

TRAINING NEEDS ASSESSMENT REPORT

“Developing Local Municipal Solid Waste Management
Planning Guidelines” project



Training Needs Assessment Report

“Developing Local Municipal Solid Waste Management
Planning Guidelines and
Training Needs Assessment for Implementing Such Guidelines” project

This research has been implemented in the scope of the Policy Development and Research fund, financed by the Swedish Government and in cooperation with AUA and the Armenian Government. The views and opinions expressed in this research are those of the authors' only and do not necessarily reflect the official policy or position of any of the other parties.

Project website: https://ace.aua.am/waste/planning_guidelines/

Contents

| | |
|--|----|
| Summary | 4 |
| 1 Introduction..... | 5 |
| 2 TNA Methodology | 6 |
| 3 Participants..... | 6 |
| 4 Statistical analysis..... | 8 |
| 4.1 General planning process in municipalities | 8 |
| 4.2 Solid waste management planning process at municipalities | 8 |
| 4.3 Previous trainings on solid waste management planning at municipalities..... | 10 |
| 4.4 Training needs at municipalities for waste management planning | 10 |
| 5 Conclusions and recommendations | 14 |
| Appendix A – Training Needs Assessment questionnaire..... | 15 |

Summary

The present Training Needs Assessment (TNA) is done in the frameworks of the Developing Local Municipal Solid Waste Management Planning Guidelines Project and aims to identify the training needs for the application of the Guideline.

The assessment was carried out using the questionnaire presented in [Appendix A](#), which was filled out by 164 municipalities, including both consolidated and non-consolidated communities.

The analysis of survey results showed that there is a dire need for trainings in municipalities on a number of topics related to solid waste management planning, particularly with regard to planning methodology and required toolsets, plan structure and contents, as well as application of information technologies in planning.

Staffs of municipalities had low levels of knowledge and skills regarding basic principles and tools pertaining to sustainable management of solid wastes, i.e., waste hierarchy, green public procurement in the waste sector, programs for reduction of waste generation.

The results of the Training Needs Assessment will be used for the development of training courses that will aim to improve competences of LSG authorities in regard to solid waste management planning and application of the Guideline.

1 Introduction

The present Training Needs Assessment was carried out in the frameworks of the Developing Local Municipal Solid Waste Management Planning Guidelines Project implemented within the scope of the Policy Development and Research fund of the American University of Armenia (AUA), financed by the Swedish Government, and in cooperation with the AUA, Urban Foundation for Sustainable Development, and the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia.

The assessment was carried out during the first ten days of March 2021 and aimed to identify current competences and skills required for the application of the Local Municipal Solid Waste Management Planning Guideline in the municipalities.

Project details, the Guideline and other outcomes are available on the project website:

https://ace.aua.am/waste/planning_guidelines/

2 TNA Methodology

Key steps required for the implementation of the TNA are presented in the diagram below:



The list of competences and knowledge has been developed considering the general knowledge necessary for strategic planning as well as special knowledge and skills required for solid waste management. The draft TNA questionnaire was developed on the Google Forms online platform based on the list of competences and knowledge.

A meeting of multi-stakeholder groups was held in February with the participation of representatives from territorial administration and local self-governance authorities, as well as other participants from Yerevan and 9 provinces, save for Syunik.

At the meeting of the multi-stakeholder groups the preliminary contents and structure of the TNA questionnaire was presented and discussed with the participants. A number of observations and recommendations were made, based on which the questionnaire was further developed and finalized. The final draft of the TNA questionnaire that was circulated among all stakeholders is presented in Appendix A.

The questionnaire was developed to collect data in the following areas: general planning procedures at municipalities, solid waste management planning procedures, past experience and current needs related to solid waste management planning trainings.

The TNA questionnaire was circulated among municipalities through territorial administration authorities and under direct coordination by the RA Ministry of Territorial Administration and Infrastructure. The project expert team provided assistance to municipalities in filling out the questionnaires.

TNA survey results were analyzed by the project expert team and summed up in this report. The survey results will serve as baseline for the development of the training program directed at the improvement of competences of LSG authorities in regard to local solid waste management planning and application of the Guideline.

