

Municipal waste management



Albania 

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Municipal waste management in Western Balkan countries — Country profile

Albania



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Executive summary

In Albania, approximately 70 % of the population is currently served by waste collection services, mainly so in urban areas. The main system for waste collection in Albania consists of 'bring points' for residual (mixed) municipal waste, where citizens take their waste for collection. Where no waste collection service is provided, people often dump waste at roadsides or burn waste in the open. Albania has quite a low recycling rate, resulting in informal waste pickers collecting waste from dumpsites and bins. Separate collection for recycling is not common, and there are no clear enforcement mechanisms supporting separate collection and recycling.

A lack of funds is a key barrier to improving the management system for municipal solid waste (MSW) in Albania. According to Albanian legislation, municipalities' waste management costs should be covered by service tariffs, but in practice they are not. The funding system needs to be improved to cover all expenses arising from waste management, including providing funding for setting up separate collection systems.

The current waste management system in Albania is heavily reliant on disposal to landfill both legal and illegal. There are plans to close the illegal landfills and instead build waste incinerators and sanitary landfills. This will be done through the introduction of waste management zones, with at least one recycling centre and one waste treatment facility for residual municipal waste in each zone. Three incineration plants are currently planned to treat up to 30 % of all generated residual waste, which may create logistical problems and high waste management costs.

As the landfilling rates are planned to decrease, the capacities of the forthcoming residual waste treatment facilities may exceed future demand. Combined with a lack of reliable data and an increase in the quantity of waste generated, there is a significant risk of overcapacity for residual waste treatment, which may be a barrier to the development of the recycling sector. The regional treatment facilities will also result in significantly longer waste transport distances, coupled with higher transport costs. The prevention of illegal dumping will thus be essential for the system of regional treatment facilities to be successful. The increasing waste management costs will be allocated to the municipalities, which already struggle to cover the costs of waste management. It is therefore important to ensure that the funds allocated to municipal waste management can support the enforcement of the new system.

Albania has a new national waste management plan (NWMP) for 2020-2035, which has key targets on waste management. The targets for increasing recycling and reducing landfilling are relatively ambitious, and require the development of key infrastructure for the treatment of residual MSW. To reach the targets set in the NWMP, infrastructure development, the introduction of an extended producer responsibility scheme and regional waste management planning are required.

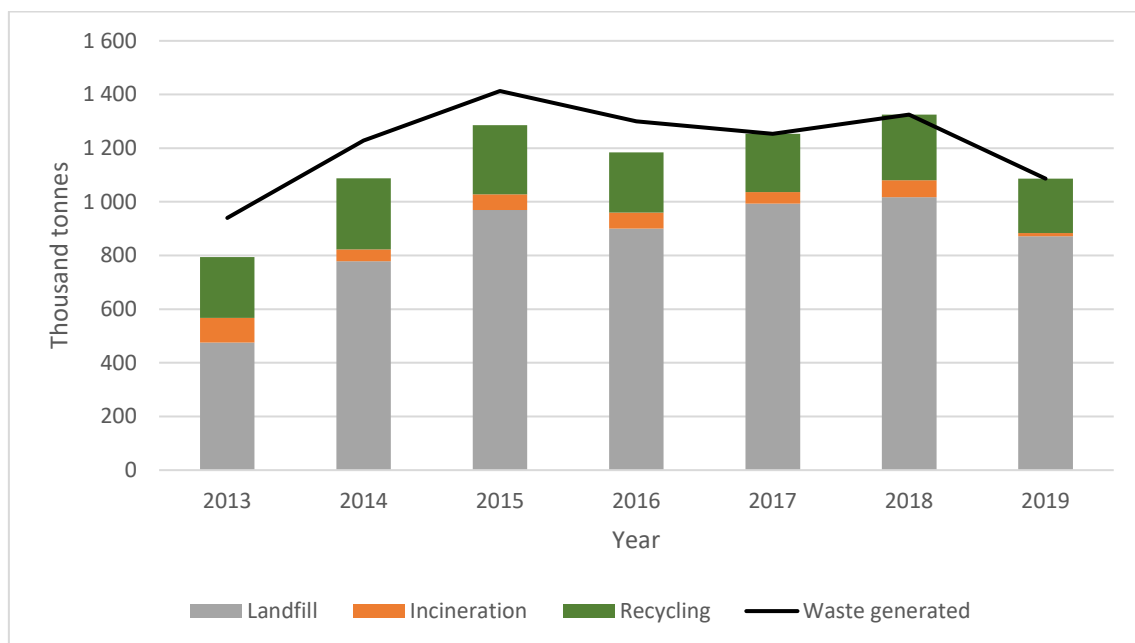
A successful transfer into a waste management system supporting the targets set in the NWMP requires the introduction of enforcement mechanisms and improved public awareness. Impunity is a barrier to the transition, as municipalities can avoid taking required measures. Finally, a separate collection system relying on separation at source by citizens cannot work without public awareness, preferably supported by a 'polluter pays' strategy, such as tariffs based on 'pay as you throw'. The main challenges in implementing the legal framework for municipal waste are related to public awareness and the lack of systems and infrastructure for separate collection and treatment, and to the lack of enforcement mechanisms.

