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# WASTE MANAGEMENT TECHNOLOGIES IN REGIONS, GEORGIA

Quarterly Report

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

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

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## ABBREVIATIONS

AIP	Annual Implementation Plan
AOR	Agreement Officer's Representative
ARA	Autonomous Republic of Adjara
CCI	Chamber of Commerce and Industry
CENN	Caucasus Environmental NGO Network
CO	Cooperative Agreement
COP	Chief of Party
DCOP	Deputy Chief of Party
EBRD	European Bank for Reconstruction and Development
EU	European Union
GHG	Greenhouse Gas emission
GIZ	German Technical Assistance Agency (Deutsche Gesellschaft für Technische Zusammenarbeit)
GOG	Government of Georgia
ICMA	International City/County Management Association
IFES	International Foundation for Electoral Systems
ISC	Institute for Sustainable Communities
ISWM	Integrated Solid Waste Management
KfW	German Development Bank, Regional Office South Caucasus, Tbilisi (Georgia)
MOE	Ministry of Environment and Natural Resource Protection
MOF	Ministry of Finance
MRDI	Ministry of Regional Development and Infrastructure
NEO	New Economic (NEO) Initiative
NGO	Non-governmental Organization
PMP	Performance Monitoring Plan
PR	Public Relations
PSA	Public Service Announcement
REAP	Restoring Efficiency to Agricultural Production
4 Rs	Reduce, Reuse, Recover, Recycle
SIDA	Swedish International Development Agency
SWM	Solid Waste Management
TV	Television
UNEP	United Nations Environment Programme / Regional Office in Europe
USAID	U.S. Agency for International Development
USGBC	U.S. Green Building Council
WMTR	Waste Management Technologies in Regions

## Program Background

The USAID Waste Management Technologies in Regions Program (hereinafter referred to as WMTR) under the Cooperative Agreement AID 114-LA-14-00001 was awarded to International City/County Management Association (ICMA) on March 18, 2014. ICMA is implementing WMTR in partnership with a local sub-recipient Caucasus Environmental NGO Network (CENN) and Institute for Sustainable Communities (ISC). The estimated completion date for the activity is March 17, 2018. 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 technical support in order to reduce greenhouse gas emissions from landfill sites by improving the waste management and recycling sectors in two regions of Georgia – Kakheti and Adjara - and to deliver technical assistance to develop best practices in landfill remediation and preparation of landfills' closing plans. In the initial phase, the project will build on the previous experiences in the targeted regions, assessing the condition of waste management and recycling structures and prepare recommendations for intervention in all eight municipalities of the Kakheti region. In addition, municipalities with the potential for recycling improvement in the Adjara region will be selected, and composting improvement in Kakheti region will also be conducted. WMTR will be working primarily at local and regional levels with targeted national-level support. Its activities will promote greenhouse gas mitigation by improving waste management systems, closing out illegal landfills and dumpsites, and bolstering private sector recycling. Heavy emphasis will be placed on public engagement, collaboration with local and international partners, local governments, and civil societies. 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 year 2018.

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. 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 cross-cutting activities that support the four components above and that promote local governance. The cross cutting 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 October 1, 2014 until December 31, 2014, within the USAID Fiscal Year 2014.

## **Assumptions, Problems and Barriers**

WMTR had to contend with following assumptions, problems and barriers in the reporting period:

- Frequent turnover of governmental representatives.
- Miscommunication and lack of coordination between donor agencies working in the waste management sector.
- Lack of communication between state institutions responsible for waste management in Georgia.
- Non-existence of a waste management strategy in the country.
- Lack of accurate data and information related to waste management.
- Lack of local expertise in waste management issues.
- None of municipal waste recycling companies operating in the target regions – Kakheti and Adjara – possess environmental permits, thus they operate illegally.
- According to the PMP, the project aims to reduce GHG emissions by 5kt CO<sub>2</sub>e by October 1, 2015 and by a cumulative GHG emission reduction of 25kt CO<sub>2</sub>e by October 1, 2016. Based on the results of the GHG analysis implemented by the international expert this goal could be achievable only in case of installing a flare system, which is quite expensive. Therefore, either project goal should be adjusted, or additional funds should be raised (contribution from the government or other donors) to meet PMP requirements.

To mitigate the potential problems and barriers, WMTR works closely with all tiers of government, involving officials and stakeholders in capacity building and has been using an intensive communication, outreach and awareness campaign to promote best practices in waste management and recycling systems.

## Significant Events and Achievements During the Reporting Period

- In September 2014, The WMTR international expert prepared a Review of the Waste Management Code on the request of the Ministry of Environment and Natural Resource Protection prior to the Parliamentary discussion and approval. Following this discussion, The Waste Management Code was unanimously approved by the Parliament (79 votes for and 0 against) and consequently signed by the President of Georgia on December 26, 2014.
- Stakeholder Consultative Group (SCG) continued its effective work as an advisory board for the WMTR program. On December 16, 2014, WMTR held the second meeting of the SCG in Tbilisi.
- On December 12, 2014, WMTR secured a Memorandum of Understanding on the creation of *a national association of waste recycling companies* was signed with 14 enterprises working on the recycling of paper, glass, plastic and tires waste recycling.
- WMTR administered an Assessment of Greenhouse Gas Emissions and designed Scenarios for Emission Reduction from Solid Waste in the Municipalities of Adjara and Kakheti Regions on November 24, 2014.
- The WMTR team identified the partner cities in Georgia and the US that will participate in a City-to -City activity and the dates of the first visits of the US representatives to Batumi and Telavi were agreed upon.<sup>1</sup>
- The WMTR team held working meetings with the Ministry of Environment and Natural Resources Protection to identify the government needs and requirements under the Waste Management Code of Georgia and to develop the Integrated Solid Waste Management Plan Guideline for municipalities.
- The WMTR team identified 3 recycling companies in the target regions of the program – Kakheti (1 company) and Adjara (2 companies) for the rapid assessments of their capacities as potential grant recipients.
- WMTR held second and third national workshops of recycling companies to share experiences and leading practices.
- WMTR carried out a pre-award assessment of two recycling companies in Adjara region for the upcoming launch of WMTR grants program.
- The team held Open Classes on Integrated Solid Waste Management in Public Schools of Kakheti and Adjara, a public lecture on Integrated Waste Management in Batumi State University. As many as 500 students attended Open Classes in Adjara and Kakheti and 36 students attended the Public Lecture in Batumi.
- The WMTR celebrated World Sanitation Day for the first time in Georgia by hosting an eco-camp in Bulachauri Green Centre.
- The alumni of the WMTR program summer-camps organized clean-up campaigns on their school grounds.

