

**Organisation of awareness-raising events
concerning the implementation of Directive
1999/31 EC on the landfill of waste**

REFERENCE: ENV.G.4/SER/2006/0049

MINUTES POLAND

30 May 2007

BIPRO

Beratungsgesellschaft für integrierte Problemlösungen

1 Description and results of specific events

1.1 Poland: Minutes and outcome

Date	Poland
27.-28.02.2007	Venue: Gdansk / Marshal Office of the Pomeranian Voivodeship Participants: 33 (3 from national authorities, 16 from regional authorities, 6 from universities, 7 from enterprises) Agenda: 9 presentations (including EC and BiPRO) Excursion: Two landfills in Gdynia and Gdansk

The information exchange and awareness raising event in Gdansk was organised with the support of the Ministry of Environment of Poland and the Marshal Office of the Pomeranian Voivodeship. The 33 **participants** comprised representatives from national and regional authorities, from universities and enterprises (participation list see chapter 1.2).

The workshop in Gdansk was planned as a two days event. In total, 9 **presentations** were held (including BiPRO and EC). An excursion to non-hazardous waste landfills in Gdynia and Gdansk was realized the second day.

Presentations held addressed legal provisions and requirements both on European and national level as well as the current situation of waste management in Poland stressing aspects such as the waste management plans, technological requirements and financing.

The excursion to the two landfills provided valuable insight into technical standards of modern non-hazardous waste landfills in Poland (agenda see chapter 1.3).

As a result of discussions and presentations the following topics could be identified as priority issues and conclusions concerning the landfilling of waste in Poland:

Legal framework in Poland

The legal framework on landfilling of waste as well as the adoption of European legislation has been accomplished already prior to accession in 2001 by establishing the *National Act on waste*, the *Act on Environmental Protection* and the *Packaging and Packaging Waste Act*. Based on this background, permitting is mandatory for all landfills since 2001. The legal framework specifies legal landfills as sites which are subject to siting, technical standard requirements and permitting. There is a further differentiation into sites which correspond to European standards and those which are not yet technically adapted. Besides this, illegal landfills or uncontrolled dumpsites are specified. According to the national waste act (Article 33) minor adaptations of the technical standard of existing sites had to be accomplished by 2005. Major adaptations shall be finished by 2009. In case environmental impacts persist after accomplishment of minor adaptations the sites will have to be closed in 2009. Due to Article 54 of the national waste act however, closure of a non-compliant site can only be performed if requested by the landfill operator. An amendment of the law shall allow closing non-compliant sites from 2010 if decided necessary by the competent authorities.

A review on the number of illegal landfills is foreseen in the National Waste Act. Guidelines

for this purpose are currently under development. Uncontrolled dumpsites are addressed in Article 35 of the National Waste Act. The closure of these sites is in the responsibility of local authorities. A specific decision on elimination of illegal landfills and dumpsites is scheduled for the period 2007-2009.

Major priority is the implementation of the existing laws including the installation of regional recycling systems, the targets for biodegradable waste and the closure of landfills by 2009. Current Waste Management Plans are to be reviewed in 2007 giving the opportunity to adapt them to identified needs.¹

Facts and Figures of Poland

Some facts have been presented for the Pomeranian region with focus on biodegradable waste and landfills for MSW. Basic figures for organic waste generation in 1995 have been reported as 263 kt/y. In accordance with EU targets this amount shall be reduced to 197 kt in 2010, 131 kt in 2013 and 92 kt in 2020. As concerns existing landfills, deadlines for minor and major adaptations of technical standards apply as in national legislation. 9 landfills will have to be closed by 2009 due to impossibility to meet standard requirements.

Based on reporting from landfill operators, 520 kt of MW have been generated in the Pomeranian region in 2005, out of which 208 kt have been biodegradable. The number of landfills has been reported as 61, of which 54 are classified as legal landfills and 17 as IPPC facilities.²

Future Planning in Poland

11 landfills are planned in the Pomeranian region. Installations compliant with EU requirements can be found in the Gdansk region, at Gilwa Mata (south-east region) and Stary Las (centre). Other sites are currently applying for Cohesion Funds in order to adapt the technical standard or allow the construction of a new facility. Only in the south-west region of the Pomeranian region, problems with siting due to strong opposition of the local population exist.

