

# Waste management of hazardous waste in Poland

# Administrative structure of Poland.

There are three levels of administrative structure in Poland:

- regions (called województwo)
- sub-regions (called powiat)
- municipalities (called gmina)

In Poland there are 16 regions.

Each region is divided into sub-regions (380).

Sub-regions are divided into municipalities (in total 2478 units).

The governments of regions, sub-regions and municipalities elected in general election for 5 years term are called self-government.



- The following actors are identified as responsible for permitting in the field of waste management:
- marshal – head of self-government on regional level (województwo)
- starosta – head of self-government on sub-regional level (powiat)
- wójt, burmistrz or prezydent miasta – heads of self-government on municipality level (gmina)

- The competences in the field of waste management are assigned in primary legislation:
- Environmental Protection Law
- Waste Management Act
- Act on ELVs
- Act on WEEE
- Act on batteries and accumulators

- Permits for treatment of waste are issued by starosta (sub-regional level). If waste treatment facility requires IPPC permit, it is issued by marshall (regional level).
- Regional and sub-regional governments are responsible for waste management of all types of waste, except for household waste.
- Household waste management is responsibility of municipality and it is based on Act on order maintenance of municipality.

There are three types of authorities on municipal level. It depends on the size and type of municipality.

- *Wójt* is head of the smallest and mainly rural municipalities.
- *Burmistrz* is head of medium size and large municipalities of mixed type (rural and urban).
- *Prezydent miasta* (mayor of town) is head of municipality that comprises only territory of town without rural neighbourhood.

# Enforcement.

Enforcement of environmental legislation is a task of Inspection of Environmental Protection, central administration body supervised by the Minister of the Environment.

The role of inspection is to control the compliance with environmental legislation and monitor the state of environment.

It is an institution that comprises:

- Chief Inspectorate of Environmental Protection – headquarters based in Warsaw
- 16 Regional Inspectorates of Environmental Protection – based in each of the regions

Inspectors of regional inspectorates perform inspections in facilities, including waste treatment and collection sites.



# Enforcement.

- Environmental inspectors are entitled to:
- enter economic entities with equipment and experts necessary to perform inspection,
- enter other entities 24h/day,
- enter means of transport (but cannot stop them, cooperation with police or traffic inspectors needed),
- take samples and carry out analysis to check the state of environment,
- stop the facility if this is necessary for analysis or sampling,
- request any documents, written or oral information, including interrogation.

# Enforcement.

- As a result of a control that confirmed the violation of environmental legislation, inspector may issue written orders for facility operator to undertake specific action to restore full compliance with legal requirements and set the deadlines for those actions. For minor infringements inspector may impose fines which amount to approx. 250 EUR. For major violations of legislation financial penalties are foreseen, e.g.:
  - illegal waste treatment – up to 250.000 EUR
  - illegal shipments of waste – up to 75.000 EUR
  - violation of WEEE legislation – up to 500.000 EUR
  - violation of ELVs legislation – up to 75.000 EUR

# Waste shipments.

- In Poland there is only one competent authority for waste shipments – Chief Inspector of Environmental Protection who is responsible for notification procedures and dealing with illegal shipments.

Enforcement of EU Waste Shipment Regulation is responsibility of:

- regional inspectors of environmental protection – inspections of facilities importing waste
- border police and customs – external borders of the EU (Ukraine, Belarus and Russian Federation, seaports and airports)
- traffic inspectors – road controls.

# Hazardous wastes from households.

- All issues related to household waste collection and treatment are regulated in the Act on order maintenance of municipality.
- It is a responsibility of municipality to set up a system of collection of waste from private households and ensure its proper treatment.

# Hazardous wastes from households.

This task includes:

- building local facilities for household waste treatment (incl. sorting plants)
- organizing collection of household waste from private buildings

Municipality selects through tender procedure companies that provide for regular collection of waste at the territory of each municipality. If territory of municipality is bigger than 10.000 inhabitants, more than one company may be selected.

# Hazardous wastes from households.

- ensuring the selective collection of waste at source for at least the following waste streams: paper, plastic, glass waste, combined packaging, metal scrap, biowaste

There are different schemes in use:

- dedicated containers for blocks of flats,
- bags for single houses.

