

Food and Agriculture Organization of the United Nations



STRENGTHENING NATIONAL CAPACITIES FOR ANTIMICROBIAL RESISTANCE (AMR) IN THE LIVESTOCK SECTOR

February 2022

SDGs:



Country:	Ukraine
Project Code:	TCP/UKR/3702
FAO Contribution:	USD 253 000
Duration:	1 February 2019 – 31 December 2021
Contact Info:	FAO Regional Office for Europe and Central Asia
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Implementing Partner

Ministry of Agrarian Policy and Food.

Beneficiaries

Livestock-sector stakeholders, including large-scale and backyard farmers, veterinarians, decision-makers and all those involved in antimicrobial resistance (AMR) surveillance and control.

Country Programming Framework (CPF) Outputs

CPF Priority Area 1: Business climate and law enforcement and setting up of a stable legal framework; CPF Priority Area 3: Agrifood production chain development and access to International markets; CPF Priority area 6: Environment and management of natural resources including forestry and fisheries.



BACKGROUND

Antimicrobial resistance is a growing global threat. Although much evolving AMR can be attributed to the use and misuse of antimicrobials in humans, the overuse of drugs in the livestock sector also jeopardizes the effective treatment of human and animal diseases.

There is very limited information available in Ukraine related to the use of antimicrobials in the livestock sector; however, recent studies carried out by national authorities on the sale of antimicrobials for use in veterinary practice provide clear evidence of the widespread use and possible misuse of antimicrobials along the meat and dairy value chains. Awareness of the threat of AMR development and spread is low among public authorities and the professionals involved in the livestock sector. In addition, no efficient system exists in the country to monitor antimicrobial use (AMU) and AMR in order to carry out the necessary risk assessments and put in place evidence-based policies for AMR risk management. In the light of this situation, Ukraine requested FAO assistance to enhance its capacities for antimicrobial resistance. The aim of the project was to contribute to building such capacity. It would do this through the revision and implementation of existing national legislation and policies, including the recently developed AMR National Action Plan, through increased AMU and AMR surveillance and risk management, and through the promotion of strategic AMR advocacy, with the existing AMR national working group playing a key role in ensuring the coordination of AMR activities at country level.

IMPACT

The project introduced to the country a new awareness of the risks associated with antimicrobial resistance. It significantly expanded knowledge on the situation of AMR in livestock, antibiotic use, antibiotic resistance and AMR-related legislation, and increased laboratory capacity to detect AMR. As a result of project activities and the minimization of AMU/AMR in the livestock, food safety and environment sectors, the livelihood of livestock producers of Ukraine will be improved and consumers will be provided with safe food.

ACHIEVEMENT OF RESULTS

The project was aligned with the four pillars of the FAO AMR Action Plan in support of the World Health Organization (WHO)-led Global Action Plan on AMR. The pillars are designed to: i) improve awareness on AMR and related threats; ii) develop capacity for the surveillance and monitoring of AMR and AMU in food and agriculture; iii) strengthen governance related to AMU and AMR in food and agriculture; and iv) promote good practices in food and agricultural systems, and the prudent use of antimicrobials. The project had three outputs, all of which were achieved. The first output regarded an improved understanding of the national legislative frameworks related to AMR and of the use of antimicrobial agents in the livestock sector. The project reviewed existing legislation, validated its findings with the relevant national authorities and representatives from WHO and the World Organisation for Animal Health (OIE), and prepared a report prioritizing the identified needs and making recommendations for improvement. The second output involved capacity-building in AMU and AMR monitoring, surveillance and risk management. Following an assessment of AMU among stakeholders and of the ability of the national laboratory to conduct AMR surveillance, theoretical and practical training was provided for epidemiologists and laboratory staff of the State Scientific and Research Institute for Laboratory Diagnostics and Veterinary and Sanitary Expertise (SSRILDVSE).

