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Municipal waste management in Albania

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Context
This study has been prepared by the Albanian NRC for waste, in cooperation with the European Topic Centre on Sustainable Consumption and Production (ETC/SCP), managed by Copenhagen Resource Institute (CRI), on behalf of the European Environment Agency (EEA). This report is part of the EEA support to the West Balkan countries under the project "Enhancing cooperation on waste policies with the West Balkan countries".

Contents

Highlights

- Municipal solid waste management in Albania is at a low level, but there has been an improvement of the situation through the implementation of the National Waste Strategy and the National Waste Management Plan 2010-2025.
- The establishment of a separate collection system for municipal solid waste (MSW) is urgently needed.
- Albania has started the development of new regional landfills complying with the EU environmental and sanitary standards.
- The target of the National Waste Management Plan 2010-2025 aims at recycling/ composting 25 % of MSW by 2015 and at recycling/composting 55 % of MSW by 2020.
- The future challenge is the development of the infrastructure for waste management.

1 Introduction

1.1 Objective

Based on historical MSW data the analysis undertaken for Albania will include:

- The historical performance on MSW management based on available data and indicators;
- Uncertainties that might explain differences between the country's performance which are more linked to differences in what the reporting includes than differences in management performance;
- Relating the indicators to the most important initiatives taken to improve MSW management in the country, and
- Assessing the future possible trends and achieving of the future targets on MSW.

2 Ex-post analysis of Albania's MSW management performance

Waste management in Albania is at a very low level. Although the level of waste generation is below average, in comparison to other European countries, the systems of collection and disposal are poor. The current level of MSW recycling is very low and there is a complete lack of separate collection of the generated waste.

The Ministry of Environment, Forests and Water Administration has the responsibility of drafting policies and legislation on waste management, and the responsibility for inspections and control concerning the implementation of the law. Other collaborating authorities in this field are the Ministry of Public Works, Transport and Telecommunication, the Ministry of Health, the Ministry of Economy, Trade and Energy, and Ministry of Agriculture, Food and Consumer Protection.

In 2011, the law No. 10463 "On Integrated Waste Management" was passed, which transposes the Waste Framework Directive (2008/98/EC). Several other legal acts have been drafted during the last years, which fully transpose appropriate EU Directives and are planned to be approved by the government in due time, as a legal package.

The MSW management in Albania is decentralized. Street cleaning, collection of waste and the transportation of the collected waste to disposal facilities, are tasks undertaken by private companies, which are financed by the municipalities. The responsibility for urban waste collection lies with the local authorities. Two thirds of the municipalities are contracting private companies, which are selected by public tender and operate under contracts typically of three- to five-year duration. About one third of the municipalities provide waste collection services through their own companies (UNECE, 2012).

In general, there are often insufficient waste containers, and they are frequently in a very poor condition. The frequency of waste collection, and hence standing time, is highly variable. The collected waste is transported to landfills or disposal sites without any pre-treatment.

Some progress towards better waste management has been achieved during the last years through the construction of new MSW landfills, complying with environmental standards. Such facilities are already in place in some regions, while in other regions the new landfills are still in the process of being commissioned or constructed.

2.1 MSW Indicators

Rapid population growth and high migration rate toward the cities have had a direct impact on the increase of municipal solid waste in recent years. No separation of waste is undertaken by households or commercial entities prior to collection. Albania has no separate collection system, all the municipal solid waste generated go to landfills, which are recently constructed, and/or to other disposal sites which do not comply with environmental standards. The total amount of waste generated in Albania is shown in Table 2.1 where a distinction between MSW and construction and demolition waste is made. Based on figures provided by the Ministry of Public Works, Transport and Telecommunications, the evolution of MSW generation in Albania for the period 2003- 2010 is presented in Figure 2.1.