1 Municipal waste management performance

Albania has a quite low recycling rate and a high reliance on landfilling. The main system for waste collection in Albania consists of bring points with containers for residual waste collection. The arrangement of waste management is the responsibility of municipalities, but to date only 70 % of the population is covered by waste collection services.

Figure 1.1 illustrates the development of municipal waste generation and management between 2013 and 2019 in Albania. It shows that municipal waste generation in Albania has somewhat decreased since the peak in 2015, with a clear drop in 2019. The generated waste was 1 413 thousand tonnes in 2015 (corresponding to 491 kg per capita), which dropped to 1 087 thousand tonnes in 2019 (corresponding to 381 kg per capita) (Eurostat, 2021). The decreasing trend is a result of an improvement in the quality of data and a better understanding of the municipal waste data reporting; it can thus not be interpreted as a reducing trend per se. Although there has been a reported improvement in data quality, the data are still not considered of high quality (Albanian Environment Agency, 2021).

Figure 1.1 Municipal waste generation and treatment in thousand tonnes in Albania, 2013-2019



Source: Eurostat (2021).

In Albania, the main method of managing waste is disposal to landfill and illegal dumping. There is also one incinerator and an estimated 10-18.5 % of municipal waste is collected for recycling, mainly by informal waste pickers, who collect waste from dumpsites and bins. Levels of recycling are somewhat steady, as can be seen in Figure 1.1. The 2019 levels of incineration are significantly lower than in previous years, with a reduction from 63 000 tonnes to 12 000 tonnes from 2018 to 2019 (Eurostat, 2021). The first incineration plant in Albania commenced operation in 2019; the incineration data for 2013-2018 are related to illegal burning of waste at landfills.



More specifically on landfilling, it is estimated that only 40 % of the landfilled waste is disposed of at legal landfills (Albanian Environment Agency, 2021). The waste treatment data also include estimates of waste treatment outside the official collection system, which in principle should not be reported as receiving treatment.

According to the new national waste management plan (NWMP) for 2020-2035 on integrated solid waste management, approximately 70 % of the population was served by waste collection services in 2019 (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020). This was a slight increase from the previous year, with approximately 65-67 % coverage. Currently, mainly urban areas are covered by waste collection services, while rural areas mostly do not have such services. In 2019, only 60 % of the waste generated was collected for treatment (Albanian Environment Agency, 2021).

The quality of data on waste management in Albania is poor. Data collected by municipalities and all licensed waste management and recycling companies are reported annually to the National Environment Agency (NEA) ⁽¹⁾. There are no exact statistics for waste generation; the data and reports are based on estimations by the municipalities and recycling companies, except for the few municipalities that take their waste to a sanitary landfill or incinerator equipped with weighing equipment. The estimates of the amount of waste produced per resident per year are based on predefined characteristics of each municipality (based on the economic and social profiles) (Albanian Environment Agency, 2021).

Albania has problems with a lack of reliable data, which hinders the planning of waste management, as there is no systematic monitoring of the waste streams sent to dumpsites. Furthermore, there is reason to expect that the reported waste data are inflated as a result of the financing system, which encourages the inflation of waste volumes. It seems that decision-makers have links with the waste management companies, which invoice municipalities based on the estimations of waste collected; thus, the waste generation volumes per capita tend to be significantly higher than in municipalities using data based on weighing (Albanian Environment Agency, 2021).

Reliable data are needed to support the organisation of separate collections, to enable infrastructure capacity modelling and to measure performance against targets. Moreover, the lack of reliable data and inflation of the quantities of waste generated does not allow for proper economic calculations. At the national level, better data would facilitate decision-making on larger treatment infrastructure, such as incineration facilities and sanitary landfills. At the regional and local levels, better waste composition data could also facilitate investments in sorting and recycling facilities and activities.

In an ongoing study, a mobile weighing bridge is used at some municipal dumpsites to gain insights into the amounts of waste delivered to dumpsites. The preliminary results show a big difference between actual data from the weighing and data from self-declarations. The weighing was repeated during the summer of 2021 in the same municipalities to collect data for the dry and peak tourism seasons. The study on waste generation using the mobile weighing bridges is expected to generate a more realistic picture of the amounts of municipal waste generated (Albanian Environment Agency, 2021).