3 Participants

All municipalities in the country were invited to take part in the TNA survey. As it was already mentioned, the TNA questionnaire was circulated among municipalities through territorial administration authorities and under the direct coordination of the RA Ministry of Territorial Administration and Infrastructure. Designated employees of regional authorities coordinated the process of circulating the questionnaire among municipalities and ensuring they were filled out within a 5-day time frame. 164 total responses were received. The distribution of these responses per provinces is presented in Figure 1. The most active participation was recorded in Ararat Province, while Aragatsotn was the most passive one (only 3 responses).

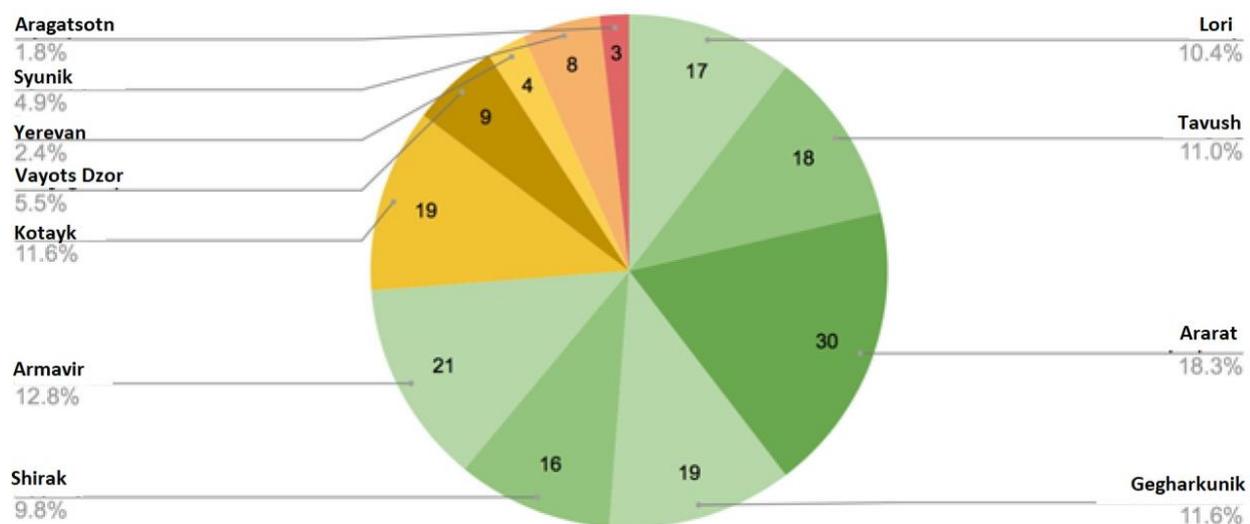


Figure 1 – Distribution of participants per provinces

4 Statistical analysis

4.1 General planning processes in municipalities

While most of the municipalities develop 5-year community development plans and annual workplans, only 18% of them develop separate waste management plans.

95% of the specialists involved in planning processes are from the community mayor's office staff, in 26% of the cases they're from the communal service departments of municipalities, in 14% of cases they're from the economic development departments, and in 12% of cases - from other departments and divisions.

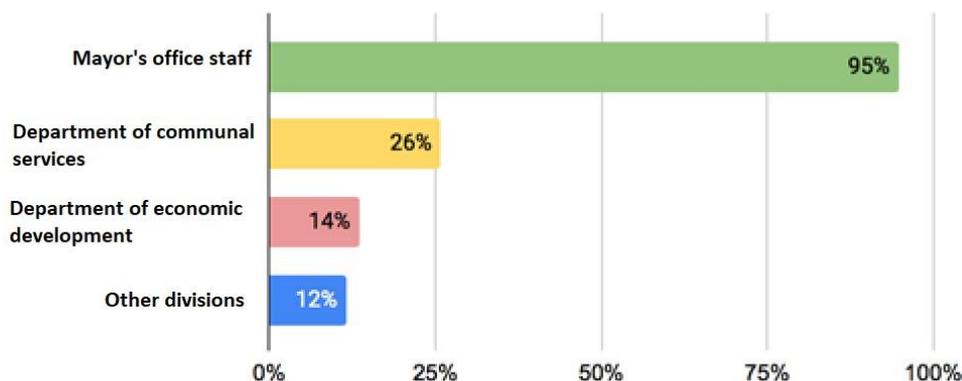


Figure 2 – Departments or divisions involved in the planning process
Number of respondents: 164

Generally, the planning process involves different numbers of specialists. In 50% of cases planning is done by 1-3 employees, while in the remaining cases by 4 and more specialists.