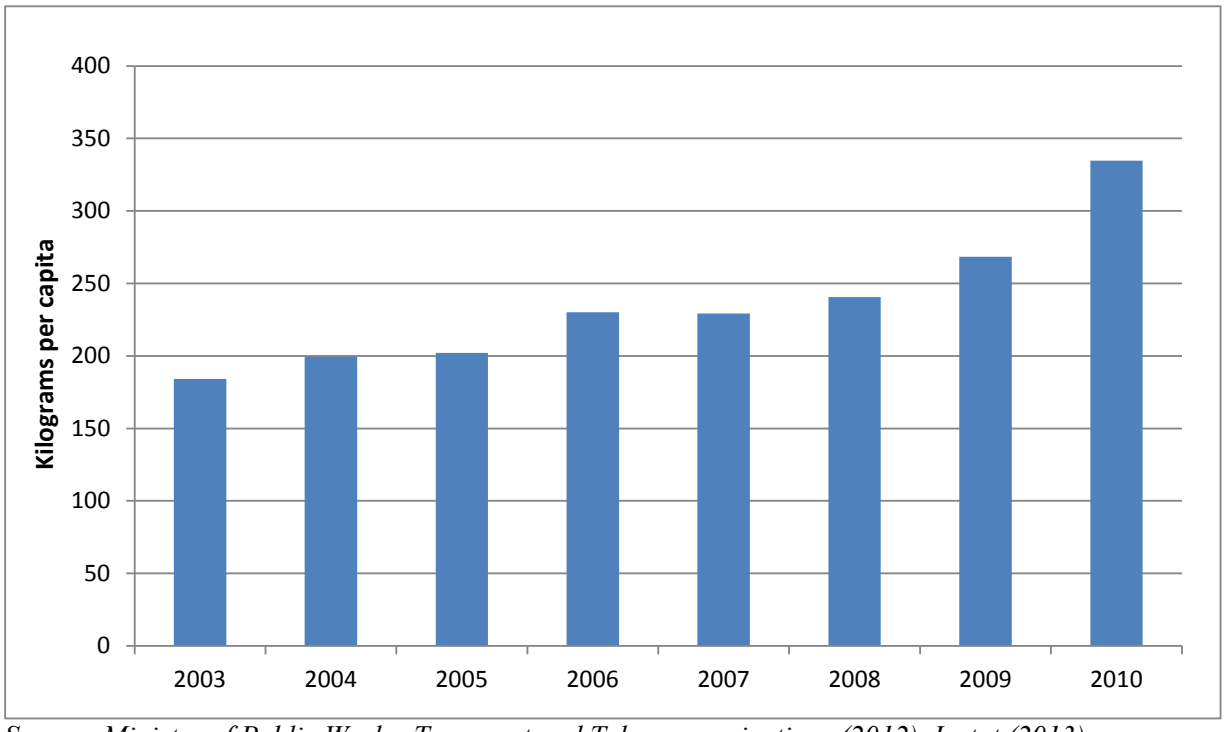
Table 2.1 Total generation of waste (tonnes)

Year	2003	2004	2005	2006	2007	2008	2009	2010
Municipal waste	571 218	622 400	633 599	722 729	722 731	762 353	857 223	1 069 094
Construction and Demolition waste	698 841	591 000	645 387	506 540	506 540	455 866	455 866	326 805
Total	**1 270 059**	**1 213 400**	**1 278 986**	**1 229 269**	**1 229 271**	**1 218 219**	**1 313 089**	**1 395 899**

Source: Ministry of Public Works, Transport and Telecommunications (2012)

The generation of MSW per inhabitant in Albania has significantly increased over the last few years. In 2010 the amount of MSW produced in Albania was 335 kg per capita. This constitutes 80 % increase, compared to the amount of MSW generated in 2003 which was 184 kg per person. The fact of this rapid development in MSW generation underlines the pressure for improving MSW management in Albania.

Figure 2.1 MSW generation per capita in Albania



Source: Ministry of Public Works, Transport and Telecommunications (2012), Instat (2013)

The MSW collection coverage in the different areas of Albania is presented in Table 2.2.

Table 2.2 Coverage of municipal solid waste collection

Collection area	Coverage (%)
Tirana	76
Durres	63
Lezhe	82
Shkoder	81
Kukes	34
Diber	25
Elbasan	45
Korçe	99
Berat	53
Gjirokaster	99
Delvine	71
Fier	89

Source: UNECE (2012)

The composition of MSW over the period September - December 2009, according to a study conducted within the project Implementation of National Plan for Approximation of Environmental Legislation (INPAEL), is given in Table 2.3. There is a high percentage of biodegradable municipal waste in Albania. Plastics constitute over 10 % of Albanian MSW.

2.1.1 The recycling of MSW

There are currently some private recycling companies in Albania that collect and process different types of waste, namely metal scrap, paper, plastic, textiles and used tires. There are about 12 000 individual collectors (informal sector) and about 60 different recyclable waste collection companies. However, there is a lack of waste separation at the source. Individual collectors and companies face difficulties in finding clean and separated waste. Most of the recyclable waste comes from urban waste and partly from the industrial sector.

Some sorting of glass bottles, paper and cardboard and metal scrap takes place in Albania. Glass bottles are collected, sterilized and reused by beverage companies. Paper and cardboard are sorted only in small quantities at a paper recycling plant in Tirana. Aluminium cans are usually exported to neighbouring countries for reprocessing, and a very small proportion of them goes to a small private Albanian smelter (UNECE, 2012).

