Public Opinion Assessment

A MENA Case Study

REC Paper • August 2016
In the framework of the Water and Security (WaSe) component of the WATER SUM project, a public opinion assessment was undertaken in local communities in Jordan (the municipalities of Al Karak, Jerash, Al-Salt and Ajloun) and Tunisia (the delegations of Sidi Ali Ben Aoun, Bir Mcherga, Nefza and Matmata) in relation to water management, water governance and water security. The questionnaire also gathered information on water development and management projects.

The public opinion assessment is one of the key steps in the creation of local water security action plans, as described in the WATER SUM Local Water Security Action Planning Manual. This document presents the results of public opinion assessments carried out in Jordan and Tunisia.
Public Opinion Assessment in Partner Municipalities and Delegations of the WATER SUM project

A MENA Case Study

Regional Environmental Center
Szentendre • Hungary

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ACKNOWLEDGEMENTS

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The analysis contained in this report do not necessarily reflect the views of the REC or of Sida.
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Introduction

Through the project “Sustainable Use of Transboundary Water Resources and Water Security Management” (WATER SUM) the REC is active in the Middle East and North Africa (MENA) region, supported by funding from the Government of Sweden (Swedish International Development Cooperation Agency [Sida] contribution ID 52030234) [1]. The overall objective of the project is to promote and enhance sustainable water resources management and to foster a comprehensive and integrated approach to water security and ecosystem services for sustainable development in beneficiary countries in the MENA region in order to help halt the downward spiral of poverty, biodiversity loss and environmental degradation. The project is divided into two components: Water Resources Management Good Practices and Knowledge Transfer (Water POrT); and Water and Security (WaSe).

The WaSe component supports the process of introducing and drafting local water security action plans (LWSAPs) in target local administrative territories in Jordan and Tunisia. Following the inception phase of the project, Jordan and Tunisia were selected as focus countries in the MENA region for the WaSe component [2], and based on stakeholder consultations in the initial phase of the project eight administrative territories were selected for the development of LWSAPs.

In Jordan:

● Ajloun Municipality
● Al Karak Municipality
● Jerash Municipality
● Al-Salt Municipality

In Tunisia:

● Nefza Delegation
● Bir Mcherga Delegation
● Matmata Delegation
● Sidi Ali Ben Aoun Delegation

To support the process of introducing and drafting LWSAPs, the REC team developed a step-by-step manual for practitioners in local communities [3]. The manual presents an original methodology comprising seven interrelated activities, some supported by a separate tailored methodology, covering stakeholder analysis, public opinion assessment, local water security assessment, and problem analysis and prioritisation. Each of the seven activities comprises two or more steps, making a total of 20 steps in the LWSAP process.

Public opinion assessments were carried out in the eight partner communities using the methodology [4] presented in the LWSAP manual. The present report contains a summary of the methodology and its results. The Regional Office for West Asia of the International Union for Conservation of Nature (IUCN ROWA) supported the implementation of activities in the partner municipalities and delegations in Jordan and Tunisia.
Public opinion surveys are carried out in order to obtain an understanding of the aggregate opinions, attitudes and experiences of an entire population, and of different social groups within that population. The approach followed by the REC team was based on the conviction that all stakeholders, as well as the public, should be given an opportunity to state their opinions and offer suggestions on the issues tackled by the WATER SUM project.

The results of the public opinion assessment represented the first input for assessing the current status of water security. The planning teams used the report on the public opinion assessment to ensure that action plans were developed on the basis of real local needs. The methodology was taken from the social sciences and generally tends to take the form of closed-format questions addressed to individuals. While it is important to understand how the sample group as a whole responds to the issues, it may also be important to understand how individual groups vary — for example by geographical location (Is information provision better in some places than others?) and social grouping (Are some people able to access more or better information than others? If yes, why?). The survey can thus provide the basis for possible future action to improve water security, reduce poverty and halt biodiversity loss and environmental degradation.

We believe that the methodology, along with the developed questionnaire and on-line tool, used in the eight partner local administrative territories to assess public opinion during the process of drafting LWSAPs, can also be of use in other local communities interested in developing LWSAPs, and even adapted for use at regional or country level.
Methodology

The public opinion assessments were carried out using a methodology specially developed by Dr. Anil Graves and Dr. Mirjana Bartula for local water security action planning within the WATER SUM project [4].

The planning team in each partner municipality and delegation, supported by external experts, carried out the public opinion assessment, including the identification of key issues, sample design and framing, data acquisition and analysis, and the interpretation of results. Public opinion assessment is an integral part of the LWSAP process in order to identify and prioritise problems and issues for inclusion in the action planning process.

The public opinion assessment methodology comprises several stages, some of which involve the planning team, while others are undertaken in the field by interviewers (see Figure 1). The approach was developed largely on the basis of Bryman (2012) and is elaborated in detail in the LWSAP manual [3]. The process presented here can be seen as a generic framework for conducting public opinion surveys and reflects the approach adopted in the WATER SUM project. In practice, the approach may vary from context to context and project to project.

STAGE 1: IDENTIFICATION OF KEY ISSUES TO BE ASSESSED

No assessment can begin without first identifying the key issues and context. Once there is a broad understanding of the issues to be assessed, the assessment can gradually be narrowed down to specific questions. The formulation of key issues is essential, as it sets the direction for all subsequent steps in the development of the public opinion assessment.

STAGE 2: REVIEW OF LITERATURE AND THEORIES RELATING TO THE TOPIC

Narrowing down the issues to be assessed in order to formulate aims and objectives is usually associated with a review of the literature and theory relating to the topic. It is usually helpful to identify whether any prior assessment has taken place in the area, either locally or internationally. This establishes a context for the assessment and highlights precedents and possible approaches for the current assessment. For example, a literature review may reveal that water governance is a key concept. However, the investigation of this concept has various dimensions, and these dimensions must be identified and explored before meaningful assessment questions and assessment instruments can be developed in order to study water governance in a particular location.

STAGE 3: FORMULATION OF ASSESSMENT AIMS AND OBJECTIVES

Clearly formulated assessment aims and objectives will guide the eventual form of the assessment — for example whether qualitative or quantitative assessment is needed, or whether closed- or open-format questionnaires are used. They will also facilitate the drafting of questions.
Figure 1. Stages in the public opinion assessment
STAGE 4: IDENTIFICATION OF POPULATION AND LOCATION OF STUDY

The “population” is essentially the universe of people from which a sample is taken. The population may be a nation, a city or a collection of cities, or a municipality. A sample is a group selected for investigation from out of the population. The sample needs to be drawn from a population that is relevant to the topic of investigation and to the assessment questions in order to provide useful data and information. In terms of location, it is important to ensure that the appropriate population is investigated. In many cases, the practicalities and logistics of the assessment also need to be considered. Is the population too remote to be accessed within the project budget or timeframe, for example? Does the whole population need to be sampled, or only a certain part of it?

STAGE 5: IDENTIFICATION OF SAMPLE DESIGN, SAMPLING FRAME AND SAMPLE SIZE

The sample may take the form of a probability sample, where respondents are selected randomly; or a non-probability sample, where selection is based on certain criteria. Probability samples include simple random samples, systematic samples, stratified random samples, or multi-stage cluster samples. Probability samples are representative and allow for generalisation from the sample to the population. Non-probability sampling includes convenience sampling, snowball sampling and quota sampling. In these approaches, as the sample is not selected to represent the population, it is difficult to use the results to make inferences about the general population.

In the WATER SUM project we used a probability-based sample design, where, as noted above, the sample size is important. However, total sample size is more important than the size of the sample relative to the population. In a well-implemented study, the precision and representativeness of the sample increases as the sample size increases, since sampling error (the mismatch between sample respondents and the population) decreases the bigger the sample. However, beyond a certain sample size there is little increase in precision, so as the sample size increases the study becomes less and less cost-effective.

In practice, there do not appear to be any fixed rules for sample size, and actual size is likely to be determined by a number of factors, which may include the amount of time and money available. The rate of non-response or incomplete responses also needs to be considered. If, for example, it is expected that 20 percent of the sample will not reply to a questionnaire, then the sample needs to be 20 percent larger than the target sample size. A very heterogeneous population may also imply the need for a larger sample, especially if there is a need to analyse the data according to different social groups within that sample. Finally, some analytical techniques also require larger sample sizes than others.

It should be noted that error is an unavoidable part of any assessment. The proportional representation of selected social groups in the sample may not, for example, properly represent the proportions of those social groups within the population (sampling error). There may also be errors associated with the implementation of the survey, for example an inadequate sampling frame (number of respondents) due to the low response rate, which in turn means that the sample results cannot be generalised to the population as a whole (sampling-related error). The data collection instruments may be poorly developed (e.g. confusing questions), resulting in respondents not actually answering the question that is intended (data collection error). Finally, the collected data may be incorrectly processed, meaning that data from the field collection instruments (e.g. paper-based field questionnaires) are incorrectly copied into a computer for analysis (data processing errors).
STAGE 6: IDENTIFICATION OF THE MODE OF ADMINISTRATION OF THE SURVEY INSTRUMENT

There are two major approaches to obtaining social data in a survey: structured interviews and self-completed questionnaires. Structured interviews are usually undertaken face to face or by telephone. Self-completed questionnaires are administered by the respondents themselves and may, for example, be sent by post or email, or set up on a website. In the WATER SUM project, the approach taken is that of structured, face-to-face interviews.

Structured interviews are one of the most commonly used approaches in surveys and research. The approach is closely associated with quantitative research. Using a standardised interview format, all respondents are asked exactly the same questions, in the same order, in order to minimise variations between interviews. This is important not only because the same interviewer is able to conduct interviews in an identical way, reducing intra-interviewer variability, but also because different interviewers are able to conduct interviews in the same way, reducing inter-interviewer variability.

STAGE 7: DEVELOPMENT OF PILOT QUESTIONNAIRE

A questionnaire can be developed using open questions or closed questions. Open questions are useful in terms of looking for unexpected or new data, as respondents are able to provide their own answers. However, the interviews are time-consuming, and it is both time-consuming and difficult to code such data afterwards. The advantage of closed questions is that they are faster and easier to answer and process, and there is greater comparability of responses. The disadvantage is that it is difficult to identify all the answers that a respondent might be able to give, thus the range of possible responses is limited.

When developing the questions it is important to bear in mind the assessment aims, to be specific about what needs to be found out, and to imagine how the questions would appear to you if you were answering them. Can they be considered irrelevant, marginally relevant, vague or confusing? If so, they need to be re-written or deleted from the questionnaire. The questions should be clear and precise and the selected responses should be clearly and logically related to the question that is being asked. Ambiguous words in answer sets (e.g. the scales used, such as “strongly agree”, “agree”, “neither agree or disagree”, “disagree”, or “strongly disagree”), for example “often” or “frequently”, should be avoided as they can mean many different things to different people. Excessively long questions, vague questions, leading questions, questions with two parts, questions asking more than one thing, questions containing negative terms, and questions containing technical terms that people may not understand should all be avoided. Clear instructions on how respondents should answer must be provided for each question.

STAGE 8: PILOTING, REVISION AND FINALISATION OF THE QUESTIONNAIRE

It is important to pilot test the questionnaire as improvements can always be made. It may be found, for example, that the questionnaire is too long or that some questions are confusing. The pilot can be used to see whether the questionnaire flows smoothly or is disjointed. It can also be used to determine whether the questionnaire instrument works as intended, or if improvements are needed. Piloting is also an opportunity for the interviewers to gain experience and to practise their interviewing skills before they interview people whose responses will be coded and used in the main part of the study. Respondents who have been interviewed for a pilot study should not be included again in the final study.
STAGE 9: SELECTION OF POPULATION SAMPLE AND ADMINISTRATION OF QUESTIONNAIRE

In the main part of the assessment, the interviews are conducted according to the sampling frame developed in Stage 5. When conducting the main interview, it is important that the interviewer is familiar with and properly understands the interview format and the questions it contains. It is critical that different interviewers share the same understanding of the interview schedule and the questions.