The final output concerned strategic advocacy on AMR-related risks to humans, animals, food, plants and the environment. In order to raise awareness of these risks, the project prepared Ukrainian versions of three manuals on the correct use of antibiotics and antimicrobials in the livestock sector, and organized a press conference during World Antibiotic Awareness Week in November 2019. Further activities under this output included a Webinar on strengthening national capacities to address AMR-related risks, attended by approximately 120 specialists. Finally, in November 2020, FAO and WHO organized an online briefing for 28 food safety specialists, food producers, farmers, and journalists, dedicated to promoting World Antimicrobial Awareness Week and discussing the prudent use of antimicrobials in humans and animals.

IMPLEMENTATION OF WORK PLAN AND BUDGET

As a result of delays caused by the COVID-19 pandemic, a no-cost extension of six months was granted to allow project activities to be completed. All activities were implemented within the original budget. Among the risks envisaged were a lack of commitment and collaboration from key line ministries and institutions, a lack of human resources, delays in obtaining government endorsement and technical disagreements among stakeholders. These risks did not arise or were successfully managed.

FOLLOW-UP FOR GOVERNMENT ATTENTION

It is recommended that the government seek donor funding for a follow-up project. All similar future projects should include hands-on training to staff involved in AMR testing. It is also recommended that the FAO 2020 case study on extended-spectrum beta-lactamase (ESBL) *Escherichia coli* (E. coli) in relevant food-producing animal species in Ukraine, conducted under the project, be followed up.





SUSTAINABILITY

1. Capacity development

The project aimed to support the development of regulatory and legislative cornerstones to sustain long-term actions that will contribute to addressing AMR, and thereby provide the framework within which enhanced capacities can be utilized beyond the life of the project. To this end, the project built capacity and awareness among all stakeholders, from farmers to laboratory staff and management personnel. The enhanced relationship with the State Service of Ukraine on Food Safety and Consumer Protection (SSUFSCP) is expected to have a significant impact in the future. The project's collaboration with WHO and OIE will further consolidate commitment to the sustainability of the project.

2. Gender equality

Although the project did not specifically focus on gender equality, project activities generally met the needs and priorities of women and men beneficiaries and stakeholders. More women than men benefited from the laboratory training provided under the project.

3. Environmental sustainability

Environmental issues were not directly addressed by the project.

4. Human Rights-based Approach (including Right to Food and Decent Work)

Human rights issues were not directly addressed by the project.

5. Technological sustainability .

The project strengthened capacities of surveillance of antibiotic use and resistance at a technical level through the provision of training to epidemiologists and laboratory personnel.

6. Economic sustainability

Issues of economic sustainability issues were not directly addressed by the project.

DOCUMENTS AND OUTREACH PRODUCTS

- Garkavenko, T. 2021. Results of the laboratory analysis of samples of faeces and milk from cattle, faeces from small ruminants, pigs and poultry. September 2021. 55 pp.
- Association of Ukrainian Pig Breeders. Final narrative report for provision of "Implementation of virtual-online interview survey on the use of antimicrobials in Ukraine, with Annexes". 4 pp.
- □ FAO. 2020. Antibiotics in livestock. Leaflet. 2 pp.
- Garkavenko, T. 2019. Assessment report on AMR surveillance in zoonotic and commensal bacteria and laboratory capacities in Ukraine. 9 pp.
- Shulima, A. & Kireeva, I. 2019. Legislation relevant for antimicrobial use and antimicrobial resistance (AMU/AMR) in Ukraine. 40 pp.
- Mazzolini, E. & Keck, N. 2019. Assessment of the national surveillance system for antimicrobial resistance in the food and agriculture sectors. 41 pp.



