOR CONTAINMENT OF ANTIMICROBIAL RESISTANCE (NACA)

The Delhi Declaration recommended the establishment of a National Authority for Containment of Antimicrobial Resistance (NACA). As part of India's initiatives towards managing this public health challenge, NACA was aimed to serve as an overarching body, providing oversight and monitoring to ensure sustained effective national action on AMR. A year and a half later, it is not known by when NACA would be formalized and what would be the specifics around its structure, role, powers etc. In fact, NAP-AMR considers NACA as a stakeholder in many activities that were planned to be completed within a year.

Bibliography

1. India's National Action Plan on AMR at <https://cdn.cseindia.org/userfiles/NAP-AMR.pdf>
2. The Delhi Declaration on AMR at <https://cdn.cseindia.org/userfiles/delhi-declaration.pdf>

For more information, contact:

Amit Khurana

Programme Director
Food Safety and Toxins Programme
Centre for Science and Environment
Email: k_amit@cseindia.org

Rajeshwari Sinha

Deputy Programme Manager
Food Safety and Toxins Programme
Centre for Science and Environment
Email: s_rajeshwari@cseindia.org



Centre for Science and Environment

41, Tughlakabad Institutional Area New Delhi 110 062

Phone: 91-11-40616000 **Fax:** 91-11-29955879

E-mail: s_rajeshwari@cseindia.org **Website:** www.cseindia.org