



USAID
FROM THE AMERICAN PEOPLE

CityLinks

ICMA
Leaders at the Core of Better Communities

CENN
Caucasus Environmental NGO Network

WASTE MANAGEMENT TECHNOLOGIES IN REGIONS, GEORGIA

Quarterly Report
PERIOD: October – December, 2015



31 January, 2016

This publication was produced for review by the United States Agency for International Development

Waste Management Technologies in Regions, Georgia

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

Prepared for:
Mission Environmental Officer
Economic Growth Office
USAID | Caucasus

Prepared by:
International City/County Management Association
777 North Capitol Street NE, Suite 500
Washington, DC 20002-4201

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.

CONTENT

- CONTENT..... iii
- ABBREVIATIONS..... 4
- Program Background 5
- Assumptions, Problems and Barriers..... 6
- Significant Events and Achievements during the Reporting Period..... 6
- Status of Activities by Components 10
 - Component 1: Waste Collection and Recycling Systems 10
 - Component 2: Private Sector-led Recycling 23
 - Component 3: Waste Management Strategy and Tariff Policy..... 27
 - Component 4: Communication and Outreach 29
- Major Activities Planned for Next Quarter 35

ANNEXES:

- Annex 1. Autumn Waste composition study reports (1a Kakheti region and 1b Adjara Autonomous Republic)
- Annex 2. The Technical Regulation on Rules of Collection and Treatment of Municipal Waste
- Annex 3. EIA report for Neoprint LTD

ABBREVIATIONS

ADC	Austrian Development Cooperation
CENN	Caucasus Environmental NGO Network
DCOP	Deputy Chief of Party
EIA	Environmental Impact Assessment
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
SWM	Solid Waste Management
SFG	Sustainable Forest Governance in Georgia program
NSWMCG	National Solid Waste Management Company of Georgia
TV	Television
USAID	U.S. 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, 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 Adjara AR. Project activities will promote greenhouse gas (GHG) mitigation and sequestration by developing the waste management sector, by improving 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; improving waste collection systems; minimizing pollution of natural resources from landfills by closing down old, illegal landfills and dumpsites; enhancing 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 cross-cutting activities that support the four components above and 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 until December 31, 2015, within USAID Fiscal Year 2016.

Assumptions, Problems, and Barriers

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

- Miscommunication and lack of coordination among donor agencies working in the waste management sector;
- Lack of communication among state institutions responsible for waste management in Georgia;
- Lack of financial resources in the municipal budgets allocated for waste management issues;
- Lack of technique and equipment (trucks, bins, etc.) in the municipalities required for waste collection;
- 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;
- Lack of local expertise in waste management issues;
- The very limited number of recycling companies with both the capacity and willingness to be potential grant recipients is a serious problem;
- The socio-economic situation in the country;
- Lack of awareness by general public of integrated waste management issues: waste separation, recycling, tariff issues, etc.

To mitigate the potential problems and barriers, WMTR continues to work closely with all tiers of government and other stakeholders on capacity building and utilizes an intensive outreach, communication, and awareness campaign to promote best practices in waste management and recycling systems.

Significant Events and Achievements during the Reporting Period

- The WMTR team, in consultation with the National Solid Waste Management Company of Georgia (NSWMCG), purchased a TDL-500 portable gas analyser, which will allow near surface measurement of actual methane emissions to determine the levels of methane emission from landfills. It will be transferred to the NSWMCG in March 2016, and training will be provided to staff on its usage.
- In October 2015, the WMTR team conducted the autumn composition study in order to analyse the morphological composition of municipal waste in the program target regions. WMTR coordinated with NSWMCG and local governments on the study which will be conducted every season, four times total) in both target regions. Over the next year, WMTR will coordinate this study four times in each target region – in autumn, winter, spring, and summer.
- The WMTR team, in collaboration with MoENRP and other international and national experts, developed technical regulations on rules of collection and treatment of municipal waste in accordance with the requirements of the Waste Management Code of Georgia.

The MoENRP should submit the technical regulation to the government for approval no later than 1 February 2016.

- In December 2015, the WMTR team started work on a cost-benefit analysis of waste management investments in the country to ensure the effectiveness of establishing a proper waste management system in Georgia. The document is being developed by WMTR in close cooperation with all stakeholders and will be finalized in February 2016.
- The WMTR team collaborated with local government to place 75 bins over all 5 pilot project villages to establish waste separation practices and expand the coverage area of waste collection. Of the 75, 30 of the bins are intended for separated collection of plastic and paper. These 30 bins were placed in public places i.e. close to shops, markets, schools, etc. for maximized accessibility while maintaining efficiency if pickup.
- In December 2015, WMTR conducted trainings on effective waste management and waste collection service optimisation in the cities of Telavi and Batumi.
- The second visit of a delegation from Golden to Batumi took place on 18-24 October 2015. During this visit the delegation held meetings with different stakeholders working on waste management issues in Batumi Self-Governance City. As a result of the meetings, a draft action plan was developed to set up a pilot project establishing a separated waste collection system in one district of Batumi.
- The WMTR team developed the Gurjaani Landfill closure plan in accordance with the requirements of national legislation, international best practices, and EU directives. According to this plan the SWMCG will announce a tender on the closure of Gurjaani landfill during January – March 2016 quarter.
- In August 2015, the WMTR team cleared an illegal dumpsite in Tsetskhlauri Village, Adjara. As a follow up in November, WMTR installed two 700 litre waste containers and an informational banner to prevent future littering at this site. To prevent the site from returning to its former condition, the WMTR team, with the support of the ADA funded SFG program (also implemented by CENN) and local government, planted 80 cryptomeria and alder trees in the former dumpsite. Fast growing and adaptive species were chosen to facilitate rapid covering.
- In November 2015, the WMTR team, in cooperation with the local government and the SFG program, cleared illegal dumpsites covering two hectares in Duisi Village, Akhmeta Municipality, Kakheti region. WMTR installed eight 700 litre waste bins and an information board on the cleared area to prevent future pollution. SFG, with the help of WMTR staff and representatives of Akhmeta Municipality, planted 300 walnut trees on the cleared area.
- In October 2015, the WMTR team, in cooperation with the regional and local governments of Adjara Autonomous Republic developed a closure plan, including a budget, for the illegal dumpsite in Beshumi, Khulo Municipality. The local government has committed to allocating some of the funds for the closure of the dumpsite with the remaining coming from the ADC funded SFG program;
- On 8 December 2015, WMTR hosted a meeting with Ms. Mischere Kawas, Country Desk Officer of USAID and Nino Kumsishvili, program AOR. Mr. Giorgi Shukhushvili, Director of the NSWMC, Ms. Khatuna Chikviladze, advisor to the company, and Mr. Alverd Chankseliani, Head of the Wastes and Chemicals Management Division of the MoENRP attended the meeting with WMTR staff.