¹ Presentation of Piotr Szymański, Ministry of Environment, Department of Waste Management and Anna Korzeniowska, Marshal Office of the Pomeranian Voivodeship

² Presentation of Piotr Szymański, Ministry of Environment, Department of Waste Management and Anna Korzeniowska, Marshal Office of the Pomeranian Voivodeship

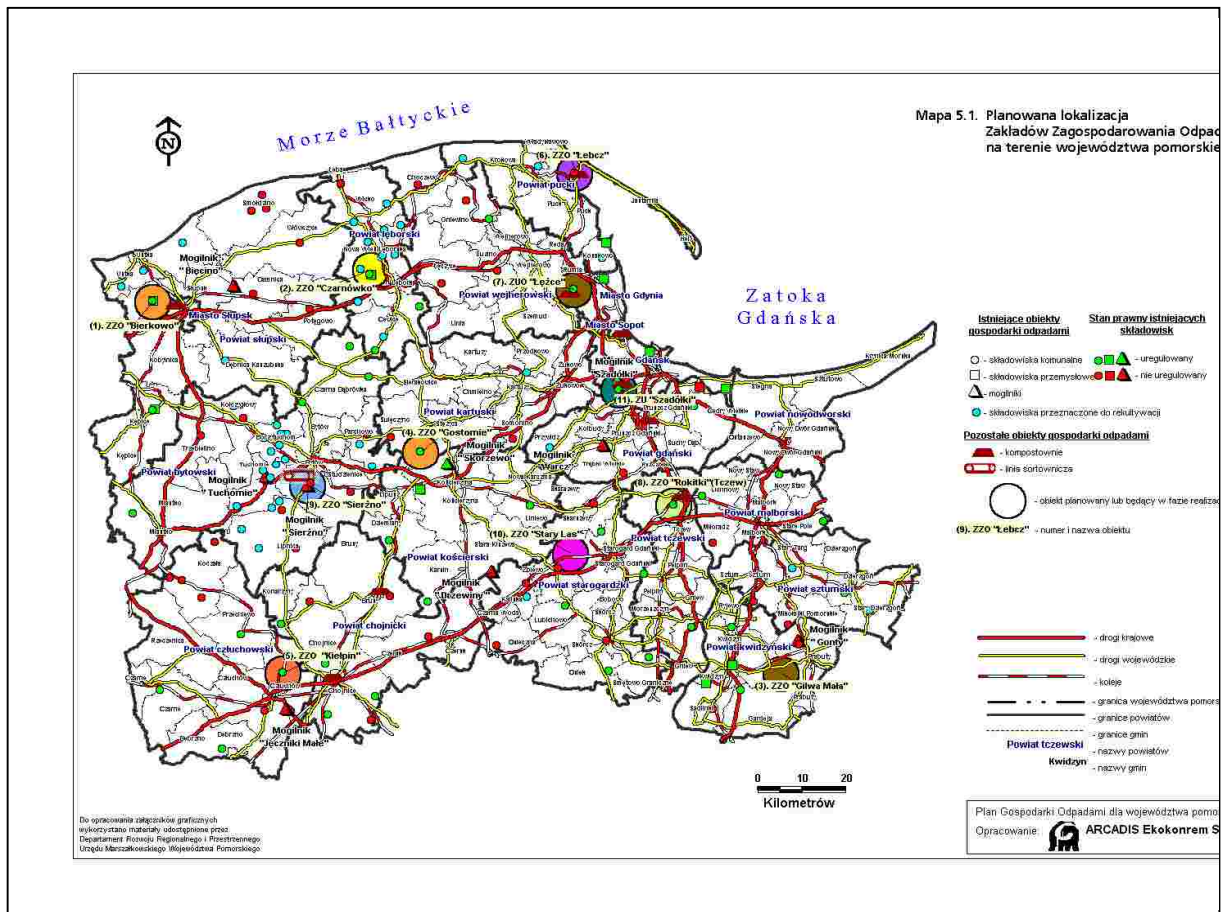


Figure 1-1: Distribution of landfills and planned landfills in the Pomeranian region

In order to improve the implementation, education and information of the public as well as better enforcement of the polluter-pays principle, besides installation of the waste management infrastructure are the priorities in waste management in the Pomeranian region.³

