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# WASTE MANAGEMENT TECHNOLOGIES IN REGIONS, GEORGIA

Quarterly Report  
PERIOD: April – June 2016



31 July 2016

# **Waste Management Technologies in Regions, Georgia**

USAID Cooperative Agreement AID-114-LA-14-00001

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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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## ABBREVIATIONS

ADC	Austrian Development Cooperation
APA	Agency of Protected Areas
CENN	Caucasus Environmental NGO Network
DCOP	Deputy Chief of Party
EHS	environmental health and safety
EIA	environmental impact assessment
EIEC	Environmental Information and Education Centre
EU	European Union
FB	Facebook
GHG	greenhouse gas
GoG	Government of Georgia
ICMA	International City/County Management Association
ISC	Institute for Sustainable Communities
ISWM	integrated solid waste management
MOENRP	Ministry of Environment and Natural Resources Protection
NGO	non-governmental organization
PSA	public service announcement
PMP	performance monitoring plan
4Rs	reduce, reuse, recover, recycle
SCG	Stakeholder Consultative Group
SFG	Sustainable Forest Governance in Georgia program
SWM	Solid Waste Management
SWMCG	Solid Waste Management Company of Georgia
USAID	United States Agency for International Development
WMTR	Waste Management Technologies in Regions
WMA	Waste Management Association

## Program Background

The USAID Waste Management Technologies in Regions Program (WMTR) was awarded to International City/County Management Association (ICMA) on March 18, 2014, under Cooperative Agreement AID 114-LA-14-00001. ICMA is implementing WMTR in partnership with a local sub-recipient, the Caucasus Environmental NGO Network (CENN). WMTR is designed to contribute to the following USAID monitoring and evaluation framework objectives and results:

- Strategy Development Objective 2: Inclusive and sustainable growth.
- Intermediate Result 2.3 More responsible management and development of Georgia’s natural endowments.
- Intermediate Result 2.3.3 Waste management improved.

The goal of WMTR is to provide professional waste management technical assistance to support waste management system development and recycling in two regions of Georgia — Kakheti and the Autonomous Republic of Adjara. Project activities will promote greenhouse gas (GHG) mitigation and sequestration by developing the waste management sector, including waste collection, recycling, and public awareness. Specifically, this project will enable GHG mitigation and sequestration from the waste sector by enabling the recycling business environment in targeted regions and municipalities; improve waste collection systems; minimize pollution of natural resources from landfills by closing down old, illegal landfills and dumpsites; and enhance public awareness of waste management issues and ensuring public participation in the decision-making and designing process of new waste management systems. Additionally, ICMA will work closely with its local partner, CENN, to build the capacity of its staff with the ultimate goal of WMTR handover in 2017.

WMTR activities combine various components into a comprehensive structure that focuses on technical assistance and capacity/institution building of integrated waste management systems and recycling/composting in two regions of Georgia — Kakheti and Adjara AR. WMTR has four main components:

- Component 1: Waste Collection and Recycling Systems
- Component 2: Private Sector-Led Recycling
- Component 3: Waste Management Strategy and Tariff Policy
- Component 4: Communication and Outreach

WMTR also implements crosscutting activities that support the four components above and promote local governance. The crosscutting activities include, among others, empowerment of youth and women, ethnic minorities and people with disabilities, and gender mainstreaming.

This Quarterly Report covers the period from April 1 until June 30, 2016, within the USAID Fiscal Year 2016.

## **Assumptions, Problems and Barriers**

WMTR continued to contend with the following assumptions, problems, and barriers during the reporting period:

1. Miscommunication and lack of coordination among donor agencies working in the waste management sector;
2. Lack of communication among state institutions responsible for waste management in Georgia;
3. Lack of capacity at the municipal level for addressing waste management issues;
4. Lack of financial resources allocated in municipal budgets for waste management;
5. Municipalities lack of technique and equipment (trucks, bins, etc.) required for waste collection and recycling;
6. Lack of accurate data on GHG emissions from the waste management sector to create a baseline and develop short-term and long term goals for the reduction of emissions;
7. Lack of local expertise in waste management;
8. A very limited number of recycling companies with both the capacity and willingness to be potential grant recipients;
9. The context of the broader socio-economic situation in the country;
10. The public's lack of awareness when it comes to integrated waste management issues like waste separation, recycling, tariff issues, etc.

To address and mitigate the effects these problems and barriers have on the program, WMTR works closely with all tiers of government and stakeholders on capacity building and has been using an intensive communication, outreach and awareness campaign to promote best practices in waste management and recycling systems. In Particular:

- (1&2) Twice a year the WMTR team is organizing the Stakeholder Consultation Meetings with the involvement of donor organizations, governmental structures, and other stakeholders. In May, 2016 the WMTR team hosted the fourth Stakeholder Consultative Group Meeting, which supported improving communication and coordination between all interested parties involved in the waste management sector;
- (3) The WMTR team organized a series of tailored trainings for the representatives of local government to improve their capacity for addressing waste management issues. The program is supporting the municipalities to develop municipal waste management plans, which will help them to improve their waste management system and comply with the requirements of the national legislation;
- (6) The WMTR team transferred the TDL-500 Portable Gas Analyzer to the Solid Waste Management Company of Georgia (SWMCG) and provided a practical training to the staff of the company on the usage of this equipment. With this activity the WMTR team developed a capacity of the governmental structure to assess the potential of GHG emissions at the landfills in Georgia;
- (8) The WMTR team has provided a technical support (tailored trainings, workshops, seminars, development of business and marketing plans, conducting energy audits, etc.) to the recycling companies in order to increase their capacity, as well as created the platform for the dialogue

between the private sector and the government to create a business friendly environment for waste recycling sector in Georgia;

- (5) Within the city to city program of the WMTR project, in September, 2016 the Self-Governing City of Telavi will receive a modern 2010 Kenworth Rear Loader trash truck, with an estimated market value of USD 90,000. This will help the city optimize its waste management system. The WMTR team also provided the Self-Governing City of Telavi and Telavi Municipality with bins for separated waste collection (plastic and paper) and thus supported them with the technique and equipment required for waste collection and recycling;
- (10) The WMTR team issued small grants for two schools in Kakheti Region to support establishing an integrated approach to waste management. The team is also conducting very intensive awareness raising campaign through competitions, celebrations of environmental days, roundtable meetings, TV programs, Facebook campaigns, etc. to increase the public's awareness on integrated waste management issues.