- On 4 December 2015, the WMTR team helped WMA organize a presentation of the Association to donor organisations, NGOs, government representatives, and the media.
- The WMTR team helped Neoprint Ltd (a cardboard recycling company) develop the required EIA report. This report considers possible impacts on, and risks to different components of the physical, biological, and human environment. In December 2015, the EIA report was submitted to the Permit Department at the MoENRP for comment.
- The WMTR team has developed a grant competition for municipal waste (plastic, paper, and glass) recycling. This competition will facilitate plastic, paper, and glass recycling in Georgia by strengthening the winning companies. The competition was announced in early January 2016.
- On December 16 2015, WMTR hosted a meeting of the WMA board. The president and board members discussed further development of the Association the WMTR team.
- In December 2015, WMTR started developing a general methodology for tariff calculation and an effective cost recovery system. The purpose of the document is to propose a methodology for establishing tariffs and a cost recovery scheme for providing solid waste management services. These services include, street sweeping, cleaning of public areas and the collection, recycling, transport, and disposal of solid waste. The document will be developed by WMTR in partnership with all stakeholders, and will be finalized in February 2016.
- Catawba County continues to support the Telavi Self-Governance City in efforts to calculate a waste tariff using the waste fee setting tool provided by this US County. Using this tool, the local government in Telavi calculated expenses over a fifteen year period. These expense were calculated separately for households and industries. Calculations will be finished in January 2016.
- On December 9-11 and 16-17, WMTR held meetings with local communities and open classes for school students were in five villages in the Telavi Municipality. The meetings covered topics related to existing waste disposal problems, integrated waste management, and how the importance of waste separation relates to environmental protection and Georgia's national economic development.
- The program developed a fifth quarterly newsletter in English and Georgian, and distributed it through the CENN Electronic Network, which has more than 24,000 subscribers worldwide;
- The WMTR staff continue to update the Facebook page. This page provides the general public and school students from the project target regions updates on the implementation of the program — including competitions, trainings, workshops, grant announcements, information about ongoing activities, and news on modern practices in waste management.
- The WMTR team developed a public service announcement (PSA) to promote the importance of waste reduction and raise the awareness on the issue. The PSA is being broadcasted on public television and is available online on YouTube and the program's Facebook page.
- The WMTR program developed a table calendar — *Waste Free 2016: Choose Vintage – Be Unique and Have a Positive Environmental Effect!* The calendar promotes messages on how

to use the 4R concept in everyday life and be a conscious citizen with an environmentally friendly attitude.

- In December 2015, the WMTR team finalized a separation and recycling e-game. The game aims to raise awareness among children aged 6 and above on waste separation and recycling issues.
- In November 2015, the WMTR program announced a grant competition for local schools of the target municipalities in both target regions — Kakheti Region and Adjara Autonomous Republic — the announcement of the competition was posted on jobs.ge. A total of seven applications were received. These will be evaluated in January 2016.
- The WMTR team collaborated with Georgia’s leading independent English-language newspaper, *Georgia Today*, to ensure the outreach of WMTR program activities and make them available for a broad audience. In the period of October-December 2015 two articles were printed in this newspaper.

Status of Activities by Components

Component 1: Waste Collection and Recycling Systems

Conduct a preliminary environmental assessment and an assessment of current GHG emissions in Kakheti Region and Adjara AR

Measurement of GHG emissions via portable equipment and strengthening the capacity of the NSWMCG to calculate landfill gas (GHG) emissions from existing landfills in Georgia

Accurate information on GHG emissions from landfills does not currently exist in Georgia. Resultantly, the evaluation of emissions using international calculation methodologies is ineffective and provides inaccurate results since the initial data required for such calculations does not exist.

In order to facilitate the collection of this data, the WMTR team, in consultation with the National Solid Waste Management Company of Georgia (NSWMCG), purchased a TDL-500 portable gas analyser. This equipment will allow for near surface measurement of actual methane emissions to determine the levels of this gas being released from landfills.



The analyser will be transferred to the NSWMCG in February 2016 and WMTR will provide train staff how to use it. The NSWMCG will measure emissions of methane in the project target regions (including Adjara, which is not under their jurisdiction) and will share the results with the WMTR program. This will allow the WMTR team, in cooperation with the NSWMCG, to plan GHG mitigation measures in the project target regions and formulate a process replicable in other regions. Measurements will then be taken of all landfills in Georgia to create a national database for GHG emissions from landfills. These efforts will be vital in the development of a nationwide plan to reduce GHG emissions from landfills.