At the beginning of the interview, it is good practice and polite for interviewers to introduce themselves, their organisation and the assessment topic, and to explain briefly how the interview will be conducted. It is important to reassure the respondent that their participation is voluntary, and that the data they provide will remain anonymous and confidential, thus any information they offer during the interview cannot be used against them or to identify them. It is also important to explain to the interviewee that they have the right to withdraw from the interview at any point, and that they may choose not to respond to a particular question if they find it embarrassing or inappropriate. They should also be informed that they are free to ask questions. During the interview it is important to keep to the order of the questions and to record all the answers given. Generally speaking, during the questionnaire design it is best to put the most relevant questions first. This means putting questions concerning the participant’s background to the very end. It is also considered best practice to ask general questions on a topic before specific questions, and to leave sensitive or difficult questions until the end of the questionnaire.

If a respondent does not answer a question properly, it is possible to probe them. However, it is important that this is done impartially, without leading the respondent towards a particular answer. If the respondent has not responded to a set of answer options, for example, both the question and the options can be repeated. Ideally, probing should be kept to a minimum as it could introduce interviewer bias or unintended interviewer effects into the survey.

An alternative strategy might be to use answer prompts. In closed-format questions, prompts are, in effect, already included in the form of a set of predefined answers. Reading out these predefined answers in the case of every question is quite tedious, so the respondent may be happy to read the prompts directly themselves, or from separate flash cards that can be given to the respondent during the interview.

Once the interview is finished, the interviewer should be sure to thank the respondent for their time before they leave.

STAGE 10: ENTERING DATA INTO THE DATABASE FOR STATISTICAL ANALYSIS

Data entry is a relatively straightforward process when using closed-format questions. The key issue here is to ensure that the interview data are entered accurately, and that incomplete responses are identified.

STAGE 11: ANALYSIS OF DATA AND INTERPRETATION OF FINDINGS

There are many ways in which closed-format questions can be analysed, depending on whether the data are interval or ratio data, ordinal data, or category data.

STAGE 12: INTERPRETATION OF FINDINGS AND CONSIDERATION OF IMPLICATIONS FOR THE ASSESSMENT AIMS AND OBJECTIVES

The data and the results of the statistical analysis should be used to help meet the aims and objectives of the assessment and to answer the assessment questions.
Results

Following the LWSAP Manual [3] and proposed public opinion assessment methodology [4], the planning team members — supported by local coordinators and teams of experts, as well as local surveyors — carried out the public opinion assessment as the third activity and fifth step in the LWSAP process, as presented in Figure 2.

![Local Water Security Action Planning Process Diagram](image)

**Figure 2. The local water security action planning process, highlighting the public opinion assessment step**

A public opinion assessment was carried out in all the participating local communities in Jordan and Tunisia in spring 2016, organised by IUCN Regional Office for West Asia.

At the beginning of the process, a pilot questionnaire and sample size were proposed and discussed at several meetings of the WATER SUM team with local coordinators and the planning team. A few changes were made during this process, and the project team then came up with a final questionnaire that served as a basis for conducting public opinion assessments in the field and to support local LWSAP planning teams in Jordan and Tunisia.
After reaching consensus on the set of questions, preparatory trainings were organised by the WATER SUM team and appointed experts to support the local planning teams and engaged surveyors in the municipalities in Jordan and the delegations in Tunisia. During these trainings, all participants had a final chance to double-check the developed questionnaire, and discussions focused primarily on how to undertake public opinion assessment in the field; how to further support the dissemination of information about the WATER SUM project; and how to ensure the active involvement of all interested groups.

The final questionnaire was prepared in English and Arabic and was made available in printed form to the survey teams, as well as online, with answers entered manually by the surveyors:

1) Public opinion questionnaire (English):

2) Public opinion questionnaire (Arabic):

The full questionnaires can be found in Annexes 1 and 2.

Field assessment results are available online on the project page: [http://watersum.rec.org/wase-public-opinion/results.php](http://watersum.rec.org/wase-public-opinion/results.php), based on 3,207 answers in the database, searchable in total and by individual municipality and delegation.
Public opinion assessment in Jordan

This chapter summarises the results of the public opinion assessment in Jordan, as well as recommendations for achieving the objectives set in the questionnaire.

Objective 1 – Improve information flow between local authorities and local people

How do you learn about water quality?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>13.1</td>
<td>8.8</td>
<td>20.3</td>
<td>10.3</td>
</tr>
<tr>
<td>TV</td>
<td>42.7</td>
<td>49.2</td>
<td>30.7</td>
<td>54.6</td>
</tr>
<tr>
<td>Radio</td>
<td>9</td>
<td>5.7</td>
<td>4.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Village meetings</td>
<td>5.1</td>
<td>5.4</td>
<td>4.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Internet</td>
<td>21.4</td>
<td>24.9</td>
<td>28</td>
<td>11.4</td>
</tr>
<tr>
<td>I do not get that information</td>
<td>8.7</td>
<td>6</td>
<td>12.3</td>
<td>19.7</td>
</tr>
</tbody>
</table>

How do you learn about governmental plans for improving, water quality, water scarcity etc.?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>17.9</td>
<td>4.4</td>
<td>13.4</td>
<td>8.5</td>
</tr>
<tr>
<td>TV</td>
<td>40.7</td>
<td>50.2</td>
<td>40.6</td>
<td>55</td>
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<tr>
<td>Radio</td>
<td>14.5</td>
<td>8.5</td>
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<tr>
<td>Village meetings</td>
<td>9</td>
<td>6.6</td>
<td>1.1</td>
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<tr>
<td>Internet</td>
<td>11.2</td>
<td>21.8</td>
<td>25.7</td>
<td>7.6</td>
</tr>
<tr>
<td>I do not get that information</td>
<td>6.7</td>
<td>8.5</td>
<td>9.2</td>
<td>25.7</td>
</tr>
</tbody>
</table>

How often do the local authorities provide you with information related to water quality in your village?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>40.4</td>
<td>59.9</td>
<td>48.3</td>
<td>89.8</td>
</tr>
<tr>
<td>Once every year</td>
<td>25</td>
<td>17.4</td>
<td>18.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>17.3</td>
<td>13.6</td>
<td>20.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Once every month</td>
<td>12.7</td>
<td>4.7</td>
<td>11.1</td>
<td>0.7</td>
</tr>
<tr>
<td>Once every week</td>
<td>3.2</td>
<td>4.1</td>
<td>1.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Once a day</td>
<td>1.4</td>
<td>/</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>How often would you like to receive information about water quality from local authorities?</td>
<td>Al Karak</td>
<td>Ajloun</td>
<td>Jerash</td>
<td>Al-Salt</td>
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<td>Never</td>
<td>12.7</td>
<td>7.3</td>
<td>11.5</td>
<td>9.7</td>
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<tr>
<td>Once every year</td>
<td>27.6</td>
<td>12.3</td>
<td>26.8</td>
<td>21.9</td>
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<tr>
<td>Once every 6 months</td>
<td>27.6</td>
<td>30.3</td>
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<td>31.5</td>
</tr>
<tr>
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<td>22.8</td>
<td>31.9</td>
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<tr>
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<td>8.5</td>
<td>11.4</td>
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<td>4.3</td>
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<tr>
<td>Once a day</td>
<td>0.7</td>
<td>6.9</td>
<td>0.8</td>
<td>1.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often do the local authorities provide information related to water plans and programs in your village?</th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>38.4</td>
<td>46.1</td>
<td>39.5</td>
<td>87.2</td>
</tr>
<tr>
<td>Once every year</td>
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<td>15.5</td>
<td>26.1</td>
<td>8</td>
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<tr>
<td>Once every 6 months</td>
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<td>Once every week</td>
<td>6.4</td>
<td>10.7</td>
<td>1.1</td>
<td>0.2</td>
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<tr>
<td>Once a day</td>
<td>0.7</td>
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</tbody>
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<table>
<thead>
<tr>
<th>How often do you request information about water from local authorities?</th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
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<tbody>
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<td>80</td>
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<td>30.6</td>
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<td>1</td>
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<tr>
<td>Once every week</td>
<td>8.3</td>
<td>12</td>
<td>3.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Once a day</td>
<td>1.2</td>
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<td>0.8</td>
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<tr>
<th>How often do you express opinion about water related problems to local authorities?</th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
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<tbody>
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<td>26.2</td>
<td>30.3</td>
<td>23.4</td>
<td>54.3</td>
</tr>
<tr>
<td>Once every year</td>
<td>23</td>
<td>11</td>
<td>19.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>25.8</td>
<td>17.4</td>
<td>24.9</td>
<td>10.7</td>
</tr>
<tr>
<td>Once every month</td>
<td>16.3</td>
<td>25.2</td>
<td>27.6</td>
<td>6.5</td>
</tr>
<tr>
<td>Once every week</td>
<td>8</td>
<td>6.3</td>
<td>4.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Once a day</td>
<td>0.7</td>
<td>9.8</td>
<td>/</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Objective 1 – Recommendations provided by the local teams

- Public awareness-raising campaigns should use various means of communication and dissemination, including television, newspapers, radio and Internet, in order to reach between 50 and 85 percent of the population.
- Awareness-raising campaigns should be focused.
- Local authorities should be motivated to provide information on water quality and water-related plans and programmes to the public at least once every six months using television, newspapers, radio and Internet.
- Awareness should be raised of the public’s rights/possibilities to request water-related information from relevant institutions and to participate in decision-making processes regarding environmental issues. This is particularly important in the municipality of Al-Salt.
- The following additional proposals were provided by local coordinators during the project workshops:
  - Al Karak Municipality:
    - Municipality/local governance structures should organise seminars and meetings for local communities to discuss the status of water and water problems and how to solve them.
    - Brochures should be published periodically to explain the water situation and innovations, and distributed to households with water bills.
    - Educational television programmes should be produced to present data, projects, plans and information about the water situation in each municipality.
  - Jerash Municipality:
    - Awareness of water management issues should be raised via television programmes in collaboration with the relevant water management bodies.
    - Information on water quality and government plans related to water should be regularly disseminated, and the public service office should be proactive in this respect.
    - Regular meetings should be held between the local authority and the local community for the purposes of providing information about water management plans.
    - Monthly or annual reports should be issued outlining the water management situation in cities/local communities, and the problems faced by the community.
  - Al-Salt Municipality:
    - A 10-minute documentary on water issues should be shown on public (e.g. national) television channels.
    - Information on water issues should additionally be disseminated online.
    - Leaflets or brochures should be published for distribution with water bills.
  - Conferences should be organised periodically on local water security.
  - Coordination should be strengthened between the Ministry of Water and municipalities.
  - The community should be involved in decision-making processes.
Objective 2 – Bring about change in water governance patterns in target municipalities

How often are you invited to participate at meetings (events) related to water management planning within your municipality?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>50.4</td>
<td>87.7</td>
<td>43.7</td>
<td>96.3</td>
</tr>
<tr>
<td>Once every year</td>
<td>26.5</td>
<td>9.5</td>
<td>14.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>15.4</td>
<td>2.8</td>
<td>25.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Once every month</td>
<td>6</td>
<td>/</td>
<td>15.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Once every week</td>
<td>1.4</td>
<td>/</td>
<td>0.4</td>
<td>/</td>
</tr>
<tr>
<td>Once a day</td>
<td>/</td>
<td>/</td>
<td>0.4</td>
<td>/</td>
</tr>
</tbody>
</table>

Is your contribution to water management planning process accepted by leaders of the process?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>53.3</td>
<td>31.9</td>
<td>45.2</td>
<td>10.9</td>
</tr>
<tr>
<td>No</td>
<td>46.7</td>
<td>68.1</td>
<td>54.8</td>
<td>89.1</td>
</tr>
</tbody>
</table>

Objective 2 – Recommendations provided by the local teams

- The knowledge and understanding of relevant authorities should be increased regarding the benefits of public involvement in the planning process, and techniques for public involvement.
- Coordination between the Ministry of Water and municipalities should be enhanced so as to involve the community in the planning process.
- The local community should be involved in water management planning by consultation via the use of public opinion questionnaires.
- Water management plans should be developed based on the needs of the local community.
- The capacities of representatives of local people should be increased, enabling them to communicate their views and attitudes to the relevant authorities.
- A unit should be established in the municipality to be in charge of communication with the public regarding water issues.
Objective 3 – Bring about behavioural change in water utilisation patterns in target municipalities

How often would you like to receive information about water saving rules at home?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>8.3</td>
<td>6.3</td>
<td>14.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Once every year</td>
<td>26.7</td>
<td>11.0</td>
<td>17.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>35.4</td>
<td>28.1</td>
<td>32.2</td>
<td>34.0</td>
</tr>
<tr>
<td>Once every month</td>
<td>22.1</td>
<td>32.8</td>
<td>33.0</td>
<td>34.7</td>
</tr>
<tr>
<td>Once every week</td>
<td>5.8</td>
<td>13.6</td>
<td>3.1</td>
<td>4.2</td>
</tr>
<tr>
<td>Once a day</td>
<td>1.6</td>
<td>8.2</td>
<td></td>
<td>1.1</td>
</tr>
</tbody>
</table>

Are you trying to save water in your home?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60.4</td>
<td>87.7</td>
<td>46.4</td>
<td>70.9</td>
</tr>
<tr>
<td>No</td>
<td>39.6</td>
<td>12.3</td>
<td>53.6</td>
<td>29.1</td>
</tr>
</tbody>
</table>

Do you use tap water for car washing / watering garden, etc.?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>66.2</td>
<td>44.5</td>
<td>28.7</td>
<td>27.1</td>
</tr>
<tr>
<td>No</td>
<td>33.8</td>
<td>55.5</td>
<td>71.3</td>
<td>72.9</td>
</tr>
</tbody>
</table>

Do you harvest rainwater?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>31.2</td>
<td>38.2</td>
<td>23.8</td>
<td>25.2</td>
</tr>
<tr>
<td>No</td>
<td>68.8</td>
<td>61.8</td>
<td>76.2</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Objective 3 – Recommendations provided by the local teams

- Public awareness campaigns should be organised on possibilities for saving water at home. Television, newspapers, Internet and radio should be used for effective public outreach.
- Water-saving tips should be sent out every six months.
- Funds should be raised for the construction of rainwater harvesting facilities in homes.
- The use of tools and equipment to reduce water consumption should be increased, and their use should be included in building codes.
- Regulations should be developed to oblige people to build wells to harvest rainwater for buildings and supported by relevant municipal licensing procedures.
- The planting of houseplants that do not require large amounts of water should be encouraged.
• Affordable ways to treat household grey water and reuse it in domestic gardens should be identified and promoted.
• Brochures should be produced to raise awareness of the importance of saving water at home.
• Women should be trained on the use of grey water at home.
• The digging of wells for harvesting rainwater should be encouraged.

Objective 4 – Improve public awareness of the impact of water scarcity on biodiversity, the environment and local socioeconomic development

Please rate the importance (current and future) of water quality to the abundance of plant and animal species living in your village.

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not important at all</td>
<td>10.8</td>
<td>3.5</td>
<td>10.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Not very important</td>
<td>14.2</td>
<td>3.8</td>
<td>8.8</td>
<td>10.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>18.1</td>
<td>17.4</td>
<td>26.8</td>
<td>15.3</td>
</tr>
<tr>
<td>Important</td>
<td>41.9</td>
<td>52.7</td>
<td>37.9</td>
<td>60.7</td>
</tr>
<tr>
<td>Vital for plants and animals</td>
<td>9.7</td>
<td>19.6</td>
<td>10.0</td>
<td>6.0</td>
</tr>
<tr>
<td>I do not know</td>
<td>5.3</td>
<td>3.2</td>
<td>6.1</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Do you think that you could earn more money if you had secure access to water?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, I do not</td>
<td>22.7</td>
<td>18.0</td>
<td>23.4</td>
<td>38.8</td>
</tr>
<tr>
<td>Yes</td>
<td>52.2</td>
<td>67.5</td>
<td>44.4</td>
<td>49.2</td>
</tr>
<tr>
<td>I do not know</td>
<td>25.3</td>
<td>14.5</td>
<td>32.2</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Objective 4 – Recommendations provided by the local teams

• Awareness about the interrelationship between water availability and socioeconomic development should be increased as a motivation for water saving and rainwater harvesting.
• Mosques and churches should be encouraged to play an active role in raising awareness of the importance of water and the rights of all to the equitable distribution of water.
• Leaflets and display boards should be used in municipal spaces to make people aware of:
  o the seriousness of water scarcity in the region; and
  o the huge difference between the cost of water production, treatment and delivery to households, and its final price.
Objective 5 – Reduce water-related tensions or conflicts in target municipalities

How often do you have conflicts over the use of water with other water users?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>31.9</td>
<td>42.0</td>
<td>55.2</td>
<td>90.3</td>
</tr>
<tr>
<td>Once every year</td>
<td>25.0</td>
<td>12.6</td>
<td>18.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>17.2</td>
<td>8.5</td>
<td>5.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Once every month</td>
<td>13.5</td>
<td>11.4</td>
<td>12.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Once every week</td>
<td>9.0</td>
<td>18.6</td>
<td>7.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Once a day</td>
<td>3.5</td>
<td>6.9</td>
<td>1.1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

In your opinion, what is the best solution for reducing conflicts?

<table>
<thead>
<tr>
<th>Solution</th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient water for all sectors</td>
<td>43.2</td>
<td>36.0</td>
<td>62.1</td>
<td>45.6</td>
</tr>
<tr>
<td>Equal participation of all consumers in water management planning</td>
<td>27.8</td>
<td>34.4</td>
<td>27.2</td>
<td>31.6</td>
</tr>
<tr>
<td>Improved access to water</td>
<td>16.1</td>
<td>20.5</td>
<td>8.0</td>
<td>11.9</td>
</tr>
<tr>
<td>Reduced water pollution</td>
<td>12.9</td>
<td>9.1</td>
<td>2.7</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Objective 5 – Recommendations provided by the local teams

- The best solution for reducing conflicts over the use of water among different users is to secure enough water for all sectors by participatory water management planning. This will ensure the equal participation of all consumers in water management planning and water pollution reduction.

- A significant difference should be introduced between the price paid for water by households that consume reasonable amounts of water, and the price paid for water by households that consume larger amounts of water (big differences in price categories to achieve equal distribution).
Information about water availability, use and quality

What is your main use of water?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>81.2</td>
<td>96.2</td>
<td>94.6</td>
<td>99</td>
</tr>
<tr>
<td>Gardening</td>
<td>12.4</td>
<td>1.9</td>
<td>4.6</td>
<td>1</td>
</tr>
<tr>
<td>Farming</td>
<td>6.4</td>
<td>1.9</td>
<td>0.8</td>
<td></td>
</tr>
</tbody>
</table>

Do you get enough water for your main use?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>47.3</td>
<td>38.2</td>
<td>36.4</td>
<td>51</td>
</tr>
<tr>
<td>Never</td>
<td>20.2</td>
<td>12.3</td>
<td>29.1</td>
<td>6.8</td>
</tr>
<tr>
<td>Most days</td>
<td>32.6</td>
<td>49.4</td>
<td>34.5</td>
<td>42.1</td>
</tr>
</tbody>
</table>

Is the water of an appropriate quality for your main use?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>29.2</td>
<td>43.8</td>
<td>54.8</td>
<td>53.3</td>
</tr>
<tr>
<td>No</td>
<td>70.8</td>
<td>56.2</td>
<td>45.2</td>
<td>46.7</td>
</tr>
<tr>
<td>I do not know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Is the water provided at a price that you can afford?

<table>
<thead>
<tr>
<th></th>
<th>Al Karak</th>
<th>Ajloun</th>
<th>Jerash</th>
<th>Al-Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70.6</td>
<td>65.9</td>
<td>49.4</td>
<td>71.6</td>
</tr>
<tr>
<td>No</td>
<td>29.4</td>
<td>34.1</td>
<td>50.6</td>
<td>28.4</td>
</tr>
</tbody>
</table>

Recommendations provided by the local teams

The survey results show that water pollution is a problem for more than half of the respondents. In Karak municipality, the proportion is significantly higher: 70.8 percent of respondents evaluated water as being of inappropriate quality for their main purpose (i.e. household use).

During the workshops at which the results of the surveys were discussed, the local coordinators of partner municipalities in Jordan provided additional proposals and recommendations for improving the current situation:

- Public awareness campaigns should also focus on reducing water pollution at home.
- The monitoring of water quality should be increased, and methods of water treatment should be developed.
- The use of environmental tools and equipment in homes should be encouraged (e.g. washing machines, irrigation tools).
- Support should be provided for the improvement of sewerage infrastructure.
Country-specific conclusions for Jordan

The survey results indicate that the majority of respondents (over 80 percent across all municipalities) use water for domestic purposes, while the use of water for gardening and farming is relatively uncommon. The quality of the water supplied is considered to be relatively poor, as pollution is a significant problem for over 50 percent of respondents. (In Karak municipality, the proportion is significantly higher, as 70.8 percent of respondents rated water quality as poor in terms of their main use.) The quantity of water supplied is deemed sufficient or relatively sufficient by around 70 percent of respondents, while the price of water is declared to be affordable by around 70 percent of survey respondents.

One anomaly in the distribution of survey results can be noted in the municipality of Karak, where around 20 percent of respondents claim that they use water for gardening and farming, while the same percentage also claim that they never receive sufficient water for their main water use. In the same municipality, over 70 percent of respondents believe their water to be of inappropriate quality, and the same percentage are of the opinion that water is affordably priced. This could lead to the conclusion that, in this particular municipality, water resources are not utilised sustainably and that the citizens, being unaware of water-saving practices, value water relatively little by acknowledging that the quality of water is poor but that the water is priced fairly.

The majority of respondents in partner communities in Jordan receive information about water quality, while the proportion of those who claim they do not receive any information varies between 6 and 12 percent. The only exception is the municipality of Al-Salt, where the proportion climbs to almost 20 percent. The situation is similar concerning information on governmental plans for improving water quality, tackling water scarcity and related issues. The majority of respondents receive such information, while the proportion of those who do not ranges from 6 to 9 percent. Again, the exception is the municipality of Al-Salt, where almost 26 percent of respondents claim that they do not receive any information on this topic at all. Concerning the sources of information about water quality, television is the predominant source in all partner communities, while a significant proportion of respondents (ranging from 40 to 90 percent) confirmed that their local authorities never provide them with information related to water quality or to water plans and programmes in their communities.

National-level sources (such as the hydrometeorological service) are apparently the main sources of water quality data, which are most effectively distributed via television and other electronic media. In addition, about 10 percent of respondents would like never to receive information about water quality from their local authorities, and the proportion of those who never request information about water from their local authorities ranges from 17 percent in Ajloun to 80 percent in Al-Salt. The proportion of those who never express their opinions about water-related problems to local authorities ranges from 23 to 55 percent. Another telling indicator is that 43 to 96 percent of local residents are never invited to participate at meetings (events) related to water management planning in their municipalities, while in terms of the acceptance of their contributions to water management planning processes the stated level ranges from 11 to 53 percent.

These results could imply that local residents have a relatively low level of trust in their municipal administration, and limited interest in taking part in water management planning. There are apparently few opportunities for the public to address water management and planning, although there is relative
openness to external inputs, which leaves the possibility for some transparency and public participation in these processes. The position of local authorities in this regard should be viewed in the context of a poorly decentralised system of local governance in Jordan and a limited amount of resources available for the distribution of water-related information in the field.

A large proportion of respondents (85 to 94 percent) stated that they are interested in receiving information about water-saving techniques in their homes, while on average 65 percent of respondents claim that they try to save water in their homes. In conjunction with the latter figure, the proportion of respondents who use tap water for washing their cars or watering their gardens ranges from 27 to 45 percent, with the exception of Al Karak municipality, where the proportion is 66 percent. Only about 30 percent of respondents in the partner communities harvest rainwater. The importance (current and future) of water quality to the abundance of plant and animal species living in their communities is rated as important or vital for plants and animals by 48 to 67 percent, while around 55 percent of respondents claim that they could earn more money if they had secure access to water. These results imply that citizens in partner municipalities have some awareness about water management and its implications for their everyday lives, and that they are somewhat motivated to save water. It seems that there is no pronounced awareness about the interrelationships between water availability and socioeconomic development as a motivation for water saving and rainwater harvesting, and that awareness should be enhanced.

The frequency of conflicts between respondents and other water users in the partner communities is rated as relatively low. Between 30 and 55 percent of respondents claim never to have such conflicts, with the exception of Al-Salt municipality, where over 90 percent of respondents claim that they never have conflicts with other water users. This is confirmed by the result that over 90 percent of respondents in Al-Salt claim to receive sufficient water for their main use. In contrast, almost 40 percent of respondents in Jerash municipality state that they do not get enough water for their main use and, at the same time, 45 percent of them claim to have regular conflicts with other water users on different timescales.

This anomaly can be explained by the fact that almost 30 percent of respondents in Jerash (the highest result among partner communities) state that they never get enough water for their main use, thus they consider water to be relatively scarce and in higher demand than in other localities. This should also be viewed in conjunction with the result that over 50 percent of respondents from Jerash do not undertake any water-saving measures, and over 75 percent of them do not harvest rainwater for domestic purposes.

The provision of sufficient quantities of water of sufficient quality is predominantly seen as the best solution to reducing conflicts between water users, while the participation of all water users in management and planning is seen as the best tool for reducing conflicts by around 30 percent of respondents. Improved access to water is ranked relatively low (8 to 20 percent) as a potential tool for addressing water-related conflicts. This could imply that the majority of respondents have regular access to water of sufficient quality for their main use. Finally, the proportion of respondents who state that sufficient water for all sectors is, in their opinion, the best solution for reducing water-related conflicts varies greatly — between 36 and 62 percent — while the more equal participation of all consumers in water management planning is seen as the best tool for reducing water-related conflicts by around 30 percent of respondents. In conjunction with the finding that around 60 percent of respondents would like to receive information about, and hence get involved in, water planning in their communities, this can be deemed significant, as it confirms the assumption that citizens are interested and motivated to participate in water management and planning processes.
Overview of public opinion assessment results per partner municipality in Jordan

Municipality of Ajloun

The public opinion assessment questionnaire on water-related issues was completed by 317 respondents in the municipality of Ajloun, and the field assessment results are presented below.

1. Improve information flow between local authorities and local people

1. How do you learn about water quality?

2. How do you learn about governmental plans for improving water quality, water scarcity etc.?
3. How often do the local authorities provide you with information related to water quality in your village?

4. How often would you like to receive information about water quality from the local authorities?

5. How often do the local authorities provide information related to water plans and programmes in your village?
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?
2. Is your contribution to the water management planning process accepted by leaders of the process?

3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

2. Are you trying to save water at home?
3. Do you use tap water to wash your car/water your garden etc.?

- Yes: 55.5%
- No: 44.5%

4. Are you harvesting rainwater?

- Yes: 61.8%
- No: 38.2%

4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

- Not important at all: 19.6%
- Not very important: 17.4%
- Neutral: 52.7%
2. Do you think that you could earn more money if you had secure access to water?

5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

2. In your opinion, what is the best solution for reducing conflicts?
6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic: 96.2%
- Gardening: 3.5%
- Farming: 0.3%

2. Is sufficient water available to you for your main use?

- Yes: 38.2%
- Never: 12.3%
- Most days: 49.5%

3. Is the water of an appropriate quality for your main use?

- Yes: 49.8%
- No: 50.2%
4. Is the water provided at a price that you can afford?

- Yes: 65.0%
- No: 34.1%

7. Information about the respondents

**Gender**
- Male: 52.1%
- Female: 47.9%

**Age**
- 18–29: 44.5%
- 30–49: 30.5%
- 50–69: 14.8%
- Over 70: 0.8%
Municipality of Al Karak

The public opinion assessment questionnaire on water-related issues was completed by 565 respondents in the municipality of Al Karak, and the field assessment results are presented below.

1. Improve information flow between local authorities and local people

   1. How do you learn about water quality?

   - Newspapers: 13.1%
   - Television: 42.7%
   - Radio: 9%
   - Village meetings: 11.2%
   - Internet: 14.5%
   - I do not receive this information: 8.7%

   2. How do you learn about governmental plans for improving, water quality, water scarcity etc.?

   - Newspapers: 17.9%
   - Television: 40.7%
   - Radio: 9%
   - Village meetings: 11.2%
   - Internet: 14.5%
   - I do not receive this information: 9%

3. How often do the local authorities provide you with information related to water quality in your village?

   - Never: 40.4%
   - Once a year: 17.3%
   - Once every six months: 25%
   - Once a month: 12.7%
   - Once a week: 9%
   - Once a day: 9%
4. How often would you like to receive information about water quality from the local authorities?

- Never: 8.5%
- Once a year: 12.7%
- Once every six months: 22.8%
- Once a month: 27.6%
- Once a week: 27.6%
- Once a day: 10%

5. How often do the local authorities provide information related to water plans and programmes in your village?

- Never: 12.6%
- Once a year: 38.4%
- Once every six months: 23.2%
- Once a month: 18.8%
- Once a week: 8.3%
- Once a day: 0%

6. How often do you request information about water from the local authorities?

- Never: 13.5%
- Once a year: 36.8%
- Once every six months: 22.5%
- Once a month: 17.7%
- Once a week: 8.3%
- Once a day: 0%
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?

2. Is your contribution to the water management planning process accepted by leaders of the process?
3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

- 36.4%: Never
- 26.7%: Once a year
- 22.1%: Once every six months
- 8.3%: Once a month
- 3.5%: Once a week
- 1.2%: Once a day

2. Are you trying to save water at home?

- 60.4%: Yes
- 39.6%: No

3. Do you use tap water to wash your car/water your garden etc.?

- 66.2%: Yes
- 33.8%: No
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

2. Do you think that you could earn more money if you had secure access to water?
5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

- Never (31.9%)
- Once a year (17.2%)
- Once every six months (13.5%)
- Once a month (9%)
- Once a week (16.1%)
- Once a day (12.9%)

2. In your opinion, what is the best solution for reducing conflicts?

- Sufficient water for all sectors (43.2%)
- Equal participation of all consumers in water management planning (27.6%)
- Improved access to water (12.9%)
- Reduced water pollution (16.1%)

6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic (81.2%)
- Gardening (12.4%)
- Farming (6.4%)
2. Is sufficient water available to you for your main use?

- Yes: 47.3%
- Never: 20.2%
- Most days: 32.6%

3. Is the water of an appropriate quality for your main use?

- Yes: 70.8%
- No: 29.2%

4. Is the water provided at a price that you can afford?

- Yes: 29.4%
- No: 70.6%
7. Information about the respondents

Gender

- Male: 72.2%
- Female: 27.8%

Age

- 18–29: 34.5%
- 30–49: 39.6%
- 50–59: 21.9%
- Over 70: 10.6%

Education

- No formal education: 52.9%
- Primary school: 22.1%
- Secondary school: 14.3%
- University: 10.6%
Place of residence

- Rural area: 68.1%
- Urban area: 31.9%

Indicators of socioeconomic status

What is the main source of water for members of your household?

- Piped water into the dwelling: 91%
- Other sources: negligible
Municipality of Jerash

The public opinion assessment questionnaire on water-related issues was completed by 261 respondents in the municipality of Jerash. The field assessment results are presented below.

1. Improve information flow between local authorities and local people

   1. How do you learn about water quality?

   ![Pie chart showing information sources for water quality]

   - Newspapers: 12.3%
   - Television: 28%
   - Radio: 20.3%
   - Village meetings: 30.7%
   - Internet: 9.2%
   - I do not receive this information: 13.4%

   2. How do you learn about governmental plans for improving, water quality, water scarcity etc.?

   ![Pie chart showing information sources for governmental plans]

   - Newspapers: 25.7%
   - Television: 10%
   - Radio: 20.3%
   - Village meetings: 11.1%
   - Internet: 48.3%
   - I do not receive this information: 13.4%

   3. How often do the local authorities provide you with information related to water quality in your village?

   ![Pie chart showing frequency of information provision]

   - Never: 18.8%
   - Once a year: 20.3%
   - Once every six months: 11.1%
   - Once a month: 48.3%
   - Once a week: 9.2%
   - Once a day: 13.4%
4. How often would you like to receive information about water quality from the local authorities?

- Never: 27.2%
- Once a year: 11.5%
- Once every six months: 30.7%
- Once a month: 26.8%
- Once a week: 39.5%

5. How often do the local authorities provide information related to water plans and programmes in your village?

- Never: 21.8%
- Once a year: 11.5%
- Once every six months: 26.1%
- Once a month: 23.4%
- Once a week: 19.5%

7. How often do you express an opinion about water-related problems to the local authorities?

- Never: 27.5%
- Once a year: 23.4%
- Once every six months: 19.5%
- Once a month: 24.9%
- Once a week: 11.5%
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?

   - Never: 15.3%
   - Once a year: 25.7%
   - Once every six months: 14.6%
   - Once a month: 43.7%
   - Once a week: 45.2%
   - Once a day: 54.8%

2. Is your contribution to the water management planning process accepted by leaders of the process?

   - Yes: 54.8%
   - No: 45.2%
3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

2. Are you trying to save water at home?
3. Do you use tap water to wash your car/water your garden etc.?

- Yes: 28.7%
- No: 71.3%

4. Are you harvesting rainwater?

- Yes: 23.8%
- No: 76.2%
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

2. Do you think that you could earn more money if you had secure access to water?

5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?
2. In your opinion, what is the best solution for reducing conflicts?

- Sufficient water for all sectors: 62.1%
- Equal participation of all consumers in water management planning: 8%
- Improved access to water: 27.2%
- Reduced water pollution: 0.6%

6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic: 94.6%
- Gardening: 0.6%
- Farming: 4.8%

2. Is sufficient water available to you for your main use?

- Yes: 36.4%
- Never: 34.5%
- Most days: 29.1%
3. Is the water of an appropriate quality for your main use?

- Yes: 54.8%
- No: 45.2%

4. Is the water provided at a price that you can afford?

- Yes: 50.6%
- No: 49.4%

7. Information about the respondents

Gender

- Male: 58.6%
- Female: 41.4%
Indicators of socioeconomic status

What is the main source of water for members of your household?

- Piped water into the dwelling
- Piped water to the yard/plot
- Protected dug well
- Unprotected spring
- Rainwater collection
- Bottled water
- Tanker truck
- Surface water (river, dam, lake, pond, stream, canal, irrigation channel)

92.3%
Municipality of Al-Salt

The public opinion assessment questionnaire on water-related issues was completed by 921 respondents in the municipality of Al-Salt. The field assessment results are presented in this section.

1. Improve information flow between local authorities and local people

2. How do you learn about governmental plans for improving water quality, water scarcity etc.? 

3. How often do the local authorities provide you with information related to water quality in your village?
4. How often would you like to receive information about water quality from the local authorities?

- Never: 87.2%
- Once a year: 15.5%
- Once every six months: 21.9%
- Once a month: 31.5%
- Once a week: 31.4%
- Once a day: 9.7%

5. How often do the local authorities provide information related to water plans and programmes in your village?

- Never: 87.2%
- Once a year: 8%
- Once every six months: 5.5%
- Once a month: 2.2%
- Once a week: 1.1%
- Other: 0%

6. How often do you request information about water from the local authorities?

- Never: 87.2%
- Once a year: 15.5%
- Once every six months: 21.9%
- Once a month: 31.5%
- Once a week: 31.4%
- Once a day: 9.7%
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?

- Never: 96.3%
- Once a year: 3.5%
- Once every six months: 0.2%
- Once a month: 0.0%

2. Is your contribution to the water management planning process accepted by leaders of the process?

- Yes: 90.9%
- No: 8.8%
3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

- Never: 8.8%
- Once a year: 17.2%
- Once every six months: 34.7%
- Once a month: 34%
- Once a week: 8.8%
- Once a day: 8.8%

2. Are you trying to save water at home?

- Yes: 70.9%
- No: 29.1%

3. Do you use tap water to wash your car/water your garden etc.?

- Yes: 27.1%
- No: 72.9%
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

2. Do you think that you could earn more money if you had secure access to water?
5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

2. In your opinion, what is the best solution for reducing conflicts?

6. Information about water availability, use and quality

1. What is the main purpose for which you use water?
2. Is sufficient water available to you for your main use?

- Yes: 51%
- Never: 42.1%
- Most days: 28.4%

3. Is the water of an appropriate quality for your main use?

- Yes: 46.7%
- No: 53.3%

4. Is the water provided at a price that you can afford?

- Yes: 71.6%
- No: 28.4%
7. Information about the respondents

Gender

- Male: 40.9%
- Female: 59.1%

Age

- 18-29: 46.3%
- 30-49: 32.7%
- 50-69: 17.3%
- Over 70: 3.0%

Education

- No formal education: 13%
- Primary school: 37.7%
- Secondary school: 45.2%
- University: 0.0%
Place of residence

- Rural area: 20.7%
- Urban area: 79.3%

Indicators of socioeconomic status

What is the main source of water for members of your household?

- Piped water into the dwelling: 73.2%
- Piped water to the yard/plot: 24.6%
- Public tap/standpipe: 0.2%
- Protected dug well: 0.2%
- Bottled water: 0.2%
- Other: 0.2%
Public opinion assessment in Tunisia

This chapter summarises the results of the public opinion assessment in Tunisia, as well as recommendations for achieving the objectives set in the questionnaire, based on the questionnaire and on consultative meetings held in Tunisia.

Objective 1 – Improve information flow between local authorities and local people

How do you learn about water quality?

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<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
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<td>10.3</td>
<td>1.2</td>
<td>10</td>
</tr>
<tr>
<td>Village meetings</td>
<td>13.5</td>
<td>11.3</td>
<td>32.1</td>
<td>28.3</td>
</tr>
<tr>
<td>Internet</td>
<td>4.6</td>
<td>7.2</td>
<td>1</td>
<td>5</td>
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<td>75.6</td>
<td>33</td>
<td>61</td>
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How do you learn about governmental plans for improving, water quality, water scarcity etc.?

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<td>TV</td>
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<td>Radio</td>
<td>1.9</td>
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<td>Village meetings</td>
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<td>7.2</td>
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<td>69.6</td>
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How often do the local authorities provide you with information related to water quality in your village?

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<th>Sidi Ali Ben Aoun</th>
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<td>19.4</td>
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<td>1.4</td>
<td>3.2</td>
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<tr>
<td>Once a day</td>
<td>0.4</td>
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<td>0.4</td>
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<td>Once every week</td>
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How often would you like to receive information about water quality from local authorities?

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<td>13.9</td>
<td>1.7</td>
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<td>38.8</td>
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<td>30.6</td>
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<td>0.2</td>
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How often do the local authorities provide information related to water plans and programmes in your village?

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<td>91.2</td>
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<td>4.8</td>
<td>1.6</td>
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<td>Once every month</td>
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<td>Once every week</td>
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<td>Once a day</td>
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How often do you request information about water from local authorities?

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How often do you express opinion about water related problems to local authorities?

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<td>37.5</td>
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<tr>
<td>Once every year</td>
<td>42.5</td>
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<td>15</td>
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<td>Once every 6 months</td>
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<td>Once every month</td>
<td>4.2</td>
<td>10</td>
<td>13.1</td>
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Once every week 0.2 0.7 0.6 3.3
Once a day 0.2

Objective 1 – Recommendations provided by the local teams

- Public awareness campaigns should make use of village meetings, television and radio, while Internet/online campaigns may not be the most effective tool for information dissemination in target delegations.
- Local authorities should be encouraged to provide information on water quality and water-related plans and programmes to the public at least once a year (according to the majority of respondents in Tunisia) using village meetings, television and radio.
- Public awareness should be increased about the right to request water-related information from relevant institutions and the right to participate in decision-making processes regarding water issues.
- The following additional proposals were provided by local coordinators:
  - Bir Mcherga:
    - awareness on water should be raised using mass media;
    - the participation of civil society organisations in water management should be increased;
    - gender balance in water management should be ensured; and
    - meetings should be organised to distribute information.
  - Nefza:
    - the national water distribution utility, as well as the water users associations, should organise awareness programmes especially in rural areas, and should not be limited to issuing water bills; and
    - brochures should be distributed along with water bills, providing information about water quality.
  - Matmata:
    - village meetings should be organised by local leaders and everyone in the village should be invited to attend;
    - information and documentation about water projects and strategies should be shared with stakeholders, including the central government;
    - information should be disseminated in the form of press releases, reports, newsletters, brochures and other publications; and
    - use should be made of mass media programmes, spots and publicity.
Objective 2 – Bring about change in water governance patterns in target municipalities

How often are you invited to participate at meetings (events) related to water management planning within your municipality?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>41.4</td>
<td>61.5</td>
<td>68.7</td>
<td>80</td>
</tr>
<tr>
<td>Once every year</td>
<td>48.5</td>
<td>28.9</td>
<td>22.3</td>
<td>15</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>8.6</td>
<td>7.9</td>
<td>5.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Once every month</td>
<td>1.3</td>
<td>1.7</td>
<td>3.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Once a day</td>
<td>0.2</td>
<td></td>
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</tbody>
</table>

Is your contribution to water management planning process accepted by leaders of the process?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>38</td>
<td>84.9</td>
<td>87.3</td>
<td>13.3</td>
</tr>
<tr>
<td>No</td>
<td>62</td>
<td>15.1</td>
<td>12.7</td>
<td>86.7</td>
</tr>
</tbody>
</table>

Objective 2 – Recommendations provided by the local teams

- The knowledge and understanding of relevant authorities regarding the benefits of public involvement in planning processes and techniques for public involvement should be increased.
- The capacities of representatives of local populations (civil society organisations) should be increased to enable them to communicate their views and opinions to the relevant authorities.
- Representatives of local people should be invited to water management planning meetings and their proposals should be included in the plans.
- Confidence between the administration and citizens should be increased through awareness campaigns in the regions.
- The local administration should be more open to the participation of civil society actors.

Objective 3 – Bring about behavioural change in water utilisation patterns in target municipalities

How often would you like to receive information about water saving rules at home?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>29.7</td>
<td>4.1</td>
<td>61.6</td>
<td>10</td>
</tr>
<tr>
<td>Once every year</td>
<td>48.7</td>
<td>22.7</td>
<td>4.2</td>
<td>30</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>18.4</td>
<td>26.5</td>
<td>13.9</td>
<td>30</td>
</tr>
<tr>
<td>Once every month</td>
<td>3</td>
<td>37.5</td>
<td>19.9</td>
<td>20</td>
</tr>
<tr>
<td>Once every week</td>
<td>7.6</td>
<td>0.4</td>
<td>6.7</td>
<td>6.7</td>
</tr>
<tr>
<td>Once a day</td>
<td>0.2</td>
<td>1.7</td>
<td></td>
<td>3.3</td>
</tr>
</tbody>
</table>
Are you trying to save water in your home?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>67.3</td>
<td>81.8</td>
<td>58.2</td>
<td>95</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>32.7</td>
<td>18.2</td>
<td>41.8</td>
<td>5</td>
</tr>
</tbody>
</table>

Do you use tap water for car washing / watering garden, etc.?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>27.6</td>
<td>45.7</td>
<td>39.2</td>
<td>66.7</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>72.4</td>
<td>54.3</td>
<td>60.8</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Do you harvest rainwater?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>56.5</td>
<td>47.4</td>
<td>48</td>
<td>93.3</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>43.5</td>
<td>52.6</td>
<td>52</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Objective 3 – Recommendations provided by the local teams

- Public awareness campaigns should be organised on the possibilities for saving water at home. Village meetings, television and radio should be used for effective public outreach.

- Water-saving tips should be distributed once a year.

- The following potential ways to save water were proposed by local coordinators:
  - people living in rural areas should be encouraged to build tanks for rainwater harvesting and water storage;
  - a financial mechanism should be introduced to support poor families to construct water tanks;
  - incentive programmes should be established in areas that suffer from water scarcity to encourage the implementation of rainwater harvesting techniques;
  - awareness campaigns should encourage rational consumption and the conservation of water resources;
  - supply networks should be maintained to prevent leaks;
  - the use of water for washing materials should be reduced and, wherever possible, alternatives such as dry cleaning techniques should be used; scrapers, squeegees and brushes should be used to remove solid residues before washing materials in water; and
  - wastewater plants should be established that can supply water for irrigation.
Objective 4 – Improve public awareness of the impact of water scarcity on biodiversity, the environment and local socioeconomic development

Please rate the importance (current and future) of water quality to the abundance of plant and animal species living in your village.

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not important at all</td>
<td>11</td>
<td>2.1</td>
<td>29.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Not very important</td>
<td>10.5</td>
<td>5.8</td>
<td>3.4</td>
<td>5</td>
</tr>
<tr>
<td>Neutral</td>
<td>4.2</td>
<td>3.8</td>
<td>2.2</td>
<td>11.7</td>
</tr>
<tr>
<td>Important</td>
<td>49.8</td>
<td>63.6</td>
<td>44.8</td>
<td>46.7</td>
</tr>
<tr>
<td>Vital for plants and animals</td>
<td>19.8</td>
<td>22.3</td>
<td>5</td>
<td>13.3</td>
</tr>
<tr>
<td>I do not know</td>
<td>4.6</td>
<td>2.4</td>
<td>14.9</td>
<td>20</td>
</tr>
</tbody>
</table>

Do you think that you could earn more money if you had secure access to water?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, I do not</td>
<td>20.5</td>
<td>26.1</td>
<td>37.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Yes</td>
<td>61.4</td>
<td>63.2</td>
<td>38</td>
<td>66.7</td>
</tr>
<tr>
<td>I do not know</td>
<td>18.1</td>
<td>10.7</td>
<td>24.3</td>
<td>31.6</td>
</tr>
</tbody>
</table>

Objective 4 – Recommendations provided by the local teams

- Awareness about the interrelationships between water availability and socioeconomic development should be raised in order to encourage water-saving measures and rainwater harvesting.

Objective 5 – Reduce water-related tensions or conflicts in target municipalities

How often do you have conflicts over the use of water with other water users?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>51.5</td>
<td>56.7</td>
<td>83.7</td>
<td>91.7</td>
</tr>
<tr>
<td>Once every year</td>
<td>28.5</td>
<td>11</td>
<td>4.4</td>
<td>6.7</td>
</tr>
<tr>
<td>Once every 6 months</td>
<td>11</td>
<td>17.9</td>
<td>3.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Once every month</td>
<td>6.8</td>
<td>9.3</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>Once every week</td>
<td>0.6</td>
<td>4.8</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>Once a day</td>
<td>1.7</td>
<td>0.3</td>
<td>0.6</td>
<td></td>
</tr>
</tbody>
</table>
In your opinion what is the best solution for reducing conflicts?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient water for all sectors</td>
<td>79.3</td>
<td>50.2</td>
<td>51.2</td>
<td>56.7</td>
</tr>
<tr>
<td>Equal participation of all consumers in water management planning</td>
<td>13.8</td>
<td>19.2</td>
<td>10.4</td>
<td>16.7</td>
</tr>
<tr>
<td>Improved access to water</td>
<td>4.4</td>
<td>26.8</td>
<td>11</td>
<td>26.7</td>
</tr>
<tr>
<td>Reduced water pollution</td>
<td>2.3</td>
<td>3.8</td>
<td>27.5</td>
<td></td>
</tr>
</tbody>
</table>

Objective 5 – Recommendations provided by the local teams

- The most effective ways to reduce conflicts over the use of water among different users are to:
  - secure enough water for all sectors by adequate water management planning (with the involvement of all interested parties in the process); and
  - improve access to water.
- A significant difference in the price paid for water should be introduced between households that consume reasonable amounts of water and households that consume larger amounts of water (i.e. big differences in pricing categories to achieve equal distribution).
- Mosques and churches should be encouraged to play an active role in raising awareness of the importance of water and the need for the equitable distribution of water.