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<sup>1</sup> In January 2015, availability of Catawba county representatives who were scheduled to visit Telavi in February 2015 has changed and the new dates are now pending confirmation with our Georgia municipal counterparts.

- WMTR facilitated the development of a 4R Park in Artana village, Telavi municipality within the framework of the city beatification program.
- In the past quarter, the team continued implementing the WMTR outreach and marketing and communication activities:
- 4R 2015 calendar was developed, printed, and distributed among stakeholders a
  - Eight e-newsletters were disseminated via CENN e-network
  - Public Service Announcement (PSA) was developed and broadcasted on public TV channels.
  - First quarterly newsletter was developed and distributed through the CENN e-network.
- The WMTR staff developed a Facebook (FB) Page for the alumni of the eco-camps organized within the scope of the program. The FB page has 370 followers and is used for interactive communication with the audience.
- Annual Implementation Plan for the Fiscal Year 2015 was delivered to and approved by the USAID.
- The WMTR Year 1 Annual Report was delivered to and accepted by the USAID.

## Status of Activities by Components

### Component 1: Waste Collection and Recycling Systems

#### *Stakeholder Consultative Group*

On December 16, 2014, the second meeting of the Stakeholder Consultative Group (SCG) was organized in the Holiday Inn Hotel, Tbilisi. During the meeting the WMTR team presented the activities implemented and results achieved over the last six months (March 18 – September 30, 2014), as well as future plans for the next fiscal year (October 1, 2014 – September 30, 2015). The SCG members actively participated in the discussion and provided positive feedback on the implemented activities. The WMTR staff members received a number of questions and suggestions for the future plans. The main emphasis was placed on the importance of synergy among various waste management programs implemented in Georgia by the international community. This will help to avoid the duplication of activities within different programs operating in the waste management sector and will contribute to the achievement of set goals. As a result of the meeting, the participants agreed on continuing efforts to make program activities more efficient by ensuring coordination with other stakeholders and meeting on a quarterly basis instead of the previously discussed bi-annual basis. The next meeting is scheduled for the month of March 2015.



*The 2<sup>nd</sup> Stakeholder Consultative Group Meeting, Tbilisi, Holiday Inn.*

#### ***Preliminary environmental assessment and an assessment of current GHG emissions in Kakheti and Adjara***

The WMTR program conducted an assessment of current GHG emissions from landfills in Kakheti and Adjara with the support of international experts, using the IPCC Solid Waste Excel Model for calculation of quantities of CH<sub>4</sub> emissions. As a result of this assessment, the team developed the *Assessment of Greenhouse Gas Emissions and Emission Reduction Scenarios from Solid Waste in the Municipalities of Adjara and Kakheti Regions in Georgia* report finalized in November, 2014.

The primary focus of the study was to quantify GHG emissions from activities that would allow the WMTR team to achieve the goals of reducing GHG emissions by 5,000 metric tons of CO<sub>2</sub> by October 1, 2015, and by a cumulative GHG emission reduction of 25,000 metric tons of CO<sub>2</sub>

emission reduction should be set at a date 10 to 15 years after the opening of a consolidated, anaerobic landfill, when methane would be expected to be emitted. This recommendation assumes that the new landfill would include composting (organics diversion), driven by cost/benefit and landfill requirements in the Kakheti region. It also recommends a further work to collect waste characterization data in existing landfills. ***According to the recommendation of the international expert***, the second GHG reduction goal should be adjusted.

The report studied the landfills in Batumi, Adjara and in Gurjaani, Kakheti as they were the largest landfills having the most reliable data. Based on the modeling results, the emission reduction potential of a landfill gas (LFG) collection with a proposed flare system at the existing Batumi landfill appears to be more suitable. In the case of installation of a LFG system at the existing Gurjaani landfill, it should be able to achieve the first project objective of 5,000 metric tons of CO<sub>2</sub> emission reductions by October 1, 2015. However, the Gurjaani landfill is not large enough to be able to achieve the second project objective.

Due to the nature of organic waste decomposition, the IPCC model estimates methane emissions from decomposing food waste over many years, and therefore, the emission avoidance potential of composting facilities requires many years for the avoided emissions to be realized. It is important to recognize that the potential methane generation and corresponding emissions avoidance depends on the characteristics of the solid waste disposal site. For example, the potential emissions avoidance of a managed anaerobic landfill (MCF = 1) is double the amount of a managed, semi-aerobic landfill (MCF = 0.5). In the case of Kakheti, several landfills could be semi-aerobic, meaning potential avoided emissions would not be as possible in comparison to existing managed, anaerobic landfills – such as Batumi.

### ***Design region-specific ISWM strategies and action plans***

In December 2014, WMTR program engaged a tandem of international and local experts to develop the Integrated Solid Waste Management Plan Guideline (ISWMPG) in close cooperation with the Ministry of Environment and Natural Resources Protection, the Ministry of Regional Development and Infrastructure, and local municipal governments in both target regions – Kakheti and Adjara, etc.

