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respect water

**Project title: Best Water Use**  
**Project acronym: BestU**

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# LOCAL SOCIETY STUDY

## UNDER BEST WATER USE – BESTU PROJECT

MUNICIPALITY OF BANSKO, BLAGOEVGRAD, BELITSA, KRESNA, RAZLOG, SIMITLI, YAKORUDA

Developed by: Banya Tourist LTD.    October 2018

Contracting Authority: Economic development agency Bansko

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## RESULTS PRESENTATION

„ Study of target groups’ attitude towards the water resources, their conservation, efficient use and management within “Best Water Use” project (BestU acronym), funded under grant agreement B2.6f.05 / 02.10.2017 under the INTERREG V-A Greece - Bulgaria 2014-2020 Programme “

BestU project is implemented with financial support of INTERREG V-A Greece-Bulgaria 2014 – 2020 Programme, co-financed by the European Union through European Regional Development Fund



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## ABOUT

BEST-U project promotes the innovative technologies in order to improve the protection of the environment and the efficient use of water resources and soil protection. Project partners are Anatoliki S.A., GR; Serres Development Agency SA, GR; Economic Development Agency Bansko, BG; Association Eco Neurokop, BG; Economic Development Agency High West Rodopi, BG . The Specific project objective is to enhance water management, by promoting “green behavior” campaigns in the areas of water management,

the implementation of pilot activities mainstreaming existing innovative methods/technologies and the formation of an overall educational policy of the local government.

More specifically BEST-U aims to:

- ❖ Build the capacity of stakeholders and decision makers in the management of water resources
- ❖ Enhance the knowledge and raise awareness of water users, in order to participate in environmental actions more efficiently.
- ❖ Develop educational processes which will promote the comprehensive, systemic and interdisciplinary approach to environmental issues and optimum water management in particular.
- ❖ Create a sense of responsibility, among students and teachers, regarding the environmental protection and sustainable living conditions

## INTRODUCTION

Best Water Use Project presents a public study on the attitude of households / farmers / local businesses to the topic "Conservation, rational use and sustainable management of water resources" as an essential element of overall environmental protection in seven municipalities of Blagoevgrad District. The analysis and report are quantitative study result of major accents, problems, opportunities in relation with use of water resource. The survey was prepared by a team of Banya Tourist Ltd. in consultation with representatives of the Employer and the target groups.

42 questions addressed to the target group Citizens / households, 43 key questions to the target group "Farmers" and 39 key questions to the Local Business target group are analyzed in this report. Some of the questions are open and there is no predefined set of answers.

## RESPONDENTS

Interviewed respondents number is 150, as follows:

- ❖ 80 households
- ❖ 35 farmers
- ❖ 35 local business representatives

The sample of respondents identified for this study has a planned volume of (150) of which 150 interviews were conducted.

## RESULTS: SOCIAL - DEMOGRAPHIC

Mostly men (69%) have participated, with the predominance of farmers and business target groups. The majority (55%) are aged between 31-50 years.

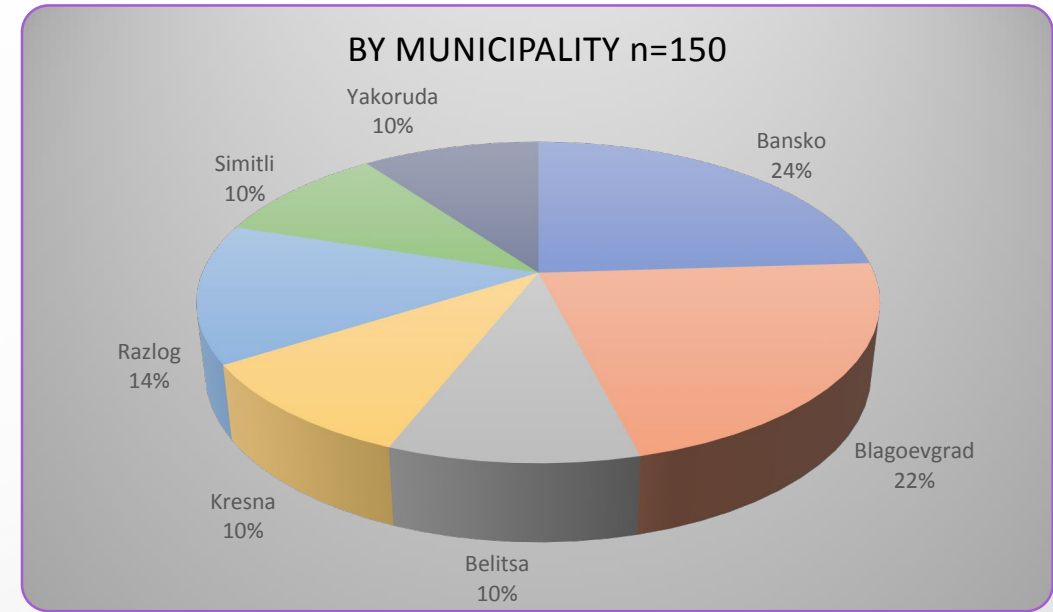
- ❖ Households are represented by 3 (40%) and over 4 (39%) family members, mostly in working-age (80%).

Interviewed farmers are mainly engaged in plant growing (66%) and animal farming (23%).

- ❖ The main representatives of the local business are the tourism, food, trading and wood processing sectors (about 20% each).

Farmers and local businesses are represented equally by each of the seven municipalities.

- ❖ Households from Bansko, Blagoevgrad and Razlog took a more active participation in the poll than the others.





## RESULTS: WATER RESOURCES

### Households

Households drinks mainly potable water from domestic water supply; 22% drink only bottled.

- ❖ They are not large consumers of drinking water with a consumption below 10m<sup>3</sup> / month (32%) and between 10-25m<sup>3</sup> / month (43%).

10% are unaware of the monthly volume of drinking water consumption.

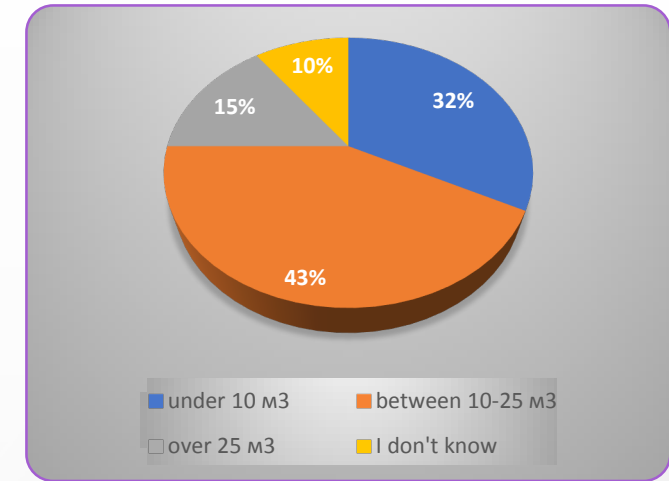
- ❖ One part (17%) experienced difficulties and problems with waste water.

### Local business

The average monthly consumption of drinking water for business is 124 m<sup>3</sup>, as 26% do not know the volume of water consumed.

- ❖ Only one respondent is a consumer of industrial water with a volume of 500 m<sup>3</sup> / month.

Main part (77%) do not experience any difficulties with drinking and / or waste water.



Drinking water for business n=26

**26%** do not know what their monthly consumption is. The average monthly consumption for business is around

**124 m<sup>3</sup>**

## RESULTS: WATER RESOURCES

### Farmers

Predominantly small farmers up to 50 acres farms have participated in the survey.

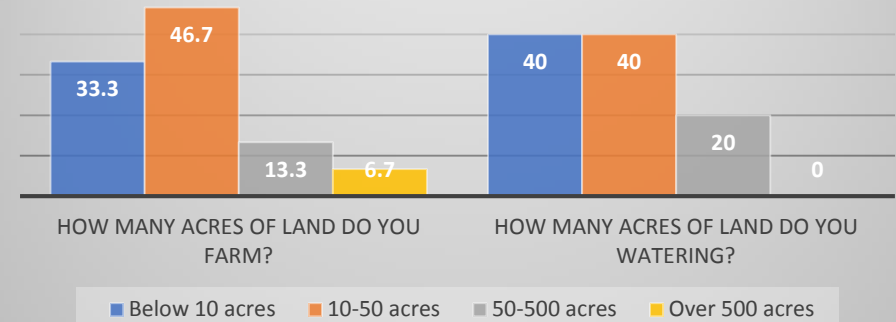
- ❖ The vast majority do not know how much water they consume per month (63%), average monthly consumption for 37% is 402 m<sup>3</sup>.

Main need for water to irrigate crops (about 90%) is during the months (June-August). During this period most rivers on Rila and Pirin' slopes are deep. The consumption in May and September (about 30%) is half less, but it is also part of the farmers' active season.

- ❖ Small to medium-sized farms uses irrigation water (up to 50 acres).

Analysis indicates that the availability of old irrigation infrastructure is a prerequisite for huge water losses, reduced yields, pollution, humus wash, and higher labor and maintenance costs.

### How many acres of land do you farm and watering?



### Water for irrigation n=13

**63%** of farmers do not know how much water they consume per month. The average monthly consumption of the other farmers is around

**402 M<sup>3</sup> / month**

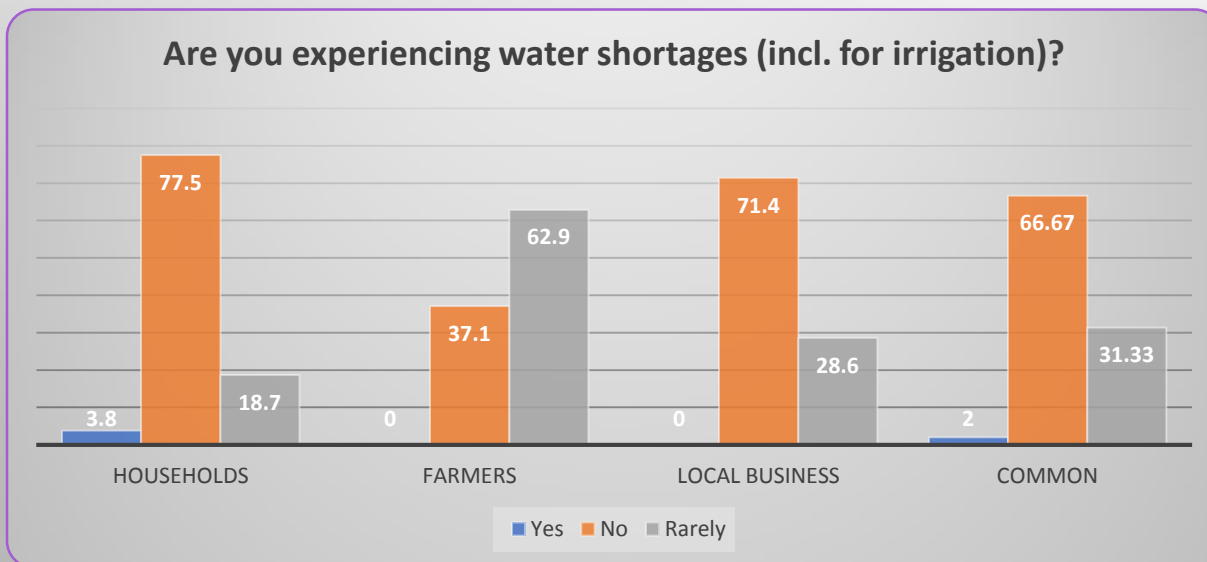


## RESULTS: WATER RESOURCES

### GENERAL

Households (76%) and businesses (86%) do not collect or use rain or well water. Some farmers use these types of water permanently (23%) and rarely (46%). The common practice (68%) is not to use this natural resource of surface and groundwater.

- ❖ Domestic water and irrigation in the region are sufficient and the respondents (67%) do not suffer from deficiencies.



Business (29%) and farmers (63%) experience seldom inconveniences and water scarcity. They are related to shortages in short periods of irrigation activity and in case of old infrastructure reconstruction and breakdowns in industrial zones. Still, 30 per 100 experience, albeit a rare shortage of water resources.

- ❖ Water quality assessment is rather satisfactory than good. The majority of the three negative ratings is just over 50%. Constantly rising cost of water is a problem that affects everyone.
- ❖ The pollution of drinking water pipelines due to the poor and non-ecological implementation of the water and sewage repairs is a constant problem in every residents area.

## RESULTS: WATER PROTECTION

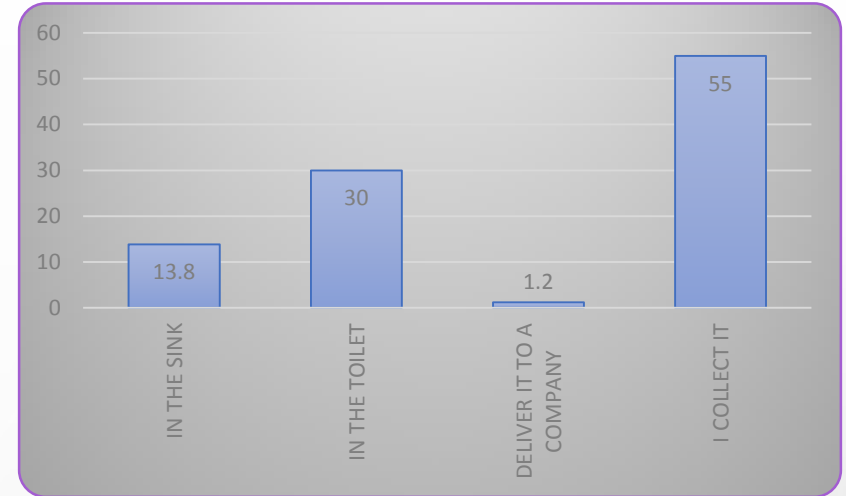
### Households

Thematic of water saving is rarely mentioned (43%) or it is not mentioned (21%).

- ❖ Unfortunately, 50% of households wash their tableware under running water.

Good practices examples for saving and protecting water are: 89% bathe in the shower; 85% do not unfreeze food under running water; 75% do not throw waste in the toilet.

- ❖ Respondents (55%) collect the fat/cooking oil after cooking, but do not give any information where they dispose of it. However, some throws it into the sink (14%) and in the toilet (30%).



## RESULTS: WATER PROTECTION

### Local business

Large part of businesses are not (49%) or partially (37%) aware of good water use efficiency practices.

- ❖ Systems for collecting, transporting, storing and disposing of waste contributing to or will contribute to clean water is fact for 59% of businesses and 15% plan to invest in it.

The chemical substances used are mainly detergents for laundry and washing (20%).

- ❖ Approximately equal parts (34%) do not use chemical pollutants and did not answer the question.

For the most part (91%), local businesses did not want to answer where their industrial waters are being discharged.

- ❖ One respondent has its own purification facility and another one discharges them into a damp well. 77% do not answer how they purify their waters.

31% emit organic waste into the environment and wastewater, and 43% did not want to respond.



## RESULTS: WATER PROTECTION

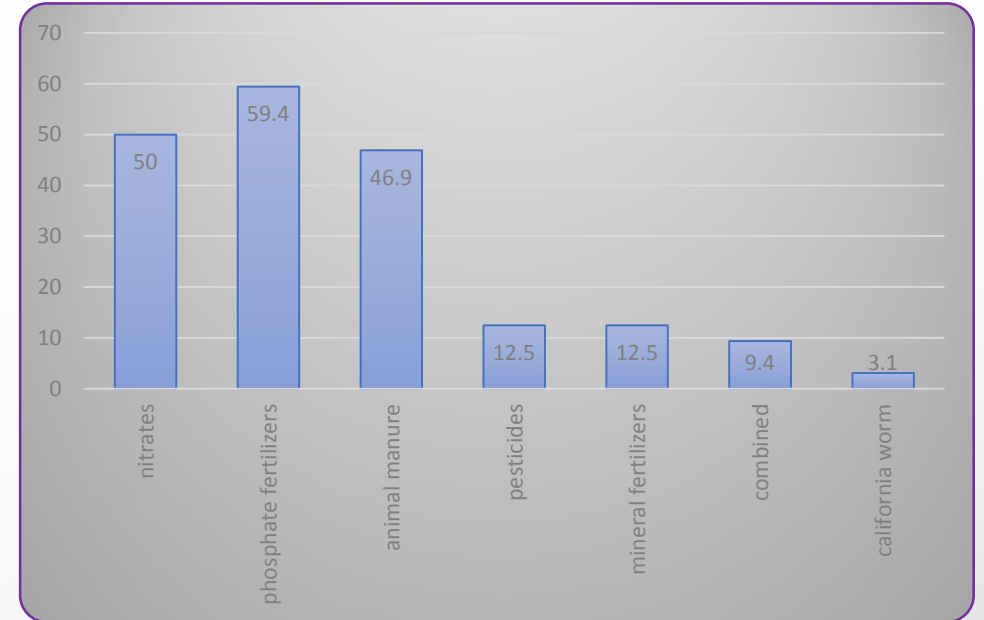
### Farmers (1)

- ❖ The fertilizer compounds used are mainly nitrate (50%), phosphate (60%) and livestock manure (47%). Imported in larger quantities than needed for good growth, these fertilizers goes to surface water in underground and permanently pollute them.

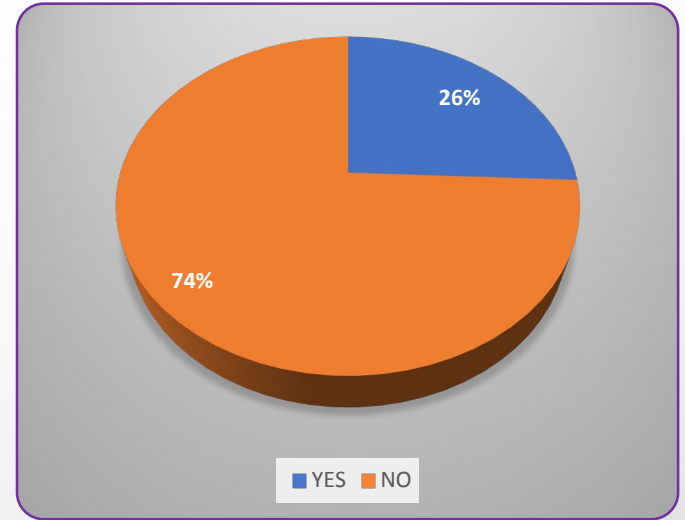
The majority of farmers are not (40%) or partially (40%) familiar with good water efficiency practices.

- ❖ One uses land rotation and another takes soil samples to maintain fertility on the ground, while 94% does not apply sustainable farming practices.

Irrigation methods such as above ground drip (28%), gravity (21%), sprinkling (41%) and others are used. Gravitational irrigation is a "flood" type, with too much water coming at the top of the field, and in the lower - insufficient.



Are you interested about irrigation systems that improves water efficiency? n=35



## RESULTS: WATER PROTECTION

### Farmers (2)

However, no one checks the humidity of the soil by sensors but in appearance (54%) or just watering on schedule (26%), regardless of humidity; 71% do not use any irrigation management methods.

❖ There are no methods of using recycled or reused waste water.

It turns out that farmers (74%) are not interested in upgraded irrigation systems and the majority (53%) do not test the quality and composition of soil or water. However, for effective assessment and improvement of soil use, 39% of them test quality and composition.

❖ 90% do not use anti-erosion practices.

97% do not engage in organic farming.

## RESULTS: WATER PROTECTION GENERAL

A bit over the half (60%) respondents affirm that they are very concerned about water pollution. But it is not small the part of these (27%), who are not very concerned.

- ❖ Conservation and protection of water resources is an important and very important topic for 71% of the respondents. For the others - it is not.

Society needs information and training activities in connection with the implementation of good practices for the efficient use of water resources.

- ❖ The majority (38%) say they save water, but maybe they will do more on this, while 25% of respondents save enough and cannot do more. Not a small fraction, 19 out of 100 do not save (because there are more important things to focus on) and recognize the need to save water, but do nothing.

The main obstacle within population is the lack of reliable information with examples of the problem significance.

- ❖ It turns out that 77% of respondents use electric water heating systems. 21.6% of households use combined systems that also include electricity. This question is intended rather to determine whether people use renewable energy sources as an integral part of the overall attitude towards environmental and water protection.

The population believes that the impact of bad infrastructure (49%) and pollution (45%) on water is enormous; of climate change (38%), the increase in urban areas (34%) and extreme events (floods, droughts) (43%) is high.



## RESULTS: INFORMATION GENERAL (1)

Respondents do not feel well informed about the agenda and regulations for water use and conservation.

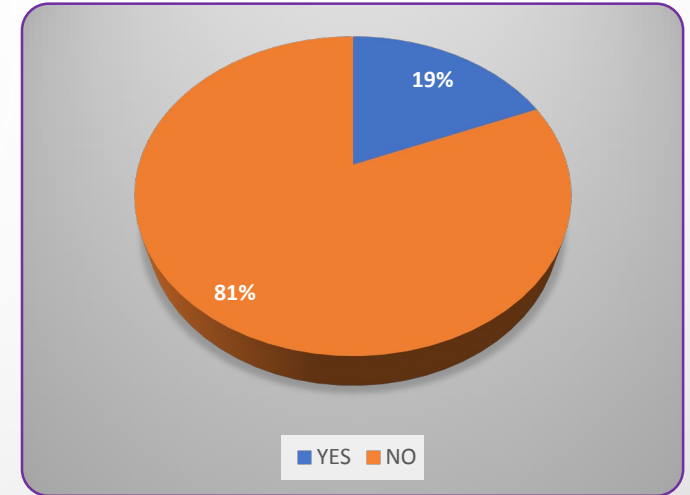
- ❖ Only 7% says that there is a separate acting strategy for dealing with and managing water problems in their settlements.

Only 19% participated in events/ trainings for resource efficiency and environmental issues.

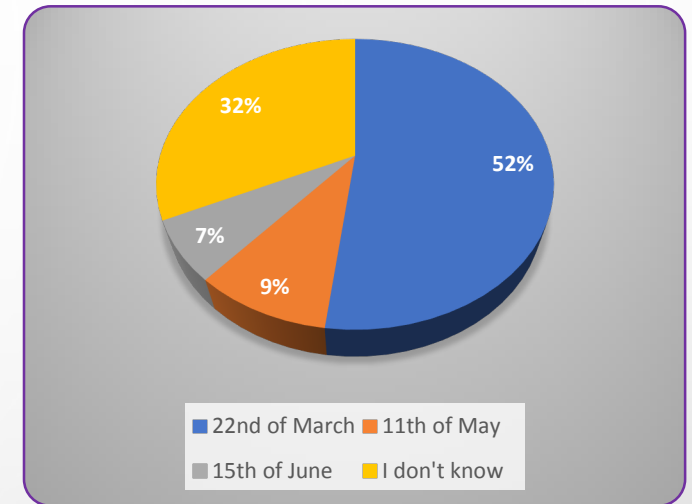
- ❖ To the question: "What do you think pollutes the waters in your settlement / municipality?", They answered: by people (63%), waste (50%), pesticides and chemicals (27%), animals (20%) and deforestation (19%).

Most representatives of the target groups do not know whether they have drainage sewerage in their city - 58%.

Have you ever participated in events / trainings on resource efficiency and environmental issues? n=80



When is the World Water Day? n=150



## RESULTS: INFORMATION GENERAL (2)

Due to unknown reason, the residents (37%) cannot determine what the quality of the sewage system discharge is. Others share the theses that it is function poorly (32%) and well (30%).

- ❖ In spite of all, 52% knows when it is the World Water Day. The existence of laws adopted to prevent and control water pollution does not know 63% of the total number of respondents.
- ❖ Likewise, a huge part (89%) know nothing about the contribution of our judicial system to protecting the cleanliness of the environment and, in particular, the water. The responsible authorities to which we can deposit a complaint in case of environmental pollution and in particular water are known to 57% of all.
- ❖ And unfortunately, 81% of people do not know why there is a separate drainage system in developed cities.

## RESULTS: INSTITUTIONS KNOWLEDGE AND EVALUATION GENERAL

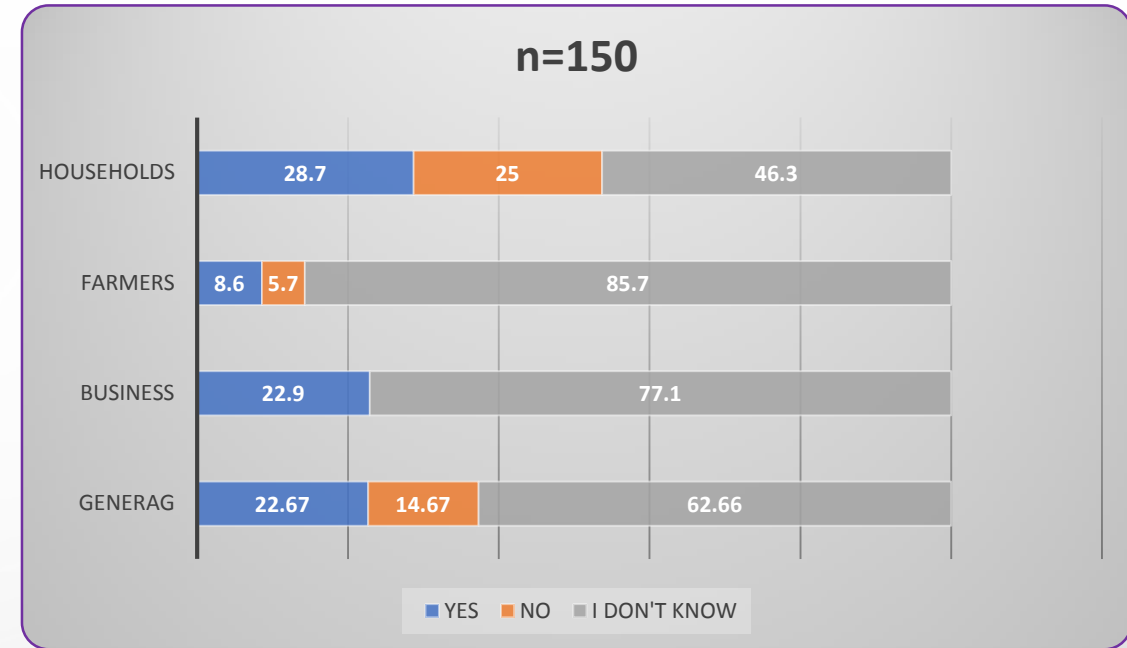
- ❖ 4 respondents only (3%) of household target group responded that they had lodged complaints against water polluters.

People have no information (24%) or do not believe (51%) that the government controls local factories and farms to guarantee water usage requirements.

- ❖ Much of them do not feel well informed (63%) about the mechanisms provided for flood control, drought and ecosystem protection in municipalities.

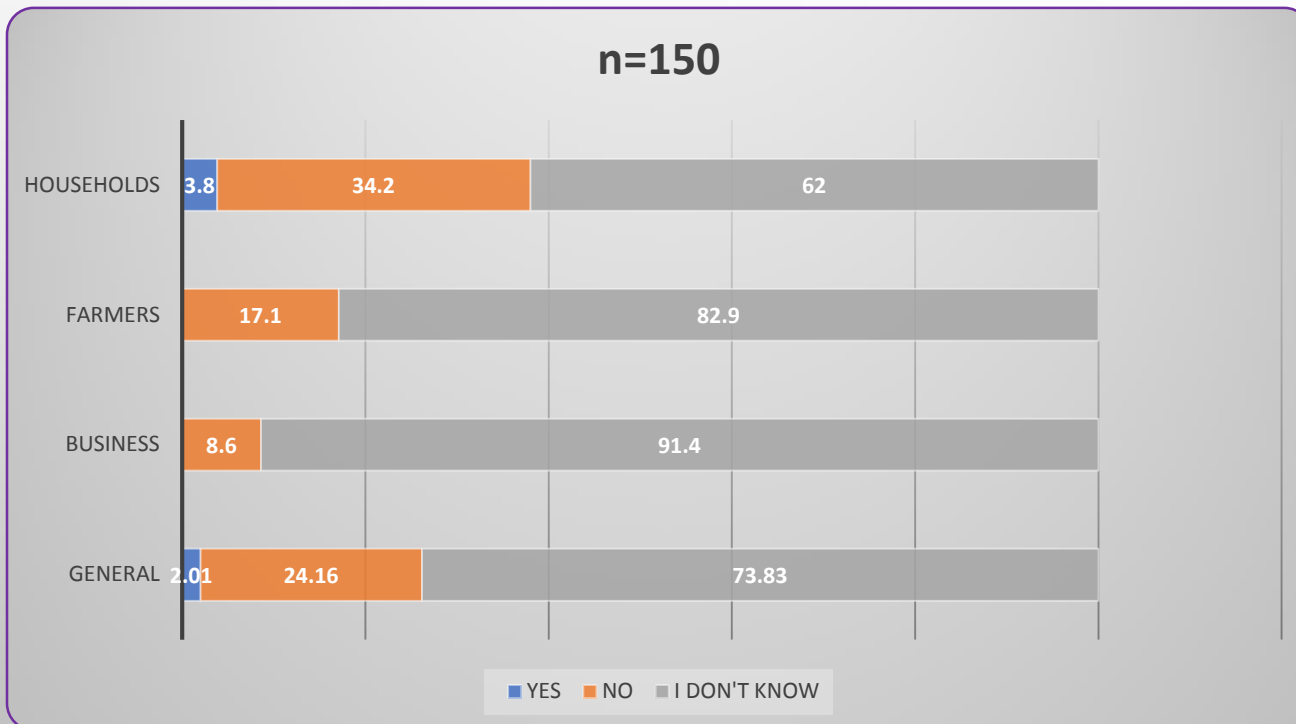
The overall assessment of the level of adequacy for water and sewage water quality operators is satisfactory (44%).

- ❖ Most people (62%) do not have data from and information on polls, surveys and other ways to assess the effectiveness of water management in the seven municipalities.



**Are mechanisms to control floods, droughts and ecosystems provided in your municipality?**

## RESULTS: USEFUL INFORMATION SOURCES GENERAL



**Do you have an organization that provides independent water data in your area, as well as access to their data?**

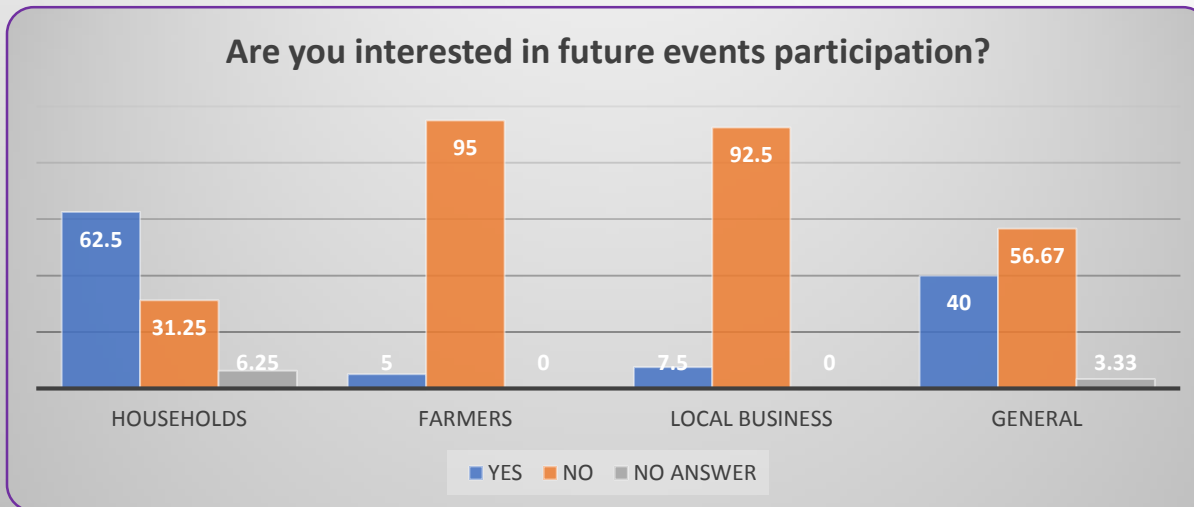
Publicly available data for drinking water quality; for economic and financial situation; for water price components; for regular financial audits, does not reach users. They do not know (65%) about the availability of such sources or are sure they are not (28%).

- ❖ 74% do not know if there is an organization that provides access to independent water data for the area, and 24% say there is no such.

Despite this opportunity, no respondent gives an example of activities carried out on the territory of their cities similar to the subject of this study.

## RESULTS: PARTICIPATION IN FUTURE EVENTS GENERAL

Mostly households are interested in future events.  
57% (of all) are categorical that they do not want to participate.

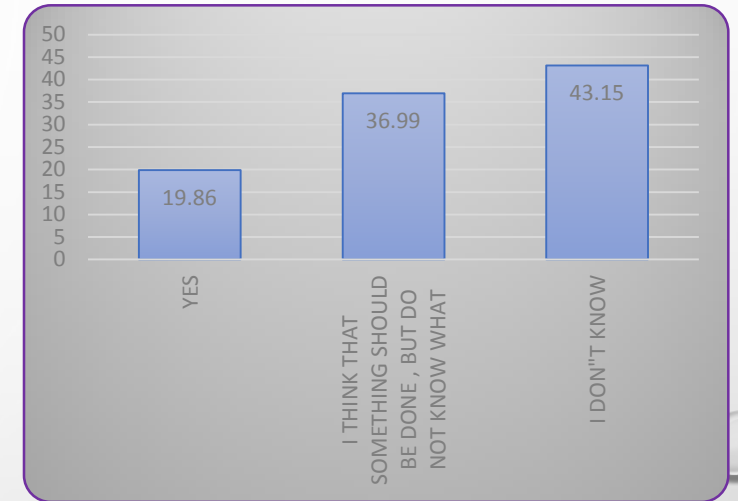


Do you have ideas / suggestions for achieving efficiency and conservation of water resources in your area? n=146

## RESULTS: IMPROVEMENT AND BETTER WATER RESOURCES MANAGEMENT RECOMMENDATIONS GENERAL

43% have no ideas / suggestions; 37% think that something should be done, but they do not know what. 20% of respondents offer the following generalized solutions for better conservation and economical use of water resources:

- ❖ Setup of municipal plumbing companies
- ❖ Reduce losses
- ❖ Meetings with the population to discuss and solve the problems
- ❖ Transparency
- ❖ Rehabilitation of underground infrastructure
- ❖ Replacement and construction of new water and sewerage infrastructure
- ❖ Repair and construction of irrigation channels
- ❖ Wastewater treatment plants
- ❖ New technologies for cleaner water
- ❖ Speed and adequacy of sector employees
- ❖ Quality check by independent NGO





## RELATED ADMINISTRATIVE AND TERRITORIAL BARRIERS THAT OBSTRUCTS THE EFFICIENT WATER MANAGEMENT RESPONSE AGGREGATED INFORMATION

- ❖ Bureaucracy
- ❖ Lack of investment
- ❖ The Government
- ❖ Private interest
- ❖ Economic interests
- ❖ Lack of control over territorial organizations (WSS)
- ❖ Inadequate requirements
- ❖ Lack of communication with WSS
- ❖ Lack of audibility of problem

## RESULTS: PROPOSALS FOR EFFICIENCY ACHIEVEMENT AND PROTECTION OF WATER RESOURCE

### HOUSEHOLDS

- ❖ Establishment of municipal plumbing companies
- ❖ Reduce water losses
- ❖ Replace the infrastructure with a new one
- ❖ Information campaigns, especially for children
- ❖ Quality and quantity control of irrigation water for watering
- ❖ Information campaigns, training and introduction of new technologies
- ❖ Coverage of the regional waters along the southern border
- ❖ Building better water mains

## RESULTS: PROPOSALS FOR EFFICIENCY ACHIEVEMENT AND PROTECTION OF WATER RESOURCE

### LOCAL BUSINESS

- ❖ Cleaner water investments
- ❖ Infrastructure improvement and construction
- ❖ Compensators for proper water distribution
- ❖ Achieving quality – price balance
- ❖ Trainings and information campaigns
- ❖ "Water is of unclear origin. The price is high and does not match the quality. "
- ❖ Reducing network losses

## RESULTS: PROPOSALS FOR EFFICIENCY ACHIEVEMENT AND PROTECTION OF WATER RESOURCE

### FARMERS

- ❖ Construction of canals and artificial water facilities
- ❖ Infrastructure maintenance
- ❖ ""Irrigation systems"" Jsc. to look after their job and build up irrigation facilities."
- ❖ New pipes to make no losses

## ADDITIONAL COMMENTS (WITHOUT EDITING) GENERAL

The topic is very important! It is necessary to educate the population about water conservation.  
To repair irrigation systems.

“Water Supply” and “Irrigation Systems” companies to become municipal in order to have control.

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**THANKS TO EVERYONE WHO SPENT FROM THEIR  
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