Information about water availability and uses and quality

**What is your main uses of water?**

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>81.4</td>
<td>88.7</td>
<td>99.2</td>
<td>76.7</td>
</tr>
<tr>
<td>Gardening</td>
<td>1.9</td>
<td>2.1</td>
<td>0.6</td>
<td>15</td>
</tr>
<tr>
<td>Farming</td>
<td>16.7</td>
<td>9.3</td>
<td>0.2</td>
<td>8.3</td>
</tr>
</tbody>
</table>

**Do you get enough water for your main use?**

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40.5</td>
<td>58.1</td>
<td>32.1</td>
<td>41.7</td>
</tr>
<tr>
<td>Never</td>
<td>40.1</td>
<td>10.3</td>
<td>12</td>
<td>1.7</td>
</tr>
<tr>
<td>Most days</td>
<td>19.4</td>
<td>31.6</td>
<td>56</td>
<td>56.7</td>
</tr>
</tbody>
</table>
Is the water of an appropriate quality for your main use?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>61.8</td>
<td>59.1</td>
<td>59</td>
<td>75</td>
</tr>
<tr>
<td>No</td>
<td>38.2</td>
<td>40.9</td>
<td>41</td>
<td>25</td>
</tr>
<tr>
<td>I do not know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Is the water provided at a price that you can afford?

<table>
<thead>
<tr>
<th></th>
<th>Sidi Ali Ben Aoun</th>
<th>Bir Mcherga</th>
<th>Nefza</th>
<th>Matmata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>53.2</td>
<td>61.9</td>
<td>56.2</td>
<td>65</td>
</tr>
<tr>
<td>No</td>
<td>46.8</td>
<td>38.1</td>
<td>43.8</td>
<td>35</td>
</tr>
</tbody>
</table>

Recommendations provided by the local teams

- As adequate water quantity is a problem for more than 50 percent of respondents, while water pollution is highlighted as a problem for about 40 percent of respondents, and even fewer in Matmata (only 25 percent), public awareness campaigns should not only focus on water pollution reduction at household level but should also encourage rational water consumption.

- The following solutions were proposed by local coordinators to improve water quantity:
  - Bir Mcherga:
    - households should be connected to the drinking water supply system;
    - wastewater reuse in agriculture should be introduced;
    - water should be transferred from the northern region; and
    - desalination should be used.
  - Matmata:
    - drinking water supply systems should be refurbished;
    - hydraulic structures and water reservoirs should be protected from sediment build-up;
    - water and soil conservation techniques should be improved; and
    - abandoned wells should be maintained and reactivated where possible.
  - Nefza:
    - rational water consumption should be encouraged via special awareness campaigns in urban areas where drinking water is regularly available;
    - graduated pricing should be applied; and
    - technical assistance should be provided to citizens in the vicinity of the Sidi El Barrak Dam in order to maintain this important resource.
Country-specific conclusions for Tunisia

The survey results indicate that the majority of respondents (over 80 percent across all municipalities) use water for domestic purposes, while the use of water for gardening and farming is relatively uncommon. The quality of the water supplied is considered acceptable by over 60 percent of respondents (in Matmata the proportion is significantly higher: 75 percent of respondents rate the quality of water as appropriate for their main use). Results concerning the quantity of water supplied vary: 40 percent of respondents in Sidi Ali Ben Aoun claim they never receive sufficient water for their main use, while 98 percent of respondents in Matmata state that they receive sufficient or relatively sufficient amounts of water. The price of water is stated as affordable by an average of 60 percent of survey respondents. One distinctive result in Nefza is that 99.2 percent of respondents claim that they use water for domestic purposes only, while almost 20 percent of respondents in Sidi Ali Ben Aoun claim they use water for gardening and farming.

In terms of the ways in which information about water quality is received, there is a wide distribution of responses in partner communities in Tunisia. The proportion of those who claim they never receive any information varies from between 60 and 76 percent in Sidi Ali Ben Aoun and Nefza, to between 28 and 33 percent in Matmata and Bir Mcherga. A similar distribution of responses can be observed to the question about information on government plans for improving water quality, combating water scarcity and related issues. In Sidi Ali Ben Aoun and Nefza, over 60 percent of respondents claim that they do not receive any information about water quality. However, it is worth noting that the majority of respondents in Sidi Ali Ben Aoun (53.5 percent) would opt to receive information on water quality only once a year.

The majority of respondents who state that they receive some information on water quality and water management and planning state that they receive this information at village meetings. A notable difference from this pattern are Bir Mcherga and Matmata delegations, where about 30 percent of respondents learn about water quality from the television and other electronic media. A large proportion of respondents (ranging between 70 and 86 percent) confirm that their local authorities never provide them with any information related to water quality or water plans and programmes in their communities. There is a notable correlation between the percentage of respondents who claim they do not receive any information on water quality and those who claim they do not receive any information on governmental plans for improving water quality. In addition, on average 7 percent of respondents would never like to receive information about water quality from their local authorities, with the exception of Sidi Ali Ben Aoun, where 32 percent of respondents make this claim.

The proportion of responses concerning a wish to receive information about water quality from local authorities ranges from 67 to 98 percent, confirming that there is a significant gap between the amount of information provided and the amount of information needed by members of the local population in all partner delegations. This corresponds to the finding that 60 to 90 percent of respondents claim that local authorities never provide information related to water plans and programmes in their communities. An average of 50 percent of respondents across partner municipalities state that they request information about water quality and management from their local authorities at least once a year, while around 60 percent confirm that they express their opinion on water-related problems to their local authorities at least once a year or more frequently. These findings should be seen in the context of the result that 40 to 80 percent of local residents are never invited to participate at meetings (events) related to water
management and planning in their municipalities, while the stated level of the acceptance of contributions to water management planning processes ranges from 13 to 88 percent.

These results could imply that local residents have a relatively low level of trust in their municipal administration, and that they rarely get involved in water management planning at the municipal level. One telling statement from a survey participant sums up the current situation: “It is required from the National Water Distribution Utility, as well as the WUA, to organise awareness programmes especially in rural areas, and not to be limited to issuing water bills.”

It seems that opportunities for addressing water management and planning issues are scarce, although there is a relative openness to external inputs, which leaves the possibility for some transparency and public participation in these processes. The position of local authorities in this regard should be viewed in the context of a strongly centralised system of water distribution in Tunisia and limited available resources for the distribution of water-related information in the field.

A large proportion of respondents (ranging from 70 to 96 percent) state that they are interested in receiving information about water-saving techniques in their homes, while 60 to 65 percent of respondents claim that they try to save water in their homes in Sidi Ali Ben Aoun and Nefza, with a significantly higher proportion in Bir Mcherga (82 percent) and Matmata (95 percent). In conjunction with this, the proportion of respondents who use tap water to wash their cars or water their gardens ranges between 27 and 45 percent, with the exception of Matmata, where the proportion is 67 percent. On average, 50 percent of respondents harvest rainwater in partner communities, with the exception of Matmata where 94 percent of respondents do so. It is interesting to note that responses from Matmata indicate that almost all respondents claim to save water in their homes and collect rainwater, although 67 percent of them use water for washing their cars and watering their gardens. These results should also be viewed in conjunction with the results about water quantity and water-related conflicts, as 92 percent of respondents in Matamata claim that they never have conflicts over water with other users and that their water supply is mostly sufficient (98.3 percent).

The importance (current and future) of water quality to the abundance of plant and animal species living in their communities is rated by 49 to 85 percent of respondents as important or vital for plants and animals, while around 65 percent of respondents claim that they could earn more money if they had secure access to water. The only striking result is from Nefza, where almost 45 percent of respondents claim that either they do not know about, or that they deny, the importance (current and future) of water quality to the abundance of plant and animal species living in their communities.

These results imply that citizens in partner delegations have some awareness about water management and its implications for their everyday lives, and that they are somewhat motivated to take action to save water. There seems to be a pronounced awareness about the interrelationships between water availability and socioeconomic development as a motivation for water saving and rainwater harvesting, with the exception of Nefza delegation, where additional action should be taken in order to enhance knowledge of water-related issues.

The frequency of conflicts with other water users in partner communities is rated at around 50 percent in Sidi Ali Ben Aoun and Bir Mcherga, while in Nefza and Matmata the rate for this indicator is above 80 percent. Sufficient water for all sectors is seen by over 50 percent of respondents as the primary solution to water-related conflicts. Almost 80 percent of respondents in Sidi Ali Ben Aoun also confirm this. Some
striking results were obtained from Bir Mcherga and Nefza, where 27 percent of respondents claim that improved access to water is the best solution to water-related conflicts, and 28 percent state that the best solution is reduced water pollution.

Overview of public opinion assessment results per partner delegation in Tunisia

Bir Mcherga delegation

The public opinion assessment questionnaire on water-related issues was carried out in the delegation of Bir Mcherga. The field assessment results for Bir Mcherga, based on 291 answers in the database, are presented below. Results can be also accessed via the project website.

1. Improve information flow between local authorities and local people

1. How do you learn about water quality?

2. How do you learn about governmental plans for improving, water quality, water scarcity etc.?
3. How often do the local authorities provide you with information related to water quality in your village?

- Never: 72.2%
- Once a year: 19.2%
- Once every six months: 16.8%
- Once a month: 30.6%
- Once a day: 39.9%

4. How often would you like to receive information about water quality from the local authorities?

- Never: 67%
- Once a year: 25.4%
- Once every six months: 7.6%
- Once a month: 16.8%
- Once a week: 30.6%

6. How often do the local authorities provide information related to water plans and programmes in your village?

- Never: 67%
- Once a year: 25.4%
- Once every six months: 7.6%
- Once a month: 16.8%
- Once a week: 30.6%
6. How often do you request information about water from the local authorities?

- Never: 44%
- Once a year: 33.3%
- Once every six months: 16.2%
- Once a month: 10%
- Once a week: 11%

7. How often do you express an opinion about water-related problems to the local authorities?

- Never: 50.2%
- Once a year: 28.2%
- Once every six months: 10%
- Once a month: 11%
- Once a week: 7.9%

2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?

- Never: 61.5%
- Once a year: 26.9%
- Once every six months: 7.9%
- Once a month: 11%
2. Is your contribution to the water management planning process accepted by leaders of the process?

- Yes: 84.9%
- No: 15.1%

3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

- Never: 7.6%
- Once a year: 22.7%
- Once every six months: 26.5%
- Once a month: 37.5%
- Once a week: 7.6%
- Once a day: 15.1%

2. Are you trying to save water at home?

- Yes: 18.2%
- No: 81.8%
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development.
1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

2. Do you think that you could earn more money if you had secure access to water?

5. Reduce water-related tensions or conflicts in target municipalities
1. How often do you have conflicts over the use of water with other water users?

- Never: 56.7%
- Once a year: 11%
- Once every six months: 17.9%
- Once a month: 9.3%
- Once a week: 0.2%
- Once a day: 0.2%

2. In your opinion, what is the best solution for reducing conflicts?

- Sufficient water for all sectors: 50.2%
- Equal participation of all consumers in water management planning: 26.6%
- Improved access to water: 19.2%
- Reduced water pollution: 3%
6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic: 88.7%
- Gardening: 9.3%
- Farming: 9.3%

2. Is sufficient water available to you for your main use?

- Yes: 58.1%
- Never: 10.3%
- Most days: 31.6%

3. Is the water of an appropriate quality for your main use?

- Yes: 58.1%
- No: 40.9%
4. Is the water provided at a price that you can afford?

- Yes: 61.9%
- No: 38.1%

7. Information about the respondents

Gender

- Male: 54.6%
- Female: 45.4%

Age

- 18-29: 17.2%
- 30-49: 23%
- 50-59: 17.2%
- Over 70: 58.4%
Matmata delegation

The public opinion assessment questionnaire on water-related issues was carried out in the delegation of Matmata in Tunisia. Field assessment results for Matmata, based on 60 answers in the database, are presented below. The results can be also accessed via the [project website](#).

1. Improve information flow between local authorities and local people

![Chart 1: How do you learn about water quality?](chart1)

2. How do you learn about governmental plans for improving water quality, water scarcity etc.?  

![Chart 2: How do you learn about governmental plans?](chart2)
3. How often do the local authorities provide you with information related to water quality in your village?