According to the newly approved and signed Waste Management Code, each municipality shall adopt a plan for the management of the municipal waste produced within its territory for a period of five years after the enforcement of the law. The code also describes the general content of the mandatory integrated municipal solid waste plans (ISWMP) and establishes the regulatory framework in Georgia. This framework will serve as a basis for the development of the ISWMPG.

Recognizing the importance of assisting state institutions and target municipalities to comply with the new requirements, the WMTR is developing the ISWMP guideline (a set of unified principles). The WMTR team has already agreed on the following issues related to the development of the ISWMPG:

- Municipal solid waste management plan development process.
- Key initial organizational issues for the development of the ISWMPG.
- Draft outline of the municipal ISWMPG.

The first draft of the guideline will be developed by the end of February 2015. The draft guideline will be discussed with all stakeholders through workshops and will be finalized after receiving and incorporating all comments. Once the guideline is finalized and adopted by the national and local government it will be piloted in the municipalities of the target regions – Kakheti and Adjara.

### ***Assessment of program stakeholders in terms of waste management related Issues in Kakheti and Adjara regions and identification of their training needs***

The WMTR program developed a ToR for local experts to implement the following assessments:

- A detailed assessment of program stakeholders in terms of waste management related issues in the Kakheti and Adjara regions.
- Training needs assessment of program stakeholders related to waste management in the Kakheti and Adjara regions.

The assessment is going to be launched in January 2015 and will concentrate on the following areas: financial processes and functions, capacities related to waste collection program technical design and operations, tender, contracting and supervision functions, inventory and assessment of assets used in the waste management sector, etc. Based on the assessment, recommendations for the improvement of management in waste sector will be developed and training needs of stakeholders will be identified.

### ***Design and implement a City-to-City Activity***

The WMTR team has identified two pairs of partner cities in Georgia and USA that will participate in the City-to-City activities. The work will be focusing on improvement of waste management and recycling system practices via partnership of these two pairs:

- Telavi city in Kakheti Region will be matched with Catawba County in North Carolina.
- Batumi city in Adjara Region will be matched with Golden city in Colorado.

The City-to-City activities will be facilitated by the WMTR project with the Catawba and Golden pro-bono technical support in areas of capacity building, legislative changes such as development of strategies, policies, plans and practices on local and regional levels, and technical assistance such as the programmatic involvement that would most be needed (e.g. workshops, pilot recycling/composting projects etc.). As a precondition of the City-to-City activity, an Action Plan will be set forth that will commit each party to take initial steps in preparation for the further implementation.

In October and November 2014 the WMTR COP and DCOP met with the Mayors and Deputy Mayors of Batumi and Telavi cities to discuss the City-to-City exchange activity, receive feedback and provide local government representatives with information about the implementation of the WMTR program.



*Meeting with the Mayor, Mr. Platon Kalmakhelidze, and deputy Mayor of Telavi in Telavi city hall.*



*Meeting with the Mayor, Deputy Mayors of Batumi and focal point of the WMTR program in Batumi city hall.*

Mayors of both cities welcomed the City-to-City activity and expressed their readiness and willingness to participate in it. Mr. Ermakov (Batumi Mayor) and Mr. Kalmakhelidze (Telavi Mayor) stressed that their cities are interested in learning about best practices in solid waste management. As both cities joined the Covenant of Mayors, they have certain obligations to reduce GHG emissions from different sectors, including waste management. Therefore, knowledge sharing with the US city representatives could be very beneficial for their cities. Mr. Ermakov suggested that the WMTR program should focus more on practical issues within the scope of the City-to-City activity. Mr. Kamakhelidze also emphasized the preference to implement result oriented activities under this activity.

After the meetings the WMTR team continued cooperation with the city halls of both cities to agree on the details of the visit of the US cities' representatives.

During the first visit of the US counterparts to Georgia, the WMTR team intends to facilitate Memorandums of Understanding between the WMTR program, local government, and the US

representatives, collaborate on the details of action plans, and discuss the schedule of the next visits.

*For more information, please see Annex 1: Text of Memorandum of Understandings between Telavi city and Catawba county and Batumi city and city of Golden.*

### ***Cooperation with the Ministry of Environment and Natural Resources Protection of Georgia***

The WMTR team met with Mr. Alverd Chankseliani, the head of the waste management department of the Ministry of Environment and Natural Resources Protection, to discuss the needs of the Ministry and methods of cooperation with the WMTR. Mr. Chankseliani highlighted the importance of supporting the new Waste Management Code. In this regard, the Ministry requested specific assistance with the development of the following legal documents:

- National Waste Management Strategy
- Waste Management Action Plan
- Governmental resolution on *Rules of collection and processing of municipal waste (Waste Management Code, Clause 16, paragraph 5*

### ***Cooperation with the Adjara Government***

On December 4, 2014, the WMTR team met with the Adjara government representatives (Minister of Finance and Economy, Director of Division of Environmental and Natural Resources Protection of Adjara, Mayor of Batumi and their staff) to discuss Adjara needs concerning waste management and potential ways of cooperation with the WMTR.

The following issues were discussed during the meeting:

- Closure plans for the existing landfills in Adjara
- Development of a sorting facility at the new landfill
- Preparation of Terms of Reference for recycling companies and announcement of a competition
- Placement of separation bins in the buildings of governmental structures and on the boulevard in Batumi
- Development of a Public Service Announcement (PSA)

In addition the following issues were also emphasized at the meeting:

- Importance of reducing use of plastic bags and their replacement with paper bags
- Promotion of waste separation including financial rewards for delivering separated waste at the collection points
- Starting waste separation in Batumi
- Development of a tariff strategy
- Dates of the city to city activity between Batumi and Golden (USA)

It was agreed that:

- The Adjara government will provide WMTR with closure plans for the existing landfills and a copy of the Contract between the government of Adjara and the EBRD on the construction of new sanitary landfill in accordance with EU requirements
- WMTR will discuss with the donor the sorting facility and relevant issues based on a letter of request from the Government of Adjara
- WMTR is ready to support the Adjara government with the development of a ToR for recycling companies
- WMTR is ready to provide bins for the separating the collection of waste by paper, plastic and glass
- The program is ready to prepare a PSA on the issue of waste separation, in cooperation with the Adjara government

*For more information, please see Annex 2: Minutes of the meeting between the WMTR program and the Adjara Government.*

### ***Methods of Cooperation with the Ministry of Regional Development and Infrastructure/ Solid Waste Management Company***

On December 24, 2014, the WMTR team met with the representatives of the Solid Waste Management Company of Georgia (SWMCG). The company was created under the Ministry of Regional Development and Infrastructure and is responsible for the operations, management and monitoring of existing landfills (excluding Tbilisi and the Adjara Regions), construction planning of new regional landfills in compliance with EU regulations, and closure of the existing landfills that do not meet international requirements.