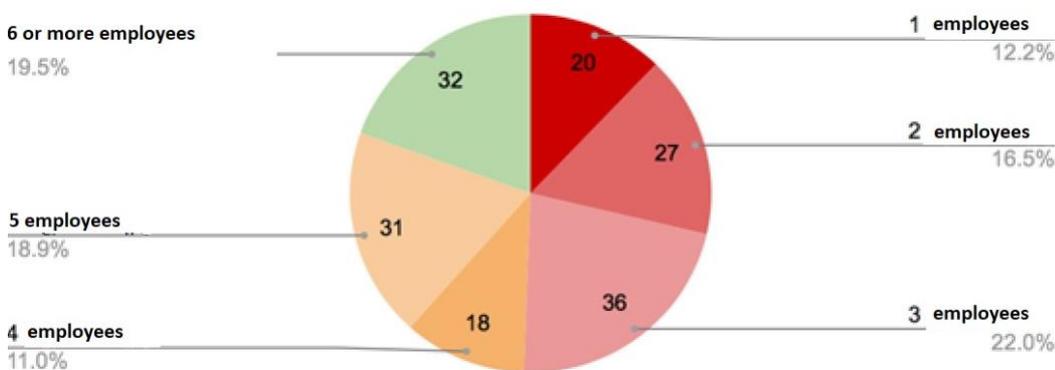


Figure 3 – Number of employees involved in the planning processes
Number of respondents: 164

4.2 Solid waste management planning processes at municipalities

As it was already mentioned, only 18% of municipalities participating in the survey develop separate waste management plans. Responses of all other municipalities indicate that the reasons for not having separate waste management plans are the absence of need for it (about 50% of respondents), as well as the lack of specialists, knowledge, competences, and human resources (about 30% of respondents).

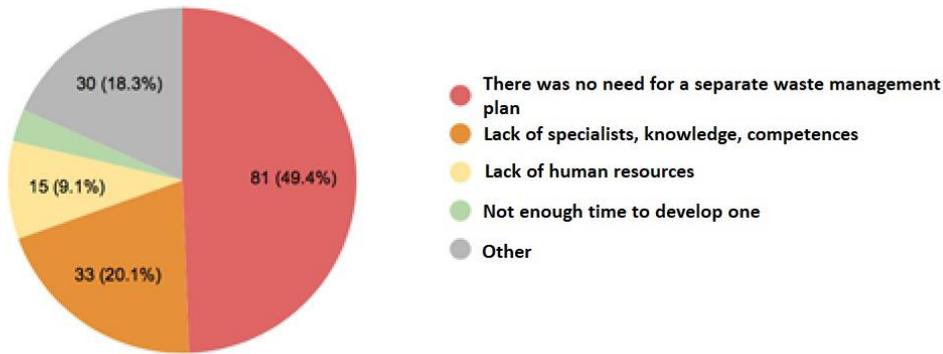


Figure 4 – Reasons for not having separate waste management plans at municipalities
 Number of respondents: 164

If a separate waste management plan is indeed developed at the municipality, then usually up to 3 employees (in 62% of cases) are involved in the planning process. In only 24% of cases there are 4-5 employees involved, and 7 or more employees are involved in the planning process in 14% of the cases.

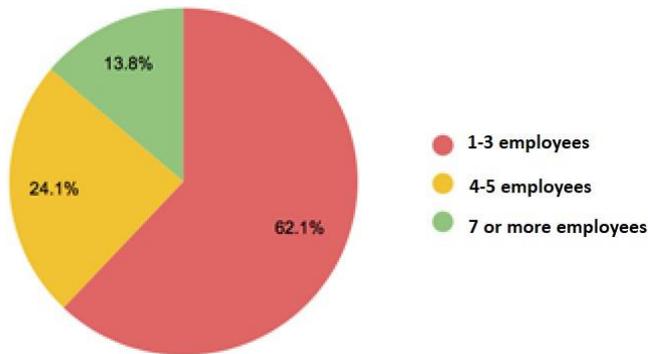


Figure 5 – Number of employees involved in the development of separate waste management plans at municipalities
 Number of respondents: 30

The time required for the development of a separate waste management plan varies greatly in municipalities that participated in the survey. As it can be seen from the figure below, in 90% of the cases this does not require more than a month.

