

STAKEHOLDERS ENGAGEMENT PLAN

**CONSTRUCTION OF BIOGAS PRODUCTION SYSTEM
IN GLOBYNO, POLTAVA REGION**

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1. INTRODUCTION

1.1 BASE VALUES

This document presents a LLC firm "Astarta-Kyiv" Plan for stakeholders' engagement (PSE) which describes public relations plans and communications means, based on the analysis of the company operation in construction of biogas system in Globyno, Poltava region and on implementation of other major investment programs planned with relation to the future.

PSE is based on the world's best practices on information disclosure and it sets out general principles of stakeholders' engagement that LLC firm "Astarta-Kyiv" shall adopt and use in the process of biogas system construction in Globyno, Poltava region and for other major investment projects.

PSE will be reviewed and updated on a regular basis. In case of changes in measures or introducing new measures aimed at stakeholders' engagement, PSE will be immediately reviewed. In addition, PSE will be periodically reviewed throughout project implementation, and it will be amended in case of necessity.

The main PSE objectives are described below.

1.2 KEY OBJECTIVES OF THE PLAN

Tools, procedures, policy and measures taken by LLC firm "Astarta-Kyiv" for timely information dissemination among stakeholders on the potential project implementation impact constitute the key subject of this document.

This PSE describes previously implemented measures aimed at stakeholders' engagement.

This document identifies the key stakeholders. In case if any stakeholder has not been specified hereby, he can contact the Technical director of Globyno sugar mill (contact information is provided below), and file an application for including him into the information and engagement list.

In addition, this document describes a mechanism of lodging complaints to LLC "Astarta-Kyiv." This document also provides a consultations schedule, which can be reviewed at the stages of project initiation, development and delivery. Resources available for PSE implementation are described herein.

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1.3 PLAN CONTENTS

Hereby the following is described:

Chapter 2 - Project description, system location areas and the main issues associated with the environmental impact and with preservation of social infrastructure;

Chapter 3 - Public consultations and information disclosure requirements;

Chapter 4 - Identification of key and other stakeholders;

Chapter 5 - Overview of previously implemented measures for stakeholders' engagement;

Chapter 6 - Program for stakeholders' engagement, engagement mechanism and resources;

Chapter 7 - Mechanism of bringing and resolving complaints.

2. PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The main objective of this LLC firm "Astarta-Kyiv" project lies in increasing usage of renewable energy in the production cycle, which is important in such energy consuming industry sector as sugar production. Project implementation will allow to reduce natural gas consumption at the mill by 46%, of water – by 10%, and the amount of greenhouse gases emissions - by about 15 tons of CO₂ per year. It is expected that in the future greenhouse gas emissions will be reduced by 35 thousand tons per year.

Globyno sugar mill processes about 6,000 tons of sugar beet per day and produces 1,200 tons of beet pulp, which contains 23-25% of readily biodegradable dry matter. Thus, beet pulp can be used for biogas production by means of anaerobic fermentation in fermenters. Fermenter operates under mesophilic conditions of methanogenic fermentation. Practical research carried out by the company showed that the maximum biogas yield from 1 ton of sugar beet pulp constitutes 140 cubic meters. It contains 53% of methane and 46% of carbon dioxide. For economic calculations the company used a more realistic biogas yield - 120 cubic meters of biogas from 1 ton of pulp. During production season, which lasts for about 100 days, biogas system will process 102,000 tons of pulp and will produce approximately 12.24 million cubic meters of biogas, or 6.48 million cubic meters of biomethane. Globyno sugar mill consumes 16.8 million cubic meters of natural gas per year. Waste reclamation (beet pulp) and biogas production will allow the company to reduce natural gas consumption at this mill by 46% per year. Thus, the company can save significant means.