To support the implementation an *Operational Programme on Infrastructure and the Environment* has been started using funding of up to 85%. Environmental funds are seen as steering instruments to give incentives for selective collection, closure of landfills and construction of new treatment facilities.⁴

Description of the landfill visited

During the event in Poland two landfills in the Pomeranian region have been visited. The first landfill was the Eko Dolina landfill, the second was the Gdansk Szadółki landfill which is currently applying for funds for adaptation of its technical standard. The Eko Dolina landfill receives 170 kt of MSW annually and serves an area of 7 municipalities with 40,000 inhabitants. Due to its central location, largest transport distances are about 25 km. The site contains a sophisticated separation line for unsorted MSW as well as for separately collected waste fractions from commerce with a capacity of 45.7 kt/y. Besides plastics, paper and

³ Presentation of Anna Korzeniowska, Marshal Office of the Pomeranian Region

⁴ Presentation of Danuta Grodzicka-Kozak, Regional Fund of Environment and Water Protection in Gdańsk

cardboard, metal and glass, the separation line allow to generate refused derived fuel (RDF) and compost like organic fraction. A recover of these two latter fractions however, is not yet performed. The overall recover rate is 10-12%. The gate fee for mixed MSW is about 26 €/t.

WEEEs are collected every two months by means of separate collection tours and they are dismantled on the site. Correspondingly, there are separate collection tours and collection facilities for hazardous waste. The amount of hazardous waste collected is about 200 t/y. This number does by far not meet the estimated 1,300 t/y expected on the basis of 1% hazardous components in mixed MSW. Recovery of C&D waste for construction purposes was 14,000 t in 2006, composting of green waste about 5,500 t/y.

70 gas wells, mostly located on the territory of the neighbouring previous landfill provide gas for energy and heat production. In 2006 energy production was 5,800 MW. 80% of the outcome can be sold to the public electricity network. Leachate water is collected and treated with inverse osmosis prior to being fed into the municipal waste water treatment system.

Gdansk Szadołki receives about 290,000 t/y of waste from the Gdansk municipality. The landfill is mainly for mixed MSW. However, except from EWC 14 and 18 principally all waste types might be accepted. Waste with more than 25% of liquid content is only accepted in the case of sewage sludge. Asbestos waste is not accepted. Hazardous waste may be delivered only after prior information in specifically dedicated areas. The gate fee for mixed MSW is about 20 €/t.

Since May 2006 container for separate collection of plastics, paper and glass have been provided for residents by Zakład Utylizacyjny – operator of Szadołki landfill. Composting is performed by means of container composting (3,000 t/y) and open composting (5,000 t/y). A power station for energy recovery from landfill gas is in place producing energy for 200 households in exceedance to own needs. Leachate water is currently recycled to compost for better digestion. A treatment facility is planned in the framework of the adaptation project.

In the framework of the project the following priorities are set:

- Develop treatment capacity for asbestos,
- Enhance composting capacity implementing huge container,
- Enhance the separation line generating recoverables as well as RDF and compost like organic fraction from mixed MSW,
- Develop a waste treatment for C&D waste,
- Develop bulky waste dismantling facility including shredder,
- Implement a section for collection and temporary storage of hazardous waste.

Falcons are used at both landfills to expel rodents and birds. Monitoring of air, water and landfill structure is performed. Both landfills and especially Eko Dolina appear to use high level technical standard according to the European requirements. Only the recover of RDF and compost like organic fraction might need improvement.⁵

