



One Health Project - Strengthening the Fight Against AMR

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The discovery of various antibiotics throughout the 20th century has been pivotal in saving millions of lives from infectious diseases. However, the widespread and often inappropriate use of these drugs has exerted significant selection pressure on microbes, leading to the emergence and spread of antimicrobial resistance (AMR). Today, AMR poses a serious global public health threat, made even more challenging by its complex and multifactorial nature. This has underscored the need for integrated interventions grounded in the "One Health" approach, which emphasizes the interconnectedness of human, animal, and environmental health. Such a holistic strategy is essential for fully understanding the dynamics of AMR and implementing effective containment measures. This project started with the vision of nurture a sustainable future at the convergence of human health, animal health and the environment – embodying the

One Health approach.

ADB-Zenex One Health Project

In April 2022, Zenex Animal Health (Zenex), in collaboration with Asian Development Bank (ADB) envisioned a three-year capacity building program for livestock farmers as well as veterinarians for creating AMR awareness. This project has been started with a goal to nurture a sustainable future at the convergence of human health, animal health and the environment – embodying the One Health approach and an expected outcome not only to improve antibiotic stewardship and minimize usage but to also improve biosecurity, productivity & health, and women participation in livestock farming. The project aimed to train a total of 2,300 livestock farmers as well as 580 veterinarians in India & SE countries - Nepal, Sri Lanka and Bangladesh to be trained under this project having the with the following objectives:

1. Appropriate use of antibiotics and effective alternatives to antibiotics.
2. Biosecurity and farm hygiene standards intended to promote better animal health and productivity.
3. Improved animal welfare standards and practices, over and above and with a more holistic approach than what is currently covered by the company's extension services.
4. Gender sensitization training.

Sathguru Management

Consultants (SMC) has been appointed as the implementation partner of the project in March 2023. Several Indian veterinary universities along with three international universities (one each in Nepal, Bangladesh and Sri Lanka) were appointed for implementing this project, as per the blueprint indicative of geographic priority. Regional Leads for implementation and locations to gather participants to enable widespread dissemination of awareness.

Theory of Change

The theory of change proposed for the project by SMC envisions a ripple effect that extends far beyond improved antibiotic stewardship. At its core, the project aims to strengthen farm-level biosecurity, improve livestock health and productivity, and enable greater participation of women in the livestock economy—delivering benefits that span animal welfare, public health, and rural livelihoods. The ToC aligns training, curriculum, and implementation with measurable outcomes:

Table 1: Institutes/Organizations Involved for imparting trainings and target number of Farmers & Veterinarians

Country	University	Training Targets	
		Farmers	Vets
India	PV Narasimha Rao Telangana State Veterinary University (PVNRTVU), Telangana	450	100
	Anand Agricultural University (AAU), Gujarat	450	100
	Guru Angad Dev Veterinary & Animal Sciences University (GADVASU), Punjab	300	100
Sri Lanka	University of Peradeniya (UoP), Kandy, Sri Lanka	400	100
Bangladesh	Sher-e-Bangla Agricultural University (SAU), Dhaka, Bangladesh	350	90
Nepal	Agriculture and Forestry University (AFU), Bharatpur, Nepal	350	90

Table 2: Current Training Status of the project

Until July 2025, the Regional cumulatively conducted 40 trainings for farmers and veterinarians across the region and have achieved training the following number of participants.

Category of Training	Total No. of Trainings
Total Number of Training Programs Completed for Farmers and Veterinarians	40
Number of Livestock Farmers Trained	
a. India	577
b. Other Countries	915
Total Number of Farmers Trained	1,492
Total Number of Veterinarians Trained	332

Note: Out of 1,492 livestock farmers trained, 575 were female, representing 39% of the total and out of 332 veterinarians trained, 124 were female, accounting for 37% of the total.

reduced AMR risk through prudent antibiotic use and alternatives, improved farm hygiene and waste management, higher farmer productivity and profitability,

and expanded opportunities for women in livestock farming. Early cohorts already report greater AMR awareness and confidence in biosecurity, signalling progress toward

long-term goals. This integrated approach lays the foundation for sustainable livestock systems and healthier communities.

Training Curriculum and

Glimpses or Trainings Across Regions



Effectiveness Assessment

As a technical partner for the entire network, SMC has collaborated with the One Health Education, Advocacy, Research and Training (COHEART) at Kerala Veterinary and Animal Sciences University (KVASU) and developed the curriculum for both farmer and veterinarian trainings. The training curriculum has also been translated to multiple regional languages. The evaluation of each training is performed at the end to ascertain its effectiveness using similar evaluation sheets across all trainings.

The project is currently undergoing as per the scheduled program with minor deviations.

Key challenges identified during project execution:

Time constraint: Initially, the duration of the training was proposed to be 3 days. However, this duration of the training posed challenges across both farmers and veterinarians - farmers find it difficult to leave their animals for an extended period, and the Veterinarians require nomination from State AHD, which prefers shorter training sessions. Finally, the training duration reduced to 1-2 days.

Limited participation of

women: In certain regions, especially Bangladesh, women's participation was limited due to a combination of social, cultural and structural barriers, thus making it difficult to achieve a female ratio in farmers' training. To mitigate the challenge, different strategies were adapted to ensure women participate in the trainings which include allowing 2 women from the families or allowing interested women to nominate another female participant from their social network to participate in the trainings. Currently Bangladesh has completed the trainings in the region and has achieved 38% & 18% of females' participation in farmers' and veterinarians' trainings, respectively.

Training delivery: Political instability in Bangladesh, in particular, severely hindered the planning and execution of training programs. With extreme support, swift and appropriate actions from the Bangladesh Regional Leads, trainings were held with lesser publicity to avoid attention in a university environment marred by protests and were organized at shorter notice to accommodate the overall uncertainty of protests.

Administrative hurdle: Due to change in leadership at the

university levels and administrative constraints, the implementation of the project has faced certain delay initially in some regions, especially Punjab and Telangana, which was later brought back on the track.

Conclusion

Such collaborative project One Health is crucial for promoting responsible use of antibiotics in rural livestock and agricultural systems where scope of misuse is often high due to limited awareness. The project aims to raise awareness among veterinarians and livestock farmers about the threat of AMR and its impact on human and animal health. It also emphasizes the discouragement of self-medication and over-the-counter use of antibiotics. Further, the farmers are also encouraged to adopt adequate biosecurity measures and nutritional management to keep their herd healthy. Veterinarians, the primary prescribers of antibiotics for animals are also encouraged to ensure judicious antibiotic usage based on accurate diagnosis. They are also urged to engage in effective communication with the farmer to explain the risks associated with AMR.