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PART I – ADMINISTRATIVE INFORMATION

| . Indicate which "Call for Proposals" this application corresponds to: Small Grants Scheme for Operational/I Implementation Research to tackle the threat on Antimicrobial | | | | |
|--|--|--|--|--|
| Resistance | | | | |
| RINCIPAL INVESTIGATOR | | | | |
| ast (family) name(s): 3. First and given name(s): | | | | |
| anodze | Lia 6 🕅 Ms 🗆 Mr 🔘 Dr 🔘 Prof | | | |
| . ⊠ Woman □Man | 0. 🛮 1013 | | | |
| Full postal address of the principal investigator: 30 |), building 6, Vasniijvari, Tbilisi, Georgia | | | |
| . Country: Georgia | 9. Telephone (office): (+995) 322 19 25 95 | | | |
| . Telephone (mobile): (+995) 595993 804 11. Primary e-mail: Secondary e-mail: | | | | |
| 2. Are you a previous TDR trainee or grantee? | 13. If Yes, indicate the most recent grant | | | |
| Yes | | | | |
| | and Grant Date: 12.10.2015 | | | |
| PROJECT | and Grant Date: 12.10.2013 | | | |
| 14. Project title | age of antibiotics for stimulating livestock raising in the population of the target area, and raising awareness | | | |
| 14. Project title Establishing a possible connection between usanouseholds and circulation of AMR strains in the of the population and persons employed in veteral. 15. Abstract / Executive summary (Maximum 0.5 pages of the framework of the project with the help of 100 households of 2 municipalities from selected antibiotics for poultry raising in households. In a sales units and veterinary facilities (including veinformation regarding antibiotics in animal food (including name, frequency, dosage). At the sales are included and personnel of the carried out among appropriate personn | age of antibiotics for stimulating livestock raising in the population of the target area, and raising awareness erinary sector ges) special questionnaires a survey will be carried out in the ded region in order to study the practice of using addition, a survey will be conducted in the animal feed reterinary pharmacies). This will allow us to gain defand also, antibiotics used as a medicinal product armetime, the data from registry books for silities will be processed/analyzed and a survey will be see institutions. This will allow us to study data on the microbiological strains in the given region. | | | |
| 14. Project title Establishing a possible connection between use nouseholds and circulation of AMR strains in the of the population and persons employed in veteral 15. Abstract / Executive summary (Maximum 0.5 pages of 100 households of 2 municipalities from selecterantibiotics for poultry raising in households. In a sales units and veterinary facilities (including vinformation regarding antibiotics in animal food (including name, frequency, dosage). At the sale bacteriological tests from medical inpatient factoried out among appropriate personnel of the antimicrobial resistance and information about Based on the processing / analysis of the recent to plan further interventions to improve the the population and veterinarians on the use of informational material for medical personnel, the project, training the framework of the project. | age of antibiotics for stimulating livestock raising in the population of the target area, and raising awareness erinary sector ges) special questionnaires a survey will be carried out in the design in order to study the practice of using addition, a survey will be conducted in the animal feed reterinary pharmacies). This will allow us to gain and also, antibiotics used as a medicinal product arme time, the data from registry books for dilities will be processed/analyzed and a survey will be rese institutions. This will allow us to study data on a microbiological strains in the given region. Served data, possible connections between usage of the institution (including preparing informational material for antimicrobial remedies in the field of agriculture, training program for medical personnel and veterinariar uning of medical personnel and veterinarians will be | | | |
| 14. Project title Establishing a possible connection between use nouseholds and circulation of AMR strains in the of the population and persons employed in vete 15. Abstract / Executive summary (Maximum 0.5 pay In the framework of the project with the help of 100 households of 2 municipalities from selecter antibiotics for poultry raising in households. In a sales units and veterinary facilities (including veinformation regarding antibiotics in animal food (including name, frequency, dosage). At the sale bacteriological tests from medical inpatient factoried out among appropriate personnel of the antimicrobial resistance and information about Based on the processing / analysis of the recent antibiotics in poultry and circulating AMR strain us to plan further interventions to improve the the population and veterinarians on the use of | age of antibiotics for stimulating livestock raising in the population of the target area, and raising awareness erinary sector ges) special questionnaires a survey will be carried out in the design in order to study the practice of using addition, a survey will be conducted in the animal feed reterinary pharmacies). This will allow us to gain and also, antibiotics used as a medicinal product arme time, the data from registry books for dilities will be processed/analyzed and a survey will be rese institutions. This will allow us to study data on a microbiological strains in the given region. Served data, possible connections between usage of the institution (including preparing informational material for antimicrobial remedies in the field of agriculture, training program for medical personnel and veterinariar uning of medical personnel and veterinarians will be | | | |

| 20. | Acceptance of g | eneral cond | itions by the | Principal | Investigator |
|-----|-----------------|-------------|---------------|-----------|--------------|

I have read the conditions set out in the instructions provided with the call for proposal and in this application form and, if my application is successful, I agree to abide by them. I shall be actively engaged in the project.

