

**Sustainable Food Systems**  
**Centre for Science and Environment**  
November 21, 2025



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## September 2025

- Online international workshop
- **>90 participants** — One Health sectors
- **19 African and Asian** nations
- Experts from global, regional and national inter-governmental organisations, research and scientific community, industry, civil society
- About **80 interventions**

## October 2025

- Key recommendations compiled and shared with QJS-AMR
- 6 relevant issues/themes

## November 2025

- Webinar to inform stakeholders and create awareness

**Towards sustainable food-animal  
production systems to prevent AMR,  
zoonoses and climate change**



**RECOGNISE** small-holder/  
extensive/rural food-animal  
production systems as sustainable.

Especially in Global South, such systems are resilient and capable of addressing the crises of AMR, zoonoses and climate change, while supporting livelihoods, nutrition security and biodiversity conservation.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**SUPPORT and PROMOTE**  
**small-holder/extensive/rural**  
**food-animal production systems.**

Through affordable access to veterinary care, extension services, diagnostics, vaccination, biosecurity and ethnoveterinary medicines. Approaches which are socially embedded, economically accessible and culturally relevant will be sustainable.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**EMPHASISE** on need for market access to small-holder producer. Provide access to **local distribution networks, incentives and subsidies**, through credible and affordable **certification systems**



Source: <http://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>







**INFORM** that intensive/industrial food-animal systems are convergence points for AMR, zoonotic outbreaks, pandemics, environmental degradation and climate change and are not sustainable; invest in reducing diseases through preventive solutions (e.g., vaccination, biosecurity)



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**RECOGNISE** urgency to amend food-animal rearing practices in intensive practices by scaling up prevention practices, phasing-out antibiotic growth promoters and routine preventative antibiotic use, promoting consumption of sustainably grown food



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**Scaling up prevention in food-animal  
systems to minimise disease and  
antibiotic use**



**RECOGNISE** advantages of scaling up preventive approaches in food-animal production systems, to prevent disease, antibiotic misuse/ overuse Can benefit public health, ecosystem, environment, farm productivity and profitability. **Participatory approach** for **behaviour change** to address gaps in knowledge



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**PHASE-OUT** antibiotic use  
for disease control and  
prevention. Such non-therapeutic  
use is often an easy and economical  
alternative due to cheap and easily  
available antibiotics – but the results  
can be disastrous.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**ENSURE** cost-effective process-centric preventive approaches receive adequate focus, in addition to product-centric solutions. Efforts and incentives for good farm management and animal husbandry, proper housing, clean water, biosecurity and waste management must be upscaled, in addition to vaccination and diagnostics.



Source: <http://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**HIGHLIGHT** the need for 'affordable access' to and 'incentives' for preventive solutions such as vaccines for local strains, cold-chain infrastructure, labs and local manufacturing; Can be complemented with access to appropriate veterinary services, economic incentives and subsidies for greater farmer adoption



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**ENSURE** systemic adoption of 'ethnoveterinary medicines', traditional herbal preparations that have emerged as cost-effective and successful alternatives, while reducing dependence on veterinary extension services that are otherwise limited in the Global South.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>







# UPSCALING BACKYARD AND RURAL POULTRY SYSTEMS IN INDIA

Exploring opportunities to reduce antibiotic  
use in food-animal production  
Ensuring co-benefits of improved livelihoods,  
nutrition and biodiversity conservation



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**Mainstreaming Water, Sanitation and Hygiene (WaSH) and waste management to contain AMR from environmental routes**



**EMPHASISE ON mainstreaming Water, Sanitation and Hygiene (WaSH) for AMR prevention.** Universal access to basic services should focus on adequate WaSH infrastructure and services for community, along with animal and human healthcare facilities. Mainstreaming WaSH should reflect clear government accountability mechanisms, principles of human rights and equitable development.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**ENSURE** effective treatment and management of waste to prevent environmental spread of **AMR**, as it

is cost-effective, less technically challenging, yields better returns on investment and is prudent for countries of the Global South.

