

**Annex to the Resolution No. 39/2010
of the Council of Ministers
of 15 March 2010**

MINISTRY OF ECONOMY

**Programme for Asbestos Abatement in Poland
2009-2032**



Warsaw, 2010

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1. SUMMARY

This *Programme for Asbestos Abatement in Poland 2009-2032*, hereinafter “the Programme”, maintains the objectives adopted by the Council of Ministers on 14 May 2002 in the *Programme for disposal of asbestos and asbestos-containing products used in Poland*:

- 1) removal and disposal of products containing asbestos;
- 2) minimising adverse health effects caused by the presence of asbestos on the territory of Poland;
- 3) eliminating negative effect of asbestos on the environment.

However, it also defines new activities necessary to abate asbestos in the country within the period of 24 years, which result from economic and social changes taking place, *inter alia*, in connection with the Poland's accession to the European Union.

Implements proposals presented in the “Report from the implementation of the *Programme for disposal of asbestos and asbestos-containing products used in Poland* for the period 2003-2007” by introducing priority legislative activities, mobilising financial support for activities carried out by self-government units, and improving monitoring system of the Programme implementation.

Financial support from the budgetary measures within the Minister of Economy's competence is directed mainly at strengthening the process of asbestos-containing products inventory by subsidising the development of gmina, powiat and voivodeship plans regarding removal of asbestos-containing products. It is also assigned for carrying out education and information activities, including trainings for public administration and local trainings which will help in strengthening the process of asbestos-containing products removal from the premises without the need to make use of specialised companies services.

The programme groups activities scheduled for the implementation at a central, voivodeship and local level in five subject areas:

- 1) legislative activities;
- 2) education and information activities addressed to children and youth, trainings for employees of government and self-government administrations, development of training materials, promotion of technologies for the destruction of asbestos fibres, organisation of national and international trainings, seminars, conferences, congresses and participation therein;
- 3) activities related to the removal of asbestos and products containing asbestos from the constructions, public amenities and sites of former asbestos products producers, cleaning the premises, building landfills and installations for the destruction of asbestos fibres;
- 4) monitoring of the Programme implementation by means of electronic spatial information system;
- 5) activities in the area of exposure assessment and health protection.

It is estimated that there are still approximately 14,5 million tonnes of products containing asbestos used within the territory of Poland (approx. 1 million tonnes were removed in the period 2003-2008).

Total cost of the Programme implementation in the period 2009-2032 is estimated to amount to approx. PLN 40.4 billion. This amount consist of the own resources of premises owners', investors' resources, funds from the national budget and funds from the self-government units.

Cost of Programme implementation was estimated based on the following assumptions:

- 14.5 million tonnes of asbestos products remain to be removed and the total cost of their dismantling and transport as well as disposal of produced waste containing asbestos is estimated to amount to approx. PLN 40 billion;
- cost of building 56 landfills and landfill sectors for asbestos-containing waste has been estimated to amount to approx. PLN 260 million;
- financial resources from the national budget, at the Minister of Economy's disposal, allocated to support: development of plans for asbestos-containing products removal, education and information activities and the Programme monitoring, amount to PLN 53.2 million (0.13%);
- financial resources of self-government units allocated to develop and update the plans for asbestos-containing products removal and education and information activities are estimated to amount to approx. PLN 40 million (0.10%).

The following financial instruments are available for dismantling, transport and disposal of removed products containing asbestos:

- 1) loans and subsidies from the resources of national environmental protection funds, the beneficiaries of which are self-government units;
- 2) EU funds under Rural Development Programme 2007-2013 and Regional Operational Programme, the beneficiaries of which include, among others, self-government units and their partnerships, operators providing services as regards own activities of self-government units, organisational units of self-government units with a legal personality, housing co-operatives, housing communities, rural, rural and municipal and municipal gminas, young farmers and farmers undertaking non-agricultural business activity;
- 3) Commercial and preferential credits (with lending rate subsidised from voivodeship environmental protection and water management funds).

In order to increase the rate of removing asbestos-containing products, especially from rural areas, the Programme introduces a new instrument enabling the removal of asbestos-containing products from own premises without the necessity to make use of specialised companies services, if the persons removing asbestos products are properly trained and have at their disposal technical safeguards which eliminate exposure to contact with asbestos fibres, and these works will be carried out incidentally. Under the works preliminary to the launching of this instrument, a list of necessary legislative activities was prepared and financing of appropriate local trainings was planned.

Removal of asbestos-containing products will provide social, economic and environmental benefits, i.e.:

- 1) reduction of asbestos fibres emission;
- 2) improvement in the protection of inhabitants' health;
- 3) improvement in external appearance of constructions and their technical condition.

Update of the Programme implementation costs, actual investment needs and fiscal effects will be possible only after finalising the process of thorough inventory of asbestos products in Poland. The rate of activities carried out so far suggests that it is necessary to assume a several years period for making a full inventory. Activities conducted by the Minister of Economy aim to accelerate and improve this process.

2. STATE OF PLAY

The Programme for disposal of asbestos and asbestos-containing products used in Poland, adopted on 14 May 2002 by the Council of Ministers, was developed in years 200-2001 on the basis of legal provisions in force at that time. Council of Ministers has been obliged to its development by the resolution, adopted by the Sejm of the Republic of Poland on 19 June 1997, on the programme of asbestos withdrawal from the economy (M.P. No 38, item 373).

Programme for Asbestos Abatement in Poland 2009-2032 constitutes a continuation and update of the objectives and activities set out in the *Programme for disposal of asbestos and asbestos-containing products used in Poland*.

The Programme implementation was scheduled for 2009-2032 and substantially exceeds the frameworks of National Development Strategy 2007-2015. Such a long period has been accepted mainly due to the considerable, at least thirty years long, stability of asbestos cement boards and other products used in building industry. Furthermore, asbestos-containing products are scattered across the country and their precise amount is unknown, though the estimates made in 2003 indicated that approx. 15.5 million tonnes of asbestos-containing products were used in Poland. Another factor significantly reducing the period of the Programme implementation is the necessity for the premises, facilities and installations owners to bear high costs of asbestos products dismantling and transport and asbestos waste disposal, as well as the unavoidable costs of new non-asbestos products that will replace the removed asbestos products.

The Programme envisages an intensification of all activities by 2012 so that a thorough assessment regarding accomplishment of the Programme objectives can be performed in years 2012–2013 and an update of the Programme can be prepared by 2015. In the years 2012–2015, the entirety of activities undertaken and goals achieved thus far will be summed up, also by means of using the Programme implementation assessment indicators.

In years 2003-2008 of the functioning of *Programme for disposal of asbestos and asbestos-containing products used in Poland*, numerous activities were carried out in order to strengthen the process of asbestos abatement in Poland. However, the rate of asbestos-containing products removal was lower than it has been assumed —so far approx. 1 million tonnes were removed, thus approximately 14.5 million tonnes of asbestos-containing products remain in use in Poland.

In order to increase the rate of removing asbestos-containing products, legislative, organisational and information and education activities were carried out, aiming at supporting the process of asbestos abatement in Poland.

It is necessary to name at least some of these activities, namely:

- 1) issuance and amendment of the Act on the ban of use of asbestos-containing products, issuance of six ordinances directly regulation the asbestos issue, and a number of other regulations on chemicals and waste management indirectly related to the asbestos issues (Annex No 1);
- 2) spreading knowledge on harmful effects of asbestos and procedures of safe conduct in case of using and removing products containing asbestos, by issuing guides and handbooks and distributing them among self-government units;

- 3) operation of 29 landfills taking for deposition waste containing asbestos, and plans for expansion of their network in Poland (Annex No 2);
- 4) analysis of new emerging technologies for destroying and using asbestos fibres in asbestos-containing waste;
- 5) Analysing possibilities of introducing derogations from the obligation to remove certain products containing asbestos;
- 6) Formation of a large number of small enterprises dealing with repair and construction which provide services in eliminating asbestos products from use and transferring produced asbestos waste to the landfill;
- 7) Training 6,000 employees of government and self-government administration, Police, Fire Service, Customs and inspectors of Labour Inspectorate, Building Control, Sanitary Inspectorate and physicians;
- 8) establishing international contacts, especially within EU, which facilitate co-operation in the area of safe asbestos removal;
- 9) launch of the Programme implementation monitoring in the form of database on products and waste containing asbestos;
- 10) establishment of the Reference Centre for Asbestos Exposure and Health Risk Assessment at the Nofer Institute of Occupational Medicine in Łódź, which conducts studies on health condition of former workers of plants where asbestos was used for production, population in hazardous areas and measurements of asbestos fibres concentration in the whole country (Annex No 3);
- 11) financial support in the form of self-government units subsidisation in connection with developing programmes for removal of asbestos and asbestos-containing products, developing documentation with regard to removal of asbestos products from public utility areas, undertaking education and information activities;
- 12) launch of financing for activities in connection with asbestos removal in the framework of national environmental protection funds from the EU resources and preferential credits of Bank Ochrony Środowiska.

The most important shortcomings in the implementation of activities to this date are:

- 1) too small number of gmina, powiat, voivodeship programmes for removal of asbestos and asbestos-containing products;
- 2) insufficient number of site plans presenting the distribution of products containing asbestos and complete registries of asbestos-containing constructions and areas exposed to asbestos in the voivodeships;
- 3) unsatisfactory rate of making an inventory of the products used, containing asbestos, and insufficient number of primary controls of constructions and construction tools condition carried out by a majority of natural and legal persons who are owners, administrators or users of sites where asbestos or asbestos-containing products were or are used; insufficient number of primary controls assessments led to the abandonment of further periodical controls as well as condition assessments and made it impossible to use safely products containing asbestos;
- 4) incomplete information on the amount of removed asbestos-containing products;
- 5) non-compliance with provisions contained in legal acts on handling products containing asbestos;

- 6) insufficient flow of information and reporting;
- 7) Insufficient cooperation between government and self-government administrations, which hindered effective implementation of activities resulting from the Programme;
- 8) lack of systemic financial support for entities obliged to take actions in favour of safe asbestos removal, especially for natural persons, which is a considerable threat to the plan of removing asbestos by year 2032.

Detailed information on the implementation of activities set out in *The Programme for disposal of asbestos and asbestos-containing products used in Poland* in years 2003-2007 were contained in the *Report on the implementation of "The Programme for disposal of asbestos and asbestos-containing products used in Poland" in years 2003-2007*, adopted by the Council of Ministers on 4 March 2008.

In 2003-2008 the state budget finances activities realised in four subject areas, i.e.:

- 1) financial support for the development of plans and programmes for asbestos-containing products removal and carrying out trainings on asbestos issues for government and self-government administrations;
- 2) information and popularising activities;
- 3) monitoring the Programme implementation and coordinating activities;
- 4) financial support for the activities of the Reference Centre for Asbestos Exposure and Health Risk Assessment and other activities related to the assessment of asbestos fibres harmful effects.

The expenditure from the total amount of state budget resources (PLN 65.150 million) assigned to the Programme implementation was expected to be allocated in accordance with the following schedule:

- in years 2003-2006 the amount of PLN 15.750 million, i.e. on average, PLN 3.940 million per year (PLN 6.153 million expended),
- in years 2007-2032 the amount of PLN 49.400 million, i.e. on average, PLN 1.900 million per year (PLN 5.769 million expended in years 2007-2008).

No funds from the state budget were allocated to works related to the Programme implementation in 2003. In 2004 PLN 2 million were allocated, while in 2005 and 2006 - PLN 3 million, respectively. For 2007, PLN 0.5 million were reserved in the budgetary act for the purpose of the Programme implementation, whereas the Minister of Economy allocated an additional amount of PLN 1.250 million from the own resources of his department. In 2008 the resources allocated to the activities implementation amounted to PLN 4.247 million. The table below presents a summary of expended resources from the state budget in years 2003-2008 according to the activities schedule of the *Programme for disposal of asbestos and asbestos-containing products used in Poland*.

Table 1. Expenditure from the state budget in years 2003-2008 for the implementation of the *Programme for disposal of asbestos and asbestos-containing products used in Poland*

Issue-subject area	Plan for 2003-2032	Expended in years 2003- 2006	Expended in 2007	Expended in 2008	Expended in years 2003-2008
	[PLN]	[PLN]	[PLN]	[PLN]	[PLN]
Development of plans, programmes and trainings	4,150,000	2,476,400	648,045	1,569,431	4,693,876
Information and popularising activities	27,000,000	1,449,100	442,200	1,398,814	3,290,114
Monitoring of the Programme implementation and coordinating activities	30,000,000	498,700	260,000	277,625	1,036,325
Activities of the Reference Centre for Asbestos Exposure and Health Risk Assessment and other activities related to the assessment of asbestos fibres harmful effects	4,000,000	1,728,900	400,000	772,697	2,901,597
Total	65,150,000	6,153,100	1,750,245	4,018,567	11,921,912

In 2008, under the budgetary resources at its disposal, the Ministry of Economy realised a number of education and information projects with an aim to improve the self-governments activity. Guides for users of asbestos-containing products, handbooks on the possible ways of obtaining financial resources for activities related to the asbestos-containing products removal, information leaflets for natural and legal persons and information posters were sent out to all self-government units. In South-East Poland, where asbestos products are used in exceptionally large amounts, radio broadcasts were given on the asbestos issues. Furthermore, preparations for the national competition for primary schools, gymnasiums and secondary schools were began under the “We remove asbestos!” (“Usuwamy azbest”) heading. The competition is scheduled to take place in school year 2009/2010. Self-governments of the following voivodeships also received financial support: Lubelskie – for the organisation of a conference for self-governors, and Podkarpackie - for producing an educational film. All poviats in Poland received educational materials in the form of a standard poviat plan for asbestos removal.

In 2008 the Minister of Economy granted subsidies to 73 self-government units from the whole territory of Poland for development of programmes for removal of asbestos and asbestos-containing products. Activities relating to health care, including measurements of asbestos fibres concentration in the air, seminars for physicians, development of new projects of research programmes, among others, on increasing the detectability of asbestos-related diseases and assessing health risks for people and farm animals, were also financed from the funds that were at the disposal of Minister of Economy in 2008. Furthermore, regional conferences have taken place in Podlaskie, Mazowieckie and Podkarpackie Voivodeships as well as seminars for city guards and housing associations from the Katowice region.

2008 saw finalisation of a project co-financed from the Union funds under which training was provided to the employees of public administration, Police, Fire Service, Customs and inspectors of Labour Inspectorate, Building Control, Sanitary Inspectorate and physicians.

Gained experiences indicate that it is necessary to continue activities that have already been launched. Self-government units' interest in obtaining subsidies of the Minister of Economy for the development of programme for asbestos-containing products removal from the area of a gmina, powiat or voivodeship, which was noted in 2008, allows us to expect that backlogs in the inventories of asbestos-containing products and in the assessment of their technical condition should be made up for. However, it is necessary to increase the funds pool assigned to financial support for developing and updating gmina, powiat and voivodeship programmes for asbestos-containing products removal.

Organising trainings and seminars for the representatives of self-government units and other services and occupational groups dealing with asbestos issues is an important part of education and information activities. Due to the employees' rotation in self-government and government administration offices and changes in law provisions, the trainings should be carried out periodically every 2-3 years.