Signature: L. Sanocze

Date: 15.07.2019

| INSTITUTION | | | | |
|--|----------------------------------|--|--|--|
| 21. Full name and postal address of the institution: Georgian Association for Professionals in Infection Control and Epidemiology in partnership with Ministry of internally displaced persons from the occupied erritories, labour, health and social affairs (Health Care Department) and Ministry of Environmental Protection and Agriculture, and National Center for Disease Control and Prevention | | | | |
| 22. Country: Georgia | 23. Telephone: (+995 32) 2141110 | | | |
| 24. Institution's website: www.gapinceorg.ge; www.moh.s | gov.ge; www.ncdc.ge | | | |
| 25. Type of organization: ☐university ☐research i☐ disease control programm | | | | |
| 26. Legal status: ⊠ private ⊠ public □ other (specify): | | | | |
| Institutional endorsement (to be completed by the Responsible Administrative Authority. This person should be fully authorized to enter into contractual arrangements on behalf of the Institution) | | | | |
| 27. Full name: lia Janasvili 28. Email address: likajanashvili@gmail.com | | | | |
| 29. Position: Founder and President of Association | | | | |
| 30. I confirm that I have read this application and that if support is granted, the work will be accommodated and administered in this institution. This institution will provide the necessary support and oversight to facilitate quality implementation and reporting of the proposed work. I confirm that principal investigator's relationship with the institution is as follows: | | | | |
| Involvement in the research will be conducted according to the Law of National Bioethics. The principal investigator will conduct surveillance over the fieldwork activities and will develop final report. | | | | |
| signature: L. Janashvi'li | Date: 15,04.2019. | | | |

PART II - PROJECT DESCRIPTION

1. Rationale and background

(Maximum 1 page)

Targeted use and misuse of antimicrobial substances in recent years has led to increased numbers of resistant organisms and resistance mechanisms that can make infectious diseases uncontrolled. In addition, as a result of global transportation and trade, resistant organisms rapidly spread from country to country. Around 25,000 people from 29 member countries of the WHO Europe region die every year as a result of infections caused by antibiotic-resistant strains. Majority of them get infected in medical facilities.

Presumably, by 2050 the deaths of 10 million people and 100 trillion dollars spent for treatment will be caused by antibiotic-resistant strains, because the infections caused by resistant strains require longer and more expensive treatment.

There is insufficient information in Georgia regarding pathogens causing infections associated with medical services and their antibiotic resistance, but based on the annual reports on antibiotic consumption (even though these reports only include information about imported antibiotics) the use of antibiotics in the country has an increasing tendency (for example 3rd generation cephalosporins, beta lactamases). One of the possible reasons for this can be the uncontrolled use of antimicrobial substances (including in veterinary) and antimicrobial resistance.

International experience and challenges in the country has led to development and implementation of the National Strategy against Antimicrobial Resistance, for which the important tasks are the following: supervision of antibiotic consumption, surveillance on antimicrobial resistance, raising awareness and education, safety of human and animal food.

Despite the priorities set out in the Strategy, the usage of subtherapeutic dosages of antibiotics for livestock growth stimulation in the households is not yet researched and properly controlled. This support the increase of antibiotic resistance in such areas and dissemination of resistant organisms to humans with the help of the food chain and / or during healthcare.

It should be mentioned that we have taken steps in improving infection control issues in medical institutions and bacteriological laboratories. However, in order for the problem to be solved we need a common healthcare approach. Therefore, the project will be an important installment in achieving the goals set in the Strategy.