There is also the possibility to provide for only two types of containers: one for recyclables and the other for the mixed waste incl. biowaste.

Municipalities have been given certain flexibility as to the type of scheme to use.

# Hazardous wastes from households.

- establishment of network of stationary collection points to collect certain streams of hazardous waste that may be generated in private households:
  - out dated pharmaceuticals and chemicals
  - WEEE
  - batteries and accumulators
  - construction and demolishing waste

Such places shall also accept certain non-hazardous waste e.g. used tyres, garden waste, discarded furniture and other oversized waste.

Each municipality is obliged to establish min. one collection point and publish on its website the address(es) of such collection point(s).

# Legislation

Types of waste management legislation:

- directly binding EU legislation e.g. regulation of Council and European Parliament adopted on EU level
- primary legislation – acts on law adopted by the Parliament
- secondary legislation – ministerial ordinance enacted by minister responsible for particular issues.



# Legislation.

- The framework legislation on waste management in Poland is Polish Waste Management Act (PWMA) which transposes EU directive 2008/98 on waste.

## Waste related issues:

- Environmental Protection Law
- Act on ELVs
- Act on WEEE
- Act on batteries and accumulators

# Definition of hazardous waste

- Hazardous waste is defined as waste exhibiting at least one of the hazardous characteristics listed in annex 3 to PWMA (explosive, oxidizing, highly flammable, irritating, toxic, ecotoxic, cancerous, infectious, poisonous, corrosive, impairing fertility).
- It is forbidden to declassify hazardous waste to non-hazardous through mixing it with non-hazardous components to dilute the hazardous content.

# Classification of waste

- Waste is classified with 6-digit code in waste catalogue that is compliant to European Waste Catalogue. Hazardous waste code is marked with asterisk '\*' eg.:
- 20 03 01 – household waste,
- 16 01 04\* - end-of-life vehicles (marked as hazardous)
  
- The holder of waste can declassify hazardous waste, only through dedicated administrative procedure, if it is proven that the waste does not contain hazardous characteristics.

# Waste hierarchy

There is the same waste hierarchy that applies to hazardous and non-hazardous waste: prevention of waste generation, preparation for reuse, recycling, other recovery processes including energy recovery and disposal.

Disposal is the least preferred option and there are further limitations for that kind of waste treatment:

- only waste that cannot be reused, recycled or otherwise recovered may be disposed,
- all recyclable content has been selected from the waste prior to disposal.

# Proximity principle.

- Waste shall be treated at the place of its generation. Waste that cannot be treated at the place of its generation should be transported to the facilities located as close as possible to the place of its generation taking into account waste hierarchy and best available technics.
- It is forbidden to treat sewage sludge and infectious medical waste from human and veterinary healthcare in region other than region of its generation.

# Treatment of hazardous waste

It is forbidden to mix:

- different types of hazardous waste,
- hazardous waste with non-hazardous waste,
- hazardous waste with other substances to dilute the hazardous content.

As exception it is allowed to make any of those mixtures in course of treatment process to improve safety and effectiveness of disposal/recovery process but only if this does not increase the threat to human health and environment.

# Transport of hazardous waste

- Waste shall be collected in a selective manner. It is forbidden to collect some types of waste in places other than places of generation (infectious medical waste, mixed household waste, sewage sludge).
- Transport of waste shall be carried out in accordance with requirements for human health and environmental protection.
- Transport of hazardous waste shall be carried out in accordance with provisions related to transport of hazardous substances (ADR for road transport, RID for railway transport or IMDG for sea transport ).

# Transport of hazardous waste

- Currently waste carriers must be authorised by sub-regional authority – *starosta*. In the transport permit *starosta* indicates the codes of waste, which carrier is authorised to transport.
- Since January 2018 all waste carrier will have to be registered in nationwide waste database and be given a specific registration number. Applications for registration will be sent to regional authorities (*marshal*).

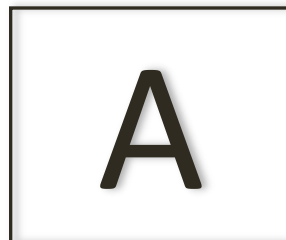


# Transport of hazardous waste

- Provisions on labelling the means of transports are now at the final stage of approval. It is foreseen that since July 2016 all vehicles transporting waste shall be marked with dedicated plates:



Alternatively it might be possible to label the vehicle with the following plate (as in Austria or Germany)



# Storage of waste.

- Waste can be stored only at place to which the holder of waste has a title (ownership, rent, lease etc.). Storage of waste is allowed only as a consequence or intermediate stage of generation, collection or treatment process.
- Waste can be stored not longer than 3 years if this is justified by organization of technical requirements of treatment processes.
- Waste destined for landfilling can be stored only in case there is a need to collect a sufficient amount for transport to landfill site and no longer that one year.
- Maximum storage time (3 years or one year in case of D10 operation) is calculated for all waste holders together.

# Responsibility for waste treatment.

- Responsibility for waste management is assumed by waste generator. Waste generator may pass the duty to other entity authorised for collection or treatment of waste.
- In such a case responsibility for waste management passes with the waste to the next holder. There are exceptions from that principle:
  - waste carriers do not assume responsibility for waste management, waste generator is responsible for waste until waste carrier hands over the waste to the next holder,
  - generator of infectious medical waste remains responsible for the waste until it is incinerated,
  - dealers and brokers do not assume responsibility if they do not take possession of waste.

# Waste management plans.

Waste management plans are adopted at two levels:

- one national plan adopted by the Cabinet of Ministers
- one regional plan per each region adopted by regional self-government body (at level of województwo)

Waste management plans include information on:

- waste management state of affair: types and amount of generated waste, waste treatment facilities,
- waste prevention measures
- investments plans
- prognosis for future,
- timetable for realization and monitoring of plan.

# Waste permits

Activities in the field of collection of waste and waste treatment require permits. If facility requires IPPC permit, conditions of collection and waste treatment become a part of IPPC permit.

Permits are issued by:

- marshal – in case of IPPC permits
- starosta – in other cases.
- IPPC permit is valid for unlimited time.
- Permit for collection and treatment of waste is valid for max. 10 years.

# Specific waste streams.

- PCB waste.

It is forbidden to recover PCB. PCB shall be disposed of through incineration. Waste containing PCB can be treated if PCB content has been eliminated. If such an elimination is not possible PCB waste shall be disposed of as PCB.

- Waste oil.

Waste oil shall be collected separately if technically feasible. Waste oils of different characteristics cannot be mixed if this could impair recovery process.

Waste oils shall be regenerated in the first place (regeneration means refining of used oil to get rid of contaminants and products of oxidizing processes).

# Specific waste streams.

- Household sewage sludge

It can be treated outside facilities i.e. submitted for limited agriculture use in very specified conditions.

Sewage sludge can be hand over only by original generator directly to final treatment (no intermediate stages allowed.

Use of sewage sludge is possible only if they are properly stabilized by waste generator through biological, chemical or thermal processes.

Sewage sludge cannot be used in national parks and other protected areas, close to water bodies (rivers, lakes) and water supply reservoirs, on land that is frozen or covered with snow etc.

# Specific waste streams.

- Medical waste.

Recovery of medical waste is forbidden. Infectious medical waste shall only be disposed of by incineration in waste incinerators. It is not allowed to incinerate such waste in co-incineration facilities e.g. cement kilns etc.

Before permitting facility for incineration of medical waste, positive opinion of sanitary inspection must be obtained.

- Waste from  $\text{TiO}_2$  industry.

Due to possibility of high content of sulphates, there are specific conditions for landfilling of such waste. It is forbidden to locate the waste in the sea.



# Waste from accidents.

- Generation of waste during accidents requires immediate actions.
- Sub-regional authority (*starosta*) can make an administrative order imposing the obligation for immediate waste treatment on the entity responsible for accident.
- In certain situations when it is not possible to issue such order (no possibility to establish responsible entity) *starosta* will organize the waste treatment financed from regional environmental protection fund.

# Landfiling of hazardous waste.

- There are several types of landfills:
  - regular landfill of waste
  - underground landfill site
  - hazardous waste landfills
  - neutral waste landfills
- Hazardous waste shall be disposed of at hazardous waste landfills. No other type of waste can be accepted at hazardous waste landfills.
- It is allowed to create special sectors dedicated to solid hazardous waste on other landfills. Provisions and requirements referring to hazardous landfills shall apply to such sectors.