4. How often would you like to receive information about water quality from the local authorities?

5. How often do the local authorities provide information related to water plans and programmes in your village?
6. How often do you request information about water from the local authorities?

7. How often do you express an opinion about water-related problems to the local authorities?

2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?
2. Is your contribution to the water management planning process accepted by leaders of the process?

- Yes: 86.7%
- No: 13.3%

3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

- Never: 10%
- Once a year: 30%
- Once every six months: 30%
- Once a month: 20%
- Once a week: 10%
- Once a day: 10%

2. Are you trying to save water at home?

- Yes: 5%
- No: 95%
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development.

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.
5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

   - Never: 91.7%
   - Once a year: 4.7%
   - Once a week: 3.6%

2. In your opinion, what is the best solution for reducing conflicts?

   - Sufficient water for all sectors: 56.7%
   - Equal participation of all consumers in water management planning: 26.7%
   - Improved access to water: 15.7%
6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

2. Is sufficient water available to you for your main use?

3. Is the water of an appropriate quality for your main use?
7. Information about the respondents

4. Is the water provided at a price that you can afford?

- Yes: 65%
- No: 35%

Gender

- Male: 60%
- Female: 40%

Age

- 18–29: 45%
- 30–40: 40%
- 50–69: 15%
- Over 70: 15%
**Education**

- No formal education: 20%
- Primary school: 15%
- Secondary school: 25%
- University: 40%

**Place of residence**

- Rural area: 43.3%
- Urban area: 56.7%

**Indicators of socioeconomic status**

**What is the main source of water for members of your household?**

- Piped water into the dwelling: 55%
- Piped water to the yard/plot: 43.3%
Nefza delegation

The public opinion assessment questionnaire on water-related issues was carried out in the delegation of Nefza in Tunisia. The field assessment results in Nefza, based on 502 answers in the database, are presented below. Results can also be accessed via the project website.

1. Improve information flow between local authorities and local people

   1. How do you learn about water quality?

   2. How do you learn about governmental plans for improving water quality, water scarcity etc.?

   3. How often do the local authorities provide you with information related to water quality in your village?
4. How often would you like to receive information about water quality from the local authorities?

5. How often do the local authorities provide information related to water plans and programmes in your village?

6. How often do you request information about water from the local authorities?
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?

2. Is your contribution to the water management planning process accepted by leaders of the process?
3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

- Never: 61.6%
- Once a year: 13.9%
- Once every six months: 19.9%
- Once a month: 61.6%
- Once a week: 39.2%

2. Are you trying to save water at home?

- Yes: 41.6%
- No: 58.2%

3. Do you use tap water to wash your car/water your garden etc.?

- Yes: 60.6%
- No: 39.2%
4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

2. Do you think that you could earn more money if you had secure access to water?
5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

- Never: 83.7%
- Once a year: 11%
- Once every six months: 10.4%
- Once a month: 5.2%
- Once a week: 2.7%
- Once a day: 0.3%

2. In your opinion, what is the best solution for reducing conflicts?

- Sufficient water for all sectors: 51.2%
- Equal participation of all consumers in water management planning: 27.5%
- Improved access to water: 11%
- Reduced water pollution: 10.4%

6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic: 99.2%
- Gardening: 0.8%
- Farming: 0.0%
2. Is sufficient water available to you for your main use?

- Yes: 56%
- Never: 12%
- Most days: 32.1%

3. Is the water of an appropriate quality for your main use?

- Yes: 59%
- No: 41%

4. Is the water provided at a price that you can afford?

- Yes: 50.2%
- No: 43.8%
7. Information about the respondents

Gender

- Male: 65.7%
- Female: 34.3%

Age

- 18–29: 39%
- 30–49: 38.4%
- 50–69: 10.2%
- Over 70: 12.4%

Education

- No formal education: 27.7%
- Primary school: 41.5%
- Secondary school: 12.7%
- University: 17.9%
Place of residence

- Rural area: 73.1%
- Urban area: 26.9%

Indicators of socioeconomic status

What is the main source of water for members of your household?

- Piped water into the dwelling: 71.1%
- Public tap/standpipe: 21.9%
- Protected dug well
- Unprotected dug well
- Protected spring
- Unprotected spring
- Surface water (river, dam, lake, pond, stream, canal, irrigation channel)
Sidi Ali Ben Aoun delegation

In the delegation of Sidi Ali Ben Aoun, 290 people filled in and submitted the public opinion assessment questionnaires, which were processed via an on-line system available on the project website.

1. Improve information flow between local authorities and local people

![Pie chart showing how people learn about water quality.]

1. How do you learn about water quality?

- Newspapers: 75.0%
- Television: 10.3%
- Radio: 10.0%
- Village meetings: 1.0%
- Internet: 0.7%
- I do not receive this information: 0.0%

![Pie chart showing how people learn about governmental plans for improving water quality, water scarcity, etc.]

2. How do you learn about governmental plans for improving, water quality, water scarcity etc.?

- Newspapers: 75.5%
- Television: 0.5%
- Radio: 0.0%
- Village meetings: 1.0%
- Internet: 1.0%
- I do not receive this information: 0.0%
3. How often do the local authorities provide you with information related to water quality in your village?

4. How often would you like to receive information about water quality from the local authorities?

5. How often do the local authorities provide information related to water plans and programmes in your village?
2. Bring about change in water governance patterns in target municipalities (initiate a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?
3. Bring about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?

2. Are you trying to save water at home?
3. Do you use tap water to wash your car/water your garden etc.? 

![Pie chart showing 60% Yes and 40% No]

4. Are you harvesting rainwater? 

![Pie chart showing 63.2% Yes and 36.8% No]

4. Improve public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.

![Pie chart showing various percentages]
5. Reduce water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?

2. In your opinion, what is the best solution for reducing conflicts?
6. Information about water availability, use and quality

1. What is the main purpose for which you use water?

- Domestic: 92%
- Gardening: 1%
- Farming: 7%

2. Is sufficient water available to you for your main use?

- Yes: 46.4%
- Never: 14.7%
- Most days: 39.9%

3. Is the water of an appropriate quality for your main use?

- Yes: 50.5%
- No: 49.5%
7. Information about the respondents

4. Is the water provided at a price that you can afford?

- Yes: 64.6%
- No: 35.4%

Gender

- Male: 56.7%
- Female: 43.3%

Age

- 18–29: 28.1%
- 30–49: 47.4%
- 50–69: 20.2%
- Over 70: 0.0%
Indicators of socioeconomic status

What is the main source of water for members of your household?

- Piped water into the dwelling (72.4%)
- Piped water to the yard/plot (10.9%)
- Public tap/standpipe (5.8%)
- Tubewell/borehole (2.9%)
- Protected dug well (2.4%)
- Unprotected dug well (1.7%)
- Protected spring (0.8%)
- Unprotected spring (0.3%)
- Rainwater collection

- Bottled water
- Cart with small tank/drum
- Tanker truck
- Surface water (river, dam, lake, pond, stream, canal, irrigation channel)
**General conclusions**

Public opinion assessments, carried out using the methodology presented at the beginning of this report, were successfully completed in partner municipalities and delegations within the Water and Security (WaSe) component of the WATER SUM project:

- in Jordan, in the municipalities of Ajloun, Al Karak, Jerash and Al-Salt; and
- in Tunisia, in the delegations of Nefza, Bir Mcherga, Matmata and Sidi Ali Ben Aoun.

The public opinion assessments were organised and carried out by IUCN Regional Office for West Asia.

The public opinion assessment helped the WATER SUM project team to gain an understanding of the opinions, attitudes and experiences of people in Jordan and Tunisia, who were interviewed locally in their municipalities and delegations. Opinions and attitudes were collected in particular in relation to water management, water governance and water security, as well as in relation to information on water and information on water development and management projects. The assessment was a very important contribution to the success of the action planning process.

The results of the public opinion assessments clearly show the need to improve information flow between local authorities and local people. Stakeholders with limited access to information or a low level of knowledge are defined as a priority target group for communication strategies at the level of municipality or delegation, although they are also a relevant target for regional and national communication strategies.

The findings of the regional survey indicate that the majority of respondents (over 80 percent across all partner communities in Jordan and Tunisia) use water for domestic purposes, while using water for gardening and farming is relatively uncommon. Respondents state that the quality of water they receive is relatively low. Pollution is a significant problem for over 50 percent of respondents in Jordan, although it is considered acceptable by over 60 percent of respondents in Tunisia (in Matmata, the proportion is significantly higher, with 75 percent of respondents rating water quality as appropriate for their main use).

Results concerning the quantity of water supplied are more disaggregated. In Jordan, 70 percent of respondents consider the amount of water they receive to be sufficient or relatively sufficient, while the price of water is declared affordable by around 70 percent of survey respondents. In Tunisia, results concerning satisfaction with the quantity of water supplied vary between 40 and 98 percent in different communities.

The price of water is declared affordable by an average of 65 percent of survey respondents in both countries.

There are significant differences concerning the dissemination of water-related information to citizens. In Jordan, the proportion of those who claim they do not receive any information varies between 6 and 12 percent, while in Tunisia the distribution of responses is more varied, with 28 to 76 percent of survey respondents stating that they do not receive any information on water quality and planning. Similar distribution patterns can be observed concerning responses to the question about information on government plans for improving water quality, combating water scarcity and related issues. Concerning sources of information about water quality, television is the predominant source in all partner communities in Jordan, while a more significant proportion of respondents in Tunisia receive such information at village meetings. It is worth noting the correlation between the percentage of respondents
who claim they do not receive any information on water quality and those who claim they do not receive any information on governmental plans for improving water quality. In addition, only a small proportion of respondents in both countries would like never to receive information about water quality from their local authorities. Consequently, these findings imply that local residents have a relatively low level of trust in their municipal administration and limited interest in taking part in water management planning. It seems that opportunities for the public to address water management and planning are rare, although there is a relative openness to external inputs, which leaves the possibility for some transparency and public participation in these processes. The position of local authorities in this regard should be viewed in the context of a poorly decentralised system of local governance and water distribution in both countries and a limited amount of resources available for the distribution of water-related information.

The results concerning water saving are comparable in Jordan and Tunisia, as between 85 and 94 percent, and between 70 and 96 percent of respondents respectively, state that they are interested in receiving information about water-saving techniques in their homes. On average, 65 percent of respondents claim that they try to save water in their homes. The results imply that citizens in partner communities have some awareness about water management and its implications for their everyday lives, and that they are somewhat motivated to take action to save water. It seems that there is no pronounced awareness about the interrelationships between water availability and socioeconomic development as a motivation for water saving and rainwater harvesting, and such awareness should be enhanced.

The frequency of conflicts with other water users in partner communities in Tunisia is diverse, ranging from 50 to 80 percent, while in Jordan the frequency of conflicts between respondents and other water users in the partner communities is relatively lower (between 30 and 55 percent of respondents claim that they never have such conflicts). Sufficient water for all sectors is seen by over 50 percent of respondents in both countries as the primary solution to water-related conflicts, while the participation of all water users in management and planning is seen as the best tool to reduce these conflicts by around a third of respondents.

This could imply that the majority of respondents have regular access to water of sufficient quality for their main use, although the percentage of respondents who claim that sufficient water for all sectors is, in their opinion, the best solution for reducing water-related conflicts greatly varies among partner communities. This could potentially imply that the majority of respondents in both countries are open to receiving water-related information, and hence to becoming involved, in water planning in their communities. Finally, this also confirms the assumption that citizens are interested and motivated to participate in water management and planning processes.

Taking into consideration the results of the public opinion assessments in each partner municipality and delegation, the local planning teams further worked on the planning process to develop local water security action plans for their respective communities.