In addition, Albania plans to do a waste composition survey supported by a private donor. Since a few municipalities now report data verified by weighing at the treatment facilities, the Albanian Institute of Statistics (Instat) has been receiving more adequate information on the

⁽¹⁾ Until the end of 2018, data were reported to the Ministry of Infrastructure and Energy. Since 2019, data are reported to NEA following a decision by the Council of Ministers.



actual situation in the country and is continuously improving the methodology and correction factors for reported data (Albanian Environment Agency, 2021).

Better data are crucial to facilitate planning and decision-making on budgeting and capacity investments. Local waste management plans, cost calculation and tariff setting, and estimations of the need for waste treatment collection infrastructure will benefit greatly from reliable data on waste composition and generation. Harmonisation of methods for data collection and introduction of quality control measures are key. Validation could improve the situation, for example by comparing incineration capacity with reported incinerated quantities.

2 Legal framework, strategies and targets

The Albanian framework law on integrated waste management aims to transpose the EU waste legislation, including targets for recycling and diversion of waste from landfill. However, the transposition pre-dates the revisions to EU waste directives adopted in 2018. These targets were also adopted in the previous NWMP. For 2021, the plans are to prepare acts that fulfil the requirements of the framework law on integrated waste management, with one act transposing the European List of Waste into Albanian legislation and one act transposing the producer responsibility obligations of packaging producers ⁽²⁾. In the short term, measures will focus on drafting/updating the legal acts in accordance with the new EU directives/regulations, clarifying the institutions' roles and responsibilities in relation to waste management and establishing waste management reporting in all municipalities (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020; Albanian Environment Agency, 2021).

The targets of the EU waste legislation (before the revisions adopted in 2018) were transposed into the previous NWMP, but were never implemented (Albanian Environment Agency, 2021). The previous NWMP (2011-2019) had quite ambitious targets for separate collection and recycling and yet no change happened during that time, as can be seen in Figure 1.1. The targets for municipal solid waste (MSW) were the following:

- to increase recycling to 25 % of the waste generated by 2015 and 55 % by 2020;
- to reduce landfilling of biodegradable waste to 50 % of the 2014 amount generated by 2021 and 35 % by 2026;
- to establish separate collection for paper/cardboard, metal, plastic and glass for municipalities by 2016.

The main challenges in implementing the legal framework for municipal waste are related to public awareness and the lack of collection and treatment infrastructure (bins, vehicles, equipment) (Albanian Environment Agency, 2021). On account of the lack of reliable data, it is currently not possible to measure performance against targets.

The new NWMP (Decision of Council Members No 418, dated 27 May 2020) 'On the approval of the strategic policy document and national action plan on integrated waste management, 2020-2035' (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020) sets more realistic targets (see below), which are not based on current legislation or on the targets of the revised Waste Framework Directive. The new NWMP aims to

⁽²⁾ This act will potentially also introduce extended producer responsibility schemes for other waste streams. As at June 2021, the law was not yet drafted and the coverage is not yet decided.



move from a linear to a circular economy in which resources are used in a more sustainable way, with a key focus on:

- identifying and defining the methodology and technology for future waste treatment investments in an integrated waste management system, including equipment for waste collection, composting, recycling, incineration for energy recovery and disposal on the basis of waste management areas;
- determining costs and fees related to waste disposal at treatment plants and waste transfer stations;
- a verifiable and transparent objective system of investment priorities related to waste management infrastructure that is built on the basis of needs and impact assessment.

The key objectives are waste prevention, separate collection of waste and large-scale recycling. The NWMP has strategic goals, specific objectives and measures. There are four specific goals, namely:

- improving waste management by meeting key principles and legal planning requirements;
- improvement and approximation of the waste management legal framework;
- sustainable funding for waste management;
- human resources, awareness raising and public participation in waste management.

Based on these strategic goals, the NWMP defines nine specific objectives and 31 measures distributed over a period of 15 years. All measures are set over three periods, with goals for 2025, 2030 and 2035, and define the institution responsible for implementing the measures. The targets in the new NWMP partly approximate the respective targets set out in the EU waste legislation. The key targets are as follows:

Targets for 2025

- Collection coverage: at least 80 % of the population and 90 % of waste generated.
- Separate collection: at least 20 % of MSW.
- Landfilling rate: maximum of 50 % of generated municipal waste.
- Biodegradable waste: reduction of landfilling of biodegradable waste to 75 % of the biodegradable MSW generated in 2016.
- Construction and demolition waste: recycle 30 %.
- Packaging: 10 % recovery of total packaging materials and specific targets of 10 % for each of paper and cardboard, metals, plastics, glass and wood.

Targets for 2030

- Collection coverage: 90 % of the population and 95 % of waste generated.
- Separate collection: 30 % of MSW.
- Landfilling rate: maximum of 30 % of generated municipal waste.
- Biodegradable waste: reduction of landfilling of biodegradable waste to 55 % of the biodegradable MSW generated in 2016.
- Construction and demolition waste: recycle 50 %.
- Packaging: 40 % recovery of packaging generated at households and similar sources and 30 % recovery of total packaging with material-specific targets for paper and cardboard (30 %), metals (30 %), plastics (12 %), glass (30 %) and wood (10 %).

Targets for 2035

- Collection coverage: 95 % of the population.
- Separate collection: 40 % of MSW.
- Landfilling rate: maximum of 10 % of generated municipal waste.



- Biodegradable waste: reduction of landfilling of biodegradable waste to 35 % of the biodegradable MSW generated in 2016.
- Construction and demolition waste: recycle 70 %.
- Packaging: 70 % recovery of packaging generated at households and similar sources and 60 % recovery of total packaging with material-specific targets for paper and cardboard (60 %), metals (50 %), plastics (22.5 %), glass (60 %) and wood (15 %).
- Batteries: recycle between 50 % and 70 % for different materials.
- Waste electrical and electronic equipment (WEEE): separate collection > 4kg per capita of WEEE from private or individual homes each year; recovery between 70 % and 80 %; recycle between 50 % and 75 %.

These targets, especially those for increasing recycling and reducing landfilling, are relatively ambitious. They are, however, lower but more realistic than the targets of the previous NWMP that were never reached.

The NWMP envisages the replacement of all current landfills/dumpsites by 11 regional, controlled landfill sites. The separate collection of packaging waste is planned to be the responsibility of the producers after the introduction of the extended producer responsibility (EPR) law, which imposes the responsibility for waste packaging on producer responsibility organisations (PROs). PROs, together with the municipalities, will be responsible for arranging the separate collection of packaging waste (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020).

The NWMP places the responsibility for the introduction of separate collection schemes with the PROs, but the introduction of the EPR legislation has been delayed and the responsibilities of PROs are not (yet) defined in law. Therefore, it seems unlikely that the collection system will be well established within a few years.

In order to reach the objectives of the new NWMP, a number of activities are ongoing:

- the preparation of local waste management plans for some municipalities;
- the improvement of the infrastructure in some municipalities (bins, vehicles);
- the fostering of public awareness on waste management at the local level in 54 municipalities, realised by private donor, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit, a German development agency) in cooperation with NEA;
- the start of the rehabilitation and closure of some existing dumpsites;
- the start of feasibility studies for two waste zones: Fier and Elbasan (waste zones are discussed in more detail in Chapter 6).

According to the NWMP for 2020-2035, regional waste management plans will be prepared after the feasibility studies are completed. Financing for the feasibility studies and arranging the waste zones has already been budgeted for by the Ministry of Tourism and Environment, and the construction of temporary landfills and new sanitary landfills has been partly budgeted for by the Ministry of Infrastructure and Energy.

Waste collection and treatment is by law the **obligation of municipalities**. The municipalities are responsible for organising the collection, transport, treatment and disposal services of MSW, and also for building, owning and operating treatment centres and for levying and collecting service fees. Municipalities can choose to provide the service themselves or subcontract the service to private companies (Albanian Environment Agency, 2021).

The municipalities are responsible for reaching the waste-related targets set by the government and in theory there is a fine if they do not reach set targets, which is set in the waste legislation. Because of the lack of funding, administrative capacity and public awareness, the municipalities



have not been reaching their targets and fines have not been implemented in the case of non-compliance. The national government supports the municipalities by creating guidelines for reporting and also economically, by allocating a general budget to the municipalities. In addition, donor organisations, especially GIZ, support municipalities to improve waste management services (Albanian Environment Agency, 2021).

The targets, especially those for increasing recycling and reducing landfilling, are relatively ambitious and require the development of key infrastructure for the treatment of residual MSW. Furthermore, strong supportive measures, for example the introduction of separate collection schemes, need to be implemented to reach the targets.

The institutional architecture of the solid waste management sector in Albania is divided into several levels (Eunomia et al., 2017; Albanian Environment Agency, 2021):

- The Ministry of Tourism and Environment (MoTE) is in charge of formulating strategy and drafting legislation, and it sets the rules for monitoring and inspection/control of the implementation of the waste acts. The waste management objectives for Albania are currently defined in the NWMP for the period 2020-2035.
- The government supports waste management with investments in big regional infrastructure, mainly by building sanitary landfills, incinerators and transfer stations. The Ministry of Infrastructure and Energy is the contracting authority for public services, including waste management and waste infrastructure projects.
- The Environmental Inspectorate is accountable to MoTE and specialises in the control and enforcement of environmental legislation. Together with the regional agencies and the Environmental Inspectorate, MoTE is responsible for setting up a system for the environmental management of waste and for monitoring its implementation at all stages and levels.
- The NEA is a division of MoTE. Twelve regional environment agencies (REAs) under NEA undertake work at the regional level. NEA is responsible for issuing, changing, suspending and revoking waste permits. It is required by law to have a licence issued by NEA and approved by MoTE for all waste management operations. The REAs are involved in the approval of waste collection and disposal sites and cooperate with local authorities to issue environmental permits for local waste facilities. Data collected by municipalities and all licensed waste management and recycling companies are reported annually to the NEA. The NEA has the role of verifying these reports and providing Instat with the reported data. Instat combines the reported data with information from surveys and uses correction factors for reported and missing data to come up with the official statistics on waste generation and treatment in Albania.
- Municipalities (the local government) are responsible for organising waste management services based on policy development targets and national standards. Municipalities also set the tariffs for waste handling and treatment in the territory of their jurisdiction.
- Other administrative entities that work with MoTE in the field of waste management policy include the Ministry of Health, the Ministry of Energy and Industry, the Ministry of Finance and Economy and the State Ministry for Local Governance.