It is also necessary to modernise monitoring system of the Programme implementation in order to ensure possibility of obtaining verified data on actual quantity of asbestos-containing products in the country, and monitor process of their removal and disposal. Initially planned costs of the Programme monitoring and coordination were reduced to amounts that guarantee restructuring of the monitoring system and its annual maintenance.

The Programme implementation is linked to the realisation of objectives set in the following documents:

- 1) National Development Strategy 2007-2015 (NDS);
- 2) National Strategic Reference Framework 2007-2013 supporting economic growth and employment – National Cohesion Strategy (NSRF);
- 3) National Environmental Policy for 2003-2006, taking into account the perspective for years 2007-2010 (National Environmental Policy 2003-2006);
- 4) National Waste Management Plan 2010 (NWMP 2010);
- 5) National Reform Programme for years 2008-2011 for implementation of the Lisbon Strategy (NRP);
- 6) Renewed EU Sustainable Development Strategy (EU SDS).

The main objective of National Development Strategy 2007-2015 is to improve standards and quality of life of Polish residents: individuals and their families. The Programme realises this objective by means of its actions directed at the improvement of health of residents of Poland and life in a clean, healthy and favourable natural environment by asbestos abatement in Poland – the substance which poses a threat to the environment.

Actions set out in the Programme are linked to the following NDS Priorities:

- 1) to Priority 1: *Growth of competitiveness and innovativeness of the economy* in terms of raising the technological economy level by research development and innovations, including eco-innovations as investments of the future, which include withdrawal of substances considered to be toxic and dangerous;
- 2) to Priority 2: *Improvement of the condition of technical and social infrastructure* in terms of shaping conditions for development of investments in the housing industry, among others, by inventorying the resources in which dangerous materials were used and replacing them with modern materials, as well as in terms of environment protection infrastructure through such undertakings as for example managing waste and reclamation of degraded lands;
- 3) to Priority 6: *Regional development and the improvement of territorial cohesion* through levelling the development opportunities of problem areas, including areas which require undertaking special activities in order to improve condition of the natural environment.

National Strategic Reference Framework 2007-2013 supports economic growth and employment. The document formulates the top challenges for Poland in the perspective of the forthcoming years and defines objectives aimed at achieving social, economic and territorial cohesion with Community countries and regions. The Programme implements Objective 3 of NSRF: *Establishment and modernisation of technical and social infrastructure crucial for increase of Poland's competitiveness*, which is coherent with the Community Strategic Guidelines in terms of strengthening the synergies between environmental protection and economic growth. Another element crucial for the functioning and development of Polish economy is environment protection infrastructure, e.g. asbestos waste landfills, and environmental safety, e.g. procedures on dismantling asbestos-containing products and transport and asbestos waste deposition. Raising environmental awareness by such actions as education and information activities conducted under the Programme implementation contribute to the improvement of life quality of Polish citizens. Development of new technologies, also for destroying asbestos fibres contributes to assure quality of the environment according to the principles of sustainable development.

The Programme is coherent with the basic directions for actions of the National Environmental Policy for 2003-2006 in terms of environment protection, development and sustainable use of environmental resources: "The Environment and Health. The Further Improvement in Environmental Quality and Safety"/ The Programme is part of Measure 2: "Implementation of waste disposal programmes for particularly hazardous waste".

The Programme implements the guiding principles of National Waste Management Plan 2010 that provides for successive realisation of the aims of the *Programme for disposal of asbestos and asbestos-containing products used in Poland*. The need to update the latter was mentioned. In order to achieve the aims in the field of asbestos-containing waste management, the following measures are needed:

- monitoring of appropriate handling of asbestos-containing waste, in particular by individual owners and companies responsible for dismantling;
- modernisation and/or construction of asbestos waste landfills.

The aim of the "National Reform Programme for years 2008-2011 to implement the Lisbon Strategy" (NRP) is to create in Poland a basis for sustainable social and economic development that will improve the living standards of citizens. The removal of asbestos-containing products is one of the factors of improving the life quality of citizens. The aims of the Programme correspond to the *Innovative economy* priority which, in the framework of measure 6 *Using innovation in terms of environmental protection*, provides for the appropriate waste management, including asbestos-containing waste. The activities listed in the Programme will result in the improvement of living conditions of the citizens.

One of the aims of the Renewed EU Sustainable Development Strategy (EU SDS) is to protect the environment by means of high-level protection measures and preventing pollution, as well as to ensure high life quality for the residents. The Programme realises public health goals concerning the improvement of protection against risks related, e.g., to asbestos as a particular environmental risk-bearing factor. The Programme is consistent with the principles of eventual replacement "by suitable alternative substances or technologies where these are economically and technically viable".

3. PROGRAMME GOALS, TASKS AND FINANCING

In the *Programme for Asbestos Abatement in Poland 2009-2032*, the following goals are maintained:

- 1) to remove and dispose of products containing asbestos;
- 2) to minimise negative health effects of contact with asbestos fibres;
- 3) to eliminate the negative effect of asbestos on the environment.

These goals are to be achieved by the implementation of mutually complementing tasks at three levels (central, voivodeship and local: powiat and gmina), financed from private and public means, including budgetary resources at the disposal of the Minister of Economy.

The Programme provides for grouping the tasks in five subject areas:

- 1) Legislative tasks;
- 2) Education and information activities, including: measures aimed at children and youth; trainings for employees of government and self-government administrations; development of educational and awareness-raising materials; evaluation and promotion of technologies for the destruction of asbestos fibres in asbestos waste; organisation of national and international trainings, seminars, conferences and congresses and participation in them;
- 3) Tasks related to the removal of asbestos and asbestos-containing products, including: removal of asbestos-containing products from constructions; cleaning of premises, amenities, public areas and former plants manufacturing asbestos-containing products; construction of asbestos waste landfills, as well as installations and equipment for the destruction of asbestos fibres; auxiliary tasks, including financial support for the development of programmes of asbestos-containing products removal and asbestos abatement at all levels;
- 4) Controlling the Programme implementation in form of the Electronic Spatial Information System for the monitoring of asbestos-containing products removal;
- 5) Measures in the field of exposure assessment and health protection, including the activities of the Reference Centre for Asbestos Exposure and Health Risk Assessment.

The basic condition for timely asbestos abatement in Poland is to ensure appropriate financial resources for works related to safe removal of asbestos products and to create legal regulations that stimulate effective cooperation between owners of polluted constructions and local authorities.

3.1. Legislative tasks

A complex analysis of the binding legal acts concerning asbestos, both at European Union and at national levels, showed that 98 acts of national law need to be harmonised with 22 acts of EU law. The results of this legal analysis indicate clearly that numerous legislative actions must be taken that are not only in the competence of the Minister of Economy, but also of the Minister of Environment and Minister of Health.

The list of tasks below covers only the most important needs in the area of legislative changes, the realisation of which should be as fast as possible, so that legal provisions concerning asbestos are streamlined, and necessary procedures launched to accelerate the process of asbestos abatement in Poland.

Table 2. Proposed legislative changes in provisions concerning asbestos

No.	TASK	Responsible	Date
1.	Amendment of the Act on waste, providing for the processing of asbestos-containing waste in mobile facilities.	Minister of Environment	2009
2.	Ordinance of the Minister of Economy on the processing of asbestos-containing waste in mobile facilities (on the basis of the amended Act on waste).	Minister of Economy	2009 (date depending on point 1)
3.	The following amendment of the Act of 19 June 1997 prohibiting the use of asbestos-containing products (Dz. U. of 2004, No 3, item 20, as amended): (1) regulation of rights and obligations of competent public administration authorities, as well as legal and natural persons, among others in the field of inventorying asbestos-containing products, (2) placing an obligation on gminas to prepare gmina programmes of removing asbestos and asbestos-containing products with the use of Electronic Spatial Information System for the monitoring of asbestos-containing products removal, (3) introduction of an exception from the obligation to remove from the ground the asbestos-cement pipes in cases when the unused pipes left in the ground will not hinder the maintenance of other infrastructure, and the asbestos products left in the ground will be shown in local plans, introduction of an exception from the obligation to remove asbestos from roads on condition of appropriate prevention of asbestos fibres emission and constant monitoring of the technical state of the roads, (5) obligation to organise the transport of dismantled asbestos products and local trainings in the territory of a gmina, (6) financial support for gminas for the realisation of local trainings within the framework of budgetary means at the disposal of the Ministry of Economy.	Minister of Economy	2010 (date of forwarding the document for debate to the Sejm)

4.	The following amendment of the Ordinance of the Minister of Economy, Labour and Social Policy of 2 April 2004 on methods and conditions of safe use and removal of asbestos-containing products (Dz. U. No 71, item 649): (1) adaptation to provisions of Directives 83/477/EEC and 89/391/EEC, (2) introduction of deadlines for notification of works that consist in securing or removing asbestos-containing products at control authorities: Building Control and Labour Inspectorate, (3) adding the Poviats Sanitary Inspector as competent authority for the notification of launching the removal of asbestos-containing products, (4) allowing for the processing of asbestos waste with the use of modern technologies in mobile facilities – amendment of the provision of Article 10(6).	Minister of Economy	2009-2010
5.	Issuing an Ordinance of the Minister of Environment on the manner of maintaining by the Marshal of the Voivodeship of a register of substances, installations and equipment, in which the substances were or are used (Article 163(8) of the Environmental Protection Law Act), including the manner of maintaining the register in line with Electronic Spatial Information System for the monitoring of asbestos-containing products removal.	Minister of Environment	2009-2010
6.	Amendment of the Ordinance of the Minister of the Environment of 23 July 2009 on the manner of providing the Marshal of the Voivodeship with information on the presence of substances posing particular threat to the environment (Dz. U. No 124, item 1033) concerning supplementing the information in Annex 1 with identification data of the owner, predicted date of asbestos removal, type of constructions and usefulness for further use.	Minister of Environment	2009-2010
7.	The following amendment of the Ordinance of the Minister of Economy, Labour and Social Policy of 23 October 2003 on requirements for using and shipping asbestos and for using and cleaning installations or devices in which asbestos is or was used (Dz. U. No 192, item 1876 and of 2008, No 200, item 1235): (1) handling asbestos-cement pipes – marking, indicating on situation plans of installations, installation maintenance, (2) handling roads hardened with asbestos waste and secured without asbestos removal – marking on asbestos plans, obligation of annual reviews, (3) updating Annexes 2 and 3: amount unit (m ²); removing point 6 of the information; updating point 7; supplementing the information pattern (Annex 2) with the number of the record parcel on which asbestos is located, (4) supplementing the information pattern (Annex 2) with the type of buildings (e.g., residential, utility, industrial, other building).	Minister of Economy	2009-2010
8.	Amendment of the Ordinance of the Minister of Health of 20 April 2005 on tests and measurements for agents harmful to health present in work environment (Dz. U. No 73, item 645, as amended) adapting the ordinance to the provisions of Article 7(3) of Directive 83/477/EEC.	Minister of Health	2009-2010
9.	Amendment of the Ordinance of the Minister of Health of 1 December 2004 on substances, preparations, agents or technological processes with carcinogenic or mutagenic potency present in work environment (Dz. U. No 280, item 2771, as amended) adapting the ordinance to the provisions of Article 3(2) of Directive 2004/37/EC.	Minister of Health	2009-2010

The goal of the legislative tasks is to streamline the rights and obligations of natural and legal persons and self-government units, adapt the Polish law to EU provisions, as well as take into account the requests of control bodies, such as the General Office of Building Control, Labour Inspectorate and Sanitary Inspectorate.

The technological development in the field of waste disposal, including asbestos-containing waste, brings about the possibility to introduce in Poland new technologies of asbestos-containing waste disposal other than storage. New legal regulations in this area will indicate the requirements of best available practices (BAT) and standards of environmental protection concerning the level of exposure of workers to asbestos dust in workplaces and the content of asbestos fibres in substances that are created after processing the asbestos-containing waste.

Experiences in removing road surfaces and water pipes containing asbestos indicate a disadvantageous profit-and-loss account both in economic and in environmental terms. The process of removing and transporting these products to landfills generates high costs and results in the threats to human health and life and the environment that have not been observed before in those locations.

The most reasonable solution seems to be the introduction of legal regulations that provide for leaving the asbestos-containing pipes in the ground and permanent securing of asbestos-containing roads, on condition of indicating them in plans and documents of the premises, which will enable effective monitoring of safe asbestos removal in the future, should the land owner decide to start the any construction projects that change the status quo.

The proposed list of exceptions from the obligation to remove asbestos-containing products can be extended at legislative stage, but each position on the list should be carefully examined from the perspective of compliance with EU law, effects on human health and life, environmental protection and economic results.

3.2. Awareness-raising activities

In the years to come, educational and awareness activities will be continued, with particular attention paid to continuing the activities launched in the recent years (among others, an inter-school competition prepared in 2008) and updating handbooks on financing asbestos removal and handling asbestos-containing products.

Cyclic trainings for government and self-government administration units will be organised. The trainings held so far were directed at employees of self-government units of all levels, customs, the police and fire brigades, as well as physicians, city guards and employees of housing associations. Due to staff turnover in government self-government administration, as well as changes in the law, trainings should be held every 2-3 years. Trainings should be directed also at occupational groups that have so far not been covered, but come across the issue of asbestos in their work.

Awareness-raising activities will include the organisation of and participation in national and international conferences, congresses and symposiums, in order to, among others, share experiences in the field of removal of asbestos-containing products. Participation in foreign – including European – training and research projects and is also taken into account.

Table 3. Awareness-raising activities of the *Programme for Asbestos Abatement in Poland 2009-2032*

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Educational and awareness-raising activities aimed at children and youth	12.8	Minister of Economy	2009-2032
2.	Cyclic trainings for government and self-government administration			
3.	Trainings for control services and occupational groups dealing with asbestos			
4.	Developing handbooks, guides, leaflets, posters, educational radio programmes and films, as well as other educational and awareness-raising materials			
5.	Assessment and promotion of new methods of asbestos fibres destruction			
6.	Organisation of and participation in national and international research and training projects			
7.	Support for and monitoring of research projects and implementations of research results in the field of innovative technologies; organisation of and participation in scientific conferences and workshops, as well as international projects and trainings	•	Minister of Science and Higher Education	2009-2032
TOTAL of ME resources		12.8		2009-2032

In the years 2003-2008, the Minister of Economy financed educational and awareness-raising activities for the sum of PLN 3.3 million. In order to ensure continuous financing of the measures that have already been launched, and provide for the access of citizens to updated information (e.g. in the form of guides and handbooks), the following sums are planned to be allocated for the tasks mentioned above:

- 2009 – PLN 1.3 million;
- 2010 – PLN 0.8 million;
- 2011 – PLN 0.7 million;
- 2012-2015 – PLN 2.8 million (PLN 0.7 million annually);
- 2016-2032 – PLN 7.2 million (the size of support in a given calendar year will be detailed at the time of budget allocation).

In the years 2010-2015, the financing of the educational and awareness-raising activities is planned to remain at the level of ca. PLN 0.7 million. This level of financing should ensure that activities will be continued and will allow for identification of priority tasks for a given year the moment a detailed spending plan is developed.

Parallel to the activities of the Minister of Economy, self-government units carry out educational and awareness-raising activities financed from their own resources or from environmental protection funds.