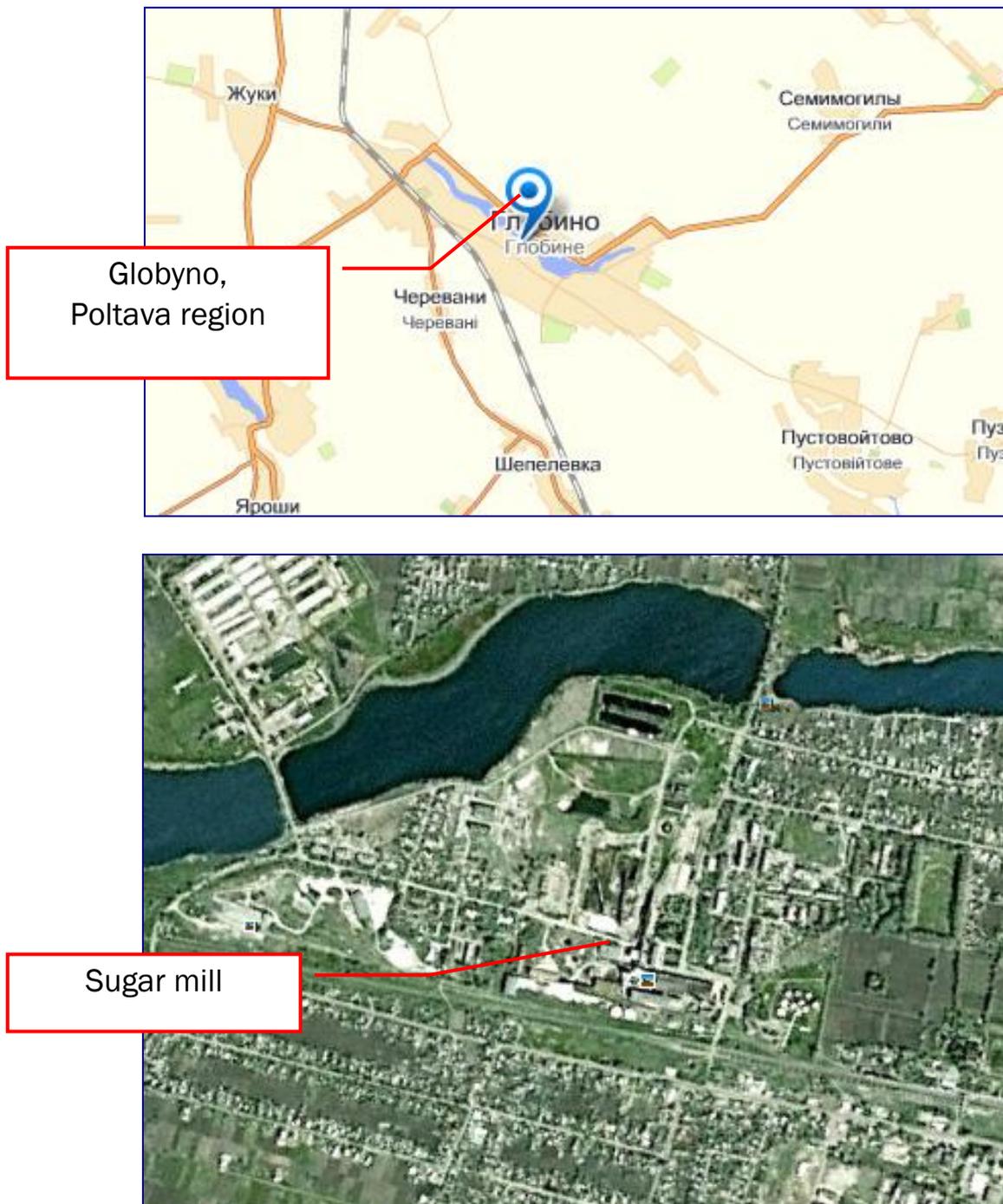


Fig. 1. Enterprise location area

After the required period of substrate fermentation in the primary fermenter, the produced biogas with the substrate is transferred to a fermenter where it undergoes biological desulphurization, then it is pumped into a scrubber for chemical sodium hydroxide (NaOH) desulphurization and after it it's transported to the mill boiler for steam production. The resulting steam is used for sugar production and electric power (5 MW / hour) generation by the mill turbine. Waste from the fermentation process will be divided into solid and liquid components. Solid waste will be accumulated in clamp storage, and then it will be used as fertilizers for agricultural production for the fields. Liquid mass will undergo additional anaerobic and aerobic treatment. Obtained biogas will be directed for cleaning to a fermenter, and liquid waste will be pumped out to a lameller tank. Then it will be separated into solid matter and purified water. Solid particles from the tank will be added into fertilizers, and the mass of purified water will be returned to the production cycle as

water for raw materials washing and transporting.