Municipal waste composition study – autumn season

The WMTR team is implementing a municipal waste composition study in Kakheti Region and Adjara Autonomous Republic in order to analyse the morphological composition of municipal waste in the program target regions. This information will help the government make informed decisions and better set short-term and long-term goals for establishing waste recovery and recycling systems. The study will be conducted four times a year in both target regions to cover every season. In July, 2015 the program conducted the summer composition study, the relevant information can be found in the WMTR annual report for the 2015 fiscal year.

During the autumn study, which was conducted in October 2015, the composition of waste was evaluated at the two main landfills of the project target regions (Batumi and Telavi). The work was coordinated with the NSWMCG and local governments.

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

Kakheti Region



Adjara Autonomous Republic



The tables below show the results of the summer and autumn composition studies, as well as the difference in the composition of waste according to the seasons. Final conclusions will be made after the composition study is conducted in all seasons.

Kakheti Region

Waste Category	I Summer (July)		II Autumn (October)		Difference between studies I and II	
	Volume of waste (kg)	Share of total waste (%)	Volume of waste (kg)	Share of total waste (%)	Volume of waste (kg)	Share of total waste (%)
Paper and cardboard	72.9	10.41	97.7	13.96	24.8	3.54
Glass	33.3	4.76	64.6	9.23	31.3	4.47
Scrap metal	13.95	1.99	14,3	2.04	0.35	0.05
Polyethylene/Plastic	89.3	12.76	108,1	15.44	18.8	2.69
Diapers	45.7	6.53	37.7	5.39	-8	-1.14
Fabric	35,2	5.03	51.6	7.37	16.4	2.34
Organic	304.1	43.44	274.9	39.27	- 29.2	- 4.17
Construction	44.75	6.39	7.8	1.11	- 36.95	- 5.28

Waste Management Technologies in Regions, Georgia

Under special supervision	7.95	1.14	5.85	0.84	- 2,1	- 0.30
Leather/Rubber	28.9	4.13	23.7	3.39	- 5.2	- 0,74
Other waste	20	2.86	11.55	1.65	- 8.45	- 1.21
Moisture	3.95	0.56	2.2	0.31	- 1.75	- 0.25

Adjara Autonomous Republic

Waste Category	I Summer (July)		II Autumn (October)		Difference between studies I and II	
	Volume of waste (kg)	Share of total waste (%)	Volume of waste (kg)	Share of total waste (%)	Volume of waste (kg)	Share of total waste (%)
Paper and cardboard	123.65	17.42	134.2	19.17	10.55	1.76
Glass	39.4	5.55	34.65	4.95	- 4.75	- 0.60
Scrap metal	7.7	1.08	10.65	1.52	2.95	0.44
Polyethylene/Plastic	119.1	16.77	112.95	16.14	- 6.15	- 0.64
Diapers	23.5	3.31	35.6	5.09	12.1	1.78
Fabric	23.4	3.30	58.05	8.29	34.65	5.00
Organic	285.1	40.15	240.6	34.37	- 44.5	- 5.78
Construction	18.95	2.67	38.25	5.46	19.3	2.80
Under special supervision	9.1	1.28	18.65	2.66	9.55	1.38
Leather/Rubber	16.5	2.32	8.7	1.24	- 7.8	- 1.08
Other waste	18.95	2.67	4.05	0.58	- 14.9	- 2.09
Moisture	24.65	3.47	3.65	0.52	- 21	- 2.95

Annex 1. Autumn Waste composition study reports.

Designing region-specific ISWM strategies and action plans

Development of technical regulations, Rules of Collection and Treatment of Municipal Waste, in accordance with the requirements of the Waste Management Code of Georgia

The WMTR program developed the final version of the technical regulation, *Rules of Collection and Treatment of Municipal Waste*. This was developed for the Ministry of Environment and Natural Resources Protection of Georgia (MoENRP) in accordance with the requirements of article 16, part 5 of the Georgian Waste Management Code.

The technical regulation establishes the following procedures, measures, and criteria:

- Procedures and requirements for providing obligatory, effective collection services to all municipal waste generators in a municipality, minimize the impact on human health and the environment of effects on local surface water, groundwater, soil, and air (including global environmental effects through mitigation of climate change related emissions).
- Measures aimed at minimizing litter throughout a municipality and eliminating possible nuisance conditions such as noise, odour, and other adverse effects.
- Measures aimed at reducing the overall impacts of resource use and improving the efficiency of such uses through recovery and recycling initiatives.
- Measures, procedures, and requirements for treating all municipal waste prior to landfill disposal in accordance with Article 21, Part 6 of the Waste Management Code.
- Minimum technical criteria that should be met by waste treatment facilities during the provision of services.

This technical regulation shall apply to all collection and treatment processes associated with the management of municipal waste.

The technical regulation does not apply to:

- The transport and treatment of sludge and similar matter derived from wastewater treatment plants (sewage sludge) and dredging operations.
- The collection, transport and treatment of inert waste delivered to landfills classified for inert waste or to landfills classified for non-hazardous waste where the inert waste is used for landfill construction or operational purposes.
- The collection and treatment of hazardous waste.
- The collection and treatment of healthcare waste.

The MoENRP should submit the technical regulation to the government for approval no later than 1 February, 2016. This technical regulation will be approved in accordance with: the Product Safety and Free Movement Code, article 58, part 2; the Waste Management Code, article 49, part 2, subparagraph b; and the Georgian Law on Normative Acts, article 12.

Annex 2. The By-Law on Rules of Collection and Treatment of Municipal Waste.

Conduct pilot cost-benefit analysis of waste management investments

The WMTR team, in cooperation with an international expert, started work on a cost-benefit analysis of waste management investments in the country to ensure the effectiveness of establishing a proper waste management system in Georgia.