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Livelihood of livestock producers of Ukraine is improved and safe food is provided to consumers through minimizing AMU/AMR on the livestock, food safety and environment sectors				
Outcome	Containment of AMR development and spread in Ukraine through enhanced and harmonized national capacities for AMU and AMR monitoring and AMR risk management following international guidelines and standards				
	Indicator	 National legislative frameworks and policies related to antimicrobial resistance and the use of antimicrobial agents in the livestock sector are reviewed and analysed. Strengthened AMR surveillance and risk management capacities. Awareness raised among decision-makers and strategic advocacy on the risks related to AMR for humans, food, animals, plants and the environment carried out. 			
	Baseline	 The National Action Plan on AMR is developed and the first draft of the Operational Plan is developed. The Operation Plan is incomplete, missing essential components, and lacking a clear understanding of the legal relationship among business entities in the legislatively regulated sphere, including administrative relations between them and the authorities in the exercise of rights and obligations provided by legislative acts, normative and regulatory acts. Initial limited capacity on AMR surveillance and low level of AMR control and risk management in livestock production sector by the Competent Authority in Ukraine. The laboratory use of outdated methodology for testing AMR. There is no capacity to test minimum inhibition concentrations (MIC). The risk of antimicrobial resistance in Ukraine is inadequately addressed owing to a low level of awareness of managerial staff and the public regarding the mechanisms of emergence and spread of AMR, and the level of threat to humans consuming animal and plant products. 			
	End Target	 Identification of regulatory needs and options to address AMR-related priorities and set up procedures for supervision and control. Strengthening the capacities of surveillance of antibiotic use and resistance in Ukraine. The increase of the knowledge level of management personnel and public awareness of the risks associated with antimicrobial resistance. 			
	Comments and follow-up action to be taken	The project outcome was fully achieved.			
	National legislative frameworks and policies related to antimicrobial resistance and the use of antimicrobial agents in the livestock sector, including weaknesses and strengths are better understood				
Output 1	Indicators		Target	Achieved	
Output 1	Regulatory needs and options to address AMR- related priorities identified and procedures set up for supervision and control.		Identification of regulatory needs and options to address AMR-related priorities and set up procedures for supervision and control.	Yes	
Baseline	0				
Comments	This output wa	s tully achieved.			
	Review of existing AMR governance				
Activity 1.1	Achieved	Yes		. I Iliun ta a	
	Comments	A report on the results of legal analysis of the legislation relevant for AMU and AMR in Ukraine was prepared. Recommendations were also provided			
	Valida <u>tion of</u> th	ne assessment results and recommen	dations on AMR governance		
A objective of a	Achieved	Yes			
Activity 1.2	Comments	omments The results of the review and recommendations were validated during consultations with relevant national authorities and representatives from WHO and OIE.			
	Preparation of	an AMR toolkit with guidelines based	on needs and recommendations		
Activity 1.3	Achieved	Achieved Yes			
	Comments	A report of AIVIR-relevant legislation was prepared, identified needs were prioritized and recommendations were made.			