Biogas production provides an opportunity to enhance energy security by means of alternative fuels usage, to create new markets for goods and services in the field of alternative fuels; to perform research and development works in this sphere. It allows the country to efficiently solve the main issues of sustainable economic development by using its own potential to the maximum. As for the social sector, this project implementation will lead to producing new jobs for the area.

Taking into account large amounts of sugar beet processing, and the fact that the raw beet pulp yield constitutes up to 80-83% of processed beet weight, it should be noted that processing, storage and disposal of beet pulp presents a serious problem. Reduction of the negative impact on the region environment should be regarded as one of the main positive outputs of this project. Utilization of beet pulp will minimize local environmental issues. Instead of the common organic waste recycling it will give the possibility to produce energy, and nutrients (fertilizers) will be used. Also, it will allow the company to save on industrial fertilizers and means of plant and water protection. After anaerobic fermentation process organic biomass becomes more effective for soil fertilization. Such fertilizers contain less pathogens and are better absorbed by plants. For this very reason, such fertilizers do not pollute groundwater.

2.2. SITE DESCRIPTION AND LOCATION AREA

Site allotted for the project is located in the Poltava region, in the central part of Ukraine, in Globyno, in immediate proximity to Globyno sugar mill. Residential buildings are located at a distance not less than 300 m from the allocated area.

Land plot allotted for the project, is currently in private ownership and it belongs to LLC firm "Astarta-Kyiv." Total construction area amounts to 4670 m².

The landscape is mainly flat.

Sukhyy podil Lake is situated at 400 m from the mill.

Study of publicly available maps showed that there are no protected areas, national parks and other objects of public concern in the immediate vicinity.

Consultations did not reveal other objects or areas that could present particular interest.

2.3. CONSULTATIONS AND INFORMATION DISCLOSURE

Public hearings and information disclosures that will be conducted by LLC firm "Astarta-Kyiv" will comply with the legislation of Ukraine and international best practices, and in accordance with the European Bank for Reconstruction and Development (EBRD) requirements.

National Requirements

LLC firm "Astarta-Kyiv" held consultations with the authorities on the issues of environmental impact assessment (EIA). The company also held consultations with the authorities in order to obtain all the necessary certificates and building permits and it promises to pass through these procedures in the event of any future expansion of production. At the stage of project preparation it will also hold public hearings for the local residents.

The European Bank for Reconstruction and Development (EBRD) requirements

Stakeholders' engagement is the EBRD prerequisite. Disclosure of information and stakeholders' engagement should be appropriate and unbiased, and the results have to be reflected in the PSE documents. The Bank sets out as one of its main requirements to formulate in the Plan and implement an effective mechanism for bringing and resolving complaints. In Plan the Formulated PSE corresponds to biogas system construction plan and includes environmental and social risks, and the forecasted level of public interest. The program will run on schedule. It will include information on the location area and time of construction for ensuring appropriate stakeholders' engagement.

Annually LLC firm "Astarta-Kyiv" shall draw a public report on its social and environmental activities. It will include data on the results of the Environmental and Social Action Plan (ESAP) implementation according to approved parameters and goals, as well as a report on the resolution of conflicts that could arise after receipt of complaints on the project.