A study conducted by the IFC recycling linkage project during the period 2005-2006 showed that the contribution of recyclable materials in MSW (metals, paper, plastics, glass) into recycling is about 152 t/year (EC, 2007).

In Table 2.3, it can be seen that Albania has a considerable potential for recycling biodegradable waste, as this waste stream constitutes a significant percentage of MSW, accounting for 62 % of the overall quantity of MSW generated in Albania in 2009.

Table 2.3 Composition of MSW generated in Albania in 2009

Waste stream	Average % in municipal waste stream	Weight within municipal waste of Albania (tonnes/day)	Weight within municipal waste of Albania (tonnes/year)
Organics	47.63	1 106	403 690
Wood	1.43	33	2 045
Paper	5.37	125	45 625
Cardboard	8.13	190	69 350
Total biodegradables	*62.30*	*1 454*	*530 710*
LD plastics	8.46	198	72 270
HD plastics	4.75	111	40 515
Glass	5.75	134	48 910
Textiles	5.27	123	44 895
Metals - ferrous	0.56	13	4 745
Metals - non-ferrous	0.57	13	4 745
Healthcare waste	0.17	4	1 460
Rubber	0.20	5	1 825
Inert waste	7.20	168	61 320
San-pro waste	3.25	76	27 740
WEEE	0.31	7	2 555
Batteries	0.02	1	365
Animal by-product waste	1.08	25	9 125
TOTAL	100	2 335 (0.7 kg/person/day)	852 360 (266 kg/person/year)

Source: SOER (2010)

Specifically, about 60 % of household waste contains biodegradable residues, wherein at least 50 % of the total is organic residues that can be composted (organic waste and some paper, cardboard, textiles and various residues). Approximately 75 % is combustible and can therefore be turned into energy (paper and cardboard, plastics, textiles, and a variety of combustible organic waste).

Based on the Albanian National Waste Management Plan 2010-2025, the necessary development in recycling and composting of MSW waste in Albania, can only be achieved by increasing the availability of public recycling sites for separate collection of waste and other technologies for the use of materials from waste. The actions required will primarily be funded by the Albanian Government's Waste Strategy Fund.

The National Waste Strategy sets the target of recycling/composting 25 % of MSW by 2015 and by 2020 it aims at increasing recycling/composting to 55 % of MSW generated.

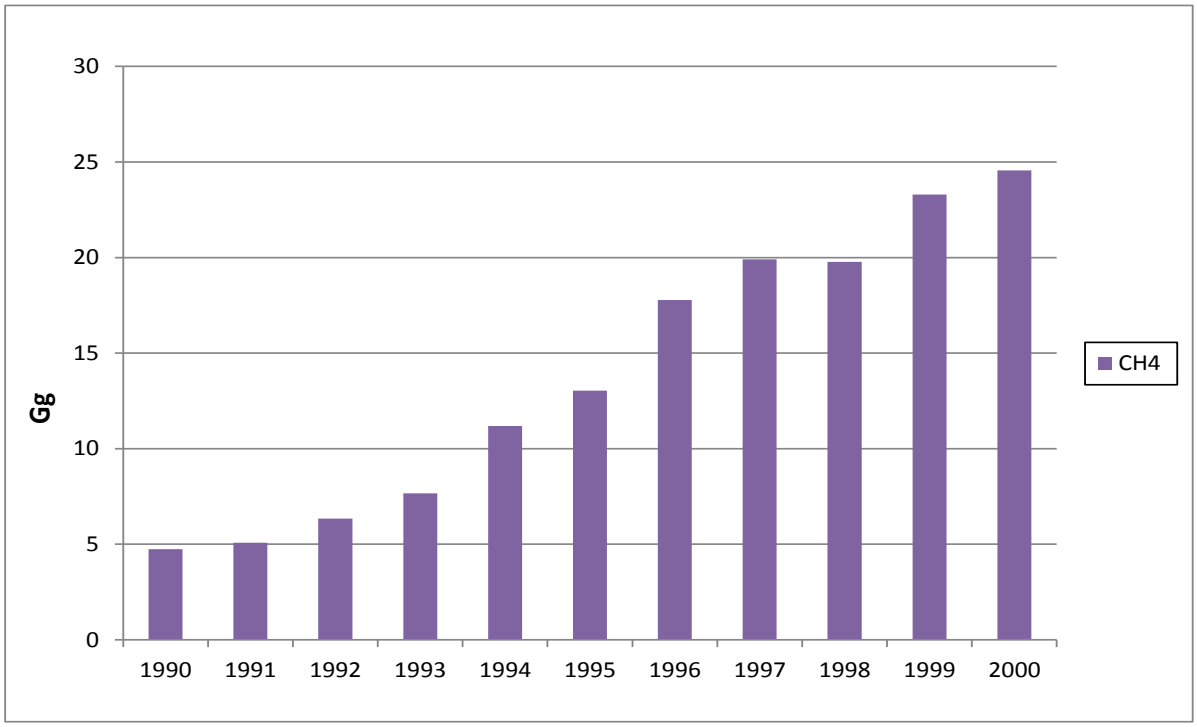
2.1.2 Landfilling of biodegradable municipal waste