There are two ministries involved in waste management planning. The collaboration of these two ministries is key to developing MSW management in Albania. As the implementation of the NWMP requires funding for planning, implementation and infrastructure development, it is important that the two ministries collaborate with each other to identify priorities and draft schedules.



3 Waste fee and taxation system

The waste management budget is the responsibility of the local governments, which must include the financing of waste management in the approved local waste management plans. The waste management budget should be covered by the service tariffs, and should include budgeting for improving the service levels. However, in Albania, the service tariffs usually only cover 20-40 % of the expenses generated by waste collection and treatment. The remaining funds are taken from the general budget of the municipalities, allocated to them by the national government. At the national level, there is an annual dedicated fund for the environment, appointed to the local governments, the size of which is based on the population of the municipality. Moreover, municipalities struggle with enforcing the payment of the service tariffs. Expenditure covers the basic services in the municipality, but is insufficient for larger investments, for example to manage disposal sites in accordance with operational standards or to close illegal dumpsites (Albanian Environment Agency, 2021).

In Albania, the service tariffs for waste collection are paid by households and private companies. Municipalities collect the fees, which are approved by the municipality council. For households the fees are based on the number of people in the household, and for businesses the fees are determined by the nature of their activity. A national methodology for cost calculation and tariff setting for municipal waste services was approved in 2019, giving all municipalities the same basis for setting tariffs. Albania plans to improve the tariff system in order to cover the expenses from waste management through the service tariffs. The methodology for cost calculation and tariff setting aims to cover all expenses. The main issue is the implementation of the tariffs, in terms of both approving them in city councils and collecting payment (Albanian Environment Agency, 2021).

In Albania, there are biannual city council elections, which is why politicians are not keen on increasing service tariffs. Therefore, local authorities mainly focus on increasing the revenue from service tariffs by improving the collection coverage (Albanian Environment Agency, 2021).

Municipal landfills have gate fees to cover the expenses; the illegal landfills and dumpsites do not collect fees for landfilling. Albania is planning to close all illegal landfills and operate only regional sanitary landfills (see Chapter 6). This will lead to the implementation of gate fees at all operating landfills in Albania. No landfill tax exists (Albanian Environment Agency, 2021).

Fines are imposed by law to protect the environment, and pollution of the environment has been considered an environmental crime since 2020. Fines regarding littering and illegal dumping are seldom imposed because of the lack of staff for environmental inspection (Albanian Environment Agency, 2021).

Eunomia (2017) modelled the expected changes in costs when moving to a 50 % recycling rate in 2026, indicating that a net change of the order of EUR 50 per household might be expected if the recycling rate is achieved and if all residual waste is sent to sanitary landfills. This sum could be reduced to around EUR 35 per household if the EPR scheme covers the waste management costs of their mandate. The study also showed that the required capital investment is mainly associated with the collection infrastructure.

Today, a key barrier to improving the waste management system in Albania is a lack of funds. Budget must be allocated for improving waste management, such as for closing illegal dumpsites, introducing separate collection or increasing collection coverage. Furthermore, the structure of the tariffs incentivises neither waste prevention nor separate collection. The introduction of an EPR scheme partly covering the waste management expenses and supporting separate collection would greatly support the transition towards increased separate collection



and recycling. The landfill gate fees do not currently encourage recycling, with dumping waste at illegal landfills being the cheaper alternative.

4 Collection coverage and separate collection

The main system for waste collection in Albania consists of bring points with containers for residual waste collection, where household and commercial waste are collected together. The frequency of collection is once per day in urban areas and two to three times per week in rural areas, with greater frequency during summer and in touristic areas (Albanian Environment Agency, 2021).

According to the NWMP, approximately 70 % of the population was served by waste collection services in 2019, mainly in urban areas. This was a slight increase from the previous year, when the coverage was approximately 65-67 %. In 2019, only 60 % of the waste generated was collected for treatment, corresponding to 70 % of the population covered by waste collection services (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020). Where no waste collection service is provided, people are responsible for the removal and disposal of their own waste. This often results in the dumping of waste at roadsides or the burning of waste in the open. Municipalities are often supported by several funding donors to improve the waste management service in rural areas, aiming to increase the collection coverage (Albanian Environment Agency, 2021).

