



Lower Austria

WASTE MANAGEMENT PLAN

Planning period
2016 – 2020

Short version

Owner, editor, publisher

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Basic principles for the waste management of Lower Austria and main priorities of the planning period 2016–2020

The present waste management plan defines the objectives and describes the measures for the Lower Austrian waste management in the following five years.

The planning period 2016-2020 focuses on the following focal points in order to drive change towards a sustainable resource management

- recyclable material and harmful substances in residual waste as well as food waste
- biogenic waste
- optimization of intercommunal cooperation and further development of waste material collection centers towards recycling centers

The Lower Austrian waste management plan 2016 maintains the three superior and proven basic principles of the Lower Austrian waste management plan 2010-2015.

sensible USE | waste avoidance and protection of resources

The basic principle "sensible USE" aims at waste avoidance and protection of resources. The use of secondary raw materials as well as the energy recovery of waste constitute a contribution to waste management towards an economic sustainable resource management.

sensible
USE

careful PROTECTION | reduction of adverse effects and the achievement of the Lower Austrian climate protection goals

The basic principle "careful PROTECTION" focuses on the reduction of adverse effects on the environment and the achievement of the Lower Austrian climate protection goals.

careful
PROTECTION

modern SHAPE | effective municipal waste management

The idea of "modern SHAPE" is the achievement of an effective municipal waste management. Therefore appropriate minimum standards for waste management services of municipalities and associations as well as an efficient intercommunal cooperation are essential.

modern
SHAPE

Measurability of waste management objectives

OBJECTIVE 2020 | **Measuring of waste management objectives based on their material flows**

Indicators are used for individual measures to make the waste management objectives measurable.

Closing data gaps

Integration of indicators into waste management plan and annual waste management reports

SHAPE

Non-hazardous waste

Residual Waste

OBJECTIVE 2020 | **Optimizing the separation discipline of recyclables and minimizing the contamination of residual waste**

Focal point in the planning period 2016–2020:
recyclable material and harmful substances in residual waste as well as food waste

In 2014 143 kg residual waste were collected per inhabitant. Besides the high rate of recyclable materials (approx. 30% by weight) and hazardous substances, the high biogenic share in the residual waste has to be noted. Food Waste (packaged or opened) plays a central role. For this reason "recyclable and harmful substances" and "avoidance of food waste" are defined as focal points in the coming period 2016-2020.

USE

Raising the awareness of the public regarding the collection system of the recyclables aluminium, iron and copper

Continuing the focal point "avoidance of food waste"

PROTECTION

Informing the public about pathways of pollutants caused by used batteries, waste electrical and electronic equipment and about collection infrastructure

SHAPE

Sorting analysis of residual waste including specific issues

Cost-benefit analysis for a Lower Austrian dual system-bin

Biogenic waste

OBJECTIVE 2020 | **Optimizing collection systems and infrastructures and minimizing the content of pollutants in composts**

Focal point in the planning period 2016–2020:
Biogenic waste

In the years 2004 to 2009 90.4 kg biogenic waste were annually collected per inhabitant on average. In 2014 it were about 99 kg/inhabitant. More than half of all households in Lower Austria compost their own biogenic waste at home. The major part of the collected volumes is treated in composting units. There are about 65 composting facilities in Lower Austria. 43 of them were run by the Lower Austrian Compost & Biogas Consortium in 2014 and 225,803 t input material was recovered.

USE

Evaluating the composting process of biogenic waste in preceding biogas plants

PROTECTION

Supporting the quality control of the Lower Austrian Compost & Biogas Consortium

SHAPE

Supporting the steps of optimization of biogenic waste collection and treatment

Undertaking a study on home composting

Plastic waste

OBJECTIVE 2020 | Collecting material for high-quality recycling and reducing the various collection systems for plastic packaging

In Lower Austria plastic packaging is collected in six various systems. In 2014 the total of light packaging was about 27,077 t which corresponds to 16.7 kg/inhabitant/year. The analysis of residual waste in Lower Austria has shown, that despite separate collection of packaging the massfraction of plastic packaging and bonded materials is 18.24kg/EW.a on a nationwide average.

Outlining plastic flows (quantities and qualities) in Lower Austria: examine the material composition of plastic waste in order to enable an ideal plastic waste treatment

Pilot project on material collection centers: collection of non-packaging of similar material

Finding arguments supporting the reduction of collection systems for plastic packaging within the scope of the regional stakeholder dialogue

SHAPE

Scrap metal

OBJECTIVE 2020 | Increasing the coverage of packaging metals in all environmental associations to more than 50% and raising the collection volume of non packaging metals

The volume of separately collected packaging metals is about 4 kg/inhabitant/year since 2009. The majority of the environmental associations in Lower Austria show a coverage between 50 to 70%, three are under 30%. Six of the environmental associations collect metal packaging with light packaging in a collection system. The majority of environmental associations collect metal packaging in a bring system.