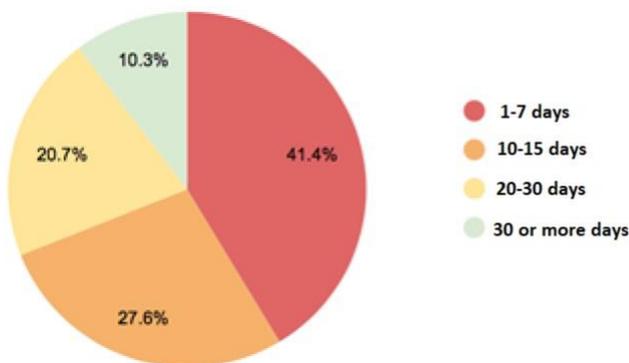


Figure 6 – Time required for the development of a separate waste management plan at municipalities
 Number of respondents: 30

The survey shows that during the development of a separate plan for waste management, the biggest share of time is spent on the identification of issues and meetings with stakeholders, while setting goals and targets, conducting a SWOT analysis and utilizing guidelines are done less frequently. The least attention is paid to logistic and economic calculations that are done only in 27% of cases.

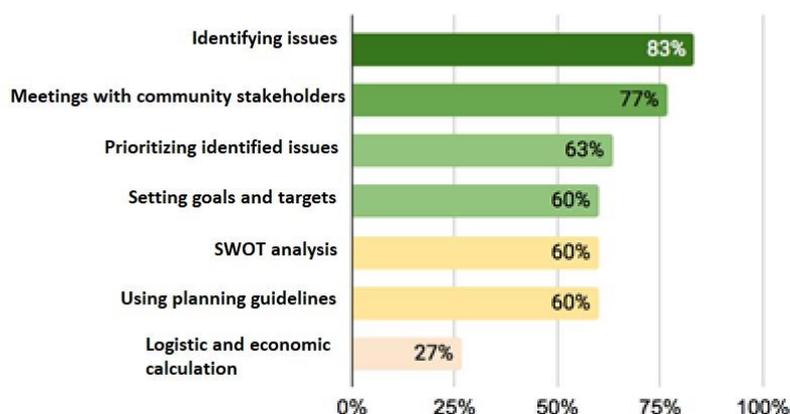


Figure 7 – Actions carried out during the development of separate waste management plans at municipalities
Number of respondents: 30

4.3 Previous trainings on solid waste management planning at municipalities

Only 8 out of 164 municipalities participating in the survey had waste management planning trainings (6%). As the table below illustrates, only 5 employees took part in the training, most of whom are still employed at the municipality.

| How many employees were trained? | How many employees are currently working? | Organization conducting the training |
|----------------------------------|---|--|
| 1 | 1 | Clean Goris NGO |
| 2 | 2 | Urban Foundation for Sustainable Development |
| 2 | 0 | Urban Foundation for Sustainable Development |
| 3 | 1 | Urban Foundation for Sustainable Development |
| 3 | 3 | Urban Foundation for Sustainable Development |
| 3 | 3 | Urban Foundation for Sustainable Development |
| 5 | 4 | Georisk CJSC |
| 5 | 5 | Georisk CJSC |

Figure 8 – Details of previous trainings at municipalities
Respondents: 8

4.4 Training needs at municipalities for waste management planning

One of the goals of this training needs assessment was to identify the level of staff knowledge and skills at municipalities, particularly in relation to certain basic principles and tools related to sustainable management of solid wastes. The table below presents the results of the survey with regard to the awareness of the eight principles and tools and the level of their application.