⁵ Presentation at EKO Dolina landfill and Gdansk Szadołki landfill

Major problems and deficits identified by the workshop participants in Poland

- (1) Most of established landfill sites do not meet EC standards. The traditional system of “municipal” waste management is still ongoing. The traditional dump sites in nearly every *Gmyna* are continuously operated. *Gmynas* often do not appreciate to collaborate among each other (for an example of good practice, see “Eko Dolina” example).
- (2) Obligations for minor adaptations in landfills exist according to Polish legislation by 2005. Inspections showed that adaptations required are not accomplished at most landfills.
- (3) According to the current Waste Act the closure of landfill are possible only on request of the landfill operator. The Ministry cannot execute closure in case of non-compliance due to provisions in national law which requires repeated “granting of transition periods” on request of landfill operator. The law shall be changed in 2010.
- (4) There exist legal obstacles for the use of waste derived from compost. Polish legislation on fertilizers does not include compost and requires organic content which cannot be fulfilled by compost in most cases. Thus restricting the compost to the use as construction material in landfill.
- (5) The existing capacity for recovery of glass and paper is exceeding the amount provided. The separation rate therefore has to be increased.
- (6) The ratio of landfill and the biodegradable fraction in landfilled waste (e.g. mixed MSW) is still far too high, and it seems difficult to achieve the targets set in the Landfill Directive by the deadlines set.
- (7) Presently, waste is not always treated in accordance with the requirements of the national or regional Waste Management Plans.
- (8) Legal requirements concerning the acceptance criteria in Polish legislation are less strict than those of EU Directive. Consequently requirements of Acceptance Criteria Decision are not yet reachable. Adaptation of national law shifted to end of 2007.
- (9) The established collection scheme for MSW with the *Gmynas* transferring responsibility to waste collectors, the free choice for citizens contracting with one of the competing waste collectors and waste collectors setting tariffs solely based on economic facts, is not appropriate to assure a sound waste management.
- (10) Waste collectors are free to select a site where they deliver the waste they have collected, so waste collectors tend to ongoing use traditional dump sites, where gate fees are much lower than at modern sites (approximately factor 4 to 5). Simultaneously, fees for waste owners (e.g. households for MSW) are depending on type and location of dwelling, not on quantity of waste produced. There is no incentive for the separate collection of recoverables.
- (11) The fees for waste owners are still too low to enable construction of modern environmental sound system of waste management including separate collection and recovery. Social protests are feared to arise if fees are increased.
- (12) Sudden increase of waste fees will promote illegal dumping.

- (13) There are legal obstacles as sidewalks may be private property and difficulties, e.g. protests from residents in obtaining permits to establish separate collection containers.
- (14) The separate collection system is introduced but the quantity and the quality is not satisfying yet. Main stream of waste is delivered as mixed waste.
- (15) The collection of hazardous fractions from MSW is organised by means of mobile collection once yearly and containers. In addition, hazardous waste can be delivered directly at the landfill sites. The effectiveness of this system is however low and it is estimated that only approximately 1% of the hazardous waste generated in household is collected so far.
- (16) The collaboration between the State, the Voivodeship, the *Powiat* and the *Gmina* level is not always frictionless. According to national authorities the Waste Management Act offers sufficient possibilities for enforcement authorities to execute decisions at local level (e.g. closure of illegal landfills, enforcement of adaptation of obligations, change in collection system). According to regional authorities and enforcing authorities these provisions however are not sufficient to enable enforcement of new rules towards local authorities.
- (17) Administrative fees that can be imposed in case of violation and non-compliance are not high enough to act as effective tool for improving compliance from landfill operators, local authorities or citizens.
- (18) Treated leachate water from landfill is often cleaner than municipal waste water with the consequence of legally required ineffective double treatment.
- (19) Requirements on thickness and characteristics of geological barrier in the Landfill Directive do not always seem to be reasonable from a practical (engineering) point of view, e.g. inclusion of use of Bentonite and acceptance of natural layer thicker but with worse k-factor might need to be discussed.

Examples of good practice identified as potential tools to improve the implementation and enforcement in Poland

- (1) The deadline for closure of non-compliant landfills is set by 2009, although there the requirements on water control, leachate management, protection of soil and water, gas control and stability will not apply to municipal landfills granted in accession treaty until 2012.
- (2) Gate fees for landfills were recently increase by factor of 5 per ton.
- (3) The Environmental Use Fee can be used as an instrument to promote the development of alternative treatment methods.
- (4) On-site verification is performed at all types of landfill not only at new ones.
- (5) Documents and guidance for the basis characterisation exist.
- (6) Administrative fines in case of violation are planned to be review.
- (7) A strategy determining targets to comply with the EU and the Polish law in are developed in the Pomeranian Voivodeship.