In particular, the costs and benefits to human health and the environment of waste separation and recycling versus landfilling will be assessed:

- Landfills — construction and maintenance costs and all other costs associated with landfills including indirect costs such as, lost land, emissions, health impacts, etc.

- Waste separation — the costs and benefits of collecting and processing separated waste from certain components of the waste stream (plastic materials, glass, paper, aluminium cans, etc.). These include, employment, reduction of negative impacts on human health and the environment, etc.

The document will be comprised of the following chapters:

Executive Summary

1. Introduction
2. Overview of the Waste Management System of Georgia Based on the Examples of Adjara and Kakheti
 - 2.1. Existing Waste Management Practices and Institutions
 - 2.2. Existing Treatment Methods
 - 2.3. Demand for Waste Management Services and Future Trends
3. Economic Evaluation of Solid Waste Landfilling in Georgia
 - 3.1. Total Social Cost Methodology
 - 3.2. Fixed Resource Costs
 - 3.3. Operational Costs
 - 3.4. Environmental Costs
 - 3.5. Total Social Costs per Tonne
4. Economic Evaluation of Source Separation and Recycling in Georgia
 - 4.1. Description of Methods and Alternatives
 - 4.2. Fixed Resource Costs
 - 4.3. Operational Costs
 - 4.4. Resource Savings and Environmental Benefits
 - 4.5. Total Net-Costs per Tonne
5. Comparative Economic Evaluation
 - 5.1. Benefit and Costs
 - 5.2. Stakeholder Impact Analysis
6. Conclusions and Policy Recommendations
 - 6.1. Summary of the Results
 - 6.2. Policy Recommendations
 - 6.3. Recommendations for Additional Study

The document will be developed in close cooperation with all stakeholders and will be finalized in February 2016.

Implement pilots via partial grant to assist recycling companies and target municipalities

Implementation of Telavi pilot project to demonstrate benefits of integrated waste management approaches in target villages of Telavi Municipality

A pilot project — *Piloting of Integrated Waste Management Systems in Target Areas of Telavi Municipality* — is being implemented in 5 villages of Telavi Municipality, Tsinandali, Kvemo Khodasheni, Akura, Vanta and Busheti. The aim of the pilot project is to demonstrate the benefits of integrated solid waste management (ISWM) practices via the provision of technical assistance, co-financing support, and the establishment of an ISWM system, as well as raise the awareness of local governmental structures and the public at large.

On 25 December, 2015, the WMTR team collaborated with local government to place 75 bins over all 5 pilot project villages to establish waste separation practices and expand the coverage area of waste collection. Of the 75, 30 of the bins are intended for separated collection of plastic and paper. These 30 bins were placed in public places i.e. close to shops, markets, schools, etc. for maximized accessibility while maintaining efficiency of pickup.



The municipality is collecting the non-recyclable waste in the five target villages twice a week — on Wednesday and Saturday. Separated/recyclable waste will be collected on the same days as regular waste. The WMTR team, together with active members of the community and youth groups, will also monitor these bins. Once the bins are filled, the waste collection company will collect the separated waste.

The separated waste will be kept in a storage space already allocated by the local government before it is recovered by a private company to be exported or recycled.

Simultaneously, the WMTR team is implementing a broad awareness raising campaign among the population of the villages, including children, to increase their capacity for proper waste management and communicate the importance of waste minimisation and separation. The awareness raising activities will be described below under component 4.

Provide tailored assistance and training to municipalities and SW companies; assist waste collection companies in developing and implementing business plans and strategies for service improvement and expansion.

Training for municipalities of Kakheti and Adjara on integrated waste management and collection service optimisation

On 16–18 and 23–25 December, 2015 WMTR held trainings on effective waste management and waste collection service optimization for municipalities in Kakheti region and Adjara Autonomous Republic. The trainings took place in the cities of Telavi and Batumi.

A total of 26 participants from municipal governments of both regions and waste collection companies from these municipalities attended the trainings. The goal was to provide participants with information on waste management system optimization and to help them develop municipal waste management plans. Technical staff from the municipalities gained knowledge on how to improve waste collection systems and gather data on waste collection. The examples of existing systems in Tbilisi for collecting waste and recording data were also discussed.

Kakheti Region, City of Telavi



Adjara Autonomous Republic, City of Batumi



The training covered the following issues:

- Structure, staff, and management of the waste collection services.
- Organization of daily work at waste collection services: monitoring of equipment, filling in special forms, collection of waste, taking it to the landfill and implementation of all relevant procedures as well as mechanisms for effective monitoring of these processes by management, etc.
- Effective planning of a waste collection system — identification of locations for waste bins, selection of optimal routes for waste collection trucks, etc.
- Development of plans for the expansion of collection services — identification of villages, streets, etc., which are not covered by collection services. Development of an optimal alternative for unserved areas. Identification of a relevant waste collection technique, making a decision on the size, shape and location of waste bins, etc. Identification of dumpsites and mobilization of resources for cleaning of these sites. Special focus was given to waste collection in mountainous areas.
- Public participation — Importance of participation of the public as waste producers, and mechanisms for their better involvement.
- Important issues defined by the Waste Management Code of Georgia relevant to waste collection.

As a result of the training, municipal officials gained practical knowledge and experience to better manage waste in their respective municipalities, increase the efficiency of their work, optimize financial and human resources, and comply with the requirements of new legislation — The Waste Management Code of Georgia and the EU-Georgia Association Agreement.