Best international experience

Key principles for effective interaction in the process of projects' implementation are summarized below:

- ◆ Providing significant information in a form and in the language which is understood by key stakeholders' groups and meets their needs.
- ◆ Furnishing with information prior to holding hearings and making decisions.
- ◆ Furnishing with information and Usage of such a method of information dissemination that will be available to stakeholders and will take into account their cultural differences;
- ◆ Respect for local traditions, languages, time frames and decision-making processes;
- ◆ Two-way dialogue allowing both sides to exchange views and information, to listen to opinions, and to pose questions.
- ◆ The desire to take public opinion into complete account, including the elderly, women and vulnerable population groups;
- ◆ Absence of blackmail, of application of force and bribery;
- ◆ Clear mechanism of response to comments, proposals and complaints from the public;
- ◆ Establishing, where it is appropriate and possible, of a feedback with the project or formulation of a program of reporting to stakeholders.

LLC firm "Astarta-Kyiv" will consider these Principles and will adopt such of them that will meet the nature and scale of the future projects.

General information on keeping records of stakeholders' engagement

LLC firm "Astarta-Kyiv" will keep records of contacts with stakeholders, and it will accurately log the key information provided by the stakeholders, and key input information (e.g., typical questions, complaints, etc.) and it will give brief description of the actions taken.

As one of such communications procedures, LLC firm "Astarta-Kyiv" will keep records on an ongoing basis and update this plan of measures for stakeholders' engagement.

3. STAKEHOLDERS IDENTIFICATION

3.1. KEY STAKEHOLDERS IDENTIFICATION

Overview

This part of the document identifies stakeholders and others individuals, which will be influenced by the project on the local, district and regional levels.

Private persons and organizations that are directly or indirectly influenced by the project in a positive and in a negative sense, and who want to express their point of view may also act as stakeholders.

For key stakeholders identification the following definitions shall apply:

Stakeholder: Any person, group of persons or an organization who has personal interest in the project delivery;

Key stakeholders: Any interested party who has considerable influence or who is significantly influenced by the project implementation, whose interests and possible impact on it should be taken into consideration for successful completion of works.

In the frames of project implementation there were established partnerships and formal consultative agreements, as well as less formal but important relationships with groups of people and private persons who have certain interests in the LLC firm "Astarta-Kyiv" operation.

Stakeholders can be classified into groups according to the following categories:

- ◆ International.
- ◆ Governmental (national, regional and local).
- ◆ Consulting NGOs.
- ◆ Suppliers of goods and services.
- ◆ Clients.
- ◆ Institutions (universities, research centres, etc.).
- ◆ Internal stakeholders (employees).
- ◆ Local residents.
- ◆ NGOs.
- ◆ Media.

If you are not included in this list, but you would like to receive information on the project, please contact us:

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3.2. STAKEHOLDERS OUTREACHED IN THE PROCESS OF THE PLAN PREPARATION

Throughout the processes of stakeholders' engagement plan preparation and project delivery, a number of interested parties were outreached. They are:

- ◆ Ministry of Economy of Ukraine;
- ◆ Executive Committee of Globyno Town Council, Poltava region;
- ◆ Inspectorate of State Architectural and Construction Supervision in Poltava region;
- ◆ Globyno Town Council;
- ◆ PJSC Institute "Inzhproekt";
- ◆ PJSC "Ukrproektstal constructions named after V.M. Szymanowski";

All key stakeholders are presented below in Table 1.

4. LLC FIRM "Astarta" ENGAGEMENT WITH STAKEHOLDERS

4.1 OVERVIEW OF EXISTING RELATIONS WITH STAKEHOLDERS AND COMMUNITY

A key benefit of this project lies in producing a guaranteed amount of energy, which will significantly reduce dependence on gas supplies and will reduce production costs. In addition, construction of the system will create new jobs for local residents.

LLC firm "Astarta-Kyiv" is intent on key stakeholders engagement in future investments and other key projects in the processes of their planning, designing and implementation. This plan for stakeholders' engagement was formulated with the aim to identify key stakeholders and to ensure, where it is appropriate, their timely notification of the potential impacts of the project. This plan also specifies the formal mechanism for bringing and resolving complaints, which can be used by stakeholders for filing their complaints, formulating questions, propositions and opinions.

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Table 1. Key stakeholders and other parties, influenced by the project

Group of stakeholders	Key stakeholders	Brief description of major interest
International	EBRD - HQ in London One Exchange Square. London ES2AJN. Great Britain	Best EBRD practices
	EBRD - Office in Ukraine 01133, Ukraine, Kyiv. Nemirovich-Danchenko St., 16 <i>European Business Association in Ukraine</i> Floor 1, 1A, Andriivskiyi uzviz, Kyiv, 04070 Ukraine	Best available technology
Governmental (national, regional, local)	State Tax Administration of Ukraine Ministry of Regional Development and Construction Housing and Communal Services of Ukraine	Policy of recruitment and statistical data collection Introduction of new technologies in the field of alternative energy and energy conservation
Counselling NGO	PJSC "Ukrainian Technological Company"	Architect's office
Suppliers of goods and services, customers and their representatives	LLC "Metalspetsbud" LLC "Victor" LLC "Sumymonolit" LLC firm "Cascade"	Participation in the project of supply of construction materials, rolled metal, construction and installation works
Institutes, universities, research centres	PJSC Institute "Inzhproekt" PJSC "Ukrproektstal constructions" named after V.M. Szymanowski	Design of gas networks Design of reactors for bioconversion of raw materials
Internal stakeholders	Company employees	Employment and social policy, relevant procedures
NGOs	Not specified	
Local residents	YES	12 additional positions
Other parties	Not specified	

4.2 BRIEF DESCRIPTION OF METHODS OF APPROVAL OF FURTHER ENGAGEMENT ACTIONS

EBRD requirements

An example of the table, presenting forms of public hearings and information disclosures that will be documented throughout major projects implementation, is given in the next section. LLC firm "Astarta-Kyiv" will constantly take into account the following information:

Types of information revealed, forms of its disclosure (e.g., oral form, brochures, reports, media outreach, radio, etc.), and methods of their implementation and dissemination.
Places and dates of public meetings for the defined date.

Individuals, groups and / or organizations that had been consulted.

Key issues discussed and key issues raised.

Answers to posed questions that include commitments to undertake further actions.

Procedure of documenting these measures and reporting to stakeholders.

This table will be updated at all public hearings and during information disclosures throughout future projects delivery.

5. PROGRAM FOR STAKEHOLDERS ENGAGEMENT

5.1 INFORMATION DISCLOSURE

Types of information to be disclosed

Information to be disclosed shall be assessed separately for each project at the stage of project validation. External communication is aimed at ensuring constant interaction with the target audience: at informing the public about the measures taken, and about implementation, development and delivery of investment plans.

Communication techniques

In general, internal and external communication will be carried out by the Technical director of Globyno sugar mill in several ways.

Types of information disclosure and specific methods of communication to be used are summarized in the program for stakeholders' engagement, which is shown below in Table 3.

5.2 FUTURE PROGRAM

Sources of conveying information will be located at key sites and they will include information presented on the boards at these sites and at local settlements. Information will also be available in the main company office in Kiev.

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Table 2. Program for stakeholders engagement

Action / Project	Type of information to be disclosed	Place and date of meetings / forms of communication	Stakeholder groups to be consulted
Publication of a statement of intent to implement the project	General information on the project, the expected level of environmental impact	June, 2012 / Local printed mass media	Local authorities, local governmental bodies, social organizations, local residents
Discussion of the technical task for assessment environmental impact	Technical task for the development of EIA	August 2012 / Public hearings	Local authorities, local governmental bodies, social organizations, local residents
Discussion of the preliminary results of the EIA	Non-technical report on the results of the EIA	November 2012 / Public hearings	Local authorities, local governmental bodies, social organizations, local residents
Development and implementation of a monitoring system for environmental impact assessment	Statistics and records on the following issues: - emissions of air pollutants; - volumes of water consumption / drainage; - volumes of waste generation	Starting from the date of project implementation, annually	Disclosure of EBRD information, local executive bodies and local government
Obtaining of necessary permits, licenses and approvals	Conclusions of expert examinations of the project, permits for emissions of pollutant substances into the atmosphere and for waste generation, limits on generation and disposal of waste	Starting from the date of project implementation, annually	Local executive bodies and local government
Publication of the results of the implementation of the Plan of Management and Monitoring environmental and social aspects	Statistics and records of the implementation of the Plan of Management and Monitoring environmental and social aspects	Starting from the date of project implementation, annually	Disclosure of EBRD information, employees, local government bodies, NGOs, local residents
Annual Report to Investors	Annual reports on the development of social infrastructure, environmental protection, on the plan for stakeholders engagement, including data on eliminating conflicts related to the project	One year after signing of the loan agreement / annual reports, which include: - PSE status - information on conflicts elimination - data on biogas production	Disclosure of the EBRD information

LLC firm "Astarta-Kyiv" shall also respond to every comment and will provide feedback throughout future projects implementation, and it will document these actions.

All the comments received will be taken into consideration in compliance with the obligations specified in the "Best international practices", as described in section 3.2. "Requirements".

It will consider the possibility of implementing any appeal, and the feasibility of making amendments with the aim to meet stakeholders' needs, and the sender will be notified about the

output.

Below it is presented a program for future stakeholders' engagement, which will be reviewed and updated on an ongoing basis.

5.3 MONITORING, REPORTING AND FEEDBACK TECHNIQUES

LLC firm "Astarta-Kyiv" shall conduct obligatory monitoring and provide feedback through such communication channels as media, unilateral and periodic meetings.

In case of conducting further important consultative meetings or public hearings, at meeting places in a conspicuous place there will be placed a Book for anonymous complaints and propositions (with attached handle), that will allow stakeholders to participate in the discussion. This book will be located in the foreground during the hearings, but this place will not be under direct observation by the staff (that place will not be located near the exit). Information will be recorded by LLC firm "Astarte", so stakeholders will be able to familiarize themselves with the output and the undertaken actions.

5.4 MECHANISM OF LODGING AND RESOLVING COMPLAINTS

Mechanism of lodging and resolving complaints will be approved in the form which is shown in Fig. 3. Below there is also given a form for lodging complaints aimed at resolving conflicts with outsiders. Complaint assessment will be conducted in compliance with Ukrainian legislation, and the answer will be given within one month from the day of the appeal receipt. The mechanism will be as follows:

- ◆ Complaint receipt.
- ◆ Recording of notification of a complaint in the registration Journal.
- ◆ In case of necessity, taking immediate measures for resolving complaints, and the sender will be notified about the steps undertaken to remedy the situation.
- ◆ Taking measures to remedy the situation, date recording and closing the case.
- ◆ In case of necessity effecting long-term arrangements to remedy the situation, and the sender will be notified about the actions planned.
- ◆ Taking measures to remedy the situation, date recording and closing the case.

The complaint must be filed by the sender according to the regular form for complaints, given below. It is necessary for ensuring inclusion of contact information, and indication of desired means and language of communication. Please, provide a clear description of the incident or complaint.

LLC firm "Astarta-Kyiv" shall respond to all complaints within one month from the date of their receipt. Processing of complaints received, their registration and taking decisions on them shall be conducted in compliance with Corporate standard "Department of External Relations of LLC firm "Astarte "KSM - KISM - 4.4.3 - 02 - 2011.