Moreover, the Minister of Science and Higher Education can co-finance applied research and development works in the manner specified in the Act of 8 October 2004 on the principles of financing science (Dz. U. of 2008, No 169, item 1049, as amended) and in its executive provisions. Subsidies are granted by way of competition. Their receipt is conditional on filing a dedicated application, which is later assessed by responsible units of the Council of Science.

3.3. Removal of asbestos and asbestos-containing products

The cost of removing asbestos-containing products, borne by premises' owners, is estimated at PLN 40 billion. Taking into account all possible forms of financial support, it has to be mentioned that while it is possible to reduce the costs of dismantling, transporting and disposal of the removed asbestos-containing products, the owners of constructions still have to bear the costs of new roofing and facades.

The rate of removing asbestos-containing products and disposing of asbestos-containing waste has so far been unsatisfactory. Therefore, actions should be taken aimed at:

- 1) identification of the real magnitude of asbestos-containing products still in use;
- 2) acceleration of works related to the removal of asbestos-containing products;
- 3) increasing financial support for these activities;
- 4) increasing self-government units' activities aimed at supporting their inhabitants in the process of removing asbestos-containing products and searching for funding to finance these activities;
- 5) removing asbestos from public amenities, roads and squares and sites of former plants manufacturing asbestos-containing products.

Five activities were enumerated, divided into specific tasks, with identified responsible persons, level of financial support from the Ministry of Economy and deadlines.

3.3.1. Removal of asbestos products from houses and technical buildings and cleaning the premises

Research held out in 2008 during outdoor demolition works showed that fibre concentration in the breathing area of workers was in the range 0.001-0.08 fibres/cm³ (the maximum admissible concentration is 0.1 fibres/cm³). The results of the research show also that carrying out one-off outdoor demolition works brings no risk of asbestos-related pathologies. In the light of research results and opinions of physicians, the number of entities authorised to remove asbestos-containing products is planned to be increased. Financial support from the resources of the Minister of Economy (PLN 16.3 million) has been allocated for the organisation of trainings for these entities.

A gmina should ensure the removal of asbestos-containing waste to the landfill or provide for its delivery to a mobile facility for asbestos-containing waste treatment. The cost of transport and disposal of asbestos-containing waste should be covered with gmina's own resources, with participation of premises' owners financing, subsidies and loans from environmental protection funds, or other resources available to the gmina. The share of premises' owners should be limited, as the cost of new roofing or facade cannot be financed from national or EU environmental protection funds.

Table 4. Tasks related to the removal of asbestos-containing products from houses and technical buildings and waste from premises.

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Removal of asbestos-containing products from houses and technical buildings and asbestos-containing waste from premises.	•	Premise owner	2010-2032
2.	Carrying out local trainings.	16.3	Self-government units – gminas	2010-2032
3.	Organising the transport of asbestos-containing waste from the territory of a gmina to a landfill or its treatment in a mobile facility.	•	Self-government units – gminas	2010-2032
4.	Gminas' financial support (within the framework of national resources) for the organisation of transport of asbestos-containing waste from the territory of a gmina to a landfill, or its treatment in a mobile facility.	•	National Fund for Environmental Protection and Water Management (NFEPWM) Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2010-2032
TOTAL of ME resources		16.3		2010-2032

Financial support from the resources of the Minister of Economy (PLN 16.3 million) has been allocated for the organisation of trainings for these entities; the trainings will concern the removal of asbestos-containing products from the premises without using the services of specialised companies. Launching the realisation of this task requires legislative changes, so financing is planned from 2010 on in the following way:

- 2010 – PLN 0.6 million;
- 2011 – PLN 0.7 million;
- 2012-2015 – PLN 3.3 million (ca. PLN 0.8 million annually);
- 2016-2032 – PLN 11.7 million (the size of support in a given calendar year will be detailed at the time of budget allocation).

It is assumed that the project of local trainings in gminas will be launched in 2010. In the following years, until 2015, the number of organised local trainings will increase, along with demand for subsidies. The level of gminas' interest and the success of the project in the first years of its implementation will determine whether the amount of financial measures for gminas will be increased.

Programmes financed from EU funds should include activities concerning the removal of asbestos-containing products.

3.3.2. Removal of asbestos-containing products from large constructions and cleaning the premises

Financial support for the removal of asbestos-containing products from large constructions should be coordinated by individual self-government units in accordance with the following rules:

- 1) Support from environmental protection funds should be used to co-finance the service of safe removal of asbestos-containing products.
- 2) The following are qualified costs of the co-financed service of safe removal of asbestos-containing products:
 - a) dismantling of asbestos-containing products;
 - b) transport of asbestos-containing waste;
 - c) depositing asbestos-containing waste in an appropriate landfill or delivery to a mobile facility for asbestos-containing waste treatment.
- 3) Support cannot exceed 80% of the total service cost.
- 4) The amount of the support will be specified as a fixed amount related to a physical unit of removed waste, for example a square metre of removed roofing or facade, a square metre of wall insulation, a tonne of pipes or a tonne of disposed asbestos-containing waste.
- 5) Beneficiaries of the support are self-government units that select – in tenders that comply with legal requirements – entrepreneurs carrying out activities in the area of safe asbestos removal.
- 6) Support will be granted after:
 - a) confirmation from the entrepreneur of:
 - depositing the asbestos-containing waste in a landfill or its treatment in mobile facilities;
 - cleaning the premises where asbestos-containing products were dismantled;
 - b) settlement of a comprehensive service.

Combining the support designated for asbestos removal with the support for thermal insulation is inadmissible if the cost of the latter includes the removal of asbestos products.

A thorough inventory and removal plan concerning asbestos-containing products is of significance in the process of obtaining the financing from environmental protection funds for the removal of asbestos-containing products from the territory of a gmina or powiat. The Minister of Economy intends to uphold financial support in the form of subsidies for the development of programmes of asbestos-containing products removal for self-government units of all levels in the amount of PLN 10.0 million in the years 2009-2015. Updating these programmes is a responsibility of self-government units.

Table 5. Tasks related to the removal of asbestos-containing products from large constructions

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Removal of asbestos products from houses and technical buildings and asbestos-containing waste from premises.	•	Construction owner	2009-2032
2.	Organising the dismantling, cleaning the premises and transport of asbestos-containing waste from the territory of a gmina or powiat to a landfill or its treatment in a mobile facility.	•	Self-government units – gminas, powiats	2009-2032
3.	Gminas' and powiats' financial support (within the framework of national resources) for the organisation of the dismantling, cleaning the premises and transport of asbestos-containing waste from the territory of a gmina to a landfill or its treatment in a mobile facility.	•	National Fund for Environmental Protection and Water Management (NFEPWM) Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2009-2032
4.	Financial support for self-government units in the development of gmina, powiat and voivodeship programmes for asbestos-containing products removal.	10.0	Minister of Economy	2009-2015
5.	Updating of gmina, powiat and voivodeship programmes for asbestos-containing products removal.	•	Self-government units	2009-2032
TOTAL of ME resources		10.0		2009-2032

Financial support for self-government units in the development of gmina, powiat and voivodeship programmes for asbestos-containing products removal is planned as follows:

- 2009 – PLN 1.3 million;
- 2010 – PLN 1.5 million;
- 2011 – PLN 1.5 million;
- 2012-2015 – PLN 5.7 million (ca. PLN 1.4 million annually).

It is assumed that until 2012, a thorough inventory of asbestos-containing products will be completed, and data from all gminas and voivodeships will be entered in a voivodeship database of asbestos-containing products and waste. Support for the development of gmina, powiat and voivodeship programmes for asbestos-containing products removal is planned until 2015; in 2015 the period of planning the removal of asbestos-containing products should be completed.

In the years 2016-2032, the process of removing asbestos-containing products is to be intensified.

Programmes financed from EU funds should include activities concerning the removal of asbestos-containing products.

3.3.3. Removal of asbestos-containing products from constructions – in combination with other activities (i.a., thermal insulation, alteration of a farm)

Funds for the removal of asbestos-containing products from constructions can be obtained within the framework of projects and programmes not addressed directly at asbestos products. These are projects related to waste management, thermal efficiency improvement of constructions, renovations of and alterations to buildings related to agricultural production and adaptation of buildings for residential use.

Table 6. Tasks related to the removal of asbestos-containing products in combination with other activities

No	TASK	Support level [PLN million]	Responsible	Date
1.	Removal of asbestos-containing products from houses and technical buildings and asbestos-containing waste from premises.	•	Construction owners	2009-2032
2.	Gminas' and poviats' financial support (within the framework of national resources) for the organisation of the dismantling, cleaning the premises and transport of asbestos-containing waste from the territory of a gmina to a landfill or its treatment in a mobile facility.	•	National Fund for Environmental Protection and Water Management (NFEPWM) Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2009-2032
3.	Launching preferential credits for all voivodeships for the removal of asbestos-containing products and thermal efficiency improvement.	•	BOŚ S.A. Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2009-2032

Programmes financed from EU funds should include activities concerning the removal of asbestos-containing products.

3.3.4. Removal of asbestos-containing products from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products

Many public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products urgently require the removal of asbestos in order to restore their original functions or change the manner of usage.

A positive example of such actions can be found in Szczucin gmina, where intensive works are being carried out to secure roads hardened with asbestos-containing waste; asbestos from former plants manufacturing asbestos products has been removed and the facilities received new functions.

Therefore, financial resources have been allocated for the support of preparation works before the removal of asbestos from such objects (for the development of necessary technical and project documentation).

Table 7. Tasks related to the removal of asbestos-containing products from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Financial support for preparation works before the removal of asbestos from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products.	2.9	Minister of Economy	2009-2015
2.	Removal of asbestos-containing products from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products.	•	Construction owners	2009-2032
3.	Gminas' financial support for the removal of asbestos from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products; for the transport of asbestos-containing waste from the territory of a gmina to a landfill; or for the treatment of waste in a mobile facility.	•	National Fund for Environmental Protection and Water Management (NFEPWM) Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2009-2032
4.	Launching preferential credits for all voivodeships for the removal of asbestos-containing products from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products.	•	BOŚ S.A. Voivodeship Fund for Environmental Protection and Water Management (VFEPWM)	2009-2032
TOTAL of ME resources		2.9		2009-2032

Financial support for preparation works before the removal of asbestos from public amenities, public utility areas and sites of former plants manufacturing asbestos-containing products – development of necessary technical and project documentation is planned as follows:

- 2009 – PLN 0.3 million;
- 2010 – PLN 0.3 million;
- 2011 – PLN 0.3 million;
- 2012-2015 – PLN 2.0 million (ca. PLN 0.5 million annually).

Asbestos and asbestos-containing products should be removed from public utility areas, public amenities and sites of former plants manufacturing asbestos-containing products as quickly as possible in order to improve the standard of living of inhabitants in a given community. Former plants should gain new economic or social functions. Owing to the opportunity to receive subsidies for the development of technical documentation, the continuation or reconstruction works should be significantly facilitated.

Programmes financed from EU funds should include activities concerning the removal of asbestos-containing products.

3.3.5. Construction of landfills for depositing asbestos-containing waste and facilities for asbestos-containing waste treatment

Provision of a network of landfills for depositing asbestos-containing waste, including underground landfills, is an important element of the process of removing asbestos-containing products. Constructing such facilities is particularly important in the regions lacking them or where the existing facilities' capacity will soon be exhausted. Planning the waste management in a given voivodeship is the responsibility of the marshal of the voivodeship, who is obliged to include the construction of subsequent facilities in the voivodeship waste management plan.

The costs of constructing 56 landfills in the years 2009-2032, estimated at ca. PLN 260 million, will be borne by their owners.

Technological development allows for the opportunity to process asbestos waste in a way that ensures the destruction of asbestos fibres. Legal provisions for the processing of asbestos waste in mobile facilities for the destruction of asbestos fibres will allow for an alternative for the creation of new asbestos waste landfills. Legislative works in this field started in 2008.

Table 8. Investment tasks of the *Programme for Asbestos Abatement in Poland 2009-2032*

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Construction of landfills for depositing asbestos-containing waste and mobile facilities for asbestos-containing waste treatment.	•	Investors Self-government units	2010-2032

3.4. Electronic Spatial Information System for the monitoring of asbestos-containing products removal

The monitoring of the implementation of the Programme with the application IT tools needs to be improved. Within the framework of subject area 4 concerning the coordination and monitoring of the implementation of the Programme, updating of voivodeship database of asbestos-containing products and waste will be continued. Modernisation of this database is planned with the aim of implementing the Electronic Spatial Information System for the monitoring of asbestos-containing products removal, which should ensure:

- presenting the results of the inventory of asbestos and asbestos-containing waste amount and location;
- planning and supporting the logistics of removing asbestos and asbestos-containing products;
- monitoring the process of removing asbestos and asbestos-containing products.

The system should consist of several groups (modules) with separate management functions, together with the possibility of entering and verifying data, processing and analysing databases; it should also include an interface for the communication with a user, containing procedures for graphic and text presentation of data, with a printout.

The construction of the system is planned in several stages:

- obtaining an orthophotomap as basic layer;
- obtaining a land register;
- linking the land register with the orthophotomap;
- construction of a relational database of spatial information, integrating data from various sources (e.g., from www.bazaazbestowa.pl);
- analyses and visualisations;
- implementation of the system and launching the monitoring of task realisation.

The system is based on the use of an orthophotomap as a basic layer and of a digital land and building register. Obtaining the collection of spatial data and gaining access to the spatial data services will be possible after the implementation of legal provisions concerning spatial information infrastructure, in accordance with the INSPIRE Directive.

Linking the orthophotomap with a land register will allow for connecting specific buildings with address data and facilitate the realisation of a list of analyses at the specificity level of a record parcel of a gmina, powiat, voivodeship and country. The system can be used for the following purposes:

- presentation of inventory results;
- verification of inventory results;
- identifying the location of illegal landfills of asbestos waste;
- identifying the location of entities dealing with asbestos-containing products removal;
- preparing the map of the urgency of asbestos removal (on the basis of data provided by owners and users of constructions);
- preparing the map of asbestos distribution;
- monitoring the implementation of the Programme.

It is assumed that the system will make use of the voivodeship database of asbestos-containing products and waste, with which it will be integrated. Modernisation of the monitoring system requires also that parallel activities are carried out at legislative, organisational and infrastructural levels. Legislative works are to strengthen the role of the presently functioning voivodeship database of asbestos-containing products and waste and give it a status of the binding system of registering the asbestos-containing products. Integration with the Electronic Spatial Information System will take place after gaining access to databases of spatial information and spatial data services, carrying out appropriate IT works and purchasing the necessary hardware and software for the Ministry of Economy.

Legislative and IT works will be carried out in parallel so that in 2012 the system can be implemented in full. Preparatory activities, including legislative works, have been planned for the years 2009-2010, while the creation and launching of the system for the years 2009-2012.

The system used so far for gathering data on asbestos-containing products, namely gathering data from natural persons at gmina level and from legal persons at voivodeship level, should be maintained; at the same time, the manner of making the inventory data available to all administration levels should be determined. The availability of complete data at gmina and powiat level ensures effective organisation of activities related to the removal of asbestos-containing products from premises and obtaining financial resources for this purpose. Reliable information at voivodeship level will ensure consistent policy of waste management in the whole voivodeship, among others, in the planning of the construction of subsequent landfills for depositing asbestos waste. Aggregated data available at the central level in the Ministry of Economy will be used for the monitoring of the implementation of tasks and taking up initiatives at government level.