Designing and implementing a City-to-City exchange program

In March 2015, the WMTR team launched the City-to-City exchange program to facilitate professional cooperation between two local governments in the US (Catawba County, North Carolina and the City of Golden, Colorado) and two Georgian local self-governments (Telavi City, Kakheti and the City of Batumi, Adjara). The exchange is focused on capacity building and technical assistance activities aimed at improving waste management and recycling system practices while supporting the development of integrated waste management systems in the selected Georgian cities.

Golden's second visit to Batumi

During October 18 – 24, 2015, a delegation from Golden visited Batumi for the second time; the delegation held meetings with different stakeholders working on waste management issues in Batumi Self-Governance City. Over the course of these meetings, the parties developed a draft action plan to set up a pilot project establishing a separated waste collection system in one district of Batumi.





During the visit, the delegation met with Vice Chairman of the Assembly, Irakli Chavleishili and the Waste Management Commission created from different stakeholders working on waste management issues. The Golden delegation presented a review of the recycling program in Golden along with recommendations based on the action plan developed at the end of the Batumi visit to Golden.

The following day, the delegation met with Assembly Chair, Irakli Cheishvili prior to the General Assembly meeting and outlined the proposed pilot program, its goals, the rationale for starting small, and how to proceed. Later on, they met with three private companies involved in recycling: Sever (a plastic bottle exporter), Zugo (a plastic bag manufacturer), and Roni (a paper recycler). These meetings confirmed the recommendation that the pilot program should initially focus on plastic recycling at Sever; however, the opportunity to support both Zugo and Roni still exists.

Before departing, the Golden delegation visited the municipal collection agency Sandasuptaveba and met with its director Davit Asambadze. The collection agency is a city owned company that is regionally responsible for collection of trash from dumpsters. The Golden delegation also met with the Mayor of Batumi and made a presentation on modern approaches of waste management for students at Batumi State University.

Develop landfill remediation/closure plans.

Cooperating with the Ministry of Regional Development and Infrastructure (MRDI)/ Solid Waste Management Company

Closure of Gurjaani Landfill

The WMTR team developed the Gurjaani Landfill closure plan in accordance with the requirements of national legislation, international best practices, and EU directives. The plan was developed for the NSWMC and communicated to the MoENRP, with the latter granting their consent for the closure of the landfill in accordance with to the plan. The NSWMC has allocated money in the 2016 budget and announced a tender in January for the closure of this landfill.

Clearing and repurposing of spontaneous dumpsites in Adjara Autonomous Republic and planting of decorative and forest trees

In August 2015, the WMTR team cleared an illegal dumpsite in Tsetskhauri Village, Adjara. On 13 November, 2015 two 700 litre waste containers along with an informational banner were installed to prevent future littering at this site. Waste collection from the area was arranged with Kobuleti Municipality and SanDasuptaveba Ltd.



On the same day, the WMTR team, with the support from the local government and the Austrian Development Cooperation (ADC) funded *Sustainable Forest Governance in Georgia* (SFG) program (also implemented by CENN), planted 80 cryptomeria and alder trees in the former dumpsite. Fast growing and adaptive species were chosen so that the area would be covered as quickly as possible, preventing it from returning to its former condition.

This initiative reduces the negative impact of waste on the environment and encourages cleanliness in similar areas.

Clearing and repurposing of spontaneous dumpsites in Kakheti and planting of 300 walnut trees

In November, 2015 the WMTR team, in cooperation with the local government and the SFG program, cleared illegal dumpsites covering an area of around two hectares in Duisi Village, Akhmeta Municipality. As a result, up to 60 m³ of waste was collected, and eight 700 litre waste bins and an information board were installed on the cleared area to prevent future pollution. Waste collection from these bins will be organized by Akhmeta Municipality.



SFG, with the help of WMTR staff and representatives of Akhmeta Municipality planted 300 walnut trees on the cleared area.

Afforestation of the area is important to avoid future pollution and to interest local residents in repurposing of the location for their long-term benefit.

Development of closure plan for an illegal dumpsite in Beshumi, Khulo Municipality

By the end of October 2015, the WMTR team, in cooperation with the regional and local governments of Adjara Autonomous Republic, developed a closure plan and budget for the illegal dumpsite in Beshumi, Khulo Municipality.



The dumpsite has been in operation since 2002 and covers an area of 780 m²; it is not fenced off and is surrounded by a unique forest. According to information provided by the local government, there is 6,000 m³ of waste at the Beshumi dumpsite.

According to the closure plan, the waste collected at the dumpsite will be transported to an official landfill located in the town of Akhaltsikhe, 67 km away. The cost of closure of the dumpsite will amount to GEL 114,999.46¹.

The local government has committed to allocate some of the funds for the closure of the dumpsite with the remaining coming from the ADC funded SFG program implemented by CENN.

Meeting with Ms. Mischere Kawas, Country Desk Officer, U.S. Agency for International Development

On 8 December 2015, WMTR hosted a meeting with Ms. Mischere Kawas, Country Desk Officer of USAID and Nino Kumsishvili, program AOR. Mr. Giorgi Shukhushvili, Director of the NSWMCG, Ms. Khatuna Chikviladze, advisor to the company, and Mr Alverd Chankseliani, Head of the Wastes and Chemicals Management Division of the MoENRP attended the meeting with WMTR staff.



During the meeting, key achievements of the program, cooperation with key stakeholders, issues related to the EU-Georgia Association Agreement, and the contribution of the program to fulfilment of the requirements of the Association Agreement were all discussed.

¹ In case the waste from the dumpsite is transported to Batumi landfill, it will amounts to GEL 140,000.
Quarterly Report October – December, 2015

Component 2: Private Sector-led Recycling

Facilitating the creation of a network of recycling companies and consolidators

And

Sharing experiences and leading practices through yearly national workshops and seminars

Presentation of the Georgian Waste Management Association, the WMA, on green business development

On 4 December 2015, the WMTR team helped WMA organize a presentation of the Association to donor organisations, NGOs, government representatives, and the media.