Biodegradable municipal waste goes to landfill together with all the other waste. However, no official data is available. Based on the figures of MSW generation in Table 2.1 and the MSW composition in Table 2.3 it is possible to roughly calculate the amount of BMW going to landfill. In 2009 it is estimated that roughly 580 thousand tonnes of BMW was landfilled.

2.1.3 Environmental benefits of better MSW management

Biodegradable waste through its decomposition releases CH_4 and CO_2 gases into the atmosphere. The MSW in Albania contains a high percentage of organic waste and currently there is no recycling or composting in the country to prevent the amounts of organic waste from being disposed in landfills. Organic waste in landfills is the main source of CH_4 emission. CH_4 emission (anthropogenic greenhouse gas emissions) in the period 1990-2000 is presented in Figure 2.2.

Figure 2.2 Methane emissions from the waste sector in Albania



Source: UNFCCC (2009)

The most effective abatement measure at this stage would be the introduction of landfill gas recovery infrastructure that could recover up to 70 % of the methane emissions from the landfill. This measure is still not being implemented in Albania.

Promoting sustainable waste management practices can also reduce GHG emissions. As it is shown in figure 2.2 the GHG emissions are increasing. Improvement of MSW management will lead to reduction of GHG emissions in the future. Recycling and composting are considered to be the top priority measure for reducing GHG emissions in Albania. Apart from reducing the environmental impacts, better waste management is seen as a beneficial source for waste recycling companies, which will make use of the recyclable waste instead of raw materials.

2.2 Uncertainties in the reporting

The estimation of MSW generation in Albania is based on the number of trucks delivering waste to disposal sites. The increase in MSW amounts reflects improvement in reporting collection and disposal activities, rather than an actual increase in MSW generation (UNECE, 2012).

2.3 Important initiatives taken to improve MSW management

The National Waste Management Plan was compiled in consultation with key government stakeholders and the community sector waste industry. It was based on the results of extensive technical assistance projects (CARDS 2006, INPAEL). The government, the Ministry of Environment, Forests and Water Administration, local authorities, regional development bodies, voluntary organizations, industry and other stakeholders will be involved in the development of sustainable waste management plans that are appropriate for regional conditions.

Local waste management plans focus on the collection of waste, including waste separation and recycling arrangements. In order to best manage waste at a strategic level in Albania, the country has been split into 12 waste areas, based on the geographical boundaries of the existing regional administrative districts. In addition, the affairs of these waste areas will be managed by an overarching body - the 'Waste Area Group' - consisting of local and regional stakeholders.

Based on the implementation of the National Strategy and Plan for waste management in Albania, new landfills have been constructed and a few more are in the planning process. In Table 2.4 the landfills currently operating or being planned are presented.

Table 2.4 Landfills in Albania

No	Landfill	Surface	Capacity	Notes
1	Bestrova 1 (Vlorë)	12 ha	1 044 690 m^3	Feasibility study finalised
2	Bushat (Shkodër)	12 ha	1 000 000 m^3	Has been constructed
3	Bajkaj (Delvinë)	5 ha	-	Feasibility study finalised
4	Sharrë (Tiranë)	15 ha	2 900 000 tonne	In operation
5	Korçë	10 ha	-	Feasibility study finalised
6	Rubik (landfill industrial)	5 000 m^2	3 500 tonne/year	Has been constructed
7	Peshkopi	8 000 m^2	-	Feasibility study finalised
8	Bajram Curri	-	-	In operation
9	Rreshen	-	-	Has been constructed
10	Paper, Elbasan	-	-	Feasibility study finalised
11	Durres	-	-	Feasibility study finalised

Source: SOER (2010)

2.4 The future possible trends on MSW by 2020

The National Waste Management Strategy sets the direction of the Albanian Government's policy for the sustainable management of waste by 2025, divided into 3 operational phases of 5 years each.