| Principle or tool for sustainable management of wastes | I'm not familiar with it | I'm familiar with it but do not apply it | I'm familiar with it and do apply it |
|--|--------------------------|--|--------------------------------------|
| "Polluter pays" principle | 43% | 29% | 28% |
| Extended producer responsibility | 73% | 21% | 6% |
| Waste hierarchy | 81% | 16% | 2% |
| Participatory budgeting of waste management | 79% | 15% | 6% |
| Performance-based contracting | 52% | 17% | 30% |
| Green public procurements in the waste sector | 78% | 19% | 3% |
| Waste minimization programs | 68% | 25% | 7% |
| Incentives for reducing waste moved to landfills | 59% | 27% | 15% |

Figure 9 – Level of staff knowledge and competences with regard to basic principles and tools for sustainable management of solid wastes

Number of respondents: 164

Another important objective of the assessment was identifying the level of knowledge of municipality staff on 27 general topics related to sustainable waste management. Survey participants have marked municipality staff knowledge as excellent, sufficient, poor, and non-existent. Figure 10 sums up the responses received during the assessment while also listing knowledge marked as non-existent for each topic in an additional column. The last row shows the average rating for all topics.

As Figure 10 illustrates, the biggest gaps of knowledge for the 27 topics that were discussed have to do with the recycling methods of waste and tools to promote them, as well as safe handling methods for hazardous solid wastes generated in the community, and tools promoting these methods. 86% of respondents have noted insufficient knowledge or lack thereof in this area. In relation to public awareness raising methods, 41% of municipalities have noted sufficient level of knowledge, while 4% marked this excellent. The same response was given regarding the methods of preventing waste disposal in undesignated areas.

The knowledge gap with regard to local solid waste management planning has been highlighted by a number of municipalities. 80% of municipalities noted of non-existent or insufficient knowledge on the structure and contents of the plan as well as regarding the tools required for planning.

77% of municipalities marked their knowledge on all 27 topics as non-existent or poor, and only 22% of them marked it as sufficient.

| General topics for sustainable waste management | Missing or poor | Missing | Poor | Satisfactory | Excellent |
|---|------------------------|----------------|-------------|---------------------|------------------|
| Solid waste recycling methods and tools for their promotion | 87% | 60% | 27% | 13% | 0% |
| Safe solid waste handling methods available in the community, and tools for their promotion | 86% | 63% | 23% | 14% | 0% |
| Composition study of solid wastes generated in the community | 86% | 61% | 25% | 13% | 1% |
| Extended producer responsibility as an effective means for solid waste management | 85% | 60% | 25% | 15% | 0% |
| Planning methodology | 84% | 60% | 24% | 16% | 0% |
| Types of solid wastes generated in the community and their management peculiarities | 83% | 58% | 25% | 16% | 1% |
| Composting methods for organic wastes and tools for their promotion | 82% | 60% | 23% | 16% | 1% |
| Bulky waste handling methods and tools for their promotion | 82% | 59% | 23% | 18% | 0% |
| Use of IT in planning | 81% | 56% | 25% | 19% | 0% |
| Data collection mechanisms on wastes generated in the community | 81% | 55% | 26% | 19% | 0% |
| Primary actors and their roles in solid waste management in the community | 81% | 55% | 26% | 18% | 1% |
| Other organic waste handling methods and tools for their promotion | 81% | 59% | 22% | 19% | 0% |
| Structure and contents of the plan to be developed | 80% | 61% | 20% | 19% | 1% |
| Toolsets required for planning | 79% | 55% | 24% | 21% | 0% |
| Solid waste handling methods and tools for their promotion | 79% | 46% | 33% | 21% | 1% |
| Methods for reduction of waste moved to landfills and tools for their promotion | 79% | 43% | 35% | 21% | 1% |
| Methods for ensuring public participation in waste management planning | 78% | 48% | 30% | 21% | 1% |
| Social and economic impacts of poor waste management | 77% | 47% | 30% | 23% | 0% |
| Methods for reducing generation of solid wastes and tools for the promotion of such methods | 77% | 38% | 39% | 23% | 0% |
| Funding and budgeting (including participatory) for sustainable management of wastes | 77% | 57% | 21% | 22% | 1% |
| Optimization of solid waste collection | 75% | 48% | 27% | 24% | 1% |
| Negative impacts of poor waste management on public health, the environment, and climate change | 74% | 42% | 32% | 26% | 0% |
| Sustainable management of landfills (establishment, operation, closure) | 70% | 39% | 31% | 29% | 1% |
| Poor waste management oversight | 68% | 37% | 31% | 31% | 1% |
| Effective application of public/community-private partnership contracts | 67% | 39% | 28% | 30% | 3% |
| Methods for preventing disposal of waste in undesignated areas in the community | 59% | 28% | 31% | 40% | 1% |
| Public awareness raising methods in the community | 55% | 24% | 31% | 41% | 4% |
| Average rating for all topics | 77% | 50% | 27% | 22% | 1% |