The importance of developing the recycling sector in the country from both an environmental protection and economic perspective was highlighted during the opening speeches made by Veronica Lee, Deputy Director of USAID Economic Growth Office; Alverd Chankseliani, Head of the Waste and Chemical Substances Management Department of the MoENRP; and Giorgi Shukhoshvili, Director of the NSWMCG. It was also noted that WMA should become a strong intermediary between recycling companies and governmental entities.

During his presentation, Giorgi Guliashvili, WMA president, introduced the attendees to the Association's strategic direction, goals, and scope of activities. In particular, he highlighted that WMA will provide consultations to interested parties, assist start-up businesses with know-how, and develop legislative and social initiatives to create a business friendly environment. The association will cooperate with national and international projects,

governments, and donor organisations in order to develop recommendations to solve problems within the field and promote the implementation of modern waste management practices.

The event proved interactive with the audience initiating discussions on issues related to exporting plastic bottles, recycling of hazardous waste, improving the law, and involving young people in awareness raising campaigns.

Provide tailored assistance, and training to recycling companies

Supporting Neoprint Ltd in developing an Environmental Impact Assessment (EIA) report, to receive an environmental permit

Neoprint is located in the Village of Tserovani, Mtskheta Municipality. The company recycles around 3,168 tonnes of waste paper per year which is used to produce cardboard. The full capacity of the company is 9,600 tonnes year. The WMTR project will continue to prioritize the cooperation with Neoprint that is needed to support the company's development in order to meet project goals and PMP indicators.

According to the *Georgian Law on Permit for Impact on the Environment*, operation of Neoprint is subject to a mandatory EIA. Consequently, the company requires a permit from the MoENRP based on an environmental impact assessment.

The WMTR team helped Neoprint Ltd develop the required EIA report. This report considers possible impacts on, and risks to different components of the physical, biological, and human environment.

In December 2015, the EIA report was submitted to the Permit Department of the MoENRP for comment and a public hearing of the document was held on January 11 2016.

The report was prepared with the support of national experts and contains the following chapters:

- General information about the company;
- Legislative analysis;
- EU regulations;
- Analysis of environmental conditions;
- Analysis of alternatives;
- Characterization of impact on natural and social environment of a production facility;
- Factors of physical impact on the environment;
- Characterisation of infrastructure, social and socio-economic indicators;
- Emergency response plan;
- Methods of cumulative impact control and restoration of the environment to initial conditions upon termination of activities.

A non-technical resume of the document has also been prepared.

Once Neoprint receives a permit, its operation will be in compliance with Georgian law.

Annex 3. EIA report for Neoprint LTD

Issuing grants to support GHG mitigation, energy efficient technologies and source separation programs

Grant competition on municipal waste (plastic, paper, glass) recycling

One important component of the WMTR program is to strengthen the private sector — i.e. waste recycling and collection companies — and consequently increase the amount of recycled products in the country and decrease the amount of waste going to landfills.

An assessment of the recycling sector by the WMTR team showed that the number and capacity of recycling companies operating in the project target regions is very limited. Therefore, the program decided to support waste recycling and collection companies outside of Kakheti and Adjara that have expressed a willingness to extend their operation to the project target regions.

The program has a grant component that enables the WMTR team to help recycling companies deploy modern and efficient equipment, improve technical skills, and introduce effective and efficient production processes to increase the quality of recycled products.

To select the best waste recycling and/or collection companies throughout the country, the WMTR team has developed a grant competition for municipal waste (plastic, paper, glass) recycling. This competition will facilitate plastic, paper, and glass waste recycling in Georgia by strengthening the winning companies.

The following results are expected from this competition:

- Increase in the amount of waste recycled in the region
- Waste recycling by energy-efficient companies
- Manufacturing of high-quality, competitive products

The competition was announced on January 6, 2016.

WMA board meeting

On December 16, 2015, WMTR hosted a meeting of the WMA board. The president and board members of the association discussed further development of the Association with the WMTR team. In particular, changes to the following components of the Association's charter were discussed: criteria for approving new members and their rights and responsibilities; a membership fee and payment system; creation of a new body in the association with executive functions and development of its structure and responsibilities.



It was decided that the association will work on introducing these changes in the charter.

Component 3: Waste Management Strategy and Tariff Policy

Development of general methodology for tariff calculation and a cost recovery system

The self-sufficiency of waste management services is crucial to the operation of a modern waste management system. Initially, it is important to assess the cost of such services, establish a waste tariff based on this information, and create an effective cost recovery scheme. The current law establish only a flat rate tariff and does not provide any methodology or explanation for how it was calculated. It is therefore unclear whether this fee will be sufficient for the sustained operation of a modern waste management system.

An adapted method must be developed in the country if appropriate tariff calculations and effective cost recovery systems are to be established. The development of such methodology is included as one of the activities in the national waste management action plan, prepared by the MoENRP for 2016-2020 (the plan has not yet been approved).

With this goal in mind, in December 2015, WMTR began to develop a general methodology for tariff calculation and an effective cost recovery system. An international expert with extensive experience in developing tariff systems in other countries has been selected and hired. The purpose of the document is to propose a methodology for establishing tariffs and a cost recovery scheme for providing solid waste management services. These services include, street sweeping, cleaning of public areas, and the collection, recycling, transport, and disposal of solid waste.

The WMTR team has already developed the preliminary scope of the document, which will be communicated to and agreed with all stakeholders:

- Purpose and introduction
- Laws and policies
- Determining revenue and cost
 - Services performed directly by a municipality

- Services provided by private companies
- Cost accounting methods
 - Full cost accounting
 - Cash basis accounting
- Waste management service categories
- Street and public area cleaning
- Establishing tariffs
- Methodology for setting tariffs
- Fee collection methods and enforcement
- Application example

The document will be developed by WMTR in partnership with all stakeholders, and will be finalized in February 2016.