## **Significant Events and Achievements during the Reporting Period**

- In June 2016, the WMTR team provided in-kind assistance to the Self-Governing City of Telavi to optimize its waste management system by increasing the efficiency and coverage area of their waste collection services and providing a quality service to residents. WMTR and the local government of Telavi city signed an In-Kind Activity Agreement on "Optimization of Waste Management System in Telavi City".
- In May and June 2016, staff from the SWMCG, trained by the WMTR team, measured methane emissions at the following landfills in the project target regions to assess the negative impacts of landfills on the environment: Telavi, Dedoplistskaro, Gurjaani, Kvareli, Lagodekhi, Sagarejo, and Tsnori. In July–August 2016, the WMTR team will help the SWMCG to evaluate GHG potential at the landfills using a software program. WMTR will also aid in the development of a plan for mitigating these emissions.
- In June 2016, the WMTR team developed a consolidated seasonal study of the morphological composition of solid municipal waste in Adjara AR and Kakheti Region. The seasonally implemented study, covered all four seasons (summer, fall, winter and spring) from July 2015 until April 2016. The results of the study will serve as a basis for planning appropriate waste separation and recycling processes in the regions.
- In June 2016, the WMTR team in cooperation with the local government of the project target regions developed a first outline of the municipal waste management plans for 7 municipalities and self-governing cities, as well as the first draft of the waste management road map for Adjara AR.
- In June 2016 the WMTR team, in cooperation with the Agency of Protected Areas (APA) of MOENRP developed the Protected Area Waste Management Guidelines. The guidelines will serve for all categories of protected areas in Georgia and provide information on principles of waste management in protected areas in accordance with the requirements of international standards. These guidelines intend to define sound practices and standards that will help ensure waste originating in protected areas is properly managed.
- In May 2016, the WMTR team began collaborating with the management of *Goodwill* in order to introduce waste separation for their customers. The hypermarket located in the Dighomi

district of Tbilisi would separate plastic bottles and bags, paper, and aluminium cans. The WMTR team connected *Goodwill's* management with the waste collection company, *Supta Samkaro Ltd*, which agreed to collect separated waste from *Goodwill* on a regular basis. In July, the WMTR team and the management of the *Goodwill* Hypermarket will officially open the waste separation corner.

- Through May and June 2016, the WMTR team organized a green school competition in five villages of Telavi Municipality — Tsinandali, Kvemo Khodasheni, Busheti, Vanta, and Akura. The competition lasted for two months. During this period, the WMTR team regularly weighed the collected waste and stored it in a specially designated storage area. WMTR will deliver the collected waste to a recycling company. The competing schools collected a total of 1,942 kg of paper and 352 kg of plastic waste. The WMTR team identified the winner of the competition by measuring the amount of correctly separated waste collected by each school. Kvemo Khodasheni Public School won the competition by collecting 579.7 kg of paper and 179.9 kg of Plastic waste. The WMTR project will award the winner — Kvemo Khodasheni School, with 140 students — with an eco-park playground, created using recycled materials.
- The WMTR team developed its seventh quarterly newsletter in [English](#) and [Georgian](#), and distributed it through the CENN Electronic Network, which has more than 24,000 subscribers worldwide.

## Status of Activities by Components

### Component 1: Waste Collection and Recycling Systems

#### ***Fourth Stakeholder Consultative Group Meeting***

On May 19 2016, the WMTR team held the fourth Stakeholder Consultative Group Meeting (SCG) in Betsy's Hotel, Tbilisi. During the meeting, WMTR provided an update to SCG members on project activities. The team highlighted the waste separation programs initiated in Telavi Municipality and the City of Telavi as successful programs other municipalities and self-governing cities could replicate.

The WMTR team also took the opportunity to garner members' support for the national government's formal adoption of policy documents developed by the WMTR team between October 2015 and April of this year:

#### *Cost-Benefit Analysis of Waste Management Strategies*

WMTR based this report on data gathered in the Adjara Autonomous Republic and Kakheti Region. The document analyzes a number of waste management strategies and evaluates their comparative costs and benefits. Some of the strategies analyzed include waste disposal at landfills, operating landfill-based material recovery facilities, source separation and recycling programs, and composting systems. Municipalities can now use this document to inform decision makers during the identification and development of appropriate waste management strategies.

#### *General Methodology for Establishing Tariffs and Cost Recovery System in Georgia.*

This document provides a modern methodology for tariff calculation along with an Excel-based calculation tool. The introduction of this tool will help municipalities to improve the sustainability of their solid waste management systems by informing the design of a maintainable funding source.





During the meeting, participants discussed both documents at length and received preliminary positive feedback. SCG members will now discuss the tools with their respective institutions and provide written comments clarifying any remaining issues.

In the next meeting, WMTR plans to highlight the importance of municipal waste management plans and conducting assessments of GHG potential at landfills.

### ***In-Kind Activity Agreement on Optimization of Waste Management System in Telavi City***

In July 2015, representatives from Telavi City Hall visited Catawba County in North Carolina, USA, under the City-to-City component of the WMTR Program. The goal of the visit was to introduce strategies for effective waste management in Telavi and demonstrate examples of waste management approaches applied in Catawba County. During the visit, *Republic Services* — the company responsible for collecting waste in the county — donated a 2010 Kenworth Rear Loader trash truck to Telavi City. The estimated market value of the truck is 90,000 USD.

Catawba County also helped Telavi Municipality develop a waste collection route optimization plan using the donated truck. Under the plan, the waste collection truck will enable improved services to city residents.

In order to ship the truck from its current location in the US, the WMTR team developed an In-Kind Activity Agreement (IKAA). Within this IKAA, the WMTR program will support the Self-Governing City of Telavi in shipping the waste collection truck from Charleston, US, to Poti, Georgia. The agreement will also support Telavi's implementation of a separated waste collection scheme. After relevant Telavi staff are trained by *Republic Services* in the maintenance and operation of the donated truck, the scheme will utilize Telavi's two small trucks (currently used for waste collection) to collect separated waste.

The Total estimated cost of this IKAA is GEL 137,157. From this amount, GEL 64,662.00 will be provided by the project and GEL 72,495.00 by the City Hall of the Self-Governing City of Telavi.

The program expects the truck to arrive in Georgia in late September.

## **Annex 1. IKAA: Optimization of Waste Management System in Telavi City**

### ***Conduct a Preliminary Environmental Assessment and an Assessment of Current GHG Emissions in Kakheti Region and Adjara AR***

In March 2016, the WMTR team transferred a TDL-500 portable gas analyzer to the Solid Waste Management Company of Georgia and conducted a two-day practical training session on the usage of this equipment. SWMCG staff are now able to measure greenhouse gas (GHG) emissions from landfills and calculate one of the significant negative impacts landfills have on the environment.

In May and June 2016, trained SWMCG staff measured methane emissions at the following landfills in the WMTR project target regions: Telavi, Dedoplistskaro, Gurjaani, Kvareli, Lagodekhi, Sagarejo, and Tsnori. In July–August 2016, the WMTR team will help SWMCG estimate GHG potential at these landfills using a software program. These estimates will then aid in the development of a plan for mitigating future emissions.

### ***Municipal Waste Composition Study Results of the Spring Season Composition Study***

In May 2016, WMTR conducted the fourth and final municipal waste composition study in Kakheti Region and the Autonomous Republic of Adjara. In 2015 and 2016, the WMTR team collected and analyzed data for three seasons — summer, autumn and winter. Please see previous reports for further information on past studies.

During the spring study (April 5–23 2016), the WMTR team evaluated the composition of waste at the two main landfills of the project target regions, Batumi and Telavi. The work was coordinated with SWMCG and local governments.

According to the spring season composition study, Batumi landfill contains large amounts of organic materials (30.16%), plastic (14.39%), construction materials (12.05%), diapers (9.25%) and textiles (9.68%). In addition, the landfill contains small amounts of glass, metal, pottery, leather and rubber.

In Kakheti the team recovered significant quantities of organic material (42.8%), plastic (10.58%), diapers (10%), paper (9.46%) and textiles (8.4%) with small amounts of glass, metal, pottery, leather, rubber, and building materials.