# Incineration of hazardous waste.

Thermal treatment of hazardous waste is always considered D10 operation even if facility uses energy from the process.

There are specific conditions for accepting hazardous waste at incineration plant:

- detailed description of waste, its characteristics, together with laboratory analysis,
- protection and precautionary measures,
- information with which substances the waste cannot be mixed,
- sampling before unloading the waste.

# Financing of waste management.

- In Poland we apply “producer pays” principle.
- Costs of waste management are borne mainly by waste producer or the holder of the waste. In some cases waste management costs are borne by producer of a product or entity responsible for marketing of the product (e.s. WEEE).
- Another financial instrument is National Fund of Environmental Protection and Water Management through which the following activities can be ensured:
  - Co-financing of waste management or waste prevention programs,
  - Co-financing ELVs dismantling facilities.

# Financing of waste management.

- Financing of the collection and treatment of household waste is based on the legislation on maintenance of the municipality.
- It is a system organized and financed through municipality from the waste management fee paid obligatorily by inhabitants.
- Each municipality establishes waste management fee taking into account:
  - type of waste (mixed or sorted)
  - size of municipality and distance to waste management facility
  - density of habitation,
  - type of area (rural or urban)
  - type of building (block of flats, single house etc.)
  - number of containers.

# Collection amounts of waste.

- In 2013 there were 142 million tons of waste generated in Poland:
- mining waste (52%),
- industrial waste (20%),
- energy production (17%)
- household waste (8%)
- other waste (5%).

# Collection of household waste.

- 11,3 million tons of household waste was generated in Poland in 2013 r. out of which 9,5 million tons were collected in 2013 including 7,139 mln collected from households.
- Out of those 7,139 mln tons, approximately 1,028 mln were selected waste. **Not more than one tonne of all selected household waste was declared as hazardous.**
- 63% of all collected waste was landfilled, 13% biologically treated and 8% was incinerated or co-incinerated.

# Collection of hazardous waste.

- According to the data reported to Marshall offices there was 1,34 milion tons of hazardous waste generated in Poland in 2013. This figure presents waste classified as hazardous according to Basel Convention (categories Y1-Y45).
- In 2013 there was 117000 tons of WEEE collected which allowed Poland to meet the target of 4kg of WEEE per capita as established in the EU legislation.



# Waste treatment capacity.

- In 2012 there were in total 2521 recovery and disposal facilities for hazardous and non-hazardous waste including:
  - 773 facilities for energy recovery (R1) with estimated capacity of 16.069.552 tons per year,
  - 85 facilities for incineration (D10) with estimated capacity of 1.546.193 tons per year,
  - 961 recycling facilities (capacity not estimated)
  - 643 landfills for non-hazardous waste with estimated capacity of 280.044 m<sup>3</sup>,
  - 49 landfills for hazardous waste with estimated capacity of 2022 m<sup>3</sup>.

# Mobile waste treatment.

- There are no provisions referring directly and exclusively to mobile treatment plants in the existing legislation in Poland.
- In the PWMA it is specified that waste can be treated in facilities or by means of equipment.
- **Facility** is a stationary technical device or set of devices connected technologically that may cause emissions.
- **Equipment** is defined as non-stationary technical device.

It might therefore be understood that mobile treatment units may fall into definition of equipment.

# Mobile waste treatment.

- PWMA requires that facility or equipment for waste treatment shall function in full compliance with environmental legislation (**permits**) and shall not cause the violation of emission standards.
- Permit application requirements are identical for facility and devices and shall include:
  - indication of the place where the waste will be treated,
  - indication of place and conditions of storage of waste,
  - description of activities to undertake in case of termination of waste treatment including the protection of the area where waste treatment has taken place

Those may indicate stationary character of facility and/or equipment.

# Awareness rising and solving problems.

## Awareness rising actions:

- Campaigns in media
  - Promotion materials
  - Sponsored articles in sectorial magazines
  - POL-EKO fairs
  - Earth Day
- 
- As to the not-in-my-backyard attitude, local solutions are required:
    - careful location of such facilities in industrial rather than residential area
    - campaigns carried out by facility operators: open door approach
    - transparency in permitting process.

THANK YOU FOR YOUR ATTENTION.