The meeting focused on the discussion of cooperation methods between WMTR and SWMCG, and specific needs of the company for improvement of waste management.

The company stated that one of the biggest issues they face is the lack of accurate data on GHG emissions from landfills (this information doesn't exist in Georgia), directly impeding with implementation of effective GHG reduction. The company will need portable equipment to measure GHG emissions (CH<sub>4</sub>, CO<sub>2</sub>) from landfills more accurately. It will enable experts to measure actual emissions in Kakheti and Adjara. Although the Adjara region is not under the company jurisdiction the company management will be able to arrange to measure emission via its Adjara partners. If the WMTR program will support them with this equipment the company will contribute with in-kind funding (staff measuring/monitoring/evaluating GHG emissions).

The results of this data collection will help to determine what kind of activities will be most appropriate and effective for each particular landfill to reduce GHG emissions, e.g. compressing CH<sub>4</sub>, or installing a flaring system (the latter is one of the recommendations of the GHG assessment report).

Once accurate information is available, it will be possible to work with the government to allocate funds and implement activities for the reduction of GHG emissions from landfills that have the biggest potential in terms of GHG reduction. This request is currently under consideration.

### ***Develop landfill remediation/closure plans***

The WMTR program is developing maps that show informal dump areas and current waste collection service coverage per municipalities of the target regions.

Official letters have been sent to all municipalities of target regions requesting for the following information:

- Areas covered by the current waste collection service (on a village level, if the service does not cover the whole territory of the village, it should be indicated what part of village is covered by the collection service)
- Location of informal dump areas (specific areas, GPS coordinates in case of their availability), their number, area, type of waste allocated on the dumping area

The GIS expert is currently comparing the information provided by the municipalities with data received from the Greens Movement of Georgia, collected within the scope of the CIDA-funded Clean up Georgia program.

By the end of January 2015, when, the information collection and maps have been completed, WMTR will start the work on the development of an action plan for the closure of informal dump-sites.

Development of existing landfill closure plans is currently under discussion with the Adjara Government and Solid Waste Management Company. It is important to confirm if the plans for the existing landfills in Adjara are already being prepared and if there is a need for the WMTR program to work on this issue. The WMTR program has sent an official letter to the Ministry of Finance and Economy of Adjara with the request to provide existing closure plans.

In Kakheti region, preliminary discussion with the SWMCG showed that the WMTR project will most probably work on the closure plan of the Gurjaani landfill, as this landfill has already been ceased by the company.

## Component 2: Private Sector-led Recycling

### *Assessing recycling companies and market in Kakheti and Adjara*

The WMTR team identified 3 recycling companies in the program – regions. One company operates in the Kakheti region and two companies – in Adjara. Table 1 below presents the solid waste recycling companies by region.

*Table 1. Solid Municipal Waste Recycling companies in Kakheti and Adjara Regions.*

Region	Company name	Type of operation
<b>Kakheti</b>	LTD To-Pa	Paper Recycling
	LTD Roni	Paper Recycling
<b>Adjara Region</b>	LTD Zugo	Plastic Recycling

The WMTR team has conducted a rapid assessment of these companies. The assessment showed that none of these companies possess environmental permits, while in accordance with the Georgian legislation, plastic and paper recycling companies must have an environmental permit, otherwise their operations are illegal. It is important to work with these companies and provide them assistance in developing environmental impact assessment reports and obtaining environmental permits.

Table 2 on the next page represents a summary of the information collected during the rapid assessment. It should be mentioned that none of these companies produce ISO standard products.

Table 2. Summary of the rapid assessment of the recycling companies in Kakheti and Adjara

Region	Company Name	Type of operation	Product	Source of raw materials	Energy source	Capacity	Planned capacity	Date Established	Comment
<b>Kakheti</b>	LTD To-Pa	Paper Recycling	Toilet paper	Companies operating in Kakheti and local population	El. energy, Natural gas	6.5 t/per month	26 t/per month	2014	High energy usage; Old style technique
<b>Adjara</b>	LTD Roni	Paper Recycling	Toilet paper	Companies operating in Adjara and local population	El. energy, Natural gas	2 t/per month	5 t/per month	2007	Lack of chemicals needed for the production cycle
	LTD Zugo	Plastic bags production and recycling of plastic bags	Plastic bags (recycled and non-recycled)	Import from the Europe and Turkey	El. energy	30 t plastic bags and 10 t recycled bags	It is possible to increase production of recycled bags on 25 %	2010	Insufficient raw material for recycling

## ***Sharing experiences and leading practices through yearly national workshops and seminars***

### ***Second National Workshop of Recycling Companies***

On October 3, 2014, a second national workshop of municipal waste recycling companies was organized in the Hotel “Chao”, Batumi, Adjara Region. Representatives of 10 companies working in the field of waste collection and recycling in Georgia attended the event. Sharing of information and experience was the main objective of the workshop.

Workshops participants were introduced to the EU-Georgia Association Agreement and to the requirements of the Waste Management Code (the document was still in a draft format during the workshop). They discussed the opportunities for entrepreneurs as well as the possible regulatory challenges that need to be tackled to meet these requirements.. Representatives of business companies exchanged information on their activities and expressed willingness to cooperate with each other and the program. The responsibilities and authorities of the Adjara Chamber of Commerce and Industry (ACCI) were also discussed during the meeting. The ACCI expressed willingness to closely cooperate with the WMTR program and offered to provide some tangible support (office space, experts, networking).

It was agreed that at the next meeting waste collection and recycling companies in Georgia will sign a Memorandum of Understanding on the creation of an association.

## ***Facilitating the creation of a network of recycling companies and consolidators***

### ***Third National Workshop of Recycling Companies - Signing of the Memorandum of Understanding***

On December 12, 2014, a workshop with participation of solid waste recycling companies was organized in Rooms Hotel, Tbilisi.



*National Conference of the Association of Recycling Companies held in Hotel "Tbilisi Rooms".*

Representatives of the companies were briefed on existing and planned legislative regulations in the waste management sector, as well as on the responsibilities of governmental structures in this field. After the presentation a discussion was organized, during which representatives of the

companies discussed issues related to the problems existing in the sector, as well as solutions to these issues.

During the second part of the meeting, WMTR and 14 enterprises working on the recycling of paper, glass, plastic and tires waste, signed a Memorandum of Understanding. Signing of the memorandum is a precondition for the establishment of a national association of waste recycling companies.

By signing the memorandum, the two sides have undertaken a commitment to cooperate in the field of waste management in order to identify issues existing in the sector and solutions to these issues. They also agreed to collect and share information on modern waste management technologies, safe collection of waste, waste transportation, disposal and recycling, increasing volume of recycled waste, improving the quality of recycled products, increasing the energy efficiency of enterprises, and the introduction of waste management best practices in enterprises.

At the end of the meeting WMTR representatives provided information related to the program grant component that may be beneficial for the recycling companies working in the target regions. Future steps with regards to this component were planned.

*For more information, please see Annex 3: Memorandum of Understanding between the Project – Waste Management Technologies in Regions and Waste Recycling Companies, agenda of the workshop and list of participants.*

### ***Implementing utility audits of recycling companies, aiming reduction of GHG emissions, energy and water consumption***

#### *Pre-Award Assessment of recycling companies*

The WMTR program envisages implementation of detailed energy, material & EHS audits for the recycling companies operating in the target regions and development of recommendations to improve their efficiency and performance. Based on the assessment, grants will be issued to support companies in increasing their efficiency, reducing energy consumption / GHG emissions and expanding of materials.

Currently, none of the municipal waste recycling companies functioning in the target regions – Kakheti and Adjara - possesses environmental permits, thus their operations may be deemed illegal.

Therefore, in consultation with the USAID it was decided that at the first stage a pre-award assessment will be conducted according to the USAID regulations. Detailed energy, material & EHS audits will be implemented for only those companies, which will successfully pass the pre-award assessment.

The aim of the pre-award assessment is to evaluate the financial and managerial capacity of the companies and assess if they operate in accordance with the requirements of the Georgian legislation. The assessment will also help identifying the companies' needs related to financial management and management systems in general.

*For more information, please see Annex 4. Pre-award assessment questionnaire and Risk Assessment Checklist.*

In December, the WMTR team conducted the pre-award assessment of two recycling companies in Adjara – Zugo (plastic recycling LTD) and Roni (paper recycling LTD). The first review of the financial documents of these two private companies showed that both of them could be considered as potential grantees (“Zugo” LTD is more organized and experienced); however, in order to make a final recommendation, the companies need to provide all requested documents. The report will be finalized and delivered in the next reporting period.

## Component 3: Waste Management Strategy and Tariff Policy

### *Carry-out tariff and cost recovery assessments in Adjara and Kakheti*

In September the WMTR program started implementing tariff and cost recovery assessments in both target regions - Adjara and Kakheti.

The program developed Terms of Reference (ToR) for the field team (4 persons, 2 in each region) to conduct the tariff assessments. The ToR contained the following information: aim of the activity, including target groups, responsibilities of the field team, scope of the field work for both regions separately (number of interviews for each target groups), and timeline of the activities. In addition detailed ToRs for each field team, indicating focus groups to be interviewed as well as detailed work plans, were developed.

In each municipality four villages have been selected according to the following criteria: two villages according to the number of population - small and large villages, and two villages according to the distance from the center of the municipality - one village that is close to the center and one that is far away from the center.

Tables 3 and 4 below indicate the villages selected according to the criteria presented above.

*Table 3. Villages selected in the Kakheti Region*

Kakheti Region				
Municipality	Villages			
	Population Size		Distance from the Center	
	Small	Large	Close	Far away
<b>Akhmeta</b>	Khorbalo	Duisi	Matani	Birkiani
<b>Gurjaani</b>	Ziari	Velistsikhe	Chumlaki	Naninaani
<b>Dedoplistskaro</b>	Tavtskaro	Zemo Machkhaani	Samreklo	Samtatskaro
<b>Lagodekhi</b>	Rachisubani	Kabali	Shroma	Kvemo Nashovari
<b>Sagarejo</b>	Antoki	Kakabeti	Giorgitsminda	Udabno
<b>Signagi</b>	Zemo Magharo	Sakobo	Nukriani	Kvemo Bodbe
<b>Kvareli</b>	Saruso	Shilda	Sanavardo	Shakriani
<b>Telavi</b>	Tetrtsklebi	Karajala	Vardisubani	Lapankuri

*Table 4. Villages selected in the Adjara Region*

Adjara Region				
Municipality	Villages			
	Population Size		Distance from the Centre	
	Small	Large	Close	Far Away
<b>Keda</b>	Namonastrevi	Kokotauri	Gulebi	Jalabashvilebi
<b>Kobuleti</b>	Zeneti	Kobuleti	Mukhaestate	Kvirike
<b>Shuakhevi</b>	Kviriauli	Nigazeuli	Beselashvilebi	Gomarduli
<b>Khulo</b>	Gorgadzeebi/Kurtskhali	Riketi/Didadjara	Dekanashvilebi	Danisparauli
<b>Khelvachauri</b>	Mirveti	Tsinsvla	Makho	Masaura

The composition of the focus groups to be interviewed during the assessments has been identified in both regions. Please see Table 5 below:

Table 5. Focus Groups by Region

Focus Groups	
Kakheti Region	Adjara Region
General Population:	General Population:
Trustees of the villages	Trustees of the villages
Teachers	Teachers
Doctors	Doctors
Big farmers / local entrepreneurs	Big farmers / local entrepreneurs
Socially vulnerable groups	Socially vulnerable groups
Representatives of local municipalities / each municipality	Representatives of local municipalities / each municipality
Representative of self-governance city Telavi	Representative of self-governance city Batumi
Companies responsible for cleaning and collection of waste	Representative of Division of Environmental and Natural Resources Protection of Adjara
Recycling company	Companies responsible for cleaning and collection of waste
	Company responsible for operation of the landfill
Big businesses	Recycling companies
	Big businesses

Guide questions to be asked during the focus groups discussions have been also developed. The program trained the field team on different interviewing techniques.

The program team prepared action plans for conducting the tariff field assessments in both target regions. Please see Table 6 below for the timetable.

Table 6. Timetable for Focus Groups by Region

Kakheti Region, 2014	Adjara Region, 2014
Dedoplistskaro municipality - December 2, 3, 4, 5, 2014	Khulo municipality - II week of November
Sagarejo municipality - December 8, 9, 2014	Shuakhevu municipality - December 9,10, 11, 2014
Sighnaghi municipality - December 10,11,12, 2014	Keda municipality - December 17, 18, 19, 2014
Kvareli municipality - December 15,16,17, 2014	Batumi city - December 23, 24, 2014
Akhmeta - December 19, 22, 2014	Kobuleti – January 22, 2015
Telavi municipality and Telavi city - December 23, 24, 25, 2014	Khelvachauri - January 25, 26, 2015
Gurjaani municipality – January 20,21,22, 2015	Batumi city - January 28, 2015
Lagodekhi municipality – January 22,23, 26,27, 2015	

Survey materials will be provided during the assessment process. The first draft of the tariff assessment report for the Kakheti and Adjara Regions will be ready by the end of February.

*For more information, please see Annex 5: General ToR for the field team, separate/detailed ToRs for the field teams in the Kakheti and Adjara Regions and questionnaire in Georgian.*

***Carry-out public education and outreach related to cost recovery enhancement***

Public education and outreach activities related to cost recovery enhancement started in October, 2014. These activities include the following actions:

- lectures on tariff and cost recovery related issues
- informational posters on the importance of developing an accurate tariff system and the significance of public involvement in this process posted in schools, Gamgeoba and Sakrebulo buildings, and libraries
- TV and Radio PSAs regarding the importance of public involvement in the tariff system development process
- installment of special boxes in public places in target areas to support public involvement in the assessment process

## Component 4. Communication and Outreach

### *Implement the public awareness campaign*

#### *Open Classes on Integrated Waste Management Themes in Public Schools of Adjara and Kakheti*

Open educational classes on integrated waste management were conducted in the public schools of Kakheti region during the week of December 5-12, 2014. The open classes were organized in Sagarejo N 1, 2 and 4 schools, as well as in the public schools of the villages of Sagarejo municipality: Bogdanovka, Kojbaani, Gombori and Patara Chailuri. The classes were attended by grade 9-12 students.

During the open classes participants received information on modern approaches to waste management and the international experience in this field. Students discussed the waste management related challenges Georgia experiences.. Participants received information on the 4Rs - *Reduce, Reuse, Repurpose, Recycle* – concept. The program emphasized that the promotion of the 4R concept is very important for the introduction of integrated waste management practices in the country.

Open classes were interactive and the students were very participatory. Different questions were set and discussed on issues such as the maintenance of landfills, operation of waste recycling companies and cooperation with them, introduction of fines for environmental pollution, etc. Students presented their views on the activities that are necessary for the implementation of 4R practices and integrated waste management. Students considered that it is very important to raise public awareness on this issue and to execute a penalties system in the sector.

Open classes will continue to be conducted on a regular basis in the public schools of both target regions.

#### *Celebration of World Sanitation Day*

On November 19, 2014, the WMTR program celebrated World Sanitation Day for the first time in Georgia by hosting an eco-camp in Bulachauri Green Centre.

30 school competition winners from both target regions – Adjara and Kakheti – received training in 4Rs as well as in tackling global and local sanitation challenges. The camp lasted 2 days – November 18-19. The school competition that preceded the camp took place in October, 2014. During the competition children prepared short 2 minutes videos talking in their own words about the 4Rs and the waste related problems in their villages. 33 schools of Adjara and Kakheti took part in the competition and 15 videos were selected as winners. The authors were invited to the camp.

On November 19 Ms. Maia Bitadze, Deputy Minister of Environment and Natural Resources Protection, participated in the award ceremony, where children presented their work and shared their experiences. Winners were awarded with backpacks and all 33 participating schools were given separation bins (a total of 66 bins).



*Awarding Ceremony at the World Sanitation Day with participation of the Deputy Minister of Environment and Natural Resources Protection of Georgia, Maia Bitadze, in November 19, 2014.*

### *Public Lecture on Integrated Waste Management in Batumi State University*

On November 14, 2014, a public lecture on Integrated Waste Management was held in Batumi Shota Rustaveli State University, Adjara region. A contest on waste management related issues was organized before the lecture to draw the public's attention to the event and the issue of waste management. About 15 people participated in the contest and winners were awarded with green bags to use as alternatives to plastic bags. Along with the contest, the program installed three separation bins in Batumi State University for the collection of paper, plastic and glass waste.