2. Objectives and outcomes

This section should answer the question "Why is this project needed at this time at this place?" List up to 3 major objectives and their related outcomes. Objectives should be SMART (Specific, Measurable, Achievable, Realistic and Time Bound) and include as relevant research and capacity building objectives.

| | Objectives (in SMART format) | Expected outcomes (the impact or changes in the field that the project will have contributed to) |
|----|--|---|
| 1. | Studying the trend of usage of antibiotics for stimulating of bird growth in small households | The use of antibiotics for stimulating of bird growth in selected municipalities has been established, as well as the source of antibiotics (food, water, etc.), name of medicine, dosage, the main place of purchase of medicine |
| 2. | Establishing a possible connection between household product consumption and the spread of AMR | Resistance has increased in specific municipality population / households to those antibiotics which are more often used for stimulation of bird growth |
| 3. | f be weekelde of the | Awareness regarding antimicrobial resistance has increased among members of households, personnel of veterinary and medical institutions by using information booklets and training |

3. Key deliverables and success indicators for the proposal

This section should answer the question "What needs to be done to achieve the objectives?" List up to four deliverables produced by this project (e.g. research evidence, trained scientists, new strategic approach, policy briefs, strengthened network, etc.).

For each deliverable, provide one indicator of achievement and its target date.

Milestones are events that mark progress towards the achievement of an objective. List one or two milestones per deliverable and per year. Add as many rows as necessary.

| Deliverables list | Deadline (by) |
|---|---------------|
| Deliverable 1: Selection of target region / municipalities, target groups (households, animal feed sales units, veterinarians) | 20.10.2019 |
| Milestone 1.1 Studying household development in different regions in order to select the most advanced region / municipalities in terms of poultry development | 10.10.2019 |
| Milestone 1.2 Studying number of population, distribution in selected region / municipalities | 15.10.2019 |
| Milestone 1.3 Identification of household, food sales units and veterinarians in selected region/ municipalities | 20.10.2019 |
| Success indicator 1: The survey region / municipalities, household owners, animal feed sales units, veterinarians (including addresses) has been selected | |
| Deliverable 2: Interviewers are trained, final versions of the questionnaires are prepared | 25.11.2019 |
| Milestone 2.1 Prepare the final (revised) version of the questionnaires for persons employed in households | 30.10.2019 |
| Milestone 2.2 Prepare the final (revised) version of the questionnaires for the staff of animal feed sales units and for veterinarians | 10.11.2019 |
| Milestone 2.3 Prepare trainings for interviewers | 15.11.2019 |
| Milestone 2.4 Organizing / conducting training for interviewers | 20.11.2010 |
| Milestone 2.5 Testing of questionnaires | 25.11.2019 |
| Success indicator 2: The Final (revised) versions of the questionnaires (for households / animal feed sales units' employees / veterinarians) are prepared, interviewers are trained | |
| Deliverable 3: Determining the type, duration of use and dosage of antibiotics used in subtherapeutic dosages for stimulation of bird growth in households in specified region / municipalities | 20.02.2020 |
| Milestone 3.1 Conduct a research to survey households (a total of 100 households) | 31.12.2019 |
| Milestone 3.2 Conduct a research to survey employees of animal feed sales units / veterinarians | 15.01.2020 |
| Milestone 3.3 Questionnaire processing | 31.01.2020 |
| Milestone 3.4 Analysis of the obtained results | 20.02.2020 |
| Success indicator 3: The type/types, duration of use and dosage of antibiotics used in subtherapeutic dosages for stimulation of bird growth in households is determined | |
| Deliverable 4: Determination of connection between antibiotic resistant strains circulating in the region / municipalities and antibiotics used for stimulation of bird growth in households | 15.04.2020 |
| Milestone 4.1 Preparation of researchers for the purpose of interviewing / processing the results of bacteriological tests done in medical institutions for the purpose of identification of circulating AMR organisms in the region / municipality | 01.03.2020 |
| Milestone 4.2 Processing of the results of bacteriological tests done in medical institutions and interviewing the medical personnel for the purpose of identification of circulating AMR organisms in the study region / municipalities | 10.03.2020 |