Figure 10 – Level of municipality staff knowledge on general topics for sustainable waste management
Number of respondents: 164

To the question on the needs for trainings required to ensure effective waste management, 68% of municipalities have noted needs related to the structure and contents of the plan, as well as a need for trainings on toolsets required for planning. Training needs on planning methodology and application of IT in planning were also highlighted.

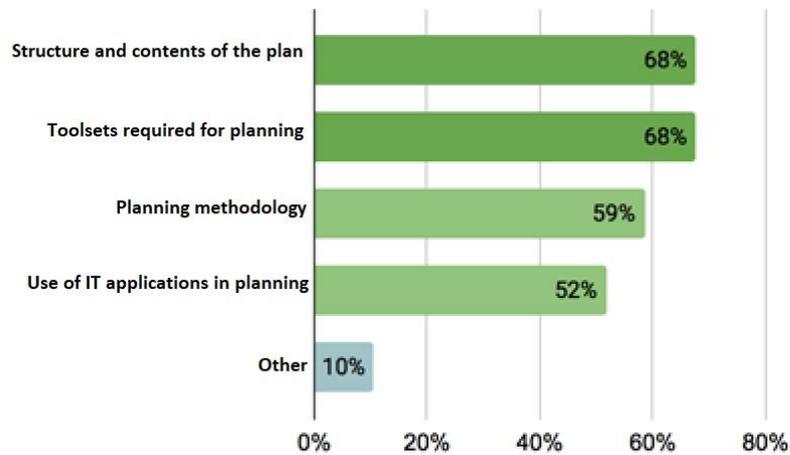


Figure 11 – Needs for trainings required to ensure effective planning of waste management at municipalities
 Number of respondents: 164

Preferences of municipalities in relation to training formats are presented below:

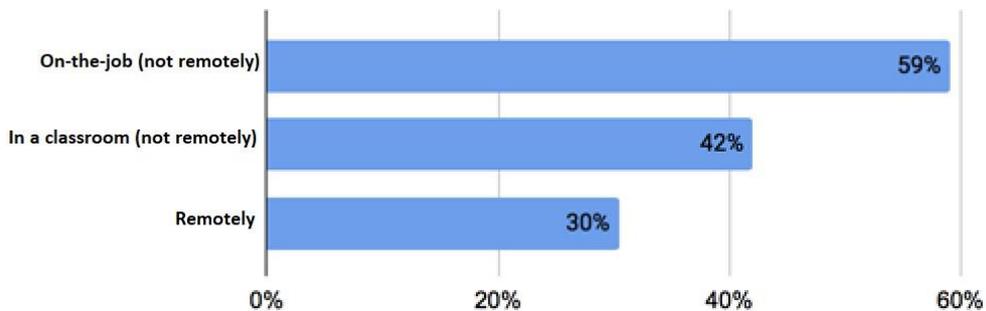


Figure 12 – Preferred formats for trainings
 Number of respondents: 164

5 Conclusions and recommendations

The Training Needs Assessment has indicated that municipalities are in desperate need of trainings on waste management, particularly with regard to some key directions and topics of waste management planning.

While filling out the questionnaire, municipality staff made contact with the project expert team over the phone and pointed out multiple times the need for trainings on sustainable waste management.

There is a need for trainings on planning of sustainable waste management for solid wastes in the following two directions:

1. planning methodology and required toolsets, plan structure and contents;
2. use of IT in planning.

A low level of skills and knowledge was identified among municipality staff in relation to basic principles and tools for sustainable management of solid wastes, including related to waste hierarchy, green public procurement in the field of wastes, and waste minimization programs.