Please see below photos showing the process of the composition studies in each target region.

Adjara AR



### Kakheti Region



### Annex 2. Municipal waste composition study

#### ***Consolidated Seasonal Study of the Morphological Composition of Solid Municipal Waste in Adjara AR and Kakheti Region***

In order to determine the technical and economic efficiency of waste recovery and recycling programs WMTR has designed and carried out an assessment of the amount of recyclables present in municipal waste streams. As waste types and volumes vary depending on the season of a year, the WMTR team carried out a seasonal morphological study of waste composition in the Batumi and Telavi landfills. The seasonal study covered all 4 seasons from July 2015 until April 2016.

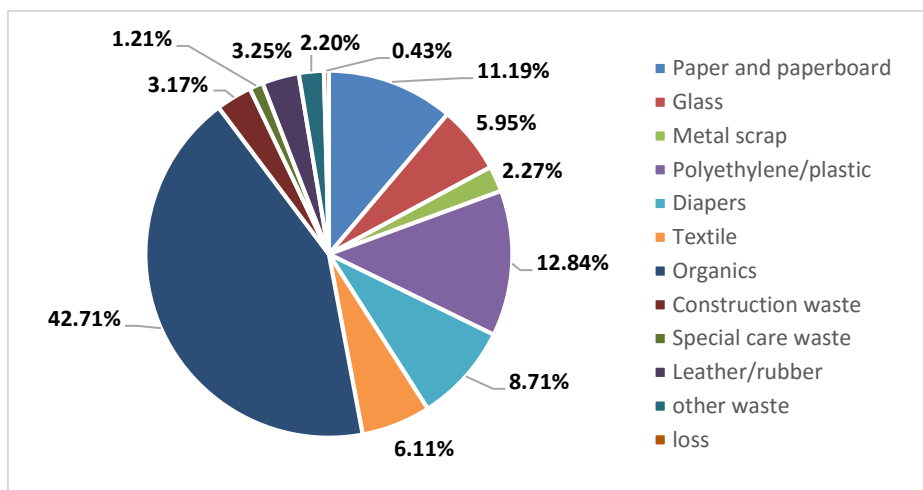
The project studied morphological waste composition over a 7-day period during each season. Each day, the team collected, manually sorted, and analyzed 100kg-samples of waste. Each waste component was placed into a container designed for its specific type of waste and weighed. The process was photographed and information obtained during the study was entered into waste composition study summary forms. At the end of each season, the team prepared reports reflecting the results of the study based on the relevant data.

The results of the study will serve as a basis for planning appropriate waste separation and recycling processes in the regions. The study concluded that organic matter makes up the biggest component of waste. Therefore, the establishment of composting systems or use of organic waste in biogas digesters to create fuel would have a significant impact on reducing the amount of waste the ends up in landfills.

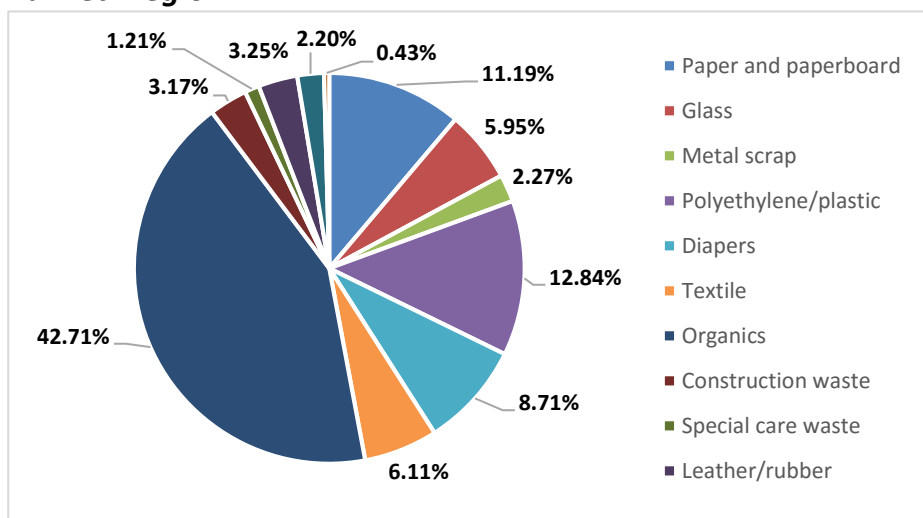
Please see below the consolidated results of the seasonal waste composition studies conducted in Adjara AR and Kakheti Region. The mean annual percentage represents the average makeup of waste for total year. The quantitative data equates to the total amount (kg) of waste collected over the entire year.

**Mean Annual Percentage of Municipal Waste  
Kakheti Region and Adjara AR – Spring, Summer, Fall, Winter**

**Adjara Region**



**Kakheti Region**



**Designing Region-Specific SWM Strategies and Action Plans**

**Development of Municipal Waste Management Plans for Municipalities in Kakheti Region and the Autonomous Republic of Adjara**

In April 2016, the WMTR team began working with seven municipalities in both project target regions to develop Municipal Waste Management Plans (MWMP). The development of such plans is required by Georgian legislation — the Waste Management Code.<sup>1</sup> According to article 13 (1) of this law, each

<sup>1</sup> The law enacted on January 15, 2015.

municipality shall adopt a plan for the management of the municipal waste produced within its territory for a period of five years.

The municipalities of Khulo and Khelvachauri and the self-governing City of Batumi in Adjara AR, as well as the municipalities of Telavi, Akhmeta, Lagodekhi and the self-governing City of Telavi in Kakheti regions each appointed a contact person to work with the WMTR team on the development of these plans.

During the reporting period, the WMTR team, in cooperation with representatives from the regions, collected the necessary background information required for the development of MWMPs. The next step will be for the WMTR team and Ministry of Environment and Natural Resources Protection to host working group meetings for these municipalities to collaborate on the first outline of their plans.

The MWMPs will include the following information:

#### **Introduction and Background**

- Regulatory and Legal Basis for the Municipal Waste Management Plan; Municipal Profile and Demographics; Planning Objectives and Target Outcomes; Description of the Planning Process

#### **Municipal Waste Stream Characteristics**

- Introduction; Types of Waste Covered by the Plan; Waste Quantities; Waste Projections; Waste Composition Analysis

#### **Summary of the Existing Municipal Waste System**

- Introduction; Description of Current Municipal Services; Collection and Transport Services; Street Sweeping; Current Disposal Facilities; Recovery (Recycling and Composting); Legal and Institutional Framework; Cost and Cost Recovery; Budgeting and Financial Processes

#### **Waste Industry Sound Practices and Trends**

- Collection and Transport; Recovery Processes; Public Education and Outreach

#### **Analysis of Future Waste Management Options**

- Collection and Transport; Disposal; Recovery; Institutional Considerations; Funding of System improvements

#### **Findings and Recommendations**

- Infrastructure and Equipment Needs; Institutional Capacity Building; Procedures for implementation of recovery programs; Public Education Program

#### **Implementation Action Plan and Schedule**

### ***Development of Waste Management Road Map for the Adjara AR***

In June 2016, the WMTR team, in cooperation with the regional government of Adjara AR, began development of the waste management road map for the Adjara autonomous region. WMTR and Adjara prepared the document in accordance with the requirements of the National Waste Management Strategy and Action Plan approved by Georgia's national government in March 2016.

The document is intended to help the regional government of Adjara AR plan effectively to meet the indicators imposed by the national policy documents.

The waste management road map includes the following information:

- Introduction

- Analysis of existing situation:
  - Existing system of waste management
  - Challenges related to waste management
  - Factor analysis
- Strategic directions in waste management
  - Vision, objectives and activities
  - Indicators (outputs/outcomes)
- Estimated budget
- Mechanisms for implementation and management of the road map
- Risks assessment
- Monitoring and evaluation
- Action plan for implementation

WMTR has presented the first draft to the regional government of Adjara AR for final revision.

### ***Implement Pilots via Partial Grant to Assist Recycling Companies and Target Municipalities***

#### ***Introduction of Waste Separation Scheme in the Self-Governing City of Telavi***

In June 2016, the WMTR team, in cooperation with the local government, started development of a waste separation system in the Self-Governing City of Telavi. The WMTR team and local government selected Alazani Avenue to begin a waste separation pilot project; approximately 25% of Telavi's 154,100 residents live in the area.

In July, a local entrepreneur from Akhmeta Municipality produced 36 waste separation bins (18 for paper and 18 for plastic), which will be placed in the selected district. The local government of the city has already allocated a truck to service these bins and a space to store all separated waste before removal by the recycling company.

#### ***Develop Landfill Remediation/Closure Plans***

##### ***Clean-up activities in Jokolo, Pankisi Gorge and Busheti, Telavi Municipality***

In April 2016, the WMTR team, with the assistance of local students, cleared a small-scale illegal dumpsite (1.5 ha) of waste in the village of Jokolo in Pankisi Gorge. Following the removal of the waste, the Austrian Development Cooperation (ADC)-funded program, *Sustainable Forest Governance in Georgia* (SFG), planted around 200 trees on the area.





On June 23, the WMTR team with the support of the local government and local people, cleared around 0.7 ha of land in Busheti, Kakheti Region. This location had served as an illegal dumpsite for 40 years. The WMTR team removed 18 m<sup>3</sup> of waste from the site and the local government took it to Telavi landfill.





## **Landfill Remediation/Closure Plans - Environmental Assessment**

### **Development of Scoping Statement for Gurjaani Landfill Closure Plan**

USAID approved WMTR's initial environmental examination (IEE) on October 16, 2012 (DCN: 2012-GEO-073). Pursuant to 22 CFR 216, "a scoping statement (SS) and environmental assessment must be prepared for projects/sites that have been determined to potentially have a significant effect on the environment."

WMTR Component 1.7, "Assist the local government in the development of the plan and mitigation measures for the illegal landfill remediation process, and in design of the new landfill," has been determined to have a significant effect on the environment. Therefore, the development of closure plan for Gurjaani landfill required preparation of an SS an environmental assessment.

In May 2016, the WMTR team, in accordance with USAID requirements, developed a SS for the Gurjaani landfill closure plan and submitted it to the Bureau Environmental Officer for approval. After the approval of the SS, the WMTR team will develop the environmental assessment report.

### **Development of Environmental Review Checklist (ERC) for Clearing of the Municipal Waste Illegal Disposal Area Located in Beshumi Borough**

The development of a closure plan for clearing the illegal disposal area in Beshumi falls under WMTR Component 1.2 "Assist local municipalities and the region to design the regional waste management plan. This will be done in cooperation with waste collection, landfill companies, and recycling facilities if any." According to the IEE, this component does not require development of an SS or environmental assessment. However, the activity could potentially affect air, land, and water. Therefore, the development of an environmental review checklist (ERC) for this activity is required.

In June 2016, the WMTR team developed an ERC for clearing of the Beshumi dumpsite. The ERC helped to identify potential environmental impacts of project activities and processes. In July, WMTR submitted the ERC to the Bureau Environmental Officer for approval. After the approval of ERC, the WMTR team in cooperation with local government will start the closure of the Municipal Waste Illegal Disposal Area Located in Beshumi Borough.

### **The Waste Management Guideline for Agency of Protected Areas (APA)**

The *Waste Management Strategy and Action Plan* approved by the government in March 2016, requires the development of a *Protected Areas Waste Management Guidelines*. Therefore, the WMTR team, in close cooperation with the MOENRP's APA, started development of this guideline.

In June 2016, WMTR and APA completed work on the document. The guidelines will apply to all categories of protected areas in Georgia and provide information on the principles of waste management in protected areas in accordance with international standards. The guidelines define sound practices and standards that will help assure waste originating from protected areas is managed properly.

The document includes the following information:

#### **Basis for the protected area waste management guideline**

- Protected Areas that are the Subject of the Guideline; Visitor Waste Generation Characteristics; Existing Baseline Practices and Problems; Conflicts with or Impact of Adjoining or Nearby Land Uses

### Evaluating protected area waste management alternatives

- Zero Waste Principle — Carry in-Carry out; Source Reduction; Recycling; Composting; Collection; Coordinating with Municipal Waste Collection and Disposal Programs

### Making waste management design and operational decisions for individual protected areas

- Who and Where: Waste Generator Analysis; What: Waste Composition Analysis; How: Making Waste Management System Design and Operational Decisions; Monitoring and Enforcement

### Implementing effective public communication, education and outreach

- Designing and Deploying Protected Area Signage; Utilizing Printed and Other (Television, etc.) Media Educational and Outreach Materials; Developing and Implementing Waste Management Related Educational Programs; Developing and Supporting Special Events including Periodic Clean-up Initiatives

### Implementing effective waste management programs at all protected areas

### Annex 3. The waste management guideline for Agency of Protected Areas (APA).

## Component 2: Private Sector-led Recycling

### ***Introducing Waste Separation Scheme at Goodwill Hypermarket***

In May 2016, the WMTR team began collaborating with the management of *Goodwill* to provide waste separation to their customers. The hypermarket located in the Dighomi district of Tbilisi will now be capable of collecting plastic bottles and bags, paper, and aluminium cans. The WMTR team connected *Goodwill's* management with the waste collection company *Supta Samkaro Ltd.* *Goodwill* will pay *Supta* to collect separated waste from the location on a regular basis.



*Supta Samkaro Ltd.* installed a press in the Hypermarket and constructed a “recycling corner” that will allow customers to deposit separate waste they bring from home. The WMTR program printed project-branded stickers that will be displayed on the collection unit.

The WMTR team and *Goodwill* staff developed a communication strategy to advertise this activity to the broader public. An important component of the communication strategy is the opening ceremony, which will involve the participation of key stakeholders from governmental structures and international institutions.

The tentative date of the opening ceremony has been scheduled for the beginning of August. Once the recycling corner is opened in this location, the WMTR team and *Goodwill's* management will replicate this scheme at the hypermarket in Batumi, Adjara AR.

***Implement Yearly National Workshops and Seminars to Share Experiences and Leading Practices***

***The WMA and Other Stakeholders Meeting With Larry Black, International Waste Management Expert***

On April 12, the WMTR team, with the support of the US Embassy in Tbilisi, organized a meeting between Larry Black, an international expert in waste management and sustainability, members of the Waste Management Association (WMA), and other stakeholders. The subject of the meeting was *Promoting Recycling for a Greening Economy in Georgia*. Around 40 representatives from government, NGOs, and the business sector attended the meeting.