The objectives of this strategy are:

- By 2015, recycling/composting 25 % of municipal waste;
- By 2020, aim to stop the increase of municipal waste produced; Recycling/composting 55 % of municipal waste;
- By 2025, aim at the reclamation of energy from 15 % of municipal waste.

The objectives of the National Waste Strategy will be implemented through the development and implementation of:

(i) The National Waste Plan;

(ii) The Regional Waste Management Plans;

(iii) The Local Waste Management Plans.

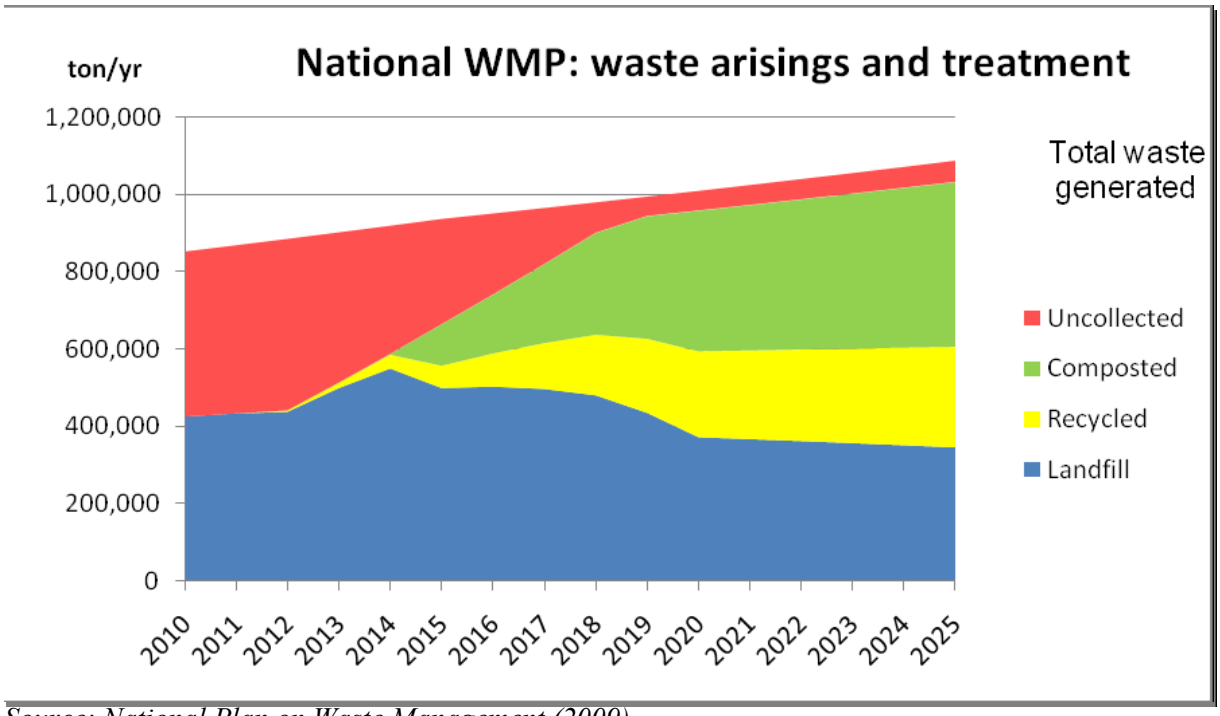
The National Plan also establishes two interim targets, which reflect the short term need to focus on municipal waste:

- To increase the amount of waste collected by local authorities that is recycled or composted to 25 % by 2015;
- To increase the amount of waste collected by local authorities that is recycled or composted to 55 % by 2020.

Overall, a radical change is planned within the Albanian waste management practices. There will be a shift away from the current absolute reliance on landfilling to a long term target of reducing landfilling to 30 %, with 70 % recovery by recycling, composting and conversion to energy. In practice, much of the early progress in increasing recycling and composting will be achieved by widespread provision, by the relevant authorities, of segregated kerbside waste collection services and mechanised post collection separation across the country. By 2020, about 85 % of the households will be served by systems appropriate to the local circumstances and by 2025 this should extend to more than 90 %.

The projection of the generated MSW during the planned period in the above mentioned National Waste Plan (2010-2025) is presented in Figure 2.3. This projection shows how much biodegradable waste needs to be diverted from landfill, and how much recycled material should be collected separately from municipal waste and be prepared for recycling.

Figure 2.3 Projection of MSW generation in Albania 2010 – 2025.



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