The collection infrastructure is generally regarded as being in a poor state. Typically, the company collecting waste is also responsible for operating the disposal site (Albanian Environment Agency, 2021).

It is estimated that approximately 10-18.5 % of municipal waste is collected for recycling, mainly by informal waste pickers, who collect waste from dumpsites and bins and then sell it to the recycling industry. This activity is, however, not legal in Albania and there are no plans to formalise these collectors. The waste pickers are mainly from the Roma community and are mostly ill-equipped and untrained workers, who are exposed to hazardous materials, in general operate under unsafe conditions and lack formal agreements with scrap buyers. The reported collection rates of the informal sector are estimated to be quite high but these might decline a bit once better data on recycling rates become available (Albanian Environment Agency, 2021; Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020).

At the sanitary landfills (Bushati, Maliqi, Bajkaj and Sharra) and the incinerator of Elbasan, staff are employed to pick out the recyclables from the waste streams. In other landfills and dumpsites, there are similar activities performed by the informal sector (Albanian Environment Agency, 2021).

There is a pilot project on separate collection in three cities: Himara, Lezha and Peqin. The project is planned to be extended to other cities (Cërrik, Saranda, Belsh and Rroskovec). The pilot aims to separately collect paper and cardboard, aluminium and plastics, by providing dedicated bins and transport for the separated fractions. It also includes the set-up of dedicated centres for pre-treatment, such as sorting, compacting and storage, until the materials are further sold to private recyclers. Furthermore, a pilot project for separate collection and composting of bio-waste in Cërrik, Peqin, Rroskovec and Belsh includes providing dedicated bins and implementing door-to-door collection (Albanian Environment Agency, 2021).

The pilot projects on separate collection are supported by donors. The aim of the pilots is that the municipalities will take over the system after the project has ended. Best practices are



shared and staff from other municipalities are invited to attend training sessions to facilitate the introduction of separate collection systems into other municipalities. The experience from the pilot projects is, however, that the education and awareness on separate collection is not good enough among the general public, resulting in containers for separate collection being used for residual waste (Albanian Environment Agency, 2021).

With regard to separate collection, there is no clear economic incentive for the municipalities. The revenues from selling sorted waste cover only the expenses of the system for separate collection and pre-treatment. Furthermore, fines imposed by the government on municipalities not meeting the recycling target are not implemented. However, separate collection does create employment opportunities, as personnel are needed at the sorting centres for pre-treatment, such as baling of waste (Albanian Environment Agency, 2021).

The NEA is currently implementing a nation-wide campaign to raise awareness of the general public and to educate local institutions with regard to waste management services. The campaign aims to reduce the generation of plastic waste, especially single-use plastic items, and to facilitate recycling through raising public awareness on sorting and separate collection. The campaign has already been realised in 61 municipalities. Furthermore, municipalities annually organise 'Let's do It' public awareness campaigns promoting responsible environmental behaviour and waste reduction, reuse and recycling. The private donor organisation GIZ is planning to cooperate with the Albanian School of Public Administration, aiming to include waste separation and recycling education in the curriculum of the School, which can then offer training on best practices in waste management and recycling to municipalities (Albanian Environment Agency, 2021).

In addition to the target of increasing awareness, there are also national targets to increase separate collection, as set out in the NWMP (see Chapter 2). The national targets are expected to be covered, at least partly, by the introduction of an EPR scheme on packaging, imposing the responsibility for the arrangement and financing of separate collection and management for packaging waste on the producers (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020; Albanian Environment Agency, 2021).

Donor projects support municipalities to construct and operate resource centres, aiming not only to collect recyclable waste but also to prepare the recyclables for selling to recycling companies. Some of the expenses are covered by the donors, but the main support is in advising and implementation (Albanian Environment Agency, 2021).

The MoTE has started a dialogue forum for stakeholders in the waste management sector with regular meetings covering specific waste-related topics. Participating stakeholders include the NEA, municipalities, other ministries, private sector company representatives, topic experts and civil society organisations (Albanian Environment Agency, 2021).

5 Extended producer responsibility schemes

There are currently no EPR schemes in place in Albania. However, in 2020, the MoTE, with support from Sweden's government agency for development cooperation, started to prepare a draft law creating the basis for an EPR system. This has been delayed because of the COVID-19 pandemic, but the aim is to finalise the work by the end of 2021 and implement the new legislation in 2022 (Albanian Environment Agency, 2021).



There is no dedicated collection scheme for packaging, end-of-life vehicles, WEEE or batteries, which are usually covered by EPR schemes in most EU Member States. In Albania, these waste streams are either collected as municipal waste or handled through the private or informal waste sectors (Albanian Environment Agency, 2021).