| Milestone 4.3 Identification of the most common microbiological strains / AMR strains in the region / municipalities based on interviewing / processing the results of bacteriological tests done in inpatient medical institutions | 20.03.2020 |
|---|------------|
| Milestone 4.4 Establishing the connection between the antibiotics frequently used for bird raising in households and AMR strains circulating in medical institutions and preparing a relevant report | 15.04.2020 |
| Success indicator 4: Connection between antibiotics used for stimulation of bird growth in households and microbiological strains/ AMR strains identified in medical facilities has been determined, the report has been prepared | |
| Deliverable 5: Raising awareness of staff members of households, animal food sales units' personnel, veterinarians and medical institutions' personnel regarding antimicrobial resistance issues | 30.09.2020 |
| Milestone 5.1 Preparation / printing of informational material (booklets) for employees of households and animal food sales units / veterinarians regarding use of antimicrobial drugs for livestock raising and prevention of possible outcomes, as well as for using them in veterinary for treating purposes | 15.05.2020 |
| Milestone 5.2 Preparation / printing of informational material (booklets) for healthcare personnel (epidemiologists / infection control specialists, medical personnel of medical facilities) regarding introduction of practice of taking a sample for bacteriological test before using antibiotics and active use of data from registry books for bacteriological tests in the process of supervision of infections associated with medical services | 31.05.2020 |
| Milestone 5.3 Preparation of the training course for the healthcare personnel (epidemiologists / infection control specialists, medical personnel of medical facilities) regarding introduction of practice of taking a sample for bacteriological test before using antibiotics and active use of data from registry books for bacteriological tests in the process of supervision of infections associated with medical services | 30.06.2020 |
| Milestone 5.4 Preparation of the training course for veterinarians regarding use of antimicrobial drugs for livestock raising and prevention of possible outcomes, as well as for using them in veterinary for treating purposes | 31.07.2020 |
| Milestone 5.5 Training of health personnel according to the prepared program | 31.08.2020 |
| Milestone 5.6 Training of veterinarians according to the prepared program | 30.09.2020 |
| Success indicator 5: Awareness on antimicrobial resistance issues of staff members of households, animal food sales units' personnel, as well as awareness of veterinarians and medical institutions' personnel is raised on the basis of relevant informational / educational interventions | |

4. Design and methods

Describe the design and the methods to be used, both for research and for capacity building objectives. This section should answer the question "How will the project generate the deliverables?" Describe the activities that will take place and explain how they will generate each planned deliverable.

Suggested sub-titles:

- a) study setting;
- b) study design;
- c) sampling and study population (including sample size estimation);
- d) data collection tools (questionnaire / variables; biological measurements / lab investigations; anthropometric measurements; others)

(Maximum 5 pages)

The survey will be conducted in two municipalities of the preliminary selected region of Georgia, specifically, in the pre-selected 100 households, where small poultry farms are available and in animal feed selling points located in these municipalities. Also, inpatient medical facilities of these municipalities will be involved in the survey.

The combination of quantitative and qualitative methods was used to achieve the above mentioned objectives.

The household survey will be carried out within the framework of the quantitative component. A face-to-face survey was used. For the purposes of the research, a structured questionnaire was developed, which will complement the researcher-interviewer with the principle of anonymity. As for the selection of a particular municipality, households will be selected in a random manner, according to the number of birds (30 or more birds).

In total, 50-50 households of two municipalities of the particular region will be selected based on the objectives of the research.

It should be noted that the questionnaire will not identify the respondent's identifying evidence.

In the field of inpatient medical institutions the research will be carried out within the qualitative component, focus group discussion techniques will be used for the treatment of the results of bacteriological researches (focus groups will be presented by the epidemiologist/Infection control specialist of the particular institution, the doctor of intensive therapy department, the main nurse of the institution, and other medical personnel may also be involved in the focus group). In each in-patient facilities 1 group discussion will be conducted, and group discussions will be conducted in all inpatient facilities of selected municipalities. On the basis of audio recording of group discussions, detailed transcripts of the discussion will be prepared for further analysis of data.

5. Data management and statistical analysis

Describe the data management and analysis plans, tests used for data analysis and statistical package(s) used

(if applicable; maximum 1 page)

Questionnaires filled in the quantitative research component will be included and processed by the Special Statistical Program (SPSS).

The formal analysis of the obtained data will be implemented within the qualitative component (differentiation of the actual and evaluation parts); After this logical analysis of the evaluation part will be implemented.

6. Quality assurance

Describe the steps you will take to ensure the quality of the work and of the results. For example, you may refer to adherence to standards, norms, procedures, control and review mechanisms, supervisory responsibilities, etc. Institutions and principal investigators are hereby advised that each project supported by TDR may be subject to TDR and/or external audits and evaluations.

(Maximum 1 page)

The survey will be implemented with the involvement of four institutions:

Ministry of internally displaced persons from the occupied terrirories, labour, health and

social affairs (Health Care Department)

- Ministry of Environmental Protection and Agriculture
- National Center for Disease Control and Prevention
- Georgian Association for Professionals in Infection Control and Epidemiology

Questionnaires will be prepared by a group of researchers and will be agreed with the Bioethics National Council.

The training will be prepared on these questionnaires for the people involved in the survey, their completed questionnaires will be verified by the internal audit group, randomly in 10% of the cases, in both municipalities equally. The internal audit group will write the report on the abovementioned verification.