- (8) Information and education campaigns are carried out to inform and educate the civil society on waste management topics.
- (9) A municipal collection system, where container for re-coverables (paper, plastic, metal, glass) is provided to citizens is free of charge. The waste fees are calculated only based on mixed MSW container.
- (10) A separation line exists at Eko Dolina landfill producing paper, plastics and glass for recycling, RDF fraction and small biodegradable. Furthermore a dismantling line for metals and WEEEs and a facility for energy recovery from a neighbouring closed landfill site, serving several hundred households, are installed.
- (11) Modern landfills are constructed at or besides former landfill site. This enables highly cost effective recultivation and coverage of "old" parts and combined management of the sites including degassing and leachate management.
- (12) Based on a risk assessment "old" landfills and dumpsites are categorised into three categories requiring different levels of recultivation efforts.

Priority activities for implementation of Landfill Directive requirements in Poland

- (1) The "polluter pays principle" has to be considered more strictly.
- (2) The waste collection system has to be changed by putting responsibility for waste management until final disposal on municipalities.
- (3) Waste collectors have to be organised privately in order to become waste owners and for having a free choice for the place for disposal or recovery.
- (4) National authorities recommend the establishment of Waste Management Regions within the Voivodeship legislation, which have to be respected and served by waste collectors.
- (5) The system of waste fees for citizens has to be changed, moving from location based to weight based system.
- (6) Collaboration between *Gmynas* has to be strengthened by setting incentives in cooperation e.g. in the field of collection schemes.
- (7) Measures for awareness raising towards a sound public attitude towards a waste separation and waste collection have to be taken, e.g. in schools.

1.2 Participation List Poland / Gdansk // 27.-28.02.2007

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1.3 Agenda Poland / Gdansk // 27.-28.02.2007

Tuesday, 27th February 2007

9:00	Registration, Come together, including Coffee (Sala Herbowa, ground floor) Chairperson: Anke Joas, Ferdinand Zotz (BiPRO GmbH)
10:00	Jan Kozłowski (Marshal of the Pomorskie Voivodeship) <i>Opening of the Workshop</i>
10:05	Anke Joas (BiPRO GmbH, Munich) <i>Welcoming of participants and introduction of the EU Project</i>
I. RELEVANT LEGISLATION AND STATUS QUO	
10:15	Anke Joas (BiPRO GmbH, Munich) <i>Overview on relevant European legislation – The Landfill Directive</i>
10:50	Helmut Maurer (EU Commission, DG Environment, Brussels) <i>Status and problems with the implementation of European legislation for landfills – An European perspective</i>
11:30	Piotr Szymański (Ministry of Environment, Department of Waste Management, Warsaw) <i>Waste landfills. Procedure methods, tasks arising from the National waste management plan 2010</i>
12:00	Anna Korzeniowska (Marshall Office Gdansk) <i>Overview of Status of landfills in the Pomorskie Voivodeship</i>
12:30	Question and Discussion
13:00	LUNCH BREAK
II. TECHNICAL REQUIREMENTS	
Chairperson: Anke Joas, Ferdinand Zotz (BiPRO GmbH)	
14:00	Marek Kundegorski (Grontmij Polska Sp. z o.o.) <i>Development of municipal solid waste (MSW) landfilling in Poland during the last 10 years – legal and technical aspects</i>
14:30	Piotr Manczarski (Warsaw Technical University, Dept. of Environmental Engineering) <i>Technological requirements for different type of landfills</i>
15:00	Ferdinand Zotz (BiPRO GmbH, Munich) <i>Legal requirements for acceptance and control during operation of landfills</i>
15:25	COFFEE BREAK
15:40	Danuta Grodzicka-Kozak (Regional Fund of Environment and Water Protection, Gdansk) <i>Finance sources for the waste management in Poland</i>
16:00	Anke Joas (BiPRO GmbH, Munich) <i>Experiences with the implementation of the Landfill Directive from the previous project events</i>
16:15	Question and Discussion
17:00	END OF DAY ONE

Wednesday, 28th February 2007

III. EXCURSION	
8:00	Excursion to the landfills of Gdynia and Gdansk
IV. CLOSING SESSION (Meeting room landfill Gdansk)	
Chairperson: Anke Joas, Ferdinand Zotz (BiPRO GmbH)	
12:00	Final Discussion, Conclusions
13:00	END OF THE WORKSHOP