6 Treatment infrastructure

Many of the landfills in Albania that have been approved for operation by the MoTE do not meet the environmental standards for landfills as defined within EU legislation. It is known that 190 illegal landfills/dumpsites are currently in use as opposed to four sanitary landfills (Bushati, Maliqi, Bajkaj and Sharra). The total capacity of the sanitary landfills is 434 362 tonnes per year. In 2018, an estimated 610 762 tonnes of waste was disposed of in illegal landfills, while 401 755 tonnes of waste was disposed of in legal landfills (Albanian Environment Agency, 2021).

Most dumpsites do not have environmental permits, and these sites have been established without the necessary infrastructure to contain landfill leachate and collect landfill gas. All types of wastes are disposed of without prior separation and without a system to manage hazardous wastes, and records of deposits are not kept. Often, the waste at the dumpsite is burned, despite a ban on doing so, creating additional risks to citizens and the environment (Eunomia et al., 2017).

It is estimated that approximately 10-18.5 % of municipal waste is collected for **recycling**, mainly by the informal sector (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020). Since a few years ago, it has not been allowed to import waste for recycling into Albania, so the feedstock for recycling has significantly been reduced and the sector is struggling economically. There is now a large potential for recycling, which is not currently being used, and a need to increase separate collection to support the domestic recycling industry. Although private companies deal with a broad range of waste fractions, a significant number deal with scrap metal. Not all of them have an environmental permit from the MoTE (Albanian Environment Agency, 2021).

With regard to the treatment of separated waste streams, collected by informal waste pickers from dumpsites and bins, the waste is sold to the recycling industry. The following processes then take place (Albanian Environment Agency, 2021):

- Glass bottles are collected, sterilised and reused by beverage companies.
- Paper and cardboard are sorted in small quantities only at paper recycling plants in Tirana, Fier and Durrës.
- Aluminium cans are usually exported to neighbouring countries (e.g. Montenegro) and a very small proportion of them are directed to a small private Albanian smelter.
- Steel scrap is sent to the Elbasan metallurgical plant.

The Albanian government is building two **incinerators** with high processing capacities through concessional public-private partnerships (ETC/WMGE, 2019):

- The Fier incinerator will have a processing capacity of around 180-200 tonnes per day.
- The Tirana incinerator will have a processing capacity of around 550-800 tonnes per day.

Construction and operation costs will be covered by the state budget for the first 6 years, while a private company is responsible for operation. Afterwards, the incinerators will be owned and operated by the respective municipalities (Thiel et al., 2019).

The already operational Elbasan incinerator has a processing capacity of around 120-140 tonnes per day (Albanian Environment Agency, 2021). In total, these three incinerators would have an



annual capacity of at least 310 000 tonnes annually, which corresponds to 30-40 % of the current annually generated MSW. All three incinerators will be located in the central parts of Albania.

In order to reach the set targets for separate collection and reduction in landfilling, supporting infrastructure must be available for residual waste treatment. To reach the 2025 targets of 20 % separate collection and a maximum of 50 % landfilling, the remaining residual waste to be treated should be 30 %, calculated based on current waste generation data. In 2030, the separate collection target is 30 % and the landfilling target is a maximum of 30 %, resulting in residual waste treatment of 40 %. In 2035 the targets of 40 % separate collection and only 10 % landfilling require a residual waste treatment capacity of 50 % of the waste generated, unless more waste is prevented or recycled. However, current waste generation data are believed to be somewhat inflated, which is why a smaller residual waste capacity can be assumed to be sufficient.

The landfill targets for 2025 are feasible only if separate collection is introduced and the incinerator in Tirana operates at full capacity. To reach the 2030 landfill target, all three incinerators must be in operation and divert the generated residual waste from landfills to incineration, assuming that the MSW generation level stays at the level of 2019. If MSW generation is to return to the level before 2019, increased residual treatment capacity is needed to reach the 2030 targets. For the 2035 targets, there may be a need for additional infrastructure, but this depends on other developments in municipal waste management, such as the increased separate collection of packaging and bio-waste and also the actual development of waste generation.

The NWMP (2020-2035) plans the development of waste management zones, which are the base units for integrated waste management planning. The zones cover a territory of one or more municipalities that offer an uninterrupted road network, facilitating the transport of waste to the pre-treatment, recovery and final disposal destinations. The zones are to include at least one centre for the recovery of the recyclable and compostable materials, an incinerator with energy recovery or a sanitary landfill. The NWMP includes plans for the replacement of all landfills/dumpsites by 11 regional controlled landfill sites; one new sanitary landfill is already in the planning stage in Vlorë and will have a capacity of 1 045 tonnes per day. Prior to the completion of the regional sanitary landfills, 10 illegal landfills are in the process of being approved for remediation to be used while the sanitary landfills are under construction (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020; Albanian Environment Agency, 2021).