7. Results uptake and use; sustainability

Explain the approach envisaged to facilitate the application and use of the project results to make a change (i.e. contribute to an outcome). Explain how the outcomes are expected to become sustainable. Include the assumptions used.

(Maximum 1 page)

After completion of the project it is important to conform to veterinary legislation, promoting universal health principles, prioritization of control of animal diseases and modernization of veterinary education.

Results:

- Raising awareness of the people employed in households on antimicrobial resistance, which contributes to their involvement in global issues
- Reduction of antibiotics in sub-therapeutic doses in animal husbandry and poultry impact on individuals engaged in policy development, changes in legislation
- In veterinary, antibiotics should be used only by doctor's prescriptions, according to popularization of the field
- Conduct bacteriological research before the use of antibiotics /promote microbiological research, in the region.

Results of sustainability indicators:

- Informed population of the region regarding the universal health issues
- Reduce the use of antibiotics for stimulation of animal growth as a result of increasing population awareness, antibiotics are not prescribed groundlessly
- Increase the responsibility of the employees in pharmacies in relation to issuing antimicrobial means - a requirement for a veterinary recipe.
- Reduce the resistance in the selected regions.

8. Dissemination of results and publication

TDR is actively promoting access for researchers in disease-endemic countries to research results and publications and is therefore requiring all publications arising from funded projects to be made available in open access. Please indicate how you intend to disseminate your results and who your target audience is. For example, publication in a peer-reviewed journal; monograph to be widely disseminated; preparing / sharing a policy-brief with decision makers. (Maximum 1 page)

The findings of the survey will be published on the web-pages of the organizations concerned (including the Ministry of internally displaced persons from the occupied terrirories, labour, health and social affairs, Ministry of Environmental Protection and Agriculture, NCDC website), in British Medical Journal and electronic journals within the framework of "Universal health coverage vs. Antimicrobial Resistance":

http://www.euro.who.int/ data/assets/pdf_file/0007/357199/POP-Georgia-2017-eng.pdf?ua=1 Commemorative/leaflets will be prepared for the community of two regions participating in the

The results will be reported to local self-governments, to maintain the achieved results and to support the AMR reduction policy.

9. Ethical and environmental considerations

Provide information on how you plan to ensure adequate protection of the human subjects' rights and well-being. All research protocols involving human subjects must be approved by the applicable institutional / national ethics review committee(s) and by WHO Ethics Review Committee before funding. Please indicate whether there is a well-established local/national ethical approval committee.

Describe measures that will be in place to reduce the project's potential impact on environment (for example disposal of chemicals, biosafety measures, environmental pollution, CO2 emissions etc.).

(Maximum 1 page)

Respondents' rights will be protected during the survey. Forms of preliminarily prepared consent of the research subject will be compatible with the Bioethics National Council. Participation in the survey will be voluntary. Before the start of the survey, the researcher will provide the research subject with complete information on the objectives of the study. Only research subject will be followed by the study and signature of the consent form. Prior to recording interviews with focus groups, this will be agreed with members of focus groups, they will be informed that their confidentiality will be protected despite the use of recording devices. Only after their consent, the interview will be recorded (In their consent sheet will be indicated on the audio-tape of an interview).

The information about the respondents will be confidential. Questionnaires and audio-tapes will not be personalized. They will be given the study numbers (study codes). Data encoding will be done by head of research/chief researcher. Only they will have access to coded material.

10. Risk management:

Enumerate foreseeable risks to the successful achievement of project objectives, along with proposed measures to mitigate those risks.

| Potential risks identified | Proposed measures to mitigate risks |
|---|--|
| Resistance of people employed in the households to research | community leader involvement |
| Employees of animal feed selling points refuse to participation in the survey | Involvement of relevant local self-government services |
| Refusal to present results of bacteriological research | Involvement of the Ministry of Health |

List the project team by filling in the table below. Add as many lines as needed. The percentage of time allocated to the project must also be calculated. For example, on a 40-hour work week, working two hours five days a week is equivalent to 25% full-time equivalent (FTE). 11. Project team