Mr. Black introduced the participants to modern approaches in waste management practiced worldwide, focusing in on how to make recycling profitable and sustainable. Mr. Black presented existing opportunities in the recycling sector and provided concrete examples of how systems that work in different developed countries could be replicated in Georgia.

***Provide Tailored Assistance and Training to Recycling Companies***

***Assessment of the waste recycling sector in Georgia***

Throughout May and June 2016, The WMTR team, in cooperation with international expert, Larry Black, conducted assessments and updated information on the recycling sector in Georgia.

The following data was collected and/or updated:

- List of top 25 commercial waste generators and their locations;
- List of top 25 governmental and educational waste generators and their locations;
- List of companies engaged in recycling of paper, cardboard, plastic, glass, aluminum, scrap metal, and electronics with their locations and quantity of material processed annually;

- Amount and type of recycled material exported from Georgia;
- Information about recycling programs that have been tried and failed.

The WMTR team obtained this information from relevant governmental structures: the Ministry of Environment and Natural Resources Protection, Revenue Service of the Ministry of Finance, and local self-governing institutions.

The team will now be able to create a scheme for the development of the recycling sector in Georgia based on this data

### ***Facilitate Creation of a Network of Recycling Companies and Consolidators***

#### ***Meeting of Larry Black and the paper recycling company, Georgian Paper Production Ltd.***

On April 13, the WMTR team organized a visit by Mr. Black to the paper recycling company; *Georgian Paper Production Ltd.* *Georgian Paper Production Ltd* produces toilet paper from waste paper. It is one of the largest recycling companies in the Georgian market, processing 7,270 tons of paper per year.

During the visit, the general manager of the company, Giorgi Khachaturov, introduced Mr. Black to the challenges that company faces in operational processes. According to Mr. Khachaturov, the main issue for the company is a lack of raw materials caused by the lack of a proper waste collection system in the country.



Mr. Khachaturov also expressed interest in learning from international experience in the recycling sector, and would appreciate Mr. Black's support in this regard. According to Mr. Khachaturov, in order to increase profitability, the company needs to increase energy efficiency in its facilities and the technological process used during production. The WMTR team will conduct an energy audit and provide corresponding recommendations on how to improve efficiency.

### ***Meeting between WMA and the Head of the Association of Microfinance Organizations in Georgia***

On May 25, WMTR organized a meeting between WMA board members and Archil Bakuradze, head of the Georgia Microfinance Association (GMA). The meeting provided the opportunity for GMA to share lessons learned from its own institutional strengthening experience. Mr. Bakuradze informed the WMA board members of the challenges GMA faced during the development process and ways in which they overcame these challenges. Members of both associations discussed the WMA's objectives and the importance of protecting the interests of each individual member during the process.



Mr. Bakuradze provided several recommendations to WMA, including creating web and Facebook pages to increase the visibility of the association; developing a code of conduct to increase the efficiency of operation; and decreasing the term of the head of the association down to two years. The WMA members found the recommendations very useful and are currently planning implementation.

### ***Issuing Grants to Support GHG Mitigation, Energy Efficient Technologies, and Source Separation Programs***

#### ***Grant Competition on Municipal Waste (plastic, paper, glass) Recycling***

In January, the WMTR team announced a grant competition for plastic, paper, and glass-recycling companies intended to increase their productivity and energy efficiency. The evaluation committee selected five companies out of seven applicants in accordance with the Evaluation Criteria set out in RFA. Before making the final decision and developing the grant applications, the WMTR team conducted pre-award assessments and site visits.

During the reporting period, the WMTR team finalized the pre-award assessments. According to the results, only two companies — *Zugo Ltd* and *Sanitari Ltd* — passed the pre-award assessment. In June, the WMTR team began development of the business and marketing plan for *Zugo*, which will be part of the grant package. WMTR will help *Sanitari* to develop a similar plan. The WMTR team will prepare grant applications for these companies and submit them for USAID approval.

### **Component 3: Waste Management Strategy and Tariff Policy**

#### ***Lobbying General Methodology for Tariff Calculation and a Cost Recovery System at the Governmental Level***

In May, the WMTR team began lobbying Georgia's national government to formally adopt the *General Methodology for Establishing Tariffs and Cost Recovery System in Georgia* developed by WMTR. During the reporting period, WMTR introduced the methodology to the relevant institutions in order to obtain their feedback and eventually receive approval to initiate changes in the legislation related to tariffs.

During the reporting period, the WMTR team implemented the following actions:

- Presented the methodology at the fourth SCG meeting on May 19. To share information, the SCG unites all relevant stakeholders working in the waste management sector — governmental institutions, international organizations, and the NGO sector;
- Submitted official letters to all relevant governmental institutions — the Ministry of Environment and Natural Resources Protection (MOENRP), Solid Waste Management Company (SWMCG), Ministry of Finance and Ministry of Economy and Sustainable

Development — with a request to provide comments on the document and at the same time arrange meetings to discuss the methodology;

- Submitted official letters to the local government in the target regions to arrange meetings in all municipalities in order to discuss the methodology.

The WMTR team received, and has already incorporated, comments from two governmental institutions: the MOENRP and SWMCG. In early July, the Deputy Minister of Environment and Natural Resources Protection, Teimuraz Murghulia, took initiative and organized a MOENRP meeting and invited all relevant stakeholders to discuss in detail the general methodology. WMTR will provide details of the meeting in the next quarterly report.

The local governments of Kakheti Region and Adjara AR welcomed the WMTR initiative to arrange meetings at the local level. Both regions have scheduled meetings for mid-July.

The WMTR team will continue lobbying the document at the governmental level and will also support the target municipalities in developing individual tariff and cost recovery plans in accordance with the general methodology.

## Component 4: Communication and Outreach

### ***Celebration of Earth Day on April 22***

On April 22, the WMTR team, together with the USAID mission to Georgia and CENN's *Sustainable Forest Governance* program, celebrated Earth Day in the village of Jokolo in Pankisi Valley, Kakheti Region. The event featured tree planting, as the goal of this year's Earth Day event was to plant 7.8 billion trees throughout the world. The WMTR team also organized a Do-It-Yourself stand, where kids used waste to create works of art and played the e-game, *Sort and Recycle*, developed by WMTR. Telavi Public School #1's eco-club introduced Jokolo students facilitated the activities and played educational games with the students using household waste.





USAID/Caucasus Mission Director, Douglas H. Ball, Deputy Minister of Environment and Natural Resources Protection of Georgia, Besarion Abashidze, and students of the local school in Jokolo village planted trees on a 1.5 ha area, which was previously an illegal dumpsite. The WMTR team and Jokolo school students cleared this area beforehand (see Component 1 above). The activity aimed to repurpose the territory in order to prevent future littering. Participants planted around 200 trees, including walnut, tilia, maple, ash, and plane trees.



### ***Earth Day Celebration at QSI International School***

The WMTR team supported Earth Day celebrations at QSI International School in Tbilisi, and on April 20<sup>th</sup> gave presentations on sustainable waste management and recycling to three groups of school students:

- Lower Elementary, age: 6–8 (54 students)
- Higher Elementary, age: 9–12 (62 students)
- Secondary (59 students)



Around 180 school students participated in the interactive seminars. The WMTR team provided information about recycling opportunities in Georgia and the importance of introducing a source

separation scheme in the country. WMTR also stressed the importance of waste reduction to save natural resources and decrease the amount of waste at landfills.

### ***Pilot Project — Green School Competition***

In December 2015, the project launched a pilot program for separated waste collection in five villages of Telavi Municipality. The pilot program supports waste separation in the villages and promotes corresponding behavioral change among the residents. One of the essential conditions for this process is to cultivate good habits at an early age.

Under the pilot project, in May and June 2016, the WMTR team organized a green school competition in five villages of Telavi Municipality — Tsinandali, Kvemo Khodasheni, Busheti, Vanta and Akura. Prior to 2015, these villages did not even have waste bins.

Children participated in the competition with enthusiasm and actively participated in the collection of plastic and paper throughout their villages. The competition motivated students to participate in the campaign; Kvemo Khodasheni School even took the initiative to clear a dumpsite around the village.

The competition lasted for two months. During this period, WMTR representatives regularly weighed the collected waste and stored it in a specially designated storage area. The collected waste was then delivered to a recycling company. The competing schools collected a total of 1,942 kg of paper and 352 kg of plastic waste.



The WMTR team identified the winner of the competition by calculating the amount of correctly separated waste collected. Kvemo Khodasheni Public School (140 students) won the competition by collecting **579.7kg of paper** and **179.9kg of plastic waste**. The WMTR project will award the winner with an eco-park playground made from recycled materials.

### ***Joint Training for School Teachers and Students on Waste Management Advocacy***

On 16–17 and 23–24 June, the WMTR team held joint training sessions for schoolteachers and students from Adjara AR and Kakheti Region. The trainings aimed to raise schoolteacher and student awareness of environmental issues. The training focused on waste management and increasing capacity to plan and implement waste management advocacy campaigns in their communities. 41 participants attended the trainings.

These two-day trainings provided participants with the knowledge necessary to advocate successfully for environmental issues. The participants worked in groups to select and highlight waste management problems in their villages. Because of the group work, they narrowed their issues down to one specific problem for which they would plan an effective advocacy campaign.



Some of the issues identified by participants included, excessive littering in their villages due to insufficient waste bins, a negligent attitude prevalent in the local population, and deficiencies in waste management services. The schoolteachers and students selected campaigns to encourage introduction of composting in order to reduce organic waste and produce a natural alternative to chemical fertilizers.



From Kakheti Region, 21 participants attended the training, from the villages of Jokolo, Dedoplistskaro, Kachreti, Nukriani and Akhalsopeli. In Adjara AR, 20 participants took part from the City of Batumi and the villages of Mukhaestate and Korkhoti. The WMTR team awarded participants with certificates at the end of the training.

### **School Grants Competition**

The WMTR team awarded 2 schools from the Kakheti Region with small grants to implement their own integrated approach to waste management:

**Telavi Public School #1** — the eco-club of Telavi Public school #1 received a small grant of 600 USD to conduct their project, *Eco Agents Against Waste*, in Telavi Municipality. The project created a network of eco-clubs in Telavi Municipality and worked closely with them through different training sessions, including training of trainers, organized competitions, clean up, and tree-planting activities all designed to raise awareness of waste management issues and create a network of cooperation at a municipal level.



The project contributed to the following results:

*Waste Management Technologies in Regions, Georgia*

- 18 eco-clubs became active members of the network;
- Cleared 10 small scale illegal dumpsites and planted local trees in 10 villages of Telavi Municipality;
- Trained around 500 school students in integrated waste management;
- Organized a youth summit for the most active members of the network
- Members of the *Eco Agents against Waste Network* conducted Interactive and fun competitions, as well as different awareness raising activities.



**Zemo Alvani Public School in Akhmeta Municipality** — eco-club members and school students received a small grant of 670 USD to organize an awareness raising campaign on waste separation and recycling. They collected around 2,500 plastic bottles during the campaign and built a greenhouse called the “Green Greenhouse”. Students installed a drip irrigation system in the structure and will grow flowers in the greenhouse starting next academic year.



## **WMTR and M-TAG Programs Joint Training Course for Journalists on Waste Management Issues**

On June 14, the WMTR team, in cooperation with the USAID M-TAG program, launched a training course for journalists in *Integrated Waste Management Practice, Challenges and Development Perspectives*. The course consisted of 24 academic hours and was attended by 10 journalists from print and TV media. The training aimed to provide journalists with comprehensive information on waste management in Georgia and modern waste management practices.



To do this, the WMTR team provided interactive sessions on the following topics:

- The importance of integrated waste management, modern approaches to waste management and the resulting benefits for the population;
- The GoG's vision in terms of waste management: strategy and action plan, the country's obligations within the EU-Georgia association agreements, and actions required to meet these obligations;
- A general overview of the Administrative Violations Code of Georgia, challenges of implementation, and the effectiveness of fines to improve the situation in the waste management sector;
- Municipal and household waste management systems in Tbilisi — collection, transportation, and disposal based on the experience of *Tbilservice Group Ltd.*;
- Waste collection and the recycling sector — the current situation and challenges, the importance of developing the sector to introduce integrated waste management in the country, and waste management tariff policy and cost recovery mechanisms;
- the importance of an integrated waste management tool for smooth operation of the waste management system in the country;
- The importance of public participation for successful introduction of integrated waste management;
- Interactive session/group work to identify priority issues in waste management that should be highlighted by the media;
- Field trip to the landfill located in Tbilisi.



The WMTR team expects that journalists acquainted with waste management issues and policy will provide better coverage of environmental issues. The media is an influential force in the community and accurate information that receives adequate coverage can have a big impact by informing the public and catalysing change.

### **Demo Composting Scheme in Girogeti Village, Lagodekhi Municipality, and Kakheti Region**

The waste composition study in Kakheti region showed that around 40% of total waste in the regions' landfills is organic waste. In order to minimize the amount of waste that goes to the landfill and reduce GHG emissions, it is important to introduce and support composting initiatives in the region. To this end, the WMTR team has conducted intensive work within the local communities to raise awareness and encourage composting. This activity will not only help the community care for the environment but will also save them money on fertilizers.

On June 10, the WMTR team conducted a seminar on composting for four families in Girogeti Village, Kakheti Region. The farmers had expressed an interest in installing composting boxes in their yards as they accumulate a significant amount of organic waste. The WMTR team provided them with the technical knowledge required to construct and maintain a composting box and informed them about the benefits of having organic fertilizer for both the environment and their families. The WMTR team also helped the four families identify the exact placement for the boxes and advised them on which materials to use.



One week later, because of this training, one family installed a demonstration composting box in their yard in Girogeti Village. The WMTR team supervised the construction process and will continue provision of technical knowledge the families when needed.



### ***The Eighth Environment for Europe Ministerial Conference***

The WMTR team participated in the *eighth Environment for Europe Ministerial Conference*, and on June 9 and presented the project's activities at a side-event — *Promoting Green Economy in the Caucasus*. The Minister of Environment and Natural Resources Protection of Georgia, Gigla Agulasvili, opened the side-event. Around 30 participants from different governmental structures, international organizations, and NGOs attended the event.



After the presentations, the panelists opened the floor for discussion. Representatives of MOENRP and SWMCG emphasized their productive cooperation with the project and hoped to continue collaborating in the future. Questions from the audience mainly related to the necessity of introducing a proper tariff system and the importance of starting a discussion of this issue at all levels. Attendees mentioned that the composition study conducted by the project in two regions of Georgia (see Component 1 above) provides important information for better planning of waste separation and recycling strategies and should be conducted in other regions.

**Produce Booklets, Media Materials, Posters, Trainings and Other Activities to Introduce the Concept and Benefits of Recycling and Encourage People to Recycle**

**The WMTR Team Placed Information Boards with the Slogan “Leave Only Footprints, Take Only Pictures!” in Lagodekhi Protected Areas to Prevent Littering in this Territory**

Protected areas in Georgia cover 8.6% of the country’s territory, and yet do not currently have an effective waste management system. The WMTR team, in cooperation with the LEPL Agency of Protected Areas of Georgia<sup>2</sup> (APA) selected Lagodekhi Protected Areas to implement a pilot project placing information boards to manage waste in this protected area by encouraging tourists to abide by the principle — take it in, take it out.

Lagodekhi Protected Areas are located in Lagodekhi Municipality, Kakheti region, in the extreme northeastern part of the southern slopes of the Caucasus and range in altitude from 590–3500m. These protected areas include Lagodekhi Nature Reserve (19,749 ha) and Lagodekhi Managed Reserve (4,702 ha). The area is one of the world’s best-preserved primitive areas, with a diversity of natural landscapes. The managed reserve of Lagodekhi Protected Areas includes five informative tourist trails, namely: Grouse waterfall, Ninoskhevi waterfall, Machi Castle, Black Rock Lake and the “Knowledge of Nature” trail.

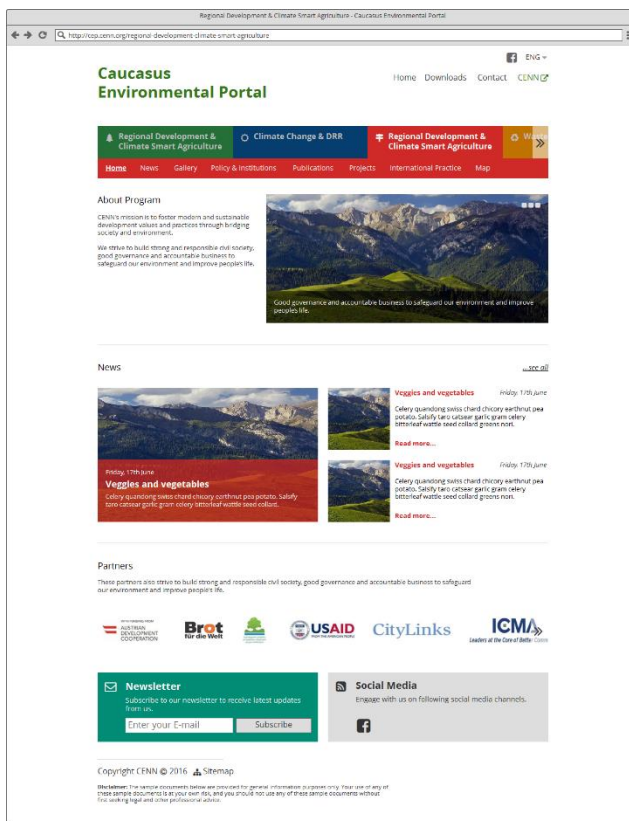
In June, the WMTR project and APA placed 30 information boards along these tourist trails in locations with a high rate of littering.



The main character of the boards is an aurochs named Toni, a symbol of Lagodekhi Protected Areas. Toni encourages tourists to care for the environment and not pollute the territory. The slogan “Leave only footprints, take only pictures!” urges visitors to pack waste out of the territory of the protected area.

<sup>2</sup> LEPL Agency of Protected Areas of Georgia of the Ministry of Environment and Natural Resources Protection is responsible for the management of protected areas throughout the country.

## Development of Waste Web-Portal



The WMTR team began development of a waste web-portal that will be an integrated part of a global environmental portal — The Caucasus Environmental Portal.

The goal of the portal is to create a unified platform for information dissemination related to waste management issues capable of reaching interested stakeholders and the wider public. The portal will address waste management topics including best practices, challenges, and opportunities. It will also provide various online community services and access to educational resources to support collaboration, assistive learning, and the latest information.

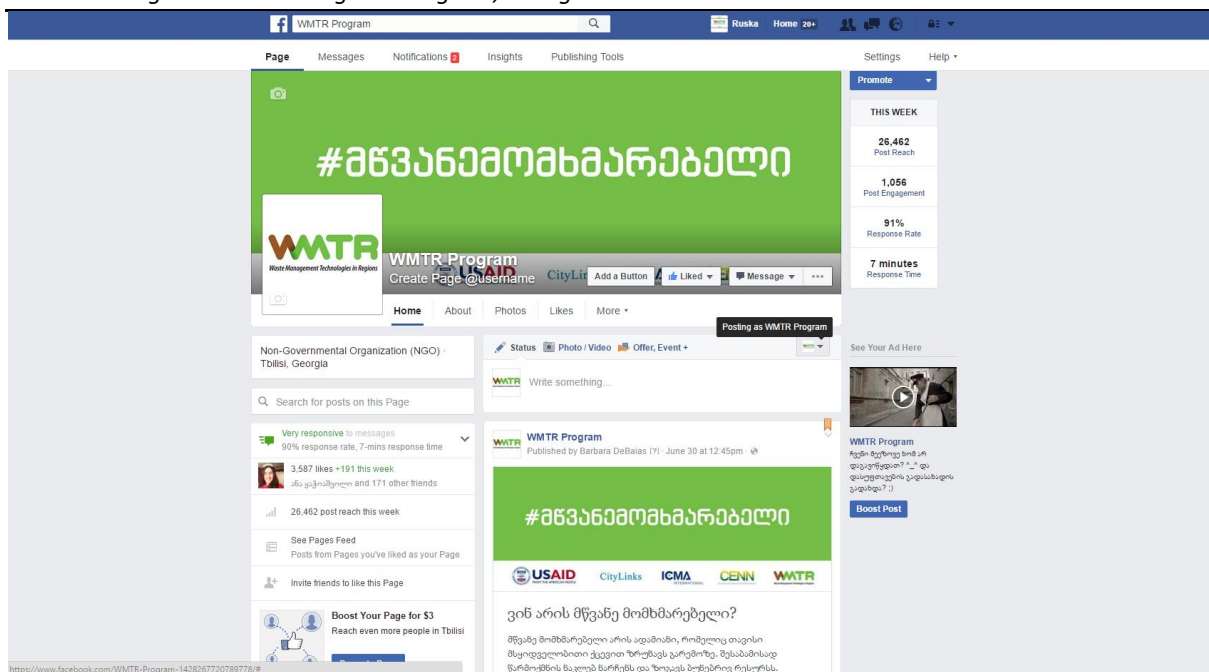
The portal is currently under construction. At this stage, the design has been finalized and the WMTR team is working on providing necessary information to upload to the portal before it is launched.

### Program quarterly newsletter

The WMTR team developed the program newsletter in [English](#) and [Georgian](#) for the period of January–March 2016 and distributed it through the CENN Electronic Network, which has more than 24,000 subscribers worldwide. The newsletter provides information on the program’s goals and activities during the period of January–March 2016 and aims to keep the public informed of, and involved in, the WMTR program.

### Maintaining the eco-camp alumni Facebook page

WMTR continues to update its [Facebook page](#). Through this page, the public, including school students from the project target regions, receive updates on the implementation of the program — competitions, trainings, workshops, grant announcements, information about ongoing activities, and news on modern practices in waste management.



## Newspaper articles

The WMTR team continued cooperating with various online Georgian news outlets to ensure the outreach of WMTR program activities and make them available for a broad audience. In the period of April–June 2016, the following articles were printed:

- |                  |  |
|------------------|--|
| Georgia Today    | <a href="#">Changing Habits: Kakheti Region Begins to Separate Paper and Plastic Waste</a>                     |
| Inter Press News | <a href="#">Georgia Started to Find New Investment Possibilities to Ensure a Solid Waste Management System</a> |
| Knews.ge         | <a href="#">Village Giorgeti gets a Composting Box</a>   |
| Georgia Today    | <a href="#">Waste – Trash or Resource?</a>   |
| Inter Press News | <a href="#">Seasonal Study of Waste Composition in Kakheti and Adjara have been Finalized</a>                  |
| Georgia Today    | <a href="#">What Do We Dump and What Could We Turn into a Resource?</a>  |



**Table 1. Number of People Reached through Outreach Campaign**

Channel of Communications	Type of Information	Size of Audience
Ministry of Environment and Natural Resources Protection of Georgia, Facebook page, April 24, 2016. <a href="#">Link</a>	Video reportage on Earth Day Celebration in Jokolo village, Pankisi valley, Kakheti region	<b>2,558 Views, 54 Likes, 16 Shares</b>
Rustavi 2 TV, News Program Kurieri, April 24, 2016. <a href="#">Link</a>	Earth Day Celebration in Jokolo village, Pankisi valley, Kakheti region	<b>24 Views on YouTube Channel</b>
Good News Agency, May 04, 2016. <a href="#">Link</a>	News on Zemo Alvani School students building a greenhouse out of used plastic bottles	<b>480 Shares, 160 Likes on Facebook page</b>
Georgiatoday.ge, May 09, 2016. <a href="#">Link</a> Social Media, Georgia Today Facebook Page, May 09, 2016	Article “Changing Habits: Kakheti Region Starts to Separate Paper and Plastic Waste”	<b>5,560 Likes on Facebook Page 53 Likes, 18 Shares on post</b>
Iberia TV, Program “My Little City”, May 22, 2016. <a href="#">Link</a>	Solid Waste Management	<b>160 Views on MyVideo Channel 19 Shares on Facebook Page</b>
Georgiatoday.ge, June 06, 2016. <a href="#">Link</a>	Article “Make Your Office Green”	<b>5,560 Likes on Facebook Page</b>
Interpressnews.ge, June 07, 2016. <a href="#">Link</a>	Article “New Investments Needed in Georgia for Establishment of Integrated Waste Management System”	<b>50,398 unique visitors per day</b>
Georgiatoday.ge, June 17, 2016. <a href="#">Link</a>	Article “Waste – Trash or Resource?”	<b>313 People Reached</b>
Telavi Municipality Facebook Page, June 17, 2016. <a href="#">Link</a>	Info on Eco Agents – Project of WMTR Program’s Grantee – Eco Club of Telavi Public School #1.	<b>14 Likes</b>
Knews.ge, June 20, 2016. <a href="#">Link</a>	Info on WMTR program’s Composting Initiative in village Giorgeti, Lagodekhi Municipality.	<b>58 Likes on Facebook page</b>
Interpressnews.ge, June 28, 2016. <a href="#">Link</a>	Article on WMTR Program’s Waste Composition Study in Adjara AR and Kakheti region	<b>50,398 unique visitors per day</b>
Georgiatoday.ge, June 30, 2016. <a href="#">Link</a>	Article “What Do We Dump and What could We Turn into a Resource?”	<b>5,560 Likes on Facebook Page</b>
WMTR Facebook page <a href="#">Link</a>		<b>649 new likes</b> Total 3,597 Likes
12 E-Digests from WMTR disseminated via CENN’s online network	WMTR activities and integrated waste management-related issues	24,000 subscribers
Summary	12 E-Digests on WMTR program were developed and disseminated via CENN E-Network - <b>24,000 subscribers</b> Rustavi 2 Television – <b>No Statistical data</b> Interpressnews.ge – on average <b>50,398 unique visitors per day</b> <b>Georgiatoday.ge – 5,560 subscribers</b> Number of people reached through various posts in social media is <b>836</b> (3,346 Views/Share/Likes divided by 4, considering that 1 person is using 4 different channels of information). Total number of people reached through WMTR Facebook page posts 15,146 (139,135 divided by total of 3,597 persons that Like WMTR Facebook page)  Total number of people reached through outreach campaign – <b>95,940</b> .	

## **Major Activities Planned for Next Quarter**

- Evaluate methane potential at the landfills in the project target regions
- Develop municipal waste management plans for seven local self-government bodies in Kakheti Region and Adjara AR
- Introduce a waste separation scheme (paper and plastic) in the City of Telavi in close cooperation with the local government
- Support the introduction of local composting practices in target regions
- Implement City-to-City partnership activities — support the city of Telavi to implement a waste management system optimization plan
- Develop an environmental assessment of Gurjaani landfill
- Develop a scoping statement and an environmental assessment for Telavi landfill
- Close the Beshumi illegal dumpsite in cooperation with the local government of Adjara AR
- Develop business and marketing plans and grant packages for *Zugo Ltd* and *Sanitari Ltd* and announce grant competitions for waste collection and recycling companies and issue additional grants to recycling companies to:
  - Deploy modern and efficient equipment
  - Improve technical skills
  - Introduce effective and efficient processes to increase the quality of recycled products
  - Improve collection, separation, transport, and manufacture of recycled materials
  - Track GHG mitigation from these grant activities
- Support the institutional strengthening of the Waste Management Association
- Conduct energy audits for *Georgian Paper Production Ltd.* and other companies to be identified based on the needs assessment
- Lobby for the implementation of a *General Methodology for Tariff Calculation and a Cost Recovery Scheme* at the governmental level
- Calculate waste tariffs for seven local self-governing bodies in Kakheti Region and Adjara AR according to the *General Methodology for Tariff Calculation and a Cost Recovery Scheme* and organize public hearings
- Working on public education and outreach about enhancing cost recovery, and implementing a public awareness campaign in Kakheti Region and Adjara AR;
- Implement wide-scale public education and outreach campaigns to promote the 4Rs and ISWM in Kakheti Region and Adjara AR
- Organize competitions for school students in Kakheti Region and Adjara AR and a national student summit
- Organizing roundtables and trainings in Kakheti Region and Adjara AR to promote the 4Rs and ISWM
- Develop and disseminate project promo materials