There is also a need for general trainings on sustainable management of solid wastes, for which all topics presented in Figure 10 should be included, since most of the municipalities have noted of missing or poor knowledge on them.

Appendix A – Training Needs Assessment questionnaire

Need assessment for the development of community waste management plans

Questionnaire (communities)

This survey is conducted in the frameworks of the project for Developing Local Municipal Solid Waste Management Planning Guidelines and Training Needs Assessment for Implementing Such Guidelines.

1. Province _____
2. Community _____

General information

1.1 What kind of planning documents are developed in the municipality? (note in respective boxes)

| | |
|--------------------------------------|--|
| Five-year community development plan | |
| Annual workplan | |
| Waste management plan | |
| Economic development plan | |
| Other (specify) | |

1.2 Municipality departments/divisions that are involved in the planning process (note in respective boxes).

| | |
|------------------------------------|--|
| Mayor’s Office staff | |
| Department of Communal Services | |
| Department of Economic Development | |
| Other (specify) | |

1.3 How many specialists are involved in the planning process? (note a number)

1.4 Has a separate strategic waste disposal (or waste management) plan been developed at the municipality as an individual document? (waste management schemes included in the development plan are not considered a separate waste management plan).

| | |
|-----|----|
| Yes | No |
|-----|----|

If a separate waste management plan was developed

2.1 How many employees were involved in the planning process? (note a number)

2.2 On average, how long does the planning process last? (note number of days)

| |
|--|
| |
|--|

2.3 What are the steps taking during the development of the plan? (write in boxes)

| | |
|--------------------------------------|--|
| Use of plan development guideline | |
| Meetings with community stakeholders | |
| Identification of issues | |
| Prioritizing identified issues | |
| Conducting SWOT analysis | |
| Setting goals and targets | |
| Logistics and economic calculation | |
| Other (specify) | |

Training needs

| | |
|---|--|
| 3.1 Has there ever been a training conducted on planning? (note Yes or No) | |
| If trainings were conducted: | |
| 3.2 How many employees were trained? (note a number) | |
| 3.3 How many of them are currently still working? (note a number) | |
| 3.4 Who conducted the training? (note name of organization) | |

3.5 What principles and tools of sustainable waste management are you familiar with and use? (I'm not familiar/I'm familiar but do not use/use them)

| | |
|---|--|
| Polluter pays principle | |
| Extended producer responsibility | |
| Waste hierarchy | |
| Participatory budgeting of waste management | |

| | |
|--|--|
| Performance-based contracting | |
| Green procurement in waste sector | |
| Waste minimization programs | |
| Incentives for reducing waste moved to landfills | |

3.6 How would you rate the current level of knowledge and skills available at your municipality/territorial administration authority with regard to the following topics on waste management: 0 – missing, 1 – poor, 2 – satisfactory, 3 – excellent?

| Topics | 0 | 1 | 2 | 3 |
|--|---|---|---|---|
| Methods for reducing solid waste generation and tools for their promotion | | | | |
| Methods for solid waste sorting and tools for their promotion | | | | |
| Optimization of solid waste collection | | | | |
| Methods of recycling of solid waste and tools for their promotion | | | | |
| Methods of composting of organic waste and tools for their promotion | | | | |
| Other methods of handling organic waste and tools for their promotion | | | | |
| Methods of safe handling of hazardous solid waste generated in the community and tools for their promotion | | | | |
| Methods of handling bulky waste and tools for their promotion | | | | |
| Methods of reducing waste moved to landfills and tools for their promotion | | | | |
| Sustainable management of landfills (establishment, operation, closure) | | | | |
| Methods to prevent waste dumping in undesignated areas in the community | | | | |
| Poor waste management oversight | | | | |
| Impacts of poor waste management on public health | | | | |
| Impacts of poor waste management on the environment | | | | |
| Social and economic impacts of poor waste management | | | | |
| Impacts of poor waste management on climate change | | | | |
| Methods of community awareness-raising | | | | |
| Effective application of PPP contracts | | | | |
| Mechanisms of data collection on solid wastes generated in the community | | | | |
| Types and management peculiarities of solid wastes generated in the community | | | | |

| | | | | |
|---|--|--|--|--|
| Composition study of solid wastes generated in the community | | | | |
| Primary actors and their roles in management of solid wastes generated in the community | | | | |
| Extended producer responsibility as an effective management method for solid wastes | | | | |
| Funding and budgeting (including participatory) of sustainable management of wastes | | | | |
| Ensuring public participation in waste management planning | | | | |