The methodology presented here was used in the eight partner municipalities and delegations in the WATER SUM project. However, we believe that it is also applicable in other local communities that are interested in developing local environmental action plans with various focus issues, or that are interested in assessing public opinion in Jordan, Tunisia and other countries in the MENA region and beyond.
References

1. Website of the project “Sustainable Use of Transboundary Water Resources and Water Security Management” (WATER SUM) (watersum.rec.org)
Annexes

Annex 1. Water-related public opinion assessment questionnaire (English)

All the information you provide will be stored and processed anonymously, and it will not be possible to trace any of your answers to you. There are no right or wrong answers: we are purely interested in your views. You can omit any questions that you do not want to answer, and you can withdraw from the survey at any point if you wish. The information you provide will be used in our project research reports and shared with other scientists in the form of papers and presentations.

**Location**

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**Improving information flow between local authorities and local people**

1. **How do you learn about water quality?**
   - Newspapers
   - Television
   - Radio
   - Village meetings
   - Internet
   - I do not receive this information

   **Other (please specify)**

2. **How do you learn about governmental plans for improving water quality, preventing water scarcity etc.?**
   - Newspapers
   - Television
   - Radio
   - Village meetings
   - Internet
   - I do not receive this information

   **Other (please specify)**

3. **How often do the local authorities provide you with information related to water quality in your village?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

4. **How often would you like to receive information about water quality from the local authorities?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

5. **How often do the local authorities provide information related to water plans and programmes in your village?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

6. **How often do you request information about water from the local authorities?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

7. **How often do you express an opinion about water-related problems to the local authorities?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

**Bringing about change in water governance patterns in target municipalities (initiating a bottom-up approach to water management planning)**

1. **How often are you invited to participate at meetings (events) related to water management planning within your municipality?**
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

2. **Is your contribution to the water management planning process accepted by leaders of the process?**
   - Yes
   - No
Bringing about change in water governance patterns in target municipalities (initiating a bottom-up approach to water management planning)

1. How often are you invited to participate at meetings (events) related to water management planning within your municipality?
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

2. Is your contribution to the water management planning process accepted by leaders of the process?
   - Yes
   - No

Bringing about behavioural change in relation to water utilisation patterns in target municipalities

1. How often would you like to receive information about water-saving rules at home?
   - Never
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   - Once a day

2. Are you trying to save water at home?
   - Yes
   - No
   If yes, how?

3. Do you use tap water to wash your car/water your garden etc.?
   - Yes
   - No

4. Are you harvesting rainwater?
   - Yes
   - No

Improving public awareness about the impact of water scarcity on biodiversity, the environment and local socioeconomic development

1. Please rate the importance (current and future) of water quality for the abundance of plant and animal species in your village.
   - Not important at all
   - Not very important
   - Neutral
   - Important
   - Vital for plants and animals
   - I do not know

2. Do you think that you could earn more money if you had secure access to water?
   - No, I do not
   - Yes
   - I do not know

Reducing water-related tensions or conflicts in target municipalities

1. How often do you have conflicts over the use of water with other water users?
   - Never
   - Once every few years
   - Once a year
   - Once every six months
   - Once a month
   - Once a week
   Other (please specify)

2. In your opinion, what is the best solution for reducing conflicts?
   - Sufficient water for all sectors
   - Equal participation of all consumers in water management planning
   - Improved access to water
   - Reduced water pollution
   Other (please specify)

Information about water availability, use and quality

1. What is the main purpose for which you use water?
   - Domestic
   - Gardening
   - Farming
   Other (please specify)
2. Is sufficient water available to you for your main use?
☐ Yes  ☐ Never  ☐ Most days
Other (please specify)

3. Is the water of an appropriate quality for your main use?
☐ Yes  ☐ No

4. Is the water provided at a price that you can afford?
☐ Yes  ☐ No
Other (please specify)

Information about the respondent

Gender
☐ Male  ☐ Female

Age
☐ 18-29  ☐ 30-49  ☐ 50-69  ☐ Over 70

Education
☐ No formal education  ☐ Primary school  ☐ Secondary school  ☐ University

Place of residence
☐ Rural area  ☐ Urban area

Indicators of socioeconomic status

What is the main source of water for members of your household?
☐ Piped water into the dwelling  ☐ Piped water to the yard/plot  ☐ Public tap/standpipe  ☐ Tubewell/borehole  ☐ Protected dug well
☐ Unprotected dug well  ☐ Protected spring  ☐ Unprotected spring  ☐ Rainwater collection  ☐ Bottled water
☐ Cart with small tank/drum  ☐ Tanker truck  ☐ Surface water (river, dam, lake, pond, stream, canal, irrigation channel)
Other (please specify)

Submit

The regional project “Sustainable Use of Transboundary Water Resources and Water Security Management” (Water SUM) is financed by the Government of Sweden through the Swedish International Development Cooperation Agency (SIDA) and implemented by the Regional Environmental Center (REC). The REC is implementing activities with the support of the Regional Office for West Asia of the International Union for Conservation of Nature (IUCN ROWA).
Annex 2. Water-related public opinion assessment questionnaire (Arabic)

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تحسين تدفق المعلومات بين السلطات المحلية والسكان المحليين

1. كيف تعنيك عن نوعية المياه؟
   - الصحف
   - التلفزيون
   - الإذاعة
   - الإنترنت
   □ لا أستطيع أقول

2. كيف تعنيك عن الخطط الحكومية لتحسن نوعية المياه والصحة العامة وغيرها؟
   - الصحف
   - التلفزيون
   - الإذاعة
   - الإنترنت
   □ لا أستطيع أقول

3. كم مرة عادة تقصد السلطات المحلية بالمعلومات المتعلقة بنوعية المياه في قرئك؟
   - لا أقصد
   - مرة سنوياً
   - مرة كل ستة أشهر
   - مرة شهرياً
   - مرة أسبوعياً
   - مرة يومياً

4. كم مرة ترغب في الحصول على معلومات عن نوعية المياه من السلطات المحلية؟
   - لا أرغب بذلك
   - مرة سنوياً
   - مرة كل ستة أشهر
   - مرة شهرياً
   - مرة أسبوعياً
   - مرة يومياً

5. كم مرة عادة تقوم السلطات المحلية بالمعلومات المتعلقة بخطط وبرامج المياه في قرئك؟
   - لا أقدم
   - مرة سنوياً
   - مرة كل ستة أشهر
   - مرة شهرياً
   - مرة أسبوعياً
   - مرة يومياً

6. كم مرة تطلب معلومات عن المياه من السلطات المحلية؟
   - لا أطلب
   - مرة سنوياً
   - مرة كل ستة أشهر
   - مرة شهرياً
   - مرة أسبوعياً
   - مرة يومياً

7. كم مرة عادة تشعر السلطات المحلية عن رأيك في المشكلات المتعلقة بالمياه؟
   - لا أشعر
   - مرة سنوياً
   - مرة كل ستة أشهر
   - مرة شهرياً
   - مرة أسبوعياً
   - مرة يومياً
ضر لا

إذا كنت تحاول كيف؟

3. هل تشتري مياه الحالية الصناعية في عسل سوبر أور أو أي الحديثة أو ما شابه ذلك؟

ضر لا

4. هل تطور مصرف مياه الآلولات؟

ضر لا

تحسين الوعي العلم بتلخيص شؤون المياه على النوع الحيوي والبيئة والنوعية الاجتماعية الاقتصادية المحلية

يرجى تصنيف الأهمية (البالية والمستقبلية) لدوافع المياه في فترة الأدوات البنائية والحوافز التي تتبع في قريتك.

غير ممكنا

ضر ممكنا جدا

محبب

محبب

حرية للمياه والاختيارات لا أعرف

2. هل تعتقد أنه يوفر كم أكثر من كم لديك وصول ضخم للمياه؟

لا لا أعد عرف

لا لا أعد عرف

تفاصيل التطورات أو النزاعات المرتبطة بالمياه في البلدات المستفيدة

1. كم مرة عادة تدخل في نزاعات حول استخدام المياه مع مستخدمين آخرين للمياه؟

لا أعد ملكة كل سنة آواور

 مرة كل سنتان

 مرة كل شهر

 مرة أسبوعية

 مرة يومية

غير ذلك (أذكره)

2. ما هو أفضل حل لتقليل النزاعات؟

مباشرة مشاية لجميع المستهلكين في التخطيط للإدارة المائية

 الوصول المحض إلى المياه

 تقليل الفائدة

 غير ذلك (أذكره)

إحاتت في أمانو حكومة المياه في البلدات المستفيدة (البدائل الممكنة من الأذرع إلى الأعلى في التخطيط للإدارة المائية)

1. كم مرة عادة تجري المشاركات في اجتماعات (محليات) متعلقة بالتخطيط للإدارة المائية ضمن بلدتك؟

لا أعد ملكة كل سنة آوور

 مرة كل سنتان

 مرة كل شهر

 مرة أسبوعية

 مرة يومية

غير ذلك (أذكره)

2. هل تقبل مساهمتك في عملية التخطيط للإدارة المائية من مديري هذه العملية؟

نعم لا

إحاتات التعديل السلوكي في أماكن استخدام المياه في البلدات المستفيدة

1. كم مرة ترحب بلقيا معلومات عن قواعد المحافظة على المياه في بلدتك؟

لا أعد ملكة كل سنة آوور

 مرة كل سنتان

 مرة كل شهر

 مرة أسبوعية

 مرة يومية

غير ذلك (أذكره)

2. هل تحاول توفير تغير المياه في بلدتك؟

نعم لا
تكثيف التوترات أو النزاعات المرتبطة بالمياه في البلدان المستهدفة

1. كم مرة عادة تدخل في نزاعات حول استخدام المياه مع مستعمرين آخرين للمياه؟
   - لا أدخل
   - مرة كل شهرين
   - مرة سنوياً
   - مرة كل سبع سنوات
   - مرة شهرياً
   - مرة أسبوعياً
   - غير ذلك (أذكر)

2. برأيك ما هو أفضل حل لتفادي النزاعات؟
   - مياه كافية لجميع العائلات
   - مشاركة شرعية لجميع المستهلكين في التخطيط الإدارة المائية
   - الوصول المحقق إلى المياه
   - تقليل نفقات المياه
   - غير ذلك (أذكر)

الموارد عن توفير المياه واستعمالاتها ونوعيتها

1. ما هي استعمالات المياه الرئيسية للمنزل؟
   - استعمالات منزلية
   - زر الحمة
   - الزراعة
   - غير ذلك (أذكر)

2. هل يتوفر لك ما يكفي من المياه لاستعمالات الرئيسي؟
   - نعم
   - لا
   - غير ذلك (أذكر)

3. هل المياه ذات نوعية مناسبة للاستعمال الرئيسي؟
   - نعم
   - لا

4. هل تزود المياه بسعة تتمكن تحمله؟
   - نعم
   - لا
   - غير ذلك (أذكر)

معلومات عن المجب (لكل سؤال اختر الإجابة الوحيدة التي تطبيق عليها)

الجنس
- ذكر
- أنثى

العمر
- أصغر من 18 سنة
- 18-29 سنة
- 30-49 سنة
- 50-69 سنة
- أكثر من 70 سنة
المؤشرات حالة الوضع الاجتماعي-الاقتصادي

ما المصدر الرئيسي للمياه لأفراد الأسرة؟

- أنابيب مياه موصولة بالمزرع
- أنابيب مياه موصولة بالمزرع/المزرعات/المنزل
- جنفية عامة/أنبوب رأس
- بئر مفتوح
- بئر مفتوح/حفرة
- بئر مفتوح غير محمي
- جمع مياه الأمطار
- جمع مياه الأمطار في رجاحات
- عرية تحل حراراً صغير/ابراشلا
- صغير/مطحنة (نهر، سمكة، بحيرة، بركة، حيوان، بئر، أقفاز، ري)
- غير ذلك (أذكره)

تقرير النموذج
In the framework of the Water and Security (WaSe) component of the WATER SUM project, a public opinion assessment was undertaken in local communities in Jordan (the municipalities of Al Karak, Jerash, Al-Salt and Ajloun) and Tunisia (the delegations of Sidi Ali Ben Aoun, Bir Mcherga, Nefza and Matmata) in relation to water management, water governance and water security. The questionnaire also gathered information on water development and management projects.

The public opinion assessment is one of the key steps in the creation of local water security action plans, as described in the WATER SUM Local Water Security Action Planning Manual. This document presents the results of public opinion assessments carried out in Jordan and Tunisia.