Focus should be on waste from farms, antibiotic manufacturing, human and animal healthcare settings, and community.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**PROMOTE** development of technology, innovation and R&D for WaSH and managing environmental AMR – focus on local, contextual, cost-effective, adaptable and affordable solutions; enable equitable technology transfer for AMR surveillance and waste treatment; and facilitate collaborations, public-private partnerships and implementation research.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**INCORPORATE** the need for **optimised environmental AMR surveillance which is targeted and action oriented** without burdening investments and resources, and jeopardising actions for AMR. Research, pilot implementation should precede large-scale investments on AMR surveillance. A chemical management approach for environmental AMR surveillance can be beneficial



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>







**OUTLINE** clearly the specific area of intervention instead of using the umbrella term 'environment' across the GAP-AMR.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>



**Strengthening multi-sectoral governance  
and financing for sustainable action  
against AMR**



**ADVOCATE FOR** a strong One Health governance at national, sub-national and grassroots levels, to strengthen multi-sectoral coordination and implementation. Sector-specific governance, accountability frameworks, inter-governmental forum at national level and embedding AMR into broader national strategies can support One Health governance.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**HIGHLIGHT** benefits of coordination, collaboration and accountability among countries for effective regional governance; can be led by central agency at the national level, while civil society can ensure accountability of implementation at national/regional level



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**UNDERLINE** the critical need  
for dedicated financing for  
**AMR at the national level**

as part of the budgets of One Health  
ministries. To garner political will and  
support, enforce assessment of available  
resources, prioritisation, evidence  
generation, economic implications of  
AMR, and cost-benefit analysis.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**SUPPORT** AMR financing by integrating with/ leveraging existing global and national financial structures and instruments; exploring pooled or basket-funding or private sector financing at national level can provide thrust to AMR action



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>







**UNDERScore** the role of predictable and sustainable financing at global and national levels, particularly in view of challenges such as shifts in financing mechanisms and funding landscapes due to exit of traditional donors, debt crisis affecting national budgets, and increasing issues of conflict, migration and inequality.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>



**Improving infection,  
prevention and control, and  
AMR/ antimicrobial use  
surveillance**



**EMPHASISE** that prioritised and low-cost surveillance across One Health sectors is critical; recognise role of strong lab-networks, legislation support, surveillance data dashboards, leveraging AI and genomics; involving private sector



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**HIGHLIGHT** the role of WaSH in IPC and surveillance focusing on healthcare facilities, rural infrastructure, decentralised treatments; **need for greater investments in WaSH and research for technologies** to remove antibiotics in WaSH facilities



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





### **RECOGNISE** critical role of IPC

**across One Health sectors;**

promote biosecurity, affordable and effective vaccination for livestock, scale up adoption of standard precautions, use of low-cost, rapid accurate diagnostics, effective infection management in hospitals and surgical sites



Source: <http://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**ENCOURAGE** a participatory approach for stewardship to support IPC (infection prevention and control).

For example, in Kerala (India), this approach has involved primary healthcare providers in hospitals, enabling a stewardship based on antibiograms and antibiotic reduction targets set up by local IPC committees.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12680>





**Ensuring affordable access to effective  
antibiotics, vaccines and diagnostics**



**ADVOCATE** that access to effective antibiotics is a public good and governments are responsible for providing equitable access. Solutions to address lack of access should be based on equity considerations, and be context-specific and tailored.



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**ENCOURAGE** nations to connect and leverage stewardship, diagnostics and innovation to improve access to antibiotics.

Global South can benefit through measures like pooled procurement, local forecasting, shortages and stock-out estimations, essential list of antibiotics, post-marketing surveillance and appropriate regulations.

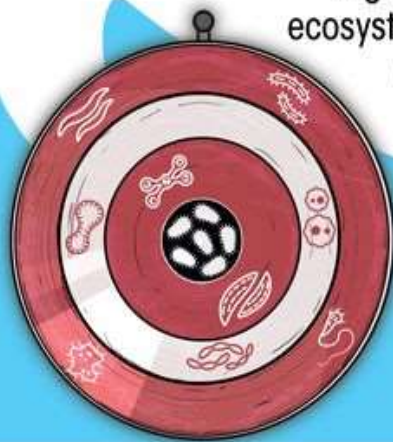


Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**PROMOTE** local research and local manufacturing to improve affordability, access to effective antibiotics and vaccines for human and animal health – through measures like tax exemptions, subsidies, duty-free importation, support to exports and compulsory licensing, regulatory frameworks and clinical trial ecosystems; link public financing of R&D with enforceable access conditions



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>





**UNDERLINE** the need for dedicated domestic financing, innovative funding mechanisms to fill the emerging funding gaps; link public financing of R&D with enforceable access conditions; encourage collaborations with private stakeholders and among Global South countries for equitable access to antibiotics, vaccines and diagnostics



Source: <https://www.cseindia.org/key-recommendations-from-the-perspective-of-global-south-to-update-gap-amr-12880>



# Thank you!

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