	AMU and AMR monitoring, surveillance and risk management capacities increased				
Output 2	Indicators		Target	Achieved	
	Strengthened of	capacities of surveillance of	Strengthening the capacities of surveillance of	Vec	
- "	antibiotic use a	and resistance in Ukraine.	antibiotic use and resistance in Ukraine.	165	
Baseline	0 This output wa	c fully achieved			
comments	i nis output was tully achieved.				
	Achieved	Yes			
Activity 2.1	Comments	A virtual-online interview survey on AMU targeting stakeholders (dairy, swine, beef cattle and chicken farms, veterinarians, small ruminants, backyard farmers) was conducted between August 2020 and April 2021. A total of 425 samples of faeces from cattle, swine, ruminants and chicken, and of cattle milk from 24 regions of Ukraine was collected by SSUFSCP, and 504 respondents were interviewed. Based on the results of the research, a Catalogue of Antimicrobials was developed. Ten reports on the results of the survey on the use of antimicrobials in livestock production in Ukraine were prepared by the implementing partner. The results of the laboratory processing of the samples of faeces and milk from cattle, and the faeces from small ruminants, pigs and poultry were prepared and shared with SSUFSCP.			
	Assessment of	AMR monitoring, surveillance and ris	k assessment & management capacities		
	Achieved	Yes			
Activity 2.2	Comments	An assessment mission using the FAO Assessment Tool for Laboratories and AMR Surveillance Systems (FAO-ATLASS) was held in Kyiv from 30 September to 4 October 2019. The objective of this mission was to assess the capacity of the national laboratory in Ukraine to conduct surveillance of AMR using FAO-ATLASS methodology. The results of the assessment and the presentation of the FAO-ATLASS mission were included in a final report. The report provided short- and mid-term recommendations for each laboratory, and for each of the five areas of the AMR surveillance systems: i) Governance, ii) Data collection and analysis - epidemiology unit, iii) Data production network - laboratories, iv) Communication, and v) Sustainability. An assessment of the national AMR surveillance system in the food and agriculture sectors was developed and provided.			
	Capacity buildi	ng laboratory training covering both	theoretical and practical trainings		
	Achieved	Yes			
Activity 2.3	Comments	 In 2021, two training events were of of SSRILDVSE. The first training for effective of SSRILDVSE. The first training for effective of SSRILDVSE. The key topics were: Strategies and legislation for the foods and animal pathogenic bare The FAO monitoring study on A Ukraine. Technical specifications for AMI veterinary antimicrobial stewar laboratory tests, analysis and in Technical specifications for same content and fresh meat at slauge border control points for isolati <i>Campilobacter coli, Campilobacter coli, Campilobacter and interpreted.</i> The practical train detected and solved, thus contribut Ukraine. Hands-on training to staff projects. As MIC data should be producing animal species in Ukraine. 	rganized for Ukrainian epidemiologists and labora epidemiologists took place on 4 October via Zoom e control of selection and diffusion of AMR in animateria. MR and AMU as a case study to train AMR surveill. R surveillance for AMR veterinary official monitorin dship: reference population, bacteria isolates, sam terpretation of results. pling of fresh manure at herd level and sampling of ther level of food-producing animals, at retail trad on of isolates of <i>Salmonella</i> spp., commensal <i>Eschi</i> <i>ter jejuni, Enterococcus faecalis</i> and <i>Enterococcus</i> je. actical laboratory training course on AMR laborato E, conducted in Kyiv on 15-16 December. On the fi rial culture; on the second day, the plate results w ing session was very fruitful as knowledge barriers ting to the development of the AMR surveillance se involved in AMR testing is recommended in future wided by SSRILDVSE to FAO after the end of the pr e FAO 2020 case study on ESBL <i>E. coli</i> in relevant for the followed up by analysing and describing the re	tory staff for hals, animal ance in ang and the ple size, of caecum le and at erichia coli, faecium to ory testing rst day, ere read were ystem in similar oject it is pod- esults of	

	Strategic advocacy on the risks related to AMR for humans, food, animals, plants and the environment				
Output 3	Indicators		Target	Achieved	
	Increased knowledge level of management personnel and public awareness of the risks associated with antimicrobial resistance.		The increase of the knowledge level of management personnel and public awareness of the risks associated with antimicrobial resistance.	Yes	
Baseline	0				
Comments	This output was fully achieved.				
	Preparation &	dissemination of educational materia	ils		
Activity 3.1	Achieved	Yes			
	Comments	In 2021, Ukrainian versions of manuals "How to use antibiotics effectively and responsibly in dairy/poultry/pig production" and "Prudent and efficient use of antimicrobials in pigs and poultry" were prepared for publication on the FAO Web site. The publication "Antibiotics in livestock" (2020) is available in Ukrainian at: www.fao.org/publications/card/en/c/CB1585UK			
	Events on raising awareness				
	Achieved	Yes			
Activity 3.2	Comments	A press conterence on the occasion of World Antibiotic Awareness Week was held in Kyiv, on 22 November 2019. (www.youtube.com/watch?v=LT8Tk976tsw). On 18 November 18 2020, a training Webinar was held on the topic: "Implementation of the FAO Project on Strengthening National Capacities to Address Antimicrobial Resistance (AMR) Risks". During the Webinar, the practical aspects of the implementation of the tasks of the project were considered and discussed. Approximately 120 specialists from the State Service of Food Safety and Consumer Protection, territorial bodies in regions and districts, and veterinary doctors took part. On 25 November 2020, FAO and WHO held an online briefing to promote World Antimicrobial Awareness Week and discuss the prudent use of antimicrobials in humans and animals. A total of 28 food safety specialists, food producers, farmers and journalists participated in the briefing. The event was broadcast on the United Nations Ukraine Facebook page and achieved over 3 600 views. (www.facebook.com/UnitedNationsUkraine/videos/691767328381931)			

Partnerships and Outreach For more information, please contact: <u>Reporting@fao.org</u>

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