Optimizing the collection of scrap metals at material collection centers

Determining the reasons for differences in collection quantities of scrap metals and relevant adaption of collection systems

USE

SHAPE

Bulky waste

OBJECTIVE 2020 | **Getting out the recyclables wood, metal and plastic from the bulky waste stream**

In 2014 44 kg bulky waste were collected per inhabitant. Since 2010 a significant decrease of collected amounts has been observed, in 2010 the figure was 47 kg per inhabitant. Fixed collection intervals will not result in an increase of collection amounts, but cause higher costs. Therefore a switch from a collection system to a bring system in combination with pick up on request should be continued as in previous years.

SHAPE

Sorting analysis of bulky waste of all collection types (quantification of the amount of wood, metal and plastic and examination of the reuse potential)

Forcing the switch from a collection system to a bring system in combination with pick up on request

Sewage sludge

OBJECTIVE 2020 | **Recovering phosphorus from sewage sludge and meat-and-bone meal**

In Austria the amount of sewage sludge has been continuously increasing in the recent years. Reasons are the expansion and the extension of sewage treatment plants. In Lower Austria 194 sewage treatment plants (more than 2000 population equivalent) were in operation in 2010. About 49.900 t sewage sludge accumulated as dry matter were nationally produced in 2013.

In Switzerland the Technical Ordinance on Waste (TOW) provides for the obligation of the recovery of phosphorus from waste water, sewage sludge, meat-and-bone meal etc. In Europe methods for economic recovery of phosphorus are being developed for several years now.

USE

Participating in/supporting of research projects

Observing the swiss legislation to obligate the recovery of phosphorus and bringing it up to the Lower Austrian discourse of waste management

Construction waste

OBJECTIVE 2020 | **Increasing the use of recycled building materials**

The collection and treatment of construction waste are not part of the jurisdiction of the Lower Austria waste management law (AWG), however, in material collection centers they are part of the services offered. In 2014 46,268 t (28.5 kg/cap.a) building rubble were municipally collected. On average 400 kg building rubble and concrete demolition per inhabitant are annually generated.

Determining quotas for usage of recycled building material at public construction projects in Lower Austria

Adaption of the guideline "Correct handling of building rubble for citizens" („Über den richtigen Umgang mit Baurestmassen für BürgerInnen")

SHAPE

Waste from Industry & Commerce

OBJECTIVE 2020 | **Providing innovative environment-friendly product design and supporting companies in resource management**

Present estimates assume, that in the industrial enterprises of Lower Austria 940.000 t of waste are produced every year. Partly this waste is removed and collected by the municipalities. The main part, however, is collected and treated by private waste management enterprises.

An ambitious environment-friendly and resource-saving waste management requires knowledge about waste from industry and commerce not only for the municipal waste. For this reason objectives and measures were elaborated as well.

Joint funding call to issues such as ecodesign in cooperation with the department of economy, tourism and technology

Accomplishing an emphasis in consulting on resource and waste management within the scope of the program "Ökomanagement"

SHAPE

Hazardous waste

OBJECTIVE 2020 | **Increasing the collection volume and supporting the reuse of Waste Electrical and Electronic Equipment**

Problem waste

5,233 t problem waste were separately collected in 2014, this corresponds to a quantity of about 3.2 kg per inhabitant.

Waste Electrical and Electronic Equipment (WEEE)

The collection of Waste Electrical and Electronic Equipment (WEEE) in Lower Austria continues to be on a high and stable level. In 2014 14,477 t WEEE were collected from private households, which is an equivalent to about 8.98kg per inhabitant and year.

The online platform "sogutwieNeu.at" for selling, sharing and giving away goods, is based on the Waste Framework Directive 2008/98/EC and supports reuse as well as waste prevention.

Used batteries

735 t used batteries were collected in 2013, 725 t in 2014. This represents a decrease of approx. 1.4 %.

USE

Integrating repair services and enterprises into the platform "sogutwieNeu"

SHAPE

Raising awareness for a separate collection of hazardous waste (accompanying public relations)

Intercommunal cooperation in waste management in Lower Austria

OBJECTIVE 2020 | **Optimizing municipal waste management**

97% of all municipalities in Lower Austria have organised themselves in 22 waste management associations and three city units, similar to the associations.

In the planning period 2010-2015 all waste management associations agreed to minimum standards in eight different categories. Despite of those standards there are different service portfolios, structures and processes. Therefore the CAF-certification (seal of approval "CAF environmental association") was introduced as a quality management system. "CAF environmental association" combines the european quality management system with the standards of the waste management associations in Lower Austria.

In order to further optimize the municipal waste management, the preparation of a future concept for recycling centers is planned for the upcoming period 2016-2020. The aim is to continually develop the material collection centers into recycling centers for a sustainable resource management in Lower Austria.