In addition, collection facilities, transfer and/or pre-treatment stations are to be located within a distance that ensures efficient service. All waste management zones operators will conduct a feasibility study on waste management, which will anticipate the need for waste transfer stations whenever the distance to the regional treatment facility ⁽³⁾ exceeds a driving time of 2 hours. The objective of the waste transfer stations is to decrease the costs of transport to the regional treatment facility. When the new regional treatment facilities replace the decentralised system of 190 illegal landfills, the distance to the landfills will significantly increase for the majority of waste, also causing a jump in waste management costs. The transfer stations will collect waste for transport, enabling optimisation of the transfer costs (Albanian Environment Agency, 2021).

Decentralised composting and home composting will be encouraged in rural areas. Separate bio-waste collection in urban areas will be incorporated into the system once facilities are in place

⁽³⁾ The planned regional waste treatment facilities include 10 sanitary landfills and three incinerators for the treatment of residual MSW



for the management of these waste streams. A new composting plant is scheduled to start operation in the Cërrik municipality in autumn 2021, with a capacity of 1 000 tonnes annually. The plan is to produce compost for use in landscaping (Albanian Environment Agency, 2021).

As regional waste treatment facilities will cover the treatment of all waste generated, and three incineration plants are planned to cover for the treatment of up to 30 % of all generated residual waste, this will create logistical problems and high waste management costs. The increasing waste management costs will be allocated to the municipalities (Albanian Environment Agency, 2021). As described in Chapter 3, municipalities already struggle with covering the current costs of waste management. It is therefore important to make sure that waste fees reflect the increasing costs and that enforcing the payment of the service tariffs is improved. Furthermore, the allocation of national funds for the implementation of regional waste management centres and logistical systems would greatly benefit the enforcement of the new system.

7 Social aspects of waste management

The Albanian Recyclers Association has 32 private recycling companies in Albania as members, which employ 1 249 people, and the industry's investment market value is about EUR 234.2 million. The processing capacity of these companies is about 498 480 tonnes per year, which is more than enough to process all recyclable waste generated in the country. The current recycling volume is 133 592 tonnes per year, which represents about 10 % of the total municipal waste generation (Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020).

The informal sector is mainly represented by the Roma community; informal waste pickers collect recyclable waste (mainly plastic and aluminium cans) from the municipal waste containers. They are also active at the municipal landfills and dumpsites, collecting recyclables there as well. There is no information available about the size of the informal sector and how many people derive their livelihood from these types of activities (Albanian Environment Agency, 2021).

There is work ongoing to include the people working in the informal sector in municipal waste management. This is mainly done by providing safety equipment for waste picking; recycling companies also prioritise members of the informal waste sector when hiring staff for the resource centres (Albanian Environment Agency, 2021).



Abbreviations

Abbreviation	Name
EEA	European Environment Agency
EPR	Extended producer responsibility
ETC/WMGE	European Topic Centre on Waste and Materials in a Green Economy
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
Instat	Institute of Statistics (Albania)
MBT	Mechanical Biological Treatment
MoTE	Ministry of Tourism and Environment
MSW	Municipal solid waste
NEA	National Environment Agency
NWMP	National waste management plan
PRO	Producer responsibility organisation
REA	Regional environment agency
WEEE	Waste electrical and electronic equipment



References

Albanian Environment Agency, 2021, 'Questionnaire to Western Balkan countries for providing information regarding municipal waste management and waste prevention & follow-up interview Albania'.

ETC/WMGE, 2019, *Resource efficiency and circular economy in Europe — Even more from less — An overview of policies, approaches and targets of Albania in 2018*, European Topic Centre on Waste and Materials in a Green Economy, Mol, Belgium.

Eunomia, et al., 2017, *A comprehensive assessment of the current waste management situation in South East Europe and future perspectives for the sector including options for regional co-operation in recycling of electric and electronic waste*, Final report, Publications Office of the European Union, Luxembourg (<https://op.europa.eu/en/publication-detail/-/publication/1325fc9d-1831-11e7-808e-01aa75ed71a1/language-en>) accessed 13 September 2021.

Eurostat, 2021, 'Municipal waste by waste management operations [env_wasmun]', Eurostat (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_wasmun) accessed 3 May 2021.

Ministry of Tourism and Environment of Albania and Gesellschaft für internationale Zusammenarbeit, 2020, *Dokumenti i politikave strategjike dhe plani kombërtar i menaxhimit te integruar te mbetjeve [Integrated waste management national plan 2020-2035]*, Ministry of Tourism and Environment of Albania (https://turizmi.gov.al/wp-content/uploads/2020/07/Dokumenti-i-Politikave-Strategjike_AL.pdf) accessed 15 April 2021.

Thiel, S., et al., 2019, *Waste management volume 9: Waste-to-energy*, Thomé-Kozmiensky Verlag GmbH, Neuruppin, Germany.