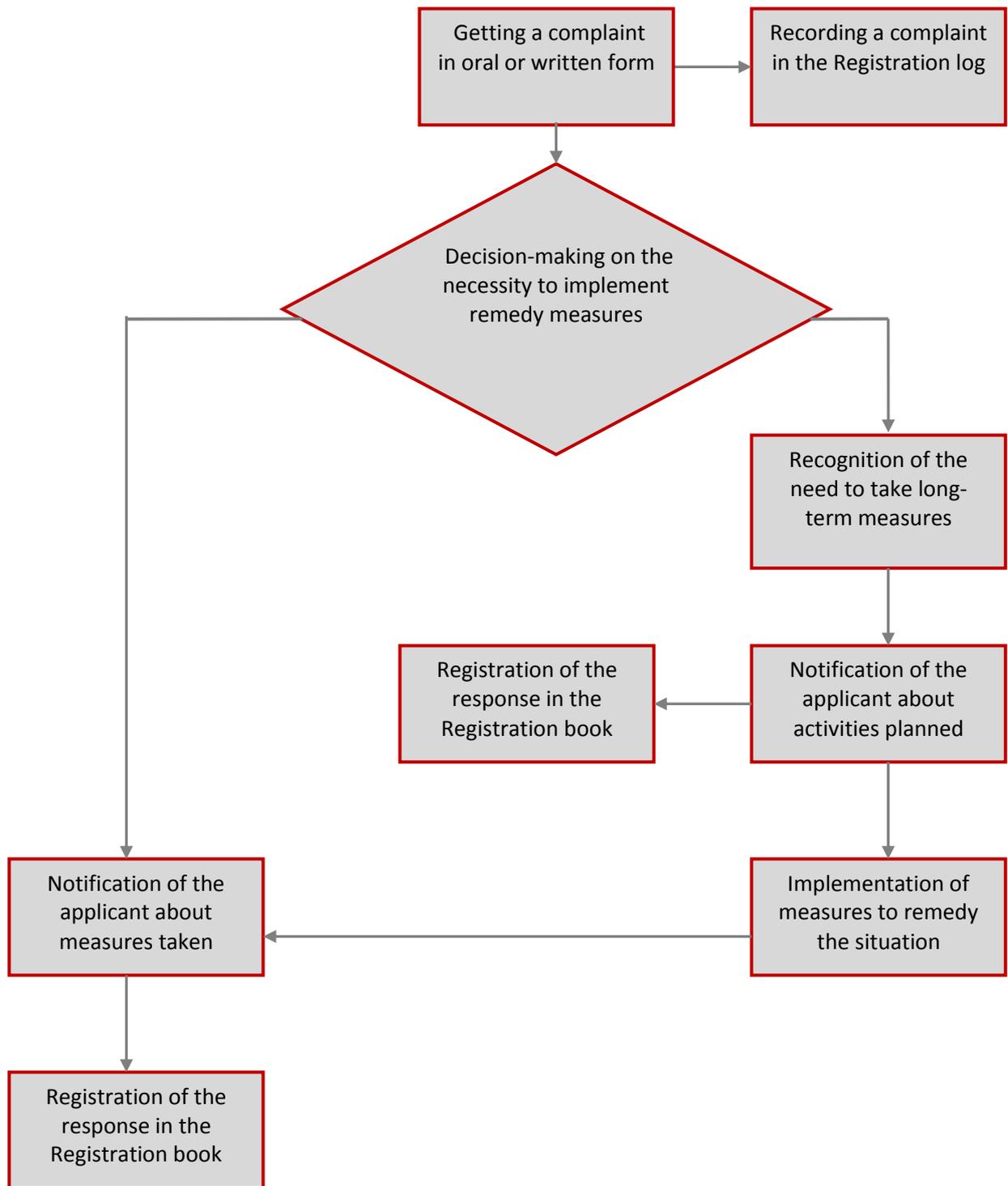


Fig 2. Scheme of complaints processing

Public complaint form

To LLC firm «Astarta-Kyiv»

From the citizen _____

Resident at:

Complaint	
Claim	
Proposition	
Request	

Employed	
Unemployed	
Retired	

Age	
Up to 25 years	
From 25 to 35 years	
From 35 to 45 years	
From 45 to 55 years	
From 55 to 60 years	
Over 60 years	

Education	
Full higher	
Incomplete higher	
Basic higher	
Vocational	

Signature	Date

The response should be sent to the address

CONTENTS

Sex	
Male	
Female	
Martial status	
Single	
Married	
Divorced	

Corresponds to the category	
Worker	
Technical worker	
Technician	
Specialist	
Head of a primary structural unit	
Company chief	