Focal point in the planning period 2016 – 2020:

Optimization of the intercommunal cooperation and further development of waster material collection centers towards recycling centers

Supporting intercommunal cooperation

Supporting CAF-certification

Supporting CAF-users in reaching the minimum standards

Developing a future concept for regional recycling centers

Presenting the services and fees of the environmental associations and municipalities in a comparable manner

Collection of good practise examples and documentation of accessibility, usability and design of waste bins

Tailor-made trainings for employees of environmental associations, which are CAF-certified

Optimizing the linkage of municipal knowledge by promoting the participation of CAF-certified environmental associations at a knowledge portal for municipalities

Supporting joint public relations between the government and the environmental associations

SHAPE

Objectives and measures 2016–2020

Subject	Objectives	Measures	HT1	HT2
Measurability	Measuring of waste management objectives based on their material flows	Closing data gaps	X	X
		Integration of indicators into waste management plan and annual waste management reports	X	X
Residual waste	Optimizing the separation discipline of recyclables and minimizing the contamination of residual waste	Raising the awareness of the public regarding the collection system of the recyclables aluminium, iron and copper	X	X
		Continuing the focal point "avoidance of food waste"	X	X
		Informing the public about pathways of pollutants caused by used batteries, waste electrical and electronic equipment and about collection infrastructure	X	X
		Sorting analysis of residual waste including specific issues	X	
		Cost-benefit analysis for a Lower Austrian dual system-bin		X
Biogenic waste	Optimizing collection systems and infrastructures and minimizing the the content of pollutants in composts	Evaluating the composting process of biogenic waste in preceding biogas plants	X	X
		Supporting the quality control of the Lower Austrian Compost & Biogas Consortium	X	X
		Supporting the steps of optimization of biogenic waste collection and treatment	X	X
		Undertaking a study on home composting	X	
Plastic waste	Collecting material for high-quality recycling and reducing the various collection systems for plastic packaging	Outlining plastic flows (quantities and qualities) in Lower Austria: examine the material composition of plastic waste in order to enable an ideal plastic waste treatment		X
		Pilot project on material collection centers: collection of non-packaging of similar material	X	
		Finding arguments supporting the reduction of collection systems for plastic packaging within the scope of the regional stakeholder dialogue	X	X
Scrap metal	Increasing the coverage of packaging metals in all environmental associations to more than 50% and raising the collection volume of non packaging metals	Optimizing the collection of scrap metals at material collection centers	X	
		Determining the reasons for differences in collection quantities of scrap metals and relevant adaption of collection systems	X	
Bulky waste	Getting out the recyclables wood, metal and plastic from the bulky waste stream	Sorting analysis of bulky waste of all collection types (quantification of the amount of wood, metal and plastic and examination of the reuse potential)	X	
		Forcing the switch from a collection system to a bring system in combination with pick up on request	X	X

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sensible USE	Waste avoidance and protection of resources	X
careful PROTECTION	Reduction of adverse effects and for achieving the Lower Austrian climate protection	X
modern SHAPE	Effective municipal waste management	X

Subject	Objectives	Measures	HT1 HT2	
Sewage sludge	Recovering phosphorus from sewage sludge and meat-and-bone meal	Participating in/supporting of research projects	X	X
		Observing the Swiss legislation to obligate the recovery of phosphorus and bringing it up to the Lower Austrian discourse of waste management	X	X
Construction waste	Increasing the use of recycled building materials	Determining quotas for usage of recycled building material at public construction projects in Lower Austria	X	
		Adaptation of the guideline "Correct handling of building rubble for citizens"	X	
Industry & Commerce	Providing innovative environment-friendly product design and supporting companies in resource management	Joint funding call to issues such as ecodesign in cooperation with the department of economy, tourism and technology	X	
		Accomplishing an emphasis in consulting on resource and waste management within the scope of the program „Ökomanagement“		X
Problem waste, Waste Electrical and Electronic Equipment, used batteries	Increasing the collection volume and supporting the reuse of Waste Electrical and Electronic Equipment	Integrating repair services and enterprises into the platform „sogutwieNeu“	X	
		Raising awareness for a separate collection of hazardous waste (accompanying public relations)	X	X
Intercommunal cooperation in Lower Austria	Optimizing municipal waste management	Supporting intercommunal cooperation	X	X
		Supporting CAF-certification	X	X
		Supporting CAF-users in reaching the minimum standards	X	X
		Developing a future concept for regional recycling centers	X	
		Presenting the services and fees of the environmental associations and municipalities in a comparable manner	X	
		Collection of good practice examples and documentation of accessibility, usability and design of waste bins		X
		Tailor-made trainings for employees of environmental associations, which are CAF-certified	X	
		Optimizing the linkage of municipal knowledge by promoting the participation of CAF-certified environmental associations at a knowledge portal for municipalities	X	
		Supporting joint public relations between the government and the environmental associations	X	X

* Halftime