| Please provide as appendix CVs for each of the investigators and not some appendix. | CVs should | be merged together into one appendia. | | | 7 70 |
|---|------------|--|--|------------------------|--------------|
| maximum lour pages: 1 cooking | Gender | Institution name | Expertise | Role in the project | FTE P |
| Lia Janashvili | E | Georgian Association for Professionals in Infection Control and Epidemiology | MD; Founder and President of Association; Member of coordinating committee organized by US disease control center group, which is working on infection prevention and control guidelines for Ministry of internally displaced persons from the occupied territories, labour, health and social affairs of Georgia IPC Project - US CDC – South Caucasus Country Office); co supervisor and trainer of continuous medical education short term programs and infection control issues accredited on the base of issues accredited on the base of Tbilisi State Medical University; Director –Medical Corporation "Primed" Ltd, Tbilisi, Georgia - Managing Director; Doctoral Student at "New Vision University" | Survey Coordinator | % 00 0 |
| Tinatin Gabrichidze | > | Georgian Association of Epidemiologists and Infection | Doctor Epidemiologist, Vice President of Association | Investigator | 20 % |
| Nino Mchedlishvili | 3 | Georgian Association of Epidemiologists and Infection | MBA; Financial Officer | Financial Officer | 10 % |
| l is Sanodže | 3 | Control Specialists National Center for Disease Control | MD; Graduated from South Caucasus Field Epidemiology and Laboratory | Principal Investigator | 20 % |

| | 15 % | % 02 | 20 % |
|--|--|---|---|
| | Investigator | Investigator | Investigator |
| Training Program (CDC – USA); Chief specialist (Epidemiologist) of Communicable Diseases Department; Member of Infection Control and Antimicrobial Resistance National Council; National consultant, Antimicrobial resistance (AMR) capacity building technical assistance for HG and Aversi in Georgia Project Mott Antimicrobial Chemotherapy; Lead Mentor of Mentorship Program: "Modern approaches of Epidemiology and Epi Surveillance and Practical Aspects of Outbreak Investigation" | MD; Head of Health Care Department; Member of Infection Control and Antimicrobial Resistance National Council | Doctor Epidemiologist; Graduated from South Caucasus Field Epidemiology and Laboratory Training Program (CDC – USA); Health Care Department, Head of Regulation Division; Member of Infection Control and Antimicrobial Resistance National Council; Member of coordinating committee organized by US disease control center group, which is working on infection prevention and control guidelines for Ministry of internally displaced persons from the occupied territories, labour, health and social affairs of Georgia (Georgia IPC Project - US CDC – South Caucasus Country Office) | Doctor Epidemiologist; PHD; Professor of Caucasus University; Health Care |
| & Public Health (NCDC) | Ministry of internally displaced persons from the occupied territories, labour, health and | Ministry of internally displaced persons from the occupied territories, labour, health and social affairs of Georgia | Ministry of internally displaced |
| | 3 | > | 3 |
| | Marina Darakhvelidze | Natia Nogaideli | Marine Baidauri |

| | 15 % |
|---|--|
| | Investigator |
| Department, Regulation DIVISION, Chief Specialist, Member of Infection Control and Antimicrobial Resistance National Council; Member of coordinating committee organized by US disease control center group, which is working on infection prevention and control guidelines for Ministry of internally displaced persons from the internally displaced persons from the cocupied territories, labour, health and social affairs of Georgia (Georgia IPC Project -US CDC - South Caucasus | Preventive Medical Doctor of General Practice – Public Health; - PHD; Head of Food Safety division, WTO contact point; Project director/principal Investigator - Project - PROTECTING AND IMPROVING PUBLIC HEALTH GLOBALLY: BUIDING AND STRENGTHENING PUBLIC HEALTH IMPACT |
| territories, labour, health and social affairs of Georgia | Ministry of Environmental Protection and Agriculture |
| | * |
| | Maia Beruashvili |

PART III - PARTNERSHIPS and LEVERAGE

1. Collaboration

With reference to the current application, describe collaborations with other research institutions, national, regional or global disease control programmes. If applicable, attach letters of support from collaborating scientists and / or institutions.

The project will be implemented within the framework of close cooperation between public and private sectors. Participation in the project will include: sectoral organization of epidemiologists, Ministry of health, National Center for Disease Control and Public Health, Ministry of Agriculture. The project will be involved in the local self-government services of the selected region, including the public health service. In addition, the project will be implemented with the cooperation and support of the World Health Organization. After completion of the project, the project staff will provide training for health personnel and veterinarians of selected municipalities.

The project is consistent with the National Strategy for Antimicrobial Resistance 2017-2020, in particular, it responds to such important challenges as strategy, such as raising awareness among veterinarians and farmers about AMR, raising knowledge of the principles of safe animal food and veterinarians on rational use of antibiotics, also, increasing the level of knowledge of medical personnel on the control of infections and rational use of antibiotics. Correspondingly, the project will facilitate effective implementation of the measures defined by the Strategy.