3.7 What kind of training needs do you have in order to make waste management more effective? (write in boxes)

| | |
|------------------------------------|--|
| Structure and contents of the plan | |
| Toolset required for planning | |
| Use of IT applications in planning | |
| Planning methodology | |
| Other (specify) | |

3.8 Preferred training format (check all preferred rows)

| | |
|------------------------------------|--|
| In-classroom format (not remotely) | |
| On-the-job format (not remotely) | |
| Remotely | |
| All options are acceptable | |

If no separate waste management plan was developed

2.5 What are the reasons for not having a waste management plan? (please check next to respective row)

| | |
|--|--|
| Lack of time | |
| Lack of human resources | |
| Lack of specialists, knowledge, skills | |
| There was no need for a separate waste management plan | |
| Other (specify) | |

Training needs

| | |
|--|--|
| 3.1 Has there ever been training conducted on planning? (note Yes or No) | |
| If trainings were conducted: | |
| 3.2 How many employees were trained? (note a number) | |
| 3.3 How many of them are still working? (note a number) | |
| 3.4 Who conducted the training? (note name of organization) | |

3.5 What principles and tools of sustainable waste management are you familiar with? (I'm not familiar/I am familiar but do not use/use them)

| | |
|---|--|
| Polluter pays principle | |
| Extended producer responsibility | |
| Waste hierarchy | |
| Waste management participatory budgeting | |
| Performance-based contracting | |
| Green procurements in waste sector | |
| Waste minimization programs | |
| Incentives for reducing wastes moved to landfills | |

3.6 How would you rate the level of knowledge and skills at your municipality/territorial administration authority in relation to waste management: 0 – missing, 1 – poor, 2 – satisfactory, 3 – excellent?

| Topics | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| Methods for reducing solid waste generation and tools for their promotion | | | | |
| Methods for solid waste sorting and tools for their promotion | | | | |
| Optimization of solid waste collection | | | | |
| Methods of recycling of solid waste and tools for their promotion | | | | |
| Methods of composting of organic waste and tools for their promotion | | | | |

| | | | | |
|--|--|--|--|--|
| Other methods of handling organic waste and tools for their promotion | | | | |
| Methods of safe handling of hazardous solid waste generated in the community and tools for their promotion | | | | |
| Methods of handling bulky waste and tools for their promotion | | | | |
| Methods of reducing waste moved to landfills and tools for their promotion | | | | |
| Sustainable management of landfills (establishment, operation, closure) | | | | |
| Methods to prevent waste dumping in undesignated areas in the community | | | | |
| Poor waste management oversight | | | | |
| Impacts of poor waste management on public health | | | | |
| Impacts of poor waste management on the environment | | | | |
| Social and economic impacts of poor waste management | | | | |
| Impacts of poor waste management on climate change | | | | |
| Methods of community awareness-raising | | | | |
| Effective application of PPP contracts | | | | |
| Mechanisms of data collection on solid wastes generated in the community | | | | |
| Types and management peculiarities of solid wastes generated in the community | | | | |
| Composition study of solid wastes generated in the community | | | | |
| Primary actors and their roles in management of solid wastes generated in the community | | | | |
| Extended producer responsibility as an effective management method for solid wastes | | | | |
| Funding and budgeting (including participatory) of sustainable management of wastes | | | | |
| Ensuring public participation in waste management planning | | | | |

3.7 What kind of training needs do you have in order to make waste management more effective? (check in boxes)

| | |
|------------------------------------|--|
| Structure and contents of the plan | |
| Toolset required for planning | |
| Use of IT applications in planning | |
| Planning methodology | |
| Other (specify) | |

3.8 Preferred training format (check all preferred rows)

| | |
|------------------------------------|--|
| In-classroom format (not remotely) | |
| On-the-job format (not remotely) | |
| Remotely | |
| All options are acceptable | |