After developing a general tariff methodology and receiving approval from the relevant governmental structures, the WMTR team will start working with the target municipalities on developing adapted tariff and cost recovery plans for each municipality in accordance with the general methodology.

Implement trainings and technical assistance on alternative tariff structures and means for collecting ISWM fees

And

Assist regional and local authorities and the MRDI to develop regional waste management tariff policies

Piloting of waste setting tool in Telavi Self-Governance City

Catawba County continues to support the Telavi Self-Governance City in efforts to calculate a waste tariff using the waste fee setting tool provided by this US County.

With this tool, Telavi will be able to calculate a realistic waste fee that will consider all details of operation of its waste management system, including expenses for:

- | | |
|---------------|--|
| • Equipment | Trucks, bins, debt service, miscellaneous |
| • Staff | Salary, benefits, insurance, employee taxes, miscellaneous |
| • Maintenance | Tires, oil/grease, parts/contingencies, miscellaneous |
| • Operations | Landfill tip fee, fuel, permits, road/vehicle taxes, employee clothing, employee safety, miscellaneous |

Using this tool, the local government in Telavi calculated expenses over a fifteen year period. These expense were calculated separately for households and industries. Calculations will be finished in January 2016.

The results of piloting the waste fee setting tool in Telavi will be used in the process of developing a general methodology for waste tariff calculation.

Component 4: Communication and Outreach

Meetings with the local population and open classes at schools in five villages of Telavi Municipality

On 9–11 and 16–17 December 2015, the WMTR team held meetings with local communities, and conducted open classes for school students in the five target villages of the pilot project — *Piloting of Integrated Waste Management Systems in Target Areas of Telavi Municipality*.

The aim of the pilot project is to introduce waste separation practices in the following villages of Telavi Municipality: Tsinandali, Kvemo Khodasheni, Akura, Vanta and Busheti. To reach this goal, it is important to work with local communities and motivate them to begin separation of their household waste into the separate bins provided. The WMTR team, in cooperation with the local government placed 30 bins for separated collection of plastic and paper in these five villages (a total of 75 bins were placed over all five villages).

The aim of the meetings was to inform students and communities of modern approaches in waste management, focusing mainly on waste separation and recycling. The attendees were also informed of the waste separation scheme that was introduced in their villages and the importance of their involvement in this process. General information about the WMTR project was also provided to participants.



Around 200 people, including village governors, school principals, teachers, and school students attended the meetings. The WMTR team distributed the program's *Waste Free 2016* calendars and various literature on different environmental topics.

Produce booklets, media materials, posters, trainings and other activities to introduce the concept and benefits of recycling and encourage people to recycle

Program quarterly newsletter

The program developed a fifth quarterly newsletter in [English](#) and [Georgian](#), and distributed it through the CENN Electronic Network, which has more than 24,000 subscribers worldwide.



The newsletter provides information about the program’s goals and activities in the period of July–September 2015 and aims to keep the public informed about, and involved in, the WMTR program’s implementation.

Maintaining the Eco-Camp alumni Facebook page

The WMTR staff continue to update the [Facebook page](#). This page provides the general public and school students from the project target regions updates on the implementation of the program — including competitions, trainings, workshops, grant announcements, information about ongoing activities, and news on modern practices in waste management.



Public service announcements (PSAs)

The reduction of waste is a significant component of the waste management hierarchy and a key area of influence for the public. Therefore, the WMTR team developed a public service announcement (PSA) to promote the importance of waste reduction and raise the awareness of the general public on this issue. In the PSA, a character from the popular Georgian painting, *Meezove* (yard keeper) by Pirosmani (the same character that was used in the previous PSA), delivers the key message — reduce the amount of waste we dispose of by avoiding single-use items and buying extra products — in a short and humorous manner.

The PSA is being broadcasted on public television and is available online on [YouTube](#).

Table calendar — Waste Free 2016

The WMTR program developed a table calendar — *Waste Free 2016: Choose Vintage – Be Unique and Have a Positive Environmental Effect!*

The calendar provides messages on how to use the 4R concept in everyday life and be a conscious citizen with an environmentally friendly attitude.



The calendar was distributed among all stakeholders at the central level and in the project target regions.

Development of a waste separation and recycling electronic game for children

In December, the WMTR team finalized the separation and recycling e-game. The game aims to raise awareness among children aged 6 and above on waste separation and recycling issues. It consists of several stages where the child is asked to clean a room, park, or picnic area and place waste in pre-determined waste bins. After the room is cleaned, an animation starts, showing the street where a garbage collecting machine comes and picks up the 5 bins full of waste.



At the next stage, the child is asked to recycle the waste and make various products out of it, like plastic plates or metal spoons. Every time a child pushes the wrong button, they lose some points. The game has identifying sounds and writing on each object as well as on each bin in the first scene, which disappears after a child moves to a higher level.

The game will be available on iOS and Android platforms and children will be able to find it in App Store and on Google Play.

School grants competition

In November 2015, the WMTR program announced a grant competition for local schools of the target municipalities in both target regions - Kakheti region and Adjara Autonomous Republic. The announcement of the competition was posted on jobs.ge.

The objective of the grants competition was to promote the concept of integrated waste management and the 4Rs (reduce, reuse, repurpose, recycle) among school students.

The small school grants concept covers four main areas: promotion of composting practices; awareness raising on 4R; promotion of waste separation and recycling; and community renewal and beautification programs (e.g. improvement of parks, neighbourhoods, community areas; clean-up of illegal dumpsites, etc.). The grant competition was designed to identify the best projects in these four areas.