2. Leveraged contributions

If relevant, estimate and describe in the table below any significant contributions by other project stakeholders. Contributing partners may provide a variety of resources, such as additional funding for the site, technical support, services, facilities, meetings, consultations, publications, or medicinal products, etc. Briefly describe each contribution and provide an estimate figure in the table below, briefly explaining the method used for estimation. This will help us better understand the value-for-money of TDR's contribution.

Also, estimate any positive effects on stakeholders in the broader context of the intervention (e.g. research evidence on insecticides done within the context of a national programme leads to savings within the programme by not wasting funds on ineffective interventions).

| Partner organization's name | Indirect funding (US\$ estimate) | Type of contribution |
|-----------------------------|----------------------------------|----------------------|
| - | | - |
| - | - | - |
| - | - | - |

PART IV - BUDGET

In order to be realistic, budget amounts should be based on detailed planned costs estimated for each activity/item. Activity costs will add up to generate the cost of each deliverable, which illustrates value for money. When costing activities, take into consideration the principles of economy and efficiency. The total budget of the project (for the entire project lifespan) is estimated by summating the cost of all deliverables.

The budget section includes a split based on type of cost (budget item).

To fill in the budget form below, double-click on the Excel form and fill in the information. Totals are calculated automatically.

| Budget items | | Proposed budget (US\$) |
|--|-----------------------------|---------------------------|
| Personnel name (if known) and role in project | % of time | |
| Lia Janashvili - Survey Coordinator | 20 % | \$1440 |
| Tina Gabrichidze - Investigator | 20 % | \$1440 |
| Nino Mchedlishvili - Financial Officer | 10% | \$480 |
| Lia Sanodze - Principal Investigator | 20 % | \$1440 |
| Marina Darakhvelidze– Investigator | 15 % | \$1440 |
| Natia Nogaideli – Investigator / expert | 20 % | \$1440 |
| Marine Baidauri - Investigator | 20 % | \$1440 |
| Maia Beruashvili - Investigator | 15 % | \$540 |
| | Subtotal personnel | \$9660 |
| Supplies | | 0 |
| Equipment | | 0 |
| Animals | | 0 |
| Patient costs (drugs, hospitalization, etc.) | | 0 |
| Local travel / fieldwork (travel, hotel, per diem) | | \$4080 |
| International travel for research staff | | 0 |
| Visiting experts (travel, hotel, per diem) | | 0 |
| Premises renovation | | C |
| Library | | |
| Vehicles (purchase, fuel, maintenance) | | 0 |
| Training (tuition, stipend) | | 0 |
| Communication (including publications) | | |
| Overheads | | |
| Other expenditures | | |
| Printing | | \$200 |
| Printing leaflet, booklets | | \$500 |
| Conduct trainings | | \$560 |
| | Subtotal other expenditures | 5340 |
| | GRAND TOTAL (US\$) | 15000 |

| Chief Financial Officer of the Institution (Type Name) Nino Mchedlishvili | Principal Investigator (Type Name) Lia Sanodze | |
|--|--|--|
| Signature R. 1429m3 Date 15.072019 | Signature Los See no dze Date 15.07.2019 | |

2. Budget justification

The budget should reflect the planned activities and costs. Justify each budget line stating how the cost figures were derived in relation to the activities to be undertaken.

Salary support for personnel

| Position Title and Name | Monthly Salary | Time | Months | Amount Requested |
|--|-------------------|------|--------|---------------------|
| Survey Coordinator - Lia Janashvili | \$600 | 20 % | 12 | \$1440 |
| Investigator - Tina Gabrichidze | \$600 | 20 % | 12 | \$1440 |
| Financial Officer - Nino Mchedlishvili | \$800 | 10% | 6 | \$480 |
| Principal Investigator - Lia Sanodze | \$600 | 20 % | 12 | \$1440 |
| Investigator - Marina Darakhvelidze | \$800 | 15% | 12 | \$1440 |
| Investigator - Natia Nogaideli | \$600 | 20 % | 12 | \$1440 |
| Investigator - Marine Baidauri | \$600 | 20 % | 12 | \$1440 |
| Investigator - Maia Beruashvili | \$600 | 15 % | 6 | \$540 |
| Total | | | | \$9660 |

Supplies

No funds are requested for this part.

Equipment

No funds are requested for this part.

Animals

No funds are requested for this part.

Patient costs

No funds are requested for this part.