The lecture specific topics included:

- classification of waste,
- the concept of integrated waste management,
- the concept of the 4Rs,
- waste collection systems,
- waste separation,
- recycling,
- landfills and their types,
- international standards of landfill arrangement
- comparison of Georgian landfills with landfills developed based on international standards

At the end of the lecture an open discussion on the following topics was held:

- The current system of waste management (collection, transportation, disposal) in the region
- The practice of waste separation and recycling in the region

Attendees were interested in the ways the WMTR program plans to cooperate with youth groups of the region. Program team presented to the audience planned and upcoming events in this regard including competitions and grants dedicated to the integrated waste management.

Approximately 40 people participated in the Open Lecture.

### *Clean-up action in the Kakheti region*

As a follow up to the summer camps organized by the WMTR program clean-up activities were initiated by the alumni of these camps in the territories of their schools.

On October 15, 2014, the WMTR summer camp members organized a clean-up action on the Territory of Tsinandali School, Kakheti region. About 31 school students participated in the campaign. On October 31 a clean-up activity was held in the public school of Village Arboshiki, Dedoplistskaro municipality with participation of 40 school students.



### *Development of interactive E-book and 4R game for children*

In cooperation with the Ministry of Environment and Natural Resources Protection of Georgia and the Ministry of Education and Sciences the WMTR program started development of an interactive e-book for children. The E-book will support the promotion of integrated waste management concepts and the development of proper behavior in terms of waste management. Sandro Asatiani, the tender winning programmer and content writer started working on the content according to the agreed concept, methodology and goals. The E-Book will be developed for Windows, IOS, Android and Web. The estimated work will take 5 months, developing content and illustrations - 2 months and programming - 3 months. The E-Book will be officially launched on Earth Day, April 22, 2015.

### *City beautification project – 4R Park in Artana village, Telavi municipality*

In November, within the scope of the City Beautification Project the WMTR program developed 4R - *Reuse, Reduce, Recycle, and Repurpose* - Park in Artana village, Telavi municipality. The local government and the population, especially youth - Artana village secondary school students - took an active role in the working process. The 4R Park was constructed to promote 4R principles and practices. All facilities in the park – tables, chairs, swings, and stairs - were developed from repurposed materials. The park is a good example how to reuse materials, give them second life and minimize waste. The Artana 4R park pilot will be replicated in other villages of the Kakheti and Adjara regions. The photos on the next page illustrate the 4R park construction process:

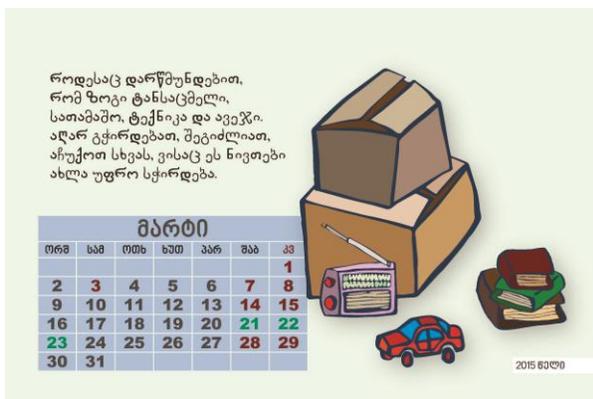


*Village Artana beautification project – 4R Park managed and constructed jointly with the local youth.*

### 4R Calendar for 2015

The WMTR program developed a 2015 4R calendar and distributed it among stakeholders – governmental structures, international organizations, NGOs, and the business sector.

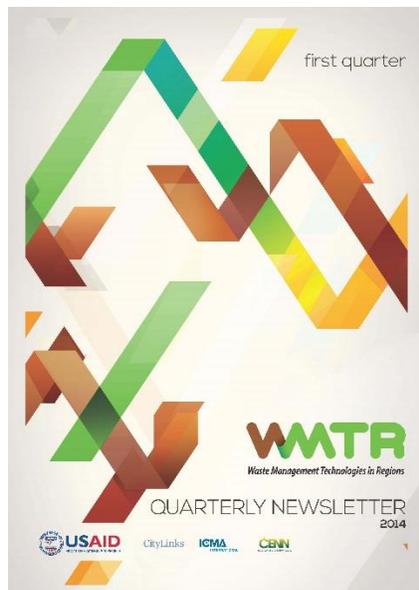
The calendar was developed with to promote 4R principles and concepts among the stakeholders. The text of the calendar provides messages on how to reduce negative impacts on the environment and save natural resources and money. Inscriptions on different months’ pages from January to December show concrete methods on how to reduce the generation of waste, promote reuse and repurpose of used items, and support recycling practices.



### Program quarterly newsletter

The program’s first quarterly newsletter has been developed in English and Georgian and distributed through the CENN electronic network, which has more than 24,000 subscribers worldwide.

The newsletter provides information about the program: goal, planned activities and recent achievements in the period of May-August, 2014. The Newsletter aims to keep the public informed about and, involved in, the WMTR program implementation process. The newsletters will be developed and published regularly on a quarterly basis.



Please follow the link to download the first newsletter: <https://www.sendspace.com/file/r3g72i>

### *Creating and maintaining the Eco-camp alumni Facebook Page*

The WMTR staff developed a Facebook (FB) Page for the alumni of the eco-camps organized within the scope of the program. The FB page is a very good tool for the school students to receive updates regarding the implementation of the program, which are relevant to school activities, inform them about the developments at the international level and exchange information about ongoing activities in different schools of the target regions – Kakheti and Adjara.

Please follow the link to visit the web-page: <https://www.facebook.com/groups/359953904179270/>

### *Public Service Announcement (PSA)*

The Public Service Announcement (PSA) to promote the principle of 4Rs has been developed and broadcasted on public television. Please follow the link to see the PSA: <https://www.sendspace.com/file/a2xau9>

### *Schools Grant Competition*

In January the WMTR program announced a grant competition for local schools of the target municipalities in both target regions - Kakheti and Adjara.