A total of seven applications were received from both target regions — Kakheti region and Adjara Autonomous Republic— which will be evaluated in January 2016.

Articles in newspaper

The WMTR team collaborated with Georgia's leading independent English-language newspaper, *Georgia Today*, to ensure the outreach of WMTR program activities and make them available for a broad audience. In the period of October-December 2015 the following two articles were printed in this newspaper:

[Waste Management Association for Environmental and Economic Development](#)

[Georgia Wastes Money with its Lack of Recycling Infrastructure.](#)

Table 1. Number of People Reached through Outreach Campaign

Channel of Communications	Type of Information	Size of Audience
Social media, My Town Facebook page, November 20, 2015, Link	PSA on Reduction of waste	484 Likes, 320 Shares
Social media, Ministry of Environment Protection Facebook page, December 11, 2015, Link	PSA on Reduction of waste	618 Likes, 366 Shares
Social Media, Film Asylum Facebook page, November 20, 2015, Link	PSA on Reduction of waste	556 Likes, 312 Shares
Palitra TV, November 11, 2015 Link	PSA on Reduction of waste	28 Shares
Social Media, Film Asylum YouTube Page, November 20, 2015, Link	PSA on Reduction of waste	9,068 Views, 81 Likes
Social media, USAID/Georgia Facebook page, October 2, 2015, Link	Youth Summit	20 Likes
InterPressNews, December 2, 2015, Link	Press Release on Waste Management Association	
Georgia Today, December 10, 2015, Link	Article on Waste Management Association Presentation	3,000 subscribers
Georgia Today, October 1, 2015, Link	Article on Lack of Recycling Infrastructure in Georgia	3,000 subscribers
Social Media, Telavi Municipality Facebook Page, December 30, 2015, Link	Placement of bins for Pilot Project	19 Likes
TV Channel Tanamgzavri, November 20, 2015, Link	Duisi Clean up and Walnut Trees	59 Views,
9 E-Digests from WMTR disseminated via CENN's online network	WMTR activities and integrated waste management-related issues	24,000 subscribers
Summary	<p>9 E-Digests from WMTR program were developed and disseminated via CENN E-Network 24,000 subscribers</p> <p>TV Channel Tanamgzavri -Approximate number of audience 12,000</p> <p>TV Channel Tanamgzavri YouTube page – 299 Subscribers</p> <p>Film Asylum YouTube page – 164 subscribers</p> <p>Georgia Today – Approximate number of audience – 3,000</p> <p>Number of people reached is 2,965 (11,860 Views/Share/Likes divided by 4, considering that 1 person is using 4 different channels of information).</p> <p>Average total number of people reached through WMTR Facebook page 3,591.</p> <p>Number of people reached through outreach campaigns is 45,556.</p>	

Major Activities Planned for Next Quarter

- Transfer of portable equipment for landfill gas (GHG) measurement/monitoring to the SWMCG;
- Conducting training for the NSWMC on usage of portable equipment for landfill gas (GHG);
- Starting measurement of GHG emission from landfills in the project target regions in cooperation with the NSWMC;
- Conducting the winter waste composition study in Kakheti and Adjara, and development of relevant reports;
- Development of pilot cost-benefit analysis (landfill, recycling investment proposals, landfill remediation) of waste management investments in close cooperation with the MoENRP and communicating it with all stakeholders;
- Started developing ISWMP for seven selected local self-government bodies in both regions;
- Seminars/roundtables for local government representatives;
- Implementation of City-to-City partnership activities – development of Telavi waste management system optimization plan;
- Implementation of the pilot project — *Piloting of Integrated Waste Management Systems in Target Areas of Telavi Municipality* — which will be carried out in 5 selected villages in Telavi Municipality;
- Supporting the introduction of composting practices at the local level in target areas;
- Closure of illegal waste dumpsites in cooperation with local governments in Kakheti;
- Starting preparatory works for closure of an illegal landfill in Beshumi, Khulo Municipality together with the local government and the FSG project;
- Starting to develop the Telavi landfill conditioning, closure, and after care plan in close cooperation with international and local experts and in consultation with the SWMCG;
- Finalizing of legal analysis to identify factors hampering development of waste management;
- Finalizing of a draft strategy and action plan for the Waste Management Association;
- Conduction of at least 1 seminar and 1 training for waste collection and recycling companies;
- Development of an environmental impact assessment (EIA) report for the recycling company, Neoprint;
- Energy auditing for Zugo Ltd, along with relevant recommendations;
- Development of business and marketing plan for Zugo Ltd;
- Work on the first cycle of the grant program to increase efficiency, reduce energy consumption/GHG emissions of one recycling company;
- Organization of a round-table meeting for the Waste Management Association to facilitate their cooperation with governmental structures;
- Development of a general methodology for tariff calculation and drafting a cost recovery scheme;
- Organization of a roundtable at the national level on tariff issues for different stakeholders at central and local levels;
- Development of informational posters on the importance of developing an accurate tariff system and the significance of public involvement in this process;

- Start working on public education and outreach about enhancing cost recovery, and implementing a public awareness campaign in the target regions (Kakheti and Adjara AR);
 - Developing and installing information boards in Lagodekhi Protected Area aimed at improving waste management at the site;
 - Implementation of wide-scale public education and outreach campaigns to promote the 4Rs and ISWM in the project target regions;
 - Organisation of competitions for school students in the 5 pilot target villages of Telavi Municipality;
 - Organization of roundtables and trainings in the target regions to promote the 4Rs and ISWM;
- Announcement of a grant competition for schools in target regions and issuing of grants.