Local travel (field work)

| travel, hotel, per diem | Number of People | Number of Municipalities | Number of Units | Unit Cost | Amount Requested |
|----------------------------|---------------------|-----------------------------|--------------------|-----------|---------------------|
| Survey | 2 | 2 | 6 days | \$60/day | \$1440 |
| Survey | 2 | 2 | 5 days | \$60/day | \$1200 |
| Training | 2 | 2 | 6 days | \$60/day | \$1440 |
| Total | | | | | \$4080 |

Travel costs include:

- 2 project team members per diem, travel and accommodation in order to conduct 6 days survey in 2 municipalities of Georgia;
- 2 project team members per diem, travel and accommodation in order to conduct 5
 days survey in the inpatient clinics of 2 municipalities of Georgia;

 2 project team members per diem, travel and accommodation in order to conduct 5 days training for health care workers and veterinarians in 2 municipalities of Georgia.

International travel

No funds are requested for this part.

Visiting experts

No funds are requested for this part.

Premises renovation

No funds are requested for this part.

Library

No funds are requested for this part.

Vehicles (purchase, fuel, maintenance)

No funds are requested for this part.

Training (tuition, stipend)

No funds are requested for this part.

Communications (including publications)

No funds are requested for this part.

Overhead, administrative or miscellaneous expenses

No funds are requested for this part.

Other expenditures

Printing - US\$0.04 per page x 5,000 pages = US\$200

Printing leaflet, booklets

| I fillially loaner, boo. | | | |
|--------------------------|------------|-------------------|---------------|
| Unit | N of units | Unit rate (in \$) | Costs (in \$) |
| Per Item | 1000 | 0.5 | 500 |

Conduct trainings - \$560

\$8 per person X 70 persons=\$560

PART V - LIST OF APPENDICES

The appendices listed need to be submitted along with the completed application form. Do NOT attach reports or publications and try to keep the number of pages to a minimum.

| Number | Title |
|--------|---|
| 1 | Letter from Deputy Minister (Ministry of internally displaced persons from the occupied terrirories, labour, health and social affairs) |
| 2 | CV-s of project team members |
| 3 | Questionnaires (first drafts) |

PART VI - BIBLIOGRAPHIC REFERENCES

List bibliographic references included in the proposal.

Enter tayt here

- 1. European strategic action plan on antibiotic resistance. WHO,2011;
- 2. Centers for Disease Control and Prevention. Antibiotic Resistance Threats in the United States, 2013;
- 3. WHO Global Strategy for Containment of Antimicrobial Resistance, 2014;

- Central Asian and Eastern European Surveillance of Antimicrobial Resistance. Annual report. WHO.2014;
- 5. Versporten A et al. Antibiotic use in eastern Europe: a cross-national database study in coordination with the WHO Regional Office for Europe; The Lancet Infectious Diseases 1 May 2014 (Volume 14 Issue 5 Pages 381-387 DOI: 10.1016/S1473-3099(14)70071-4);
- 6. Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers, Michael J. Martin, MD, MPH, MBA,corresponding author Sapna E Thottathil, PhD, and Thomas B. Newman, MD, MPH. 2015; PMCID: PMC4638249;
- 7. Global action plan on antimicrobial resistance, WHO 2015;
- 8. Guidelines for the prudent use of antimicrobials in veterinary medicine. Commission notice. Official Journal of the European Union 11.9.2015; C 299/7-25;
- 9. National strategy on antimicrobial resistance for 2017-2020 of Georgia, Governmental decree #29, 11th of January, 2017;
- 10. Antibiotic use in poultry: a survey of eight farmsin Thailand Gumphol Wongsuvan,a Vanaporn Wuthiekanun,a Soawapak Hinjoy,b Nicholas PJ Day,c andDirek Limmathurotsakul aPMCID: PMC5791776 PMID: 29403112. 2017;
- 11. Restricting the use of antibiotics in food-producing animals and its associations with antibiotic resistance in food-producing animals and human beings: a systematic review and meta-analysis; Karen L Tang, Niamh P Caffrey, Diego B Nóbrega, Susan C Cork, Paul E Ronksley, Herman W Barkema, Alicia J Polachek, Heather Ganshorn, Nishan Sharma, James D Kellner, William A Ghali. Lancet Planet Health 2017; 1: e316–27;
- 12. Restriction in the use of antibiotics in food animals and antibiotic resistance in food animals and humans a systematic review and meta-analysis (University of Calgary, Canada); Karen L. Tang, Niamh P. Caffrey, Diego B. Nóbrega, Susan C. Cork, Paul E. Ronksley, Herman W. Barkema, Alicia J. Polachek, Heather Ganshorn, Nishan Sharma, James D. Kellner, and William A. Ghali. Last Revision: March 2017.