The objective of the grant competition is to develop and later select the best project proposals aiming at the solution/promotion of integrated waste management related issues at the local level. In

particular waste management related issues should be solved through waste reduction, reusing/repurposing or waste separation for recycling purposes.

The WMTR staff has already implemented the preparatory works. The competition will be open to small groups (from three to seven members) of 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> grade students, as well as eco-clubs of target schools. Eligible participants will submit application forms describing project goal, expected results and activities. The maximum amount of the grant proposal is 2,000 GEL. Preferences will be given to those project proposals that consider sustainability of the project outcomes.

Please see Table 7 on the next page for a full description of WMTR public outreach campaigns conducted in this quarter and the size of the audience reached.

Table 7. Number of People Reached through Outreach Campaign

Channel of Communications	Type of Information	Size of Audience
Telavi municipality website, November 7, 2012 <a href="#">Link</a>	Development of 4R pakr in Telavi municipality from recycled materials in Artana	3,213 followers
TV Channel Tanamgzavri, November 7, 2014; there was also a report was also published on their website <a href="#">Link</a>	Development of 4R pakr in Telavi municipality from recycled materials in Artana	Approximate audience: 12,000 individuals
Adjara TV, November 14, 2014; there was also a report was also published on their website <a href="#">Link</a>	Open lecture at Batumi state university on integrated waste management	8,779 views
TV 25, November 14, 2014; there was also a report was also published on their website <a href="#">Link</a>	Open lecture at Batumi state university on integrated waste management	Average of 468 visitors per day
GDS TV Channel, November 17, 2014; it was also hosted on their YouTube channel <a href="#">Link</a>	Waste recycling	167 views
Georgian Public Broadcasting, November 19, 2014; it was also hosted on their website <a href="#">Link</a>	Celebration of World Sanitation Day	319 views
Front News, November 19, 2014 <a href="#">Link</a>	Celebration of World Sanitation Day	72 views
TV3, November 19, 2014; it was also hosted on their website <a href="#">Link</a>	Celebration of World Sanitation Day	7 views
Adjara TV, November 19, 2014; there was also a report was also published on their website <a href="#">Link</a>	Celebration of World Sanitation Day	5 views
News Agency News Day, November 19, 2014 <a href="#">Link</a>	Celebration of World Sanitation Day	2 views
News Agency Kvira, November 19, 2014 <a href="#">Link</a>	Celebration of World Sanitation Day	Average of 8,471 visitors per week
Ministry of Environment and Natural Protection of Georgia website, November 19, 2014 <a href="#">Link</a>	Celebration of World Sanitation Day	349 likes
Radio Green Chocolate, December 23, 2014 <a href="#">Link</a>	Waste Management Code regulations and news	2 views
"Liberali" Magazine, December 30, 2014 <a href="#">Link</a>	Waste Management Code regulations and news	53 likes
15 E-Digests from WMTR disseminated via CENN's online network	WMTR activities and integrated waste management-related issues	23,000 subscribers
Summary	15 E-Digests on WMTR program were developed and disseminated via CENN E-Network 23,000 subscribers Telavi municipality web site 3,213 Followers TV Channel Tanamgzavri -Approximate number of audience 12,000 An average number of visitors of different information sites per week 2,234– (assuming that one person is using about 4 sites for receiving the information, total number 8,939). An average number of views of different information sites per week 2439– (assuming that one person is using about 4 sites for receiving the information, total number 9,755).	

### ***Collaboration with Donors and Implementers***

During the reporting period, the WMTR team has closely collaborated with international donors and implementers in the field of waste management and recycling to coordinate and support the technical assistance, training, education, information campaigns, and behavioral change with regards to landfills closures, waste separation, and recycling practices. Table 8 below outlines WMTR’s activities supporting collaboration with other donors and implementers this quarter.

*Table 8. Programs and Organizations for Coordination and Collaboration*

Organization and Program	Areas of Coordination and Collaboration
U.S. Agency for International Development (USAID)	USAID partners’ roundtable (meeting with USAID implementers); weekly reports and monthly meetings with Agreement Officer’s Representative (AOR)
European Bank for Reconstruction and Development (EBRD)	Discussing solid waste management and landfill-related issues and coordination
The Swedish Embassy in Georgia and Swedish International Development Agency (SIDA)	Involving SIDA representatives at the Stakeholder Consultative Group meeting and related solid waste collection and recycling activities coordination
Winrock International- Georgia	Coordinating current and upcoming activities

## **Reports and Deliverables Completed**

- Annual Implementation Plan for the Fiscal Year 2015
- Year 1 Annual Report for the period of March 18 – September 30, 2014
- Quarterly Report (October 1 – December 31, 2014)

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

- Organization of the Stakeholder Consultative Group meeting in March, 2015.
- Development of the Integrated Solid Waste Management Plan Guideline for Municipalities.
- Capacity building and training gap analysis of municipal and solid waste companies.
- Preparation work on the set of training workshops for municipalities and waste management companies.
- Provision of tailored assistance and training, including cost-benefit analysis, to municipalities and SW companies.
- Assistance to waste collection companies in developing and implementing business plans and strategies for service improvement and expansion.
- Implementation of City-to-City partnership activities.
- Finalization of maps showing waste collection system coverage areas and location of illegal dumpsites.
- Development of the tariff and cost recovery assessment report for the target regions – Kakheti and Adjara.
- Public education and outreach related to cost recovery enhancement and implementation of the public awareness campaign in targeted regions (Kakheti and Adjara).
- Production of promotion materials such as training and marketing tools, posters, PSA, TV and radio reportages, presentations, and others on waste management and 4Rs.
- Announcement of a grant competition for schools in target regions and issue grants.