Therefore, Electronic Spatial Information System for the monitoring of asbestos-containing products removal should guarantee the flow of information between individual levels of public administration, according to individual competences.

Financial measures planned for the implementation of this task will include the cost of modernisation of the system and its annual maintenance until 2032.

Table 9. Tasks related to the monitoring of *Programme for Asbestos Abatement in Poland 2009-2032*

No.	TASK	Support level [PLN million]	Responsible	Date
1.	Inventory of the asbestos-containing products, with the application of the Electronic Spatial Information System for the monitoring of asbestos-containing products removal (voivodeship database of asbestos-containing products and waste)	•	Construction owners. Self-government units	2009-2012
2.	Updating the inventory of the asbestos-containing products, with the application of the Electronic Spatial Information System for the monitoring of asbestos-containing products removal (voivodeship database of asbestos-containing products and waste)	•	Construction owners. Self-government units	2013-2032
3.	Forecast of the environmental impact for the <i>Programme for Asbestos Abatement in Poland 2009-2032</i>	0.2	Minister of Economy	2009
4.	Creation of the Electronic Spatial Information System for the monitoring of asbestos-containing products removal on the basis of map base and inventory data, for the purpose of monitoring the process of asbestos removal, with the application of possibilities of map creation, cartographic presentation, verification of quantitative data and of information on asbestos location	1.5	Minister of Economy	2009-2011
5.	Launching the Electronic Spatial Information System for the monitoring of asbestos-containing products removal	0.3	Minister of Economy	2012
6.	Maintaining the Electronic Spatial Information System for the monitoring of asbestos-containing products removal	5.2	Minister of Economy	2013-2032
TOTAL of ME resources		7.2		2009-2032

With the pre-condition of initial investments in the construction and modernisation of the system, in the years to follow, until the end of the Programme, the following funds will be necessary to ensure its appropriate functioning:

- 2009 – PLN 0.7 million;
- 2010 – PLN 0.5 million;
- 2011 – PLN 0.5 million;
- 2012 – PLN 0.3 million;
- 2013-2015 – PLN 0.7 million (ca. PLN 0,2 million annually)
- 2016-2032 – PLN 4.5 million (ca. PLN 0.2 million annually).

Following the modernisation of the voivodeship database of asbestos-containing products and waste in 2012, constant maintenance of the database is planned until the end of Programme implementation. Until 2015, the Electronic Spatial Information System should be implemented in full and contain data from the whole country.

In 2009, PLN 0.2 million was allocated for carrying out necessary procedures concerning Programme's environmental impact.

3.5. Tasks in the area of exposure assessment and health protection

Exposure to asbestos dust is a serious threat to human health. The problem of risk of asbestos-related cancer persists despite the increased quality of protection in work requiring contact with asbestos. Incidence of malignant cancer, in particular lung cancer and malignant mesothelioma, is closely correlated with the concentration of asbestos fibres in the air, influenced by the number and condition of built-in and used asbestos-containing products, and the level of environmental pollution.

The collected results of measurements of asbestos fibres concentration in workers' breathing area during the removal of asbestos-containing products indicate large differences depending on the location of the works and types of dismantled product.

During the outdoor dismantling of eternit panels, concentration of asbestos fibres in workers' breathing area ranged between 0.001 and 0.08 fibres/cm³ (average level in one series 0.002, in another 0.048 fibres/cm³; the binding safety norm is 0.1 fibres/cm³). Indoor works include above all the removal of soft products (insulation ropes, partition walls). Concentrations measured during such works were in the wide range between 110 fibres/cm³ and 120,000 fibres/cm³, and depended largely on the working methods.

Therefore, for the sake of the workers carrying out indoor dismantling works of asbestos products it is necessary to maintain the legal provisions on the assessment of workers' exposure (fibre concentration measurements) and health protection (preventive tests) that have been in force so far.

On the basis of the results of measurements of asbestos dust concentration during the outdoor removal of asbestos-cement products (roofing, facades), it was recommended that provisions concerning these works should be simplified and liberalised (see: 3.1).

The threat to human health resulting from the presence of mutagenic asbestos fibres in the environment implies the need to take up activities aimed at increasing the detectability and efficiency of fighting asbestos related diseases.

Table 10. Tasks in the area of exposure assessment and health protection

No.	TASKS	Support level [PLN million]	Responsible	Date
1.	Educational and awareness-raising activities among occupational physicians, family doctors, pulmonologists, oncologists and students of medicine on the danger of asbestos as mutagenic factor, biological activity of asbestos and synergic effects of smoking and asbestos dust exposure.	4.0	Minister of Health Reference Centre for Asbestos Exposure and Health Risk Assessment	2009-2032
2.	The implementation of Helsinki Criteria of diagnostics and documentation of asbestos-related diseases.			
3.	Monitoring the incidence and mortality rates of asbestos-related diseases.			
4.	Increasing the detectability of malignant mesothelioma.			
5.	Research and development projects examining and assessing the health of people and farm animals, as well as the detectability and treatment of asbestos-related diseases.	•	Minister of Science and Higher Education	2009-2032
TOTAL of Ministry of Economy sources		4.0		2009-2032

In the years 2003-2008, activities taken by the Reference Centre for Asbestos Exposure and Health Risk Assessment were supported financially by the Minister of Economy (over PLN 2.9 million). Financial support will be upheld in the following years with the aim of ensuring the continuity of cyclic analyses of asbestos fibres concentrations in the air and intensifying the activities taken to increase the detectability of asbestos-related diseases.

Support is planned at the following levels:

- 2009 – PLN 0.4 million
- 2010 – PLN 0.3 million
- 2011 – PLN 0.3 million
- 2012-2015 – PLN 1.2 million (ca. PLN 0.3 million annually)
- 2016-2032 – PLN 1.8 million (the level of support in a given calendar year will be established during the allocation of budgetary means).

Until 2015, credible information on the concentration of asbestos fibres in the air in the whole territory of Poland should be developed. This data should be a background for the information on the amounts and location of asbestos-containing products in Poland, and the former and latter data jointly should be a guideline for taking up activities in regions that require the most urgent asbestos abatement.

Moreover, the Minister of Science and Higher Education can co-finance applied research and development works in the manner specified in the Act of 8 October 2004 on the principles of financing science (Dz. U. of 2008, No 169, item 1049, as amended) and in its executory provisions. Subsidies are granted by way of competition. Their receipt is conditional on filing a dedicated application, which is later assessed by responsible units of the Council of Science.

3.6. Sources of financing asbestos removal

The sources of financing asbestos removal are budgetary means at the disposal of the Minister of Economy, own resources of construction owners, own resources of self-government units and loans.

Within the framework of budgetary means at the disposal of the Minister of Economy, financing the tasks that support the implementation of the Programme is planned in the years 2009-2032.

Table 11. Budgetary spending at the disposal of the Minister of Economy for the implementation of Programme for Asbestos Abatement in Poland 2009-2032

Subject area	Task	Total 2009-2032 [PLN million]	Years				
			2009	2010	2011	2012- 2015	2016- 2032
	Total [PLN million]	53.2	4.0	4.0	4.0	16.0	25.2
1	Legislative activities		without budgetary resources				
2	Awareness-raising activities	12.8	1.3	0.8	0.7	2.8	7.2
3.1	Support of preparation works before the removal of asbestos from public utility areas and constructions (documentation)	2.9	0.3	0.3	0.3	2.0	-
3.2	Support for the development and updating of gmina, powiat and voivodeship programmes of asbestos-containing products removal	10.0	1.3	1.5	1.5	5.7	-
3.3	Support for local trainings	16.3	0	0.6	0.7	3.3	11.7
4	Monitoring of the Programme implementation	7.2	0.7	0.5	0.5	1.0	4.5
5	Activities in the area of exposure assessment and health protection	4.0	0.4	0.3	0.3	1.2	1.8

Financing the issues of environmental protection is regulated by provisions of the Act of 27 April 2001 – Environmental Protection Law and includes tasks of environmental protection and water management resulting from the rule of sustainable development and environmental policy of the state, including activities aimed at asbestos abatement.

The tasks can be financed by the National Fund for Environmental Protection and Water Management, voivodeship environmental protection and water management funds, as well as poviats and gminas whose own tasks include the financing of environmental protection in the scope provided for in the Environmental Protection Law Act.

The National Fund for Environmental Protection and Water Management and voivodeship environmental protection and water management funds grant subsidies and loans and transfer financial resources on the basis of civil law contracts.

Tasks related to asbestos abatement include in particular:

- 1) waste management enterprises;
- 2) earth surface protection enterprises;
- 3) development of a network of environmental protection laboratories;
- 4) education in the field of environmental protection and promoting nature conservation and sustainable development;
- 5) development and implementation of new techniques and technologies in environmental protection;
- 6) voivodeship programmes of environmental protection and air protection, waste management plans, support for the implementation of these programmes and plans;
- 7) co-financing investment projects in the field of environmental protection that are to be financed from EU resources, within the framework of cooperation with international organisations and bilateral cooperation, as well as those realised specified in the Act of 19 December 2008 on public-private partnerships (Dz. U. of 2009, No 19, item 100).

Bank Ochrony Środowiska S.A. (BOŚ) is a universal commercial bank that specialises in financing environmental protection enterprises. BOŚ cooperates with Polish and international financial institutions, including funds and foundations active in the field of environmental protection. Owing to this, it can offer a wide range of credits. Tasks in the field of removing asbestos-containing products can be financed by granting the following types of credits:

- 1) preferential credits with lending rates subsidised from voivodeship environmental protection and water management funds, characterised, i.a., lower lending rates than the commercial ones, and the possibility to obtain a grace period in paying-off the capital amount. Conditions of granting these credits are varied and specified in a contract by a given Voivodeship Fund for Environmental Protection and Water Management (the enterprise must be listed as a fund priority);
- 2) commercial credits from foreign banks – KfW5 line (*Kreditanstalt für Wiederaufbau*) – and the bank resources, including in the framework of agreements between BOŚ and dealers and distributors of products for environmental protection.

Foreign financing sources for the area of environmental protection are mainly EU funds.

In the programming period 2007-2013, financial aid from European Union structural funds will be granted to Poland within the framework of individual aid programmes (the so-called operational programmes) – tools for the implementation of the National Cohesion Strategy.

Depending on the type of programme, beneficiaries can be, among others: self-government units and its unions; providers of services in the field of own tasks of the self-government units; organisational units of self-government units with legal personality; housing associations; housing communities; rural, urban-rural and urban gminas; young farmers; farmers taking up non-farming activities.

The removal of asbestos and asbestos-containing products in the years 2009-2015 can be supported from EU resources within the framework of Regional Operating Programmes (Kujawsko-Pomorskie, Łódzkie, Mazowieckie, Podkarpackie, Śląskie, Warmińsko-Mazurskie and Wielkopolskie voivodeships).

Regional Operating Programme of the Kujawsko-Pomorskie Voivodeship provides for an opportunity of subsidizing investments that are, among others, related to safe removal of asbestos products within the measures 2.2 *Waste management* and 7.1 *Revitalisation of degraded municipal areas*. Measure 2.2 includes enterprises that consist in removing, disposing of and transporting asbestos waste and other dangerous waste from public utility objects and networks. Measure 7.1., in turn, can finance enterprises consisting in, among others, replacing asbestos elements in multi-family residential buildings.

Regional Operating Programme for Łódzkie Voivodeship provides, under measure II.2 *Waste management* support for the removal of asbestos-containing elements from residential and public utility buildings and their disposal.

In the Regional Operating Programme for Mazowieckie Voivodeship, investments dealing with safe asbestos removal are included in two measures. Measure 4.2 *Land surface protection* ensures support for comprehensive actions of asbestos-containing waste abatement and removing asbestos from public administration buildings, as well as construction of dangerous waste landfills. Measure 5.2 *Municipal area revitalisation* is focused on integrated projects of renovation of municipal areas, where replacement of asbestos products is an element of the project.

Regional Operating Programme for Podkarpackie Voivodeship provides for financing the removal of asbestos products as part of accompanying infrastructure in the projects in measure 2.2 *Energy infrastructure* and measure 7.1 *Town revitalisation*. Projects can include comprehensive thermal efficiency improvement of public amenities, renovation of common parts of multi-family residential buildings, as well as renovation and adaptation for residential purposes of the already existing buildings owned by public authorities or non-profit entities.

In the Regional Operating Programme for Śląskie Voivodeship, investments dealing with safe asbestos removal included in two measures can be subsidized. In the measure 5.2 *Waste management* support will be granted to projects of comprehensive asbestos-containing waste abatement and of recultivation of degraded areas and waste landfills for environmental purposes. Within the framework of measure 6.2 *Recultivation of degraded areas* subsidies can be granted, among others, for projects whose aim is to replace asbestos products in multi-family residential buildings with non-asbestos products and to dispose of asbestos waste.

Regional Operating Programme for Warmińsko-Mazurskie Voivodeship provides for the opportunity of subsidizing investments related to safe removal of asbestos products as element of accompanying infrastructure within the framework of projects in sub-measure 4.1.1 *Improvement of technical characteristics of buildings constructed in large panel technology*.

In the Regional Operating Programme for Wielkopolskie Voivodeship, investments dealing with safe asbestos removal included in measure 4.1 *Revitalisation of municipal areas* can be subsidized.

It is impossible to estimate the level of funding allocated under ROP for activities related to safe asbestos removal, as it depends on the number of applications filed for competitions in individual voivodeships and the number of projects to be subsidized.

Projects in the field of renovation or development of buildings can include the refurbishment of common parts of multi-family residential buildings, renovation or adaptation for residential purposes of the already existing buildings, modernisation of agricultural farms, as well as activities to facilitate the startup of young farmers, diversification towards non-farming activities and rural renovation and development. Support is granted within the framework of Regional Operating Programmes and Rural Development Programme for the years 2007-2013.

No support for investments consisting in the removal of asbestos-containing products is provided for under the Infrastructure and Environment Operational Programme. Only comprehensive enterprises in the area of waste management will be financed, and support will be granted above all to waste management plants serving 150,000 inhabitants at the minimum. The selected enterprises will be realised within the framework of Priority Axis II *Waste management and land surface protection* of the Infrastructure and Environment Operational Programme.

Under the Infrastructure and Environment Operational Programme, support can also be obtained for transnational investments in health infrastructure, and under Regional Operating Programmes – for local and regional investments. Support is allotted for renovation and development of health care centres and for purchasing their equipment, as well as adaptation of the technical condition of the existing infrastructure to the purchased and used medical equipment.

It is impossible to estimate the level of EU funding allocated for the removal of asbestos-containing products in the framework of the present subsidy programmes. This level depends on the amount of resources available under individual measures, the number of contracted projects and the level of qualified costs.

4. COORDINATION AND MONITORING

The tasks envisaged in the Programme will be performed at three levels:

- 1) central level – the Council of Ministers, the Minister of Economy and – within the structures of the Ministry of Economy – the Chief Coordinator;
- 2) voivodeship level – self-government of the voivodeship;
- 3) local level – self-government of the powiat and self-government of the gmina.

The body responsible for the monitoring and coordination of the Programme implementation is the Minister of Economy, who appoints:

- 1) the Chief Coordinator as the person responsible for cooperation between individual units and institutions and for introduction of initiatives aimed at updating the Programme;
- 2) Programme Board, which – acting as a consultative and advisory body to the Minister of Economy – unites the representatives of all bodies, offices, institutions and organisations that are important for the Programme implementation.

4.1. Tasks of the Minister of Economy

With the view of performing the tasks defined in the Programme properly, the Minister of Economy collaborates with the ministers competent for the environment, health, public administration, public finances, agriculture, regional development, construction and spatial and housing management, who are responsible for carrying out specific tasks at the central level, whereas the Marshals of Voivodeships are responsible for fulfilling the tasks at the voivodeship level.

On behalf of the Minister of Economy, the coordination, monitoring and management of the Programme is performed by the Chief Coordinator appointed by the Minister.

The primary task of the Chief Coordinator is to ensure successful performance of all tasks financed directly from budget resources at disposal of the Minister of Economy, which tasks include, but are not limited to:

- 1) gathering country-level information on the amount and type of asbestos-containing products and the places where they are found, on the basis of information received from the Marshals of Voivodeships;

- 2) monitoring the performance of all the tasks;
- 3) estimating annual budget resources related to the Programme implementation;
- 4) submitting annual reports to the Minister of Economy and preparing annual information on the extent to which the objectives and tasks mentioned in the Programme have been accomplished, along with detailed documentation regarding the use of funds allocated for this purpose;
- 5) undertaking educational activities, including trainings for the employees of government and self-government administration and for the employees of the healthcare system in the area of asbestos abatement in Poland;
- 6) undertaking awareness activities with regard to safe handling of asbestos-containing products, methods of their removal and harmful effects of asbestos;
- 7) introducing initiatives related to the Programme implementation and organisation of its management, along with submitting proposals for documents and legislative measures to the Minister of Economy;
- 8) collaborating with international institutions and organisations (for example, organising and participating in conferences, symposia, congresses and trainings held in the country and abroad);
- 9) collaborating with self-government units and non-governmental organisations whose activities are related with fulfilment of the tasks provided for in the Programme;
- 10) assessing and promoting technologies for destroying asbestos fibres in waste;
- 11) collaborating at the central level with control authorities (sanitary inspection, labour inspection, building inspection and inspection for environmental protection).

4.2. Programme Board

Appointed by the Minister of the Economy, the Programme Board functions as a consultative and advisory body to the Minister.

The tasks of the Programme Board include especially:

- 1) assessing the task performance and determining new directions in works;
- 2) submitting proposals for legislative initiatives regarding asbestos-related issues to the Minister of Economy;
- 3) issuing opinions on funds to be allocated for the coordination and monitoring of the Programme and for supporting fulfilment of the tasks envisaged by the Programme;
- 4) expressing opinions on legal acts regarding asbestos-related issues.

The Programme Board is composed of:

- 1) Chair of the Board;
- 2) Chief Coordinator;
- 3) representative of the Minister of Economy;

- 4) members appointed by (one member each):
 - ministers competent for public finances, environment, health, public administration, regional development, agriculture, national defence as well as construction, spatial and housing management;
 - Marshals of Voivodeships;
 - Chief Labour Inspector;
 - General Inspector of Building Control;
 - Chief Inspector for Environmental Protection;
 - Chief Sanitary Inspector;
 - President of the National Fund for Environmental Protection and Water Management;
 - President of Bank Ochrony Środowiska S.A.;
- 5) members appointed by the Minister of Economy, representing non-governmental organisations whose activities listed in the statute are related to the management of dangerous asbestos-containing waste (up to two persons);
- 6) members appointed by the Minister of Economy as experts who have considerable scholarly achievements in the area of protection against asbestos and who represent the academic community (up to three persons).

The Programme Board functions on the basis of the Board Rules of Procedure, adopted by the Board and approved by the Minister of Economy.

The Members of the Programme Board perform their functions for no additional remuneration.

4.3. Competences of particular public administration bodies and cooperation between them

At the central level, the duties of public administration bodies include:

- 1) cooperating with the Chief Coordinator as regards the needs arising from the ongoing tasks performance;
- 2) cooperating with control authorities (sanitary inspection, labour inspection, building inspection and inspection for environmental protection) who supervise the observance of law during works related to removal of asbestos-containing products and asbestos;
- 3) cooperating steadily with government administration, self-government and other bodies whose competences involve performance of the tasks;
- 4) cooperating with the media with regard to asbestos-related matters;
- 5) collaborating with non-governmental organisations;
- 6) cooperating with institutions providing funds for performance the tasks (Bank Ochrony Środowiska, voivodeship funds for environmental protection and water management, National Fund for Environmental Protection and Water Management, etc.);

- 7) providing subject-matter assistance to the Minister of Economy with regard to asbestos-related issues, to the Minister of the Environment with regard to issues related to sustainable development, and to the Minister of Health with regard to health issues;
- 8) collaborating with the Ministry of the Environment and other institutions in the area of matters regarding national strategies and programmes concerning environmental protection and waste management;
- 9) preparing and submitting relevant information on the state of Programme implementation – for the purposes of the Minister of Economy and the Council of Ministers;
- 10) cooperating with the Programme Board.

At the voivodeship level, performance of the tasks falls under the responsibility of the Marshal of the Voivodeship, whose tasks include:

- 1) cooperating with the Chief Coordinator as regards the needs arising from the ongoing Programme implementation;
- 2) gathering by the Office of the Marshal of the Voivodeship of information on the amount and type of asbestos-containing products and the places where they are found, and forwarding this information to the Chief Coordinator using the available information technology tool – www.bazaazbestowa.pl;
- 3) taking into account the asbestos and asbestos-containing products removal in the voivodeship waste management and environmental protection programmes, especially as regards the location of asbestos-containing waste landfills and mobile facilities for asbestos-containing waste treatment;
- 4) collaborating at the voivodeship level with control authorities (sanitary inspection, labour inspection, building inspection and inspection for environmental protection).
- 5) cooperating with higher education institutions and science institutes, non-governmental organisations and experts in particular fields;
- 6) cooperating with the local media with regard to issues addressed by the Programme;
- 7) preparing and updating voivodeship programmes for asbestos-containing products removal;
- 8) cooperating with powiat and gmina self-government units and forwarding guidelines and information pertaining to the Programme implementation;
- 9) providing the Chief Coordinator with annual information on fulfilment of the tasks in the territory of the voivodeship;
- 10) developing a site plan presenting the distribution of asbestos-containing products in the territory of the voivodeship on the basis of the information submitted by self-government units and businesses.

At the local level, the tasks are carried out by powiat and gmina self-government units through:

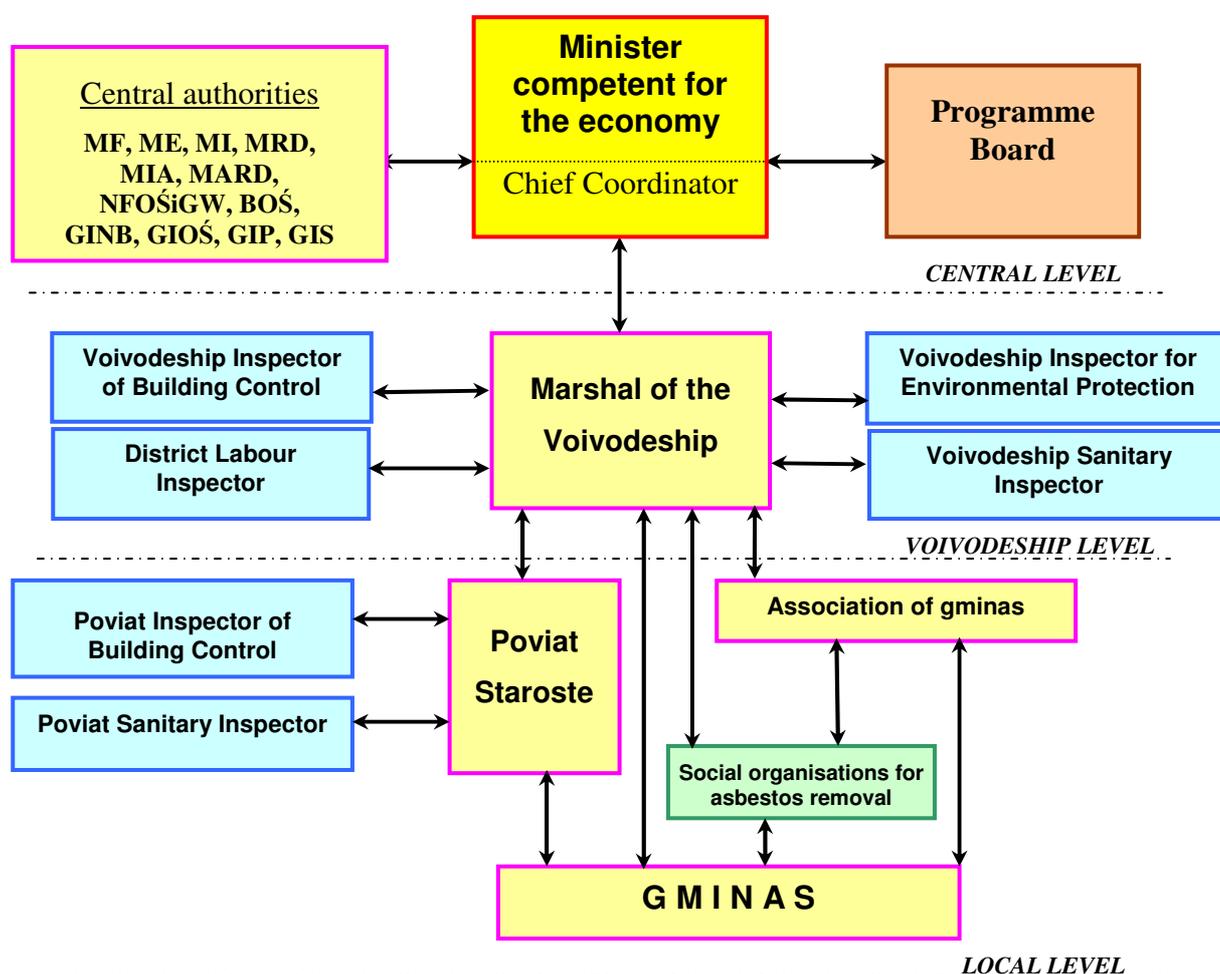
Gmina self-government:

- 1) gathering by the Voigt, Mayor and President of the City of information on the amount and type of asbestos-containing products and the places where they are found, and forwarding this information to the Marshal of the Voivodeship using the available information technology tool – www.bazaazbestowa.pl;
- 2) preparing and updating programmes for asbestos and asbestos-containing products removal, also within the framework of waste management plans;
- 3) organising local trainings on removing asbestos-containing products from premises without contracting the services of specialist companies;
- 4) organising asbestos-containing products removal with the use of national or Union funds obtained for this purpose, taking into account the principles set out in the Programme;
- 5) inspiring citizens to adopt the appropriate attitude with regard to their obligations related to asbestos-containing products removal;
- 6) cooperating with the Marshal of the Voivodeship in connection with taking the asbestos-containing products inventory and elaborating programmes for asbestos-containing products removal, especially as regards the location of asbestos-containing waste landfills and mobile facilities for asbestos-containing waste treatment;
- 7) cooperating with the media with the aim of promoting suitable social initiatives and disseminating information on dangers caused by asbestos;
- 8) cooperating with social organisations supporting the Programme implementation;
- 9) cooperating with control authorities (sanitary inspection, labour inspection, building inspection and inspection for environmental protection).

Powiat self-government:

- 1) preparing and updating programmes for asbestos and asbestos-containing products removal, also within the framework of waste management plans;
- 2) cooperating with gminas and the Marshal of the Voivodeship in connection with elaborating programmes for asbestos and asbestos-containing products removal, especially as regards verifying the asbestos-containing products inventory, location of asbestos-containing waste landfills and mobile facilities for asbestos-containing waste treatment;
- 3) organising asbestos-containing products removal with the use of national or Union funds obtained for this purpose, taking into account the principles set out in the Programme;
- 4) inspiring citizens to adopt the appropriate attitude with regard to their obligations related to asbestos-containing products removal;
- 5) cooperating with the media with the aim of promoting suitable social initiatives and disseminating information on dangers caused by asbestos;
- 6) cooperating with social organisations supporting the Programme implementation;
- 7) cooperating with control authorities (sanitary inspection, labour inspection, building inspection and inspection for environmental protection).

Diagram presenting the collaboration between government administration bodies, self-government units, inspection authorities and non-governmental organisations



4.4. Non-governmental organisations, social partners

It is envisaged that within the following 24 years harmful asbestos will be abated in the territory of Poland and a considerable improvement will be achieved in the area of protecting the health of its inhabitants.

In order to accomplish the Programme objectives, it is necessary for state administration to collaborate with social partners such as:

- 1) non-governmental organisations, for example associations and foundations grouping and representing natural and legal persons who declare their willingness to abate asbestos in a specific area and present a suitable action plan;
- 2) associations and partnerships of gminas who cooperate with the view of abating asbestos in the territory of these gminas while ensuring effective collaboration with their residents;
- 3) associations of businesses representing companies who perform works requiring contact with asbestos and guarantee high quality of the services provided.

4.5. Monitoring system and performance assessment indicators

Performance of the tasks under the Programme is examined by means of a monitoring and reporting system that was created in the years 2004–2006.

The monitoring concerning performance of the tasks under the Programme involves gathering, processing and disseminating information on asbestos and asbestos-containing products removal, pertaining principally to:

- 1) amount of asbestos-containing products removed and of dangerous asbestos-containing waste produced;
- 2) amount of asbestos-containing waste in landfills;
- 3) location of the existing and envisaged asbestos-containing waste landfills, their capacity and level of use;
- 4) number and results of inventory-taking campaigns and assessments of technical condition of asbestos-containing products and their location in the territory of gminas, poviats and voivodeships;
- 5) businesses authorised to safely remove asbestos;
- 6) number of persons having contact with asbestos at work;
- 7) number of employees trained to perform work requiring contact with asbestos;
- 8) initiatives undertaken by self-government units in the area of asbestos-containing products removal;
- 9) location of places with high concentration of asbestos fibres in the air;
- 10) registering of legislative amendments concerning asbestos-related issues;
- 11) implementation of technologies for destroying asbestos fibres in asbestos-containing waste.

The monitoring regarding performance of the tasks under the Programme also concerns environmental indicators resulting from the strategic environmental impact assessment carried out. They include:

- 1) overall area devoted to landfills and landfill sectors for asbestos-containing waste [ha];
- 2) level of air pollution by asbestos fibres in vulnerable areas and in vicinity of facilities [fibres per m³].

Until the Electronic Spatial Information System is put in place, the monitoring of the Programme will be performed using the currently available systems, that is:

- voivodeship database of asbestos-containing products and waste at the www.bazaazbestowa.pl website, developed and serviced on behalf of the Ministry of Economy and containing information on asbestos-containing products;
- electronic system for gathering and submitting data on asbestos-related issues, available at <http://azbest.ceramika.agh.edu.pl>.

The implementation of the Electronic Spatial Information System for the monitoring of asbestos-containing products removal will contribute to standardising the monitoring systems and combining them into a coherent system. The data acquired thus far should constitute entry data for the Electronic Spatial Information System for the monitoring of asbestos-containing products removal.

The reports and figures collected electronically – in accordance with the information technology system selected – will be used for the purposes of elaborating analyses and assessments necessary for drawing appropriate conclusions concerning further fulfilment of the tasks under the Programme. The monitoring will be performed on a regular basis throughout the entire period of performing the tasks under the Programme.

Before 15 November 2008, 1,753 gminas (70.74% of all gminas in Poland) had their logins and passwords assigned in the voivodeship database of asbestos-containing products and waste, maintained at the www.bazaazbestowa.pl website, but only 811 gminas (32.73%) actually used the system.

Informational and educational activities and envisaged legislative amendments should contribute to an increase in the number of gminas employing the current system in the following years.

The assessment concerning the accomplishment of the Programme objectives consists in monitoring the fulfilment of certain tasks. The indicators in the annual assessment concerning performance of the tasks are as follows:

- 1) amount of asbestos-containing products withdrawn from use;
- 2) amount of asbestos-containing waste in landfills;
- 3) number of gminas using the voivodeship database of asbestos-containing products and waste.

The summary of base and target levels for particular indicators presents specific levels of indicators in the years 2009–2012 and the overall values of indicators to be achieved in the years 2013–2015 and 2016–2032. The values indicated should be reached at the end of a given calendar year, on a cumulative basis counting from the base year 2009. It is recognised that the target values for particular indicators might change. Such changes may be associated with:

- taking of a full and thorough inventory of asbestos-containing products – for indicators 1 and 2;
- development of new technologies for asbestos-containing products treatment and legal possibility of keeping some unused asbestos-containing products in the ground, due to which less waste would be landfilled – for indicator 2.

Table 12. Summary of indicators in the annual assessment concerning performance of the tasks

Indicator	2009	2010	2011	2012	2013– 2015	2016– 2032
1 – amount of asbestos-containing products withdrawn from use - in million tonnes	0.5	1.3	2.5	4.0	6.7	14.5
2 – amount of asbestos-containing waste in landfills – in million tonnes	0.5	1.0	1.8	2.8	4.6	10.0
3 – number of gminas using the voivodeship database of asbestos-containing products and waste – in pieces	1,000	1,500	2,000	2,478	2,478	2,478

The Programme envisages an intensification of all activities before 2012 so that a thorough assessment regarding the accomplishment of the Programme objectives can be performed in the years 2012–2013 and an update of the Programme can be prepared before 2015. In the years 2012–2015, the entirety of activities undertaken and goals reached thus far will be summed up, also with the use of the indicators in the Programme implementation assessment.

5. OUTCOMES OF THE PROGRAMME

The implementation of the Programme will contribute to improving the health and life protection offered to the population, as well as bring social, environmental and economic advantages.

5.1. Social advantages

The major social advantages of the Programme implementation include:

- 1) abatement of asbestos-containing products in Poland and, in consequence, reduction of asbestos fibres emissions into the environment and ensuring of conditions for improving the health of inhabitants;
- 2) early diagnosis of asbestos-related diseases, their treatment and mitigation of negative effects;
- 3) decrease in mortality due to asbestos-related diseases, especially lung cancer and malignant mesothelioma;
- 4) extended lifespan of constructions and better exploitation parameters;
- 5) improved exterior appearance of constructions;
- 6) increase in the attractiveness of rural areas in terms of agrotourism;
- 7) increase in the attractiveness of areas where asbestos has been abated for domestic and foreign investors.

5.2. Environmental advantages

The main environmental advantage will consist in gradual reduction and, consequently, total elimination of exposure of the environment to asbestos. Such exposure takes place as a result of emission into the air of asbestos fibres from asbestos-containing products and from waste consisting of such products, as well as due to improperly conducted processes of using and removing such products. Serious environmental pollution is also caused by asbestos emissions from illegal rubbish dumps, most often found in forests.

5.3. Economic advantages

The key economic advantages of the Programme implementation include:

- 1) increase in the value of real estate;
- 2) increase in the value of land;
- 3) improved technical condition of constructions;
- 4) rise in investments;
- 5) increase in state budget income from taxes on economic activity related to asbestos-containing products removal and use of new materials;
- 6) decrease in the costs of treating asbestos-related diseases.

It is estimated that the results of the Programme implementation will include:

- 1) increase in the value of national wealth by approximately PLN 153 billion, the major share in the increase concerning owners of land, constructions and houses;
- 2) accelerated modernisation of rural areas, since rural inhabitants will have a 51% share in the abovementioned value increase;
- 3) increase in state budget income by approximately PLN 25 billion due to revenue in the form of VAT and CIT taxes collected in connection with the purchase of new construction materials and provision of construction services related to asbestos-containing products removal;
- 4) rise in the real estate market turnover that should translate into higher income both for the state budget and for gminas.

The achievement of such outcomes depends on the discipline in performance of the tasks and on the commitment of government and self-government bodies, but also on appropriate motivators bringing about an increase in social participation in the activities related to safe asbestos and asbestos-containing products removal.

ANNEXES

List of legal acts in force concerning asbestos

Acts

1. Act of 26 June 1974 – Labour Code (Dz. U. of 1998, No 21, item 94, as amended)
2. Act of 19 June 1997 prohibiting the use of asbestos-containing products (Dz. U. of 2004, No 3, item 20, as amended)
3. Act of 7 July 1994 – Construction Law (Dz. U. of 2006, No 156, item 1118, as amended)
4. Act of 27 April 2001 – Environmental Protection Law (Dz. U. of 2008, No 25, item 150, as amended)
5. Act of 27 April 2001 on waste (Dz. U. of 2007, No 39, item 251, as amended)
6. Act of 27 July 2001 introducing the Environmental Protection Law Act and the Act on waste and amending certain acts (Dz. U. No 100, item 1085, as amended)
7. Act of 11 January 2001 on chemical substances and preparations (Dz. U. No 11, item 84, as amended)
8. Act of 28 October 2002 on carriage of dangerous goods by road (Dz. U. No 199, item 1671, as amended)
9. Act of 29 July 2005 on waste electrical and electronic equipment (Dz. U. No 180, item 1495)

Ordinances

1. Ordinance of the Council of Ministers of 24 August 2004 on the list of works forbidden to juvenile workers and on conditions for engaging juveniles in some of these works (Dz. U. No 200, item 2047, as amended)
2. Ordinance of the Council of Ministers of 9 November 2004 specifying projects with potentially significant impact on the environment and detailed conditions for qualifying a project as requiring an environmental impact report (Dz. U. No 257, item 2573, as amended)
3. Ordinance of the Council of Ministers of 14 October 2008 on environmental charges (Dz. U. No 196, item 1217)
4. Order of the Minister of Health and Social Welfare of 12 March 1996 on maximum admissible concentrations and intensities for agents harmful to health having their source in construction materials, devices and elements of equipment in rooms intended for humans (M.P. No 19, item 231)

5. Ordinance of the Minister of Health of 2 September 2003 on criteria and methods for classifying chemical substances and preparations (Dz. U. No 171, item 1666, as amended)
6. Ordinance of the Minister of Health of 4 August 2004 on periodic medical examinations for workers employed in plants that used asbestos in the production process (Dz. U. No 183, item 1896)
7. Ordinance of the Minister of Health of 9 August 2004 on health resort treatment for persons engaged in production of asbestos-containing products (Dz. U. No 185, item 1920, as amended)
8. Ordinance of the Minister of Health of 1 December 2004 on substances, preparations, agents or technological processes with carcinogenic or mutagenic potency present in work environment (Dz. U. No 280, item 2771, as amended)
9. Ordinance of the Minister of Health of 10 January 2005 on the model preventive examinations record book for a person who is or was working under occupational exposure in plants using asbestos in the technological process, and the method for filling it in and for updating it (Dz. U. No 13, item 109)
10. Ordinance of the Minister of Health of 20 April 2005 on tests and measurements for agents harmful to health present in work environment (Dz. U. No 73, item 645, as amended)
11. Ordinance of the Minister of Health of 15 September 2005 on medicines related to diseases caused by working with asbestos (Dz. U. No 189, item 1603)
12. Ordinance of the Minister of Health on 28 September 2005 on the list of dangerous substances, along with their classification and labelling (Dz. U. No 201, item 1674)
13. Ordinance of the Minister of Labour and Social Policy of 29 November 2002 on maximum admissible concentrations and intensities for agents harmful to health present in work environment (Dz. U. No 217, item 1833, as amended)
14. Ordinance of the Minister of Economy of 30 October 2002 on types of waste that may be landfilled in non-selective manner (Dz. U. No 191, item 1595)
15. Ordinance of the Minister of Economy, Labour and Social Policy of 23 October 2003 on requirements for using and shipping asbestos and for using and cleaning installations or devices in which asbestos is or was used (Dz. U. No 192, item 1876 and of 2008, No 200, item 1235)
16. Ordinance of the Minister of Economy, Labour and Social Policy of 2 April 2004 on methods and conditions of safe use and removal of asbestos-containing products (Dz. U. No 71, item 649)
17. Ordinance of the Minister of Economy, Labour and Social Policy of 5 July 2004 on restrictions, prohibitions or conditions applicable to production, marketing and use of dangerous substances and preparations and of products containing them (Dz. U. No 168, item 1762, as amended)
18. Ordinance of the Minister of Economy and Labour of 7 September 2005 on criteria and procedures for accepting waste at landfills for particular types of waste (Dz. U. No 186, item 1553, as amended)

19. Ordinance of the Minister of Economy and Labour of 14 October 2005 on occupational safety and hygiene principles applicable to securing and removing asbestos-containing products and on the programme of training on safe use of such products (Dz. U. No 216, item 1824)
20. Ordinance of the Minister of Economy and Labour of 22 August 2007 on criteria and procedures for accepting waste at underground landfills (Dz. U. No 163, item 1156)
21. Ordinance of the Minister of Economy of 26 October 2007 on types of waste that may be landfilled in non-selective manner in underground landfills (Dz. U. No 209, item 1514)
22. Ordinance of the Minister of the Environment of 27 September 2001 on the catalogue of waste (Dz. U. No 112, item 1206)
23. Ordinance of the Minister of the Environment of 26 July 2002 on types of installations having the potential to cause serious pollution of particular elements of the environment or of the environment as a whole (Dz. U. No 122, item 1055)
24. Ordinance of the Minister of the Environment of 5 December 2002 on reference values for certain airborne substances (Dz. U. of 2003, No 1, item 12)
25. Ordinance of the Minister of the Environment of 9 December 2002 on the scope, period, method and conditions of monitoring waste landfills (Dz. U. No 220, item 1858)
26. Ordinance of the Minister of the Environment of 24 March 2003 on detailed requirements for location, construction, use and closure to be satisfied by particular types of waste landfills (Dz. U. No 61, item 549 and of 2009, No 39, item 320)
27. Ordinance of the Minister of the Environment of 9 April 2003 on developing waste management plans (Dz. U. No 66, item 620, as amended)
28. Ordinance of the Minister of the Environment of 13 May 2004 on conditions in which waste is considered non-hazardous (Dz. U. No 128, item 1347)
29. Ordinance of the Minister of the Environment of 16 June 2005 on underground waste landfills (Dz. U. No 110, item 953)
30. Ordinance of the Minister of the Environment of 20 December 2005 on emission standards for installations (Dz. U. No 260, item 2181)
31. Ordinance of the Minister of the Environment of 14 February 2006 on model documents used for the purposes of waste registers (Dz. U. No 30, item 213)
32. Ordinance of the Minister of the Environment of 21 March 2006 on recycling or disposal of waste outside installations and devices (Dz. U. No 49, item 356)
33. Ordinance of the Minister of the Environment of 25 May 2007 on the scope of information and model forms for preparing and submitting aggregate data summaries (Dz. U. No 101, item 686)
34. Ordinance of the Minister of the Environment of 24 June 2008 on types of waste forbidden for carriage with the aim of disposal (Dz. U. No 119, item 769)
35. Ordinance of the Minister of the Environment of 4 November 2008 on requirements for measuring emissions and the amount of water drawn (Dz. U. No 206, item 1291)

36. Ordinance of the Minister of the Environment of 23 July 2009 on the manner of providing the Marshal of the Voivodship with information on the presence of substances posing particular threat to the environment (Dz. U. No 124, item 1033)
37. Government Statement of 23 March 2007 on the entry into force of amendments to Annex A and B to the European Agreement concerning the international carriage of dangerous goods by road (ADR), concluded in Geneva on 30 September 1957 (Dz. U. No 99, item 667)
38. Ordinance of the Minister of Infrastructure of 26 June 2002 on construction site log book, assembly and dismantlement, information board and notice containing data on occupational safety and health protection (Dz. U. No 108, item 953, as amended)
39. Ordinance of the Minister of Infrastructure of 19 December 2002 on the scope and manner of applying legal provisions on carriage of dangerous goods by road to shipments of dangerous waste (Dz. U. No 236, item 1986)
40. Ordinance of the Minister of Infrastructure of 23 December 2002 on the certificate of approval of vehicles for carriage of certain dangerous goods (Dz. U. No 237, item 2011, as amended)
41. Ordinance of the Minister of Infrastructure of 23 June 2003 on the information concerning safety and health protection and the safety and health protection plan (Dz. U. No 120, item 1126)
42. Ordinance of the Minister of Health of 15 September 2005 on refresher courses for drivers of vehicles carrying dangerous goods (Dz. U. No 187, item 1571)

The acts and ordinances listed above and the Programme are available at the websites of relevant Ministries and at <http://isip.sejm.gov.pl/index.html>.

Directives and Decisions

The following Directives and Decisions are available at <http://eur-lex.europa.eu/pl/index.htm>.

1. Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (OJ 196, 16.8.1967, p. 1; special edition in Polish: Chapter 13 Volume 001, p. 27)
2. Council Directive 76/769/EEC of 27 July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (OJ L 262, 27.9.1976, p. 201, as amended; special edition in Polish: Chapter 13 Volume 003, p. 317)

Amendments to Council Directive 76/769:

- *Commission Directive 1999/77EC of 26 July 1999 adapting to technical progress for the sixth time Annex I to Council Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (asbestos) (OJ L 207, 6.8.1999, p. 18; special edition in Polish: Chapter 13 Volume 24, p. 193)*

- *Council Directive 83/478/EEC of 19 September 1983 amending for the fifth time (asbestos) Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (OJ L 263, 24.9.1983, p. 33; special edition in Polish: Chapter 13 Volume 007, p. 118)*
 - *Council Directive 85/610/EEC of 20 December 1985 amending for the seventh time (asbestos) Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (OJ L 375, 31.12.1985, p. 1; special edition in Polish: Chapter 13 Volume 008, p. 86)*
 - *Commission Directive 91/659/EEC of 3 December 1991 adapting to technical progress Annex I to Council Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (asbestos) (OJ L 363, 31.12.1991, p. 36; special edition in Polish: Chapter 13 Volume 011, p. 13)*
3. Council Directive 83/477/EEC of 19 September 1983 on the protection of workers from the risks related to exposure to asbestos at work (second individual Directive within the meaning of Article 8 of Directive 80/1107/EEC) (OJ L 263, 24.8.1983, p. 25, as amended; special edition in Polish: Chapter 5 Volume 01, p. 264)

Amendments to Council Directive 83/477:

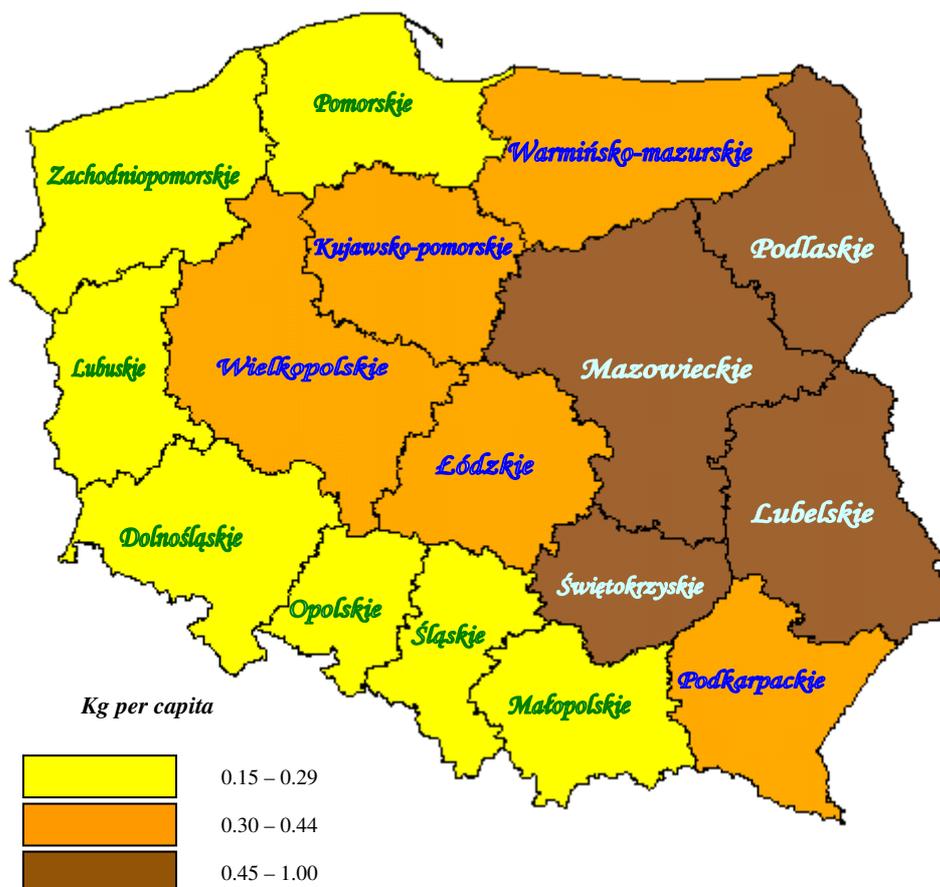
- *Directive 2003/18/EC of the European Parliament and of the Council of 27 March 2003 amending Council Directive 83/477/EEC on the protection of workers from the risks related to exposure to asbestos at work (OJ L 97, 15.4.2003, p. 48; special edition in Polish: Chapter 05 Volume 04, p. 312)*
 - *Council Directive 91/382/EEC of 25 June 1991 amending Directive 83/477/EEC on the protection of workers from the risks related to exposure to asbestos at work (second individual Directive within the meaning of Article 8 of Directive 80/1107/EEC) (OJ L 206, 29.7.1991, p. 16; special edition in Polish: Chapter 05 Volume 01, p. 415)*
 - *Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 131, 5.5.1998, p. 11; special edition in Polish: Chapter 05 Volume 03, p. 279)*
4. Council Directive 87/217/EEC of 19 March 1987 on the prevention and reduction of environmental pollution by asbestos (OJ L 85, 28.3.1987, p. 40, as amended; special edition in Polish: Chapter 13 Volume 008, p. 269)
5. Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (OJ L 183, 29.6.1989, p. 1, as amended; special edition in Polish: Chapter 05 Volume 01, p. 349)

6. Council Directive 91/689/EEC of 12 December 1991 on hazardous waste (OJ L 377, 31.12.1991, p. 20; special edition in Polish: Chapter 15 Volume 02, p. 78)
7. Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum safety and health requirements at temporary or mobile construction sites (eighth individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC) (OJ L 245, 26.8.1992, p. 6; special edition in Polish: Chapter 05 Volume 02, p. 71)
8. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work (OJ L 216, 20.8.1994, p. 12, as amended; special edition in Polish: Chapter 05 Volume 02, p. 213)
9. Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC) (OJ L 158, 30.4.2004, p. 50; special edition in Polish: Chapter 05 Volume 05, p. 35)
10. Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1, as amended; special edition in Polish: Chapter 15 Volume 04, p. 228)
11. Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (OJ L 11, 16.1.2003, p. 27; OJ L 218, 23.8.2007, p. 25; special edition in Polish: Chapter 15 Volume 07, p. 314)
12. Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) – Joint declaration of the European Parliament, the Council and the Commission relating to Article 9 (OJ L 37, 13.2.2003, p. 24; special edition in Polish: Chapter 15 Volume 07, p. 359)
13. Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste (OJ L 114, 27.4.2006, p. 9)
14. Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1)
15. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 369, 30.12.2006, p. 1 and Corrigendum in OJ L 136, 29.5.2007, p. 3)

Concentration of asbestos products, location of asbestos-containing waste landfills

It has been estimated that in the period 2002-2008 approximately 1 million tonnes of asbestos products were removed. In 2009, there were still approximately 14.5 million tonnes of these products in use.

Figure 1. Concentration of asbestos-containing products by voivodeship



The largest amount of built-in asbestos products *per capita* is observed in Mazowieckie, Lubelskie, Podlaskie and Świętokrzyskie Voivodeships. The smallest number of asbestos products can be found in Lubuskie, Opolskie and Zachodniopomorskie Voivodeships.

It has been estimated that approximately 15 million tonnes of asbestos-containing waste is going to be deposited at landfills in the period 2003-2032. Therefore, 84 asbestos-containing waste landfills of 1-5 ha will have to be located throughout the country. It is planned that in the period 2003-2012 approximately 35% of waste will be deposited at landfills, i.e. 5,413 thousand tonnes, in the period 2013-2022 approx. 40% (6,187 thousand tonnes), and in the period 2023-2032 approx. 25% (3,867 thousand tonnes).

According to estimates based on the information obtained from the Marshal and Voivodeship Offices and the Chief Inspectorate for Environmental Protection, by the end of 2006 962 thousand tonnes of asbestos-containing products were removed, of which in the period 2003-2005 164,000 tonnes were disposed to dedicated landfills, according to the data provided by the CIEP. The information provided by the entities managing asbestos-containing waste landfills shows that in 2007 approximately 80,000 tonnes of such waste was deposited at landfills, while by September 2008 – 41,000 tonnes.

In 2009 there were 29 landfills in Poland accepting asbestos-containing waste, including 3 landfills used exclusively by their owners (industrial plants). The free capacity of all landfills for asbestos waste is 1,031,095 m³ (as of June 2009). Given that the average volume of 1 tonne of stored waste amounts to 0.82 m³, the identified free capacity of landfills is sufficient to store more than 1.25 million tonnes of asbestos waste.

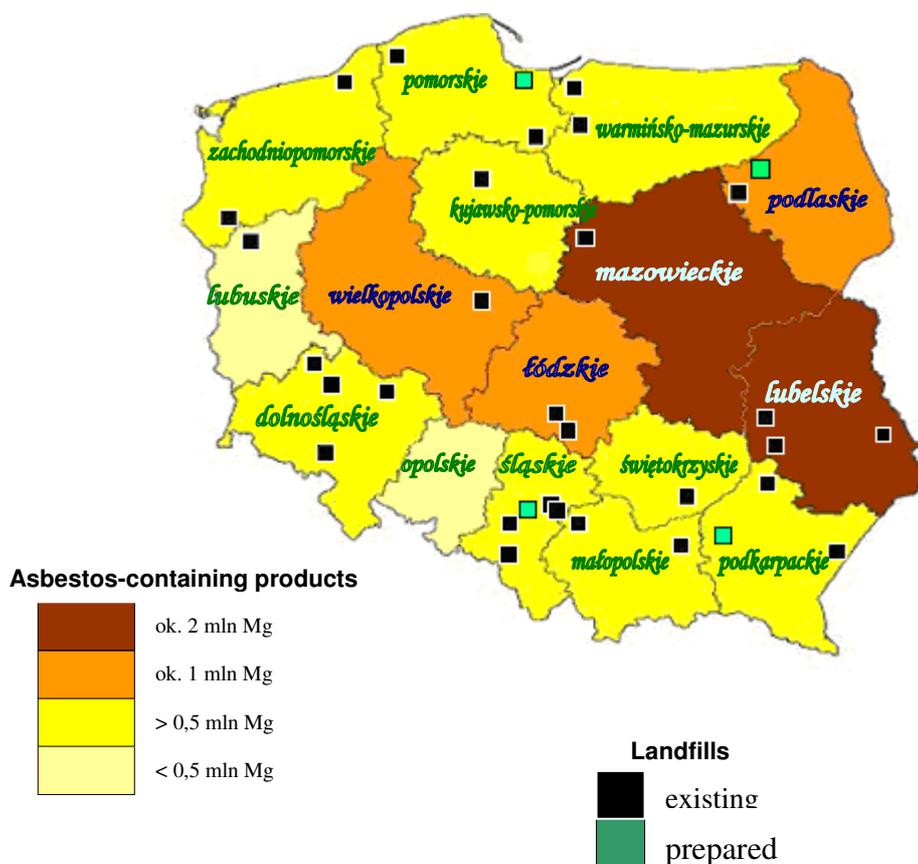
In the period 2007-2009, 6 asbestos-containing waste landfills were put into operation, while 5 other ceased to operate. A completely filled landfill cell in Świętochłowice at Huta Florian premises (Śląskie Voivodeship) has been closed, but it is planned to extend this landfill to include a new cell for asbestos-containing waste.

Based on estimates, it can be assumed that in 2008 in Poland there were approx. 14.5 million tonnes of asbestos products in use. The following amounts of asbestos-containing waste are assumed to be disposed in the next years:

- in 2009-2012 approx. 28% of waste (4 million tonnes),
- in 2013-2022 approx. 35% of waste (5.1 million tonnes),
- in 2023-2032 approx. 37% of waste (5.4 million tonnes).

In the period 2009-2013 it is planned to build 56 landfills or landfill cells for asbestos-containing waste. The capacity, location and number of landfills in a given territory depends on decisions of self-government units and should be included in voivodeship waste management plans. In the next years it is planned to build 4 waste landfills (Podkarpackie, Podlaskie, Pomorskie, and Śląskie Voivodeships) with a total volume of cells amounting to 107,240 m³. Below is an overall analysis of the demand for asbestos waste landfills and the progress in individual voivodeships.

Figure 2. Existing and prepared asbestos-containing waste landfills



Voivodeship	Progress as of 2009 (+under preparation)	Years			Total
		2009-2012	2013-2022	2023-2032	
Dolnośląskie	4	0	0	0	4
Kujawsko-Pomorskie	1	1	2	2	6
Lubelskie	3	1	3	1	8
Lubuskie	1	0	1	1	3
Łódzkie	2	1	2	2	7
Małopolskie	2	1	2	1	6
Mazowieckie	1	2	2	2	7
Opolskie	0	1	1	0	2
Podkarpackie	2 (+1)	1	1	1	5
Podlaskie	1 (+1)	1	1	2	5
Pomorskie	2 (+1)	1	1	1	5
Śląskie	4 (+1)	1	0	1	6
Świętokrzyskie	1	1	2	1	5
Warmińsko-Mazurskie	2	0	2	1	5
Wielkopolskie	1	1	2	2	6
Zachodniopomorskie	2	0	2	1	5
Total	29 (+4)	13	24	19	85 (+4)

The capacity and service life of landfills is limited. The landfills which used to operate, but are no longer in use, fulfilled their function since they accepted asbestos waste for storage. The plans to build subsequent waste landfills are justified as long as it is assumed that in a given period in average a given number of landfills is accepting asbestos waste for storage. A network of waste landfills is supposed to ensure the possibility of lawful disposal of asbestos waste.

Table 1. A list of existing and prepared asbestos-containing waste landfills (as of June 2009)

No	Name of landfill Location	Name and address of the managing entity	Free capacity of landfill [m ³]
Dolnośląskie Voivodeship			
1	Industrial Waste Landfill ul. Górnicza 1 58-303 Wałbrzych	Mo-Bruk Korzenna 214 33-322 Korzenna	43,102
2	Non-hazardous and neutral waste landfill in Trzebcz Polkowice Gmina	Przedsiębiorstwo Gospodarki Miejskiej Sp. z o.o. ul. Dąbrowskiego 2 59-100 Polkowice	1,240
3	Waste landfill in Marcinowo Trzebnica Gmina	Zakład Gospodarki Komunalnej w Trzebnicy ul. Piłsudskiego 1 55-100 Trzebnica	6,000
4	KGHM "Polska Miedź" premises in Lubin Głogów Copper Smelter and Refinery ul. Żukowicka 1 67-200 Głogów	KGHM „Polska Miedź” S.A. w Lubinie Oddział Huta Miedzi Głogów	Used by the owner
Kujawsko-Pomorskie Voivodeship			
5	Hazardous Waste Landfill Małocieczowo Pruszcz Gmina	„ECO-POL” Sp. z o.o. ul. Dworcowa 9 86-120 Pruszcz	10,079
Lubelskie Voivodeship			
6	Hazardous Waste Landfill Poniatowa Wieś Poniatowa Gmina	Przedsiębiorstwo Gospodarki Komunalnej Sp. z o.o. ul. Młodzieżowa 4 24-320 Poniatowa	1,489
7	Piaski Zarzecze II Landfill Kraśnik	WOD-BUD Sp. z o.o. ul. Piłsudskiego 12/1 23-200 Kraśnik	138,970
8	Asbestos waste landfill in Srebrzyszcze Chełm Gmina	Przedsiębiorstwo Gospodarki Odpadami Sp. z o.o. w Chełmie ul. Ks. Piotra Skargi 11 22-100 Chełm	1,340
Lubuskie Voivodeship			
9	Asbestos Waste Landfill ul. Małazzyńska 180 Chróścik, Gorzów Wielkopolski Gmina	Zakład Utylizacji Odpadów Sp. z o.o., ul. Teatralna 49 66-400 Gorzów Wielkopolski	25,816
Łódzkie Voivodeship			
10	Hazardous Waste Landfill Jadwinówka Radomsko Gmina	Transport Metalurgia S.A. ul. Reymonta 62 97-500 Radomsko	12,000
11	"Bagno-Lubień" – Elektrownia Bełchatów S.A. premises	Elektrownia Bełchatów S.A. z/s w Rogowcu ul. Wyzwolenia 30 97-406 Rogowiec	Used by the owner

Małopolskie Voivodeship			
12	Municipal Landfill in Ujków Stary Bolesław Gmina	Zakład Gospodarki Komunalnej „Bolesław” Sp. z o.o., ul. Osadowa 1 32-329 Bolesław	43,118
13	“Za rzeką Białą” Waste Landfill ul. Kwiatkowskiego 8 33-101 Tarnów	Jednostka Ratownictwa Chemicznego Sp. z o.o. ul. Kwiatkowskiego 8 33-101 Tarnów	8,200
Mazowieckie Voivodeship			
14	Municipal waste landfill in Rachocin	Zakład Gospodarki Mieszkaniowej ul. Traugutta 33 09-200 Sierpc	45,000
Opolskie Voivodeship			
No landfills			
Podkarpackie Voivodeship			
15	Waste Landfill in Młyny Radymno Gmina	Zakład Gospodarki Komunalnej Gminy Radymno z/s w Skotośzowie 341 37-550 Radymno	35,762
16	Pysznicza Waste Landfill Pysznicza Gmina	Gminny Zakład Komunalny ul. Wolności 295 37-403 Pysznicza	280
P	<i>Kozodrza Ostrów Gmina</i>	<i>Zakład Usług Komunalnych w Ostrowie</i>	<i>[17,740]</i>
Podlaskie Voivodeship			
17	Miastkowo Waste Landfill Łomża Gmina	MPGKiM ul. Akademicka 22 18-400 Łomża	682
P	<i>Construction asbestos-containing waste landfill within the municipal waste landfill in Korytki Jedwabne Gmina</i>	<i>Komunalny Zakład Budżetowy ul. Mickiewicza 4 18-420 Jedwabne</i>	<i>[I stage – 20,000] [II stage – 21,500]</i>
Pomorskie Voivodeship			
18	Waste Disposal Plant in Bierkowo Bierkowo 120 76-261 Bruszkowo Wielkie Słupsk Gmina	Przedsiębiorstwo Gospodarki Komunalnej Sp. z o.o. w Słupsku, ul. Szczecińska 112 76-200 Słupsk	3,900
19	Waste Landfill in Gliwa Mała Gilwa Mała 8 82-500 Kwidzyn	Zakład Utylizacji Odpadów Sp. z o.o. Gilwa Mała 8, 82-500 Kwidzyn	81,639
P	<i>Cell for asbestos-containing waste</i>	<i>Zakład Utylizacyjny Sp. z o.o. w Gdańsku ul. Jabłoniowa 55 80-180 Gdańsk Szadółki</i>	<i>[n/a]</i>
Śląskie Voivodeship			
20	Sector III for asbestos waste within the non- hazardous and neutral waste landfill in Knurów Szybowa 44, Knurów	PPHU „Komart” Sp. z o.o. ul. Szpitalna 7 44-194 Knurów	239,090
P	<i>Municipal waste landfill Świętochłowice – ground remaining after the exploitation of slag heap of Huta “Florian”</i>	<i>Miejskie Przedsiębiorstwo Gospodarki Komunalnej Sp. z o.o. ul. Łagiewnicka 76 41-608 Świętochłowice</i>	<i>[18,000]</i>
21	Cell X for asbestos waste within the non-hazardous and neutral waste landfill in Dąbrowa Górnicza	Koksownia „Przyjaźń” Sp. z o.o. ul. Koksownicza 1 42-523 Dąbrowa Górnicza	358

22	Asbestos waste landfill at the premises of Huta Katowice Rain and Industrial Wastewater Treatment Plant Dąbrowa Górnicza	ARCELOR MITTAL POLAND S.A. Oddział w Dąbrowie Górniczej, ul. J. Piłsudskiego 92 41-308 Dąbrowa Górnicza	Used by the owner
23	Separated sub-cell for asbestos-containing waste within sector III of the non-hazardous and neutral waste landfill in Jastrzębie Zdrój	Cofinco-Poland Sp. z o.o. ul. Graniczna 29 40-956 Katowice	15,977
Świętokrzyskie Voivodeship			
24	Hazardous Waste Landfill Dobrow Tuczepy Gmina	Środowisko i Innowacje Sp. z o.o. Dobrow 8 28-142 Tuczepy	144,008
Warmińsko-Mazurskie Voivodeship			
25	Asbestos-containing waste landfill in Półwieć Zalewo Gmina	Przedsiębiorstwo Usług Komunalnych Sp. z o.o. ul. 3-go Maja 8 14-100 Ostróda	19,900
26	Zakład Utylizacji Odpadów Sp. z o.o. ul. Szańcowa 1 82-300 Elbląg	Zakład Utylizacji Odpadów Sp. z o.o. ul. Szańcowa 1 82-300 Elbląg	2,475
Wielkopolskie Voivodeship			
27	Hazardous Waste Landfill ul. Sulańska 11 62-510 Konin	Zakład Utylizacji Odpadów Sp. z o.o. ul. Sulańska 11 62-510 Konin	119,800
Zachodniopomorskie Voivodeship			
28	Waste recycling plant ul. Łubuszan 80 Sianów	Przedsiębiorstwo Gospodarki Komunalnej Sp. z o.o. ul. Komunalna 5 75-724 Koszalin	15,350
29	Dalsze Waste Landfill Myślubórz Gmina	„Eko-Myśl” Sp. z o.o. Dalsze 36 74-300 Myślubórz	15,520
TOTAL – EXISTING			1,031,095
TOTAL – UNDER PREPARATION			77,240

P – asbestos-containing waste landfills under preparation

Asbestos-containing waste landfills are not evenly distributed throughout the country. For example, there is not a single asbestos waste landfill in Opolskie Voivodeship. However, this voivodeship is relatively small, the number of asbestos products in use is limited and the neighbouring voivodeships (Dolnośląskie and Śląskie) have numerous landfills.

The problem is the insufficient number of landfills in voivodeships with the largest number of asbestos-containing products in use, namely Mazowieckie and Lubelskie Voivodeships.

The number of asbestos-containing waste landfills which are planned to be put into operation by 2032 can decrease in the event of a significant development and implementation of new technologies for destroying asbestos fibres, which enable safe recycling of asbestos waste.

Level of air pollution by asbestos fibres

Due to its characteristics and the fact that it is practically indestructible, asbestos once introduced to the environment remains in it for an almost indefinite period of time. Asbestos fibres are released into the atmospheric air as a result of natural processes or human activity.

In practice, the importance of natural sources is marginal due to the significant dispersion of asbestos deposits and their presence in relatively underpopulated areas, while sources related to human activity usually concern more densely populated areas.

Sources related to human activity include:

- 1) buildings and areas related to the production and storage of asbestos-containing waste;
- 2) illegal asbestos-containing waste dumps;
- 3) premises, buildings, devices, installations or other places in which asbestos products are used, especially while removing asbestos-containing products.

Occupational exposure related to work in conditions of asbestos dust exposure concerned mainly asbestos processing plants and asbestos products manufacturing plants.

Apart from asbestos processing plants, which were closed down pursuant to the Act of 19 June 1997 prohibiting the use of asbestos-containing products (Dz. U. of 2004, No 3, item 20, as amended), there are still work positions posing the risk of asbestos dust exposure. They include works related to dismantling asbestos-cement boards used mainly in construction, various works carried out on ships, in heat and power stations, power plants, heating plants, renovation plants, in particular those dealing with renovation or demolition of buildings, installations and devices, and the resulting need for asbestos removal.

Non-occupational exposure concerns residents of areas neighbouring with former plants manufacturing asbestos-containing products, as well as families of workers employed in such plants (home exposure). In the past, air pollution with asbestos fibres in vicinity of such plants was substantial, frequently several times exceeding the admissible values. Measures conducted in these regions in workers' houses many years after production in plants had ceased showed an increased concentration of asbestos fibres, mainly due to asbestos dust carried on clothes.

Given the environmental pollution and risk for human health, the biggest problem is the release of asbestos fibres from corrosion-prone asbestos-cement products (whose production consumed approx. 85% of the total amount of asbestos imported to Poland), as well as the release of asbestos dust resulting from improper dismantling, transport or storage of asbestos-containing products.

The concentration of asbestos fibres in air (emission) in a given area is a direct measure used to define the cumulative dose, providing the basis for estimating health risk related to the pollution of the environment with asbestos in a given area.

In the execution of the task related to the assessment of health risks for residents potentially exposed to asbestos dust, the Reference Centre for Asbestos Exposure and Health Risk Assessment measured the concentration of asbestos fibres in air and determined the risk of asbestos-related cancers.

In the period 2004-2008, there were 5,005 measures conducted in 16 voivodeships. Measures were carried out in 1,358 points in 746 gminas located in 249 poviats. While selecting the points for measuring the concentration of asbestos fibres in air, the following issues were taken into account: the presence of potential sources of significant dust emission – the accumulation of a considerable number of built-in asbestos-cement products, the potential exposure of large groups of residents, the areas of impact of former plants manufacturing asbestos products in Gryfów, Małkinia, Lubawka, Ogrodzieniec, Szczucin and Wierzbica, as well as natural disaster areas struck by a hurricane in Opolskie, Śląskie and Łódzkie Voivodeships.

The total average concentration of asbestos fibres throughout the country was estimated at 549 fibres/m³. Concentration varied among voivodeships and amounted to 247-1,142 fibres/m³. If one assumes as acceptable the limit of 1,000 fibres/m³ of air, which would mean 0.001 fibres/cm³ in values admissible for work environment (the maximum admissible concentration NDS amounts to 0.1 fibres/cm³), almost 80% of points do not exceed this level.

The obtained results suggest that the average concentration of asbestos fibres in voivodeships increases by 103 fibres/m³ with an increase in the amount of asbestos used, expressed in tonnes per km² of voivodeship area. Lubuskie and Mazowieckie Voivodeships diverge markedly from the other voivodeships. In Lubuskie Voivodeship a high concentration of asbestos fibres was recorded in air, whereas in terms of accumulation of asbestos contained in materials per km² this voivodeship ranks last in the country, with the smallest amount of asbestos products on its territory. Unlike in Mazowieckie Voivodeship, where a large amount of asbestos accumulated in materials is not reflected by the levels of asbestos concentration in air.

Solutions resulting from the Forecast of the Programme's environmental impact, aimed at prevention, reduction or environmental compensation of potential negative environmental impacts of the Programme

Organisational and technical solutions in terms of asbestos waste handling

Legal regulations functioning in Poland, taking into consideration the specificities resulting from Poland's membership of the European Union, define precisely the rules of developing and functioning of asbestos-containing waste landfills, including underground landfills, and allow for recycling of asbestos-containing waste in mobile facilities (innovative technology which can be developed over the next few years.

The provisions of the Act on waste indicate that cells for storing asbestos waste do not have to be equipped with technical protection measures (for example leachate collection and treatment or monitoring devices) apart from the generally accepted ones. Their functioning should be consistent with the applicable procedures, and the waste accepted should be protected by being packaged in tight plastic containers.

In order to prevent negative environmental impact which can arise when using asbestos-containing products, as well as during dismantling and transporting waste, the following procedures resulting from the binding law need to be followed:

GROUP I. Procedures to be respected by the owners and entities managing buildings, installations or devices containing asbestos or asbestos-containing products.

Procedure 1. Duties and rules of conduct of the owners and managing entities in the use of buildings and premises with asbestos-containing products.

Procedure 2. Duties and rules of conduct of the owners and managing entities while removing asbestos-containing products from buildings or premises.

GROUP II. Procedures to be respected by the contractors for removing asbestos-containing products – hazardous waste producers.

Procedure 3. Rules of conduct for preparatory works for removing asbestos-containing products.

Procedure 4. Works related to removing asbestos-containing products, producing hazardous waste and cleaning building, premises and installations.

GROUP III. Procedure to be respected by entities involved in the transport of hazardous asbestos-containing waste.

Procedure 5. Preparation and transport of hazardous asbestos-containing waste.

GROUP IV. Procedure to be respected by entities managing hazardous asbestos-containing waste landfills.

Procedure 6. Waste deposition at landfills or in special cells intended exclusively for storing asbestos-containing waste.

Since it is planned for legal provisions to provide for the possibility to dispose of asbestos-containing waste with methods other than storage, including the use of mobile facilities, it will be necessary to introduce procedures, including legal regulations concerning:

- the principles of recording thus treated waste, as well as the place and methods of their final disposal or use (waste delivery chart);
- recording and certifying asbestos waste disposal services on site;
- controlling the effectiveness/efficiency of disposal processes conducted in mobile facilities.

Reducing impact on species and habitats covered by protection as NATURA 2000 sites as well as on flora and fauna not covered by protection

The main and most significant sources of pressure on fauna and flora species as well as on whole habitats which could possibly result from the implementation of the Programme include:

- construction of landfills/cells for asbestos-containing waste;
- exploitation of landfills/cells, including exploitation inconsistent with the accepted technical and legal solutions;
- transport of dismantled construction and isolation asbestos-containing waste to landfills;
- dismantling asbestos-containing waste in a way inconsistent with the accepted procedures.

Activities reducing the potential negative environmental impact arising as a result of the Programme implementation, which can be indicated with reference to waste landfills/cells:

at the stage of construction include:

- locating landfills at a minimum safe distance of approx. 1 km from protected sites to ensure reduction of potential negative impact of noise and dust;
- constructing landfills in accordance with the accepted technical solutions at a safe distance from underground water level;
- analysing the future access routes to landfills with the heaviest expected traffic in order to reduce the potential impact of transport on areas covered by legal protection;
- hedging the area around landfills/cell with plants in the form of trees and/or scrubs so as to limit the negative impact of potential release of dust containing asbestos fibres;

at the stage of operation include:

- conducting activity in accordance with the applicable procedures and legal provisions;
- accepting/storing asbestos waste protected in a way compliant with the law and procedures;

- exploitation (and/or recultivation) of a landfill in a way not posing the risk of damaging tight containers with asbestos waste.

In the case of impact caused by increased traffic which is particularly intense locally in vicinity of a landfill, the following can be indicated as activities reducing the potential negative impact:

- using modern truck fleet;
- reducing transport by roads in close vicinity of the protected areas;
- transporting waste protected in accordance with the applicable law and accepted procedures.

The only protective measures that can be indicated with reference to the stage of dismantling asbestos-containing products are conducting works by specialised entities, in compliance with all accepted protection measures reducing the release of asbestos fibres to air.

Organisation of transport of asbestos-containing waste

The efficient functioning of asbestos-containing waste management system requires using, removing and transporting asbestos products in a safe manner, as well as disposing of asbestos-containing waste.

The transport and storage of asbestos-containing waste is regulated by general provisions on hazardous waste as well as specific provisions developed based on the physicochemical characterisation of such waste and its impact on human health.

The principles of managing hazardous waste is specified in the Act of 27 April 2001 on waste, along with a number of implementing acts (mentioned in Annex No 1 to the Programme).

Pursuant to the Act on waste, hazardous waste should be disposed in the place of its generation. In the case of asbestos-containing waste this suggestion is impossible to be fulfilled. Asbestos-containing waste is generated in scattered locations, which necessitates its transport to central disposal points, i.e. landfills adapted to accepting such waste, whose number is currently relatively limited as compared to the estimated needs. The need for transport, oftentimes for long distances, of asbestos-containing waste is reflected in the general costs of dismantling and safe waste disposal, which is also highlighted in the Programme.

The manner and the associated costs of collecting and removing asbestos-containing waste depends on the type of waste and their generation sources. The general rule of conduct with asbestos-containing products and waste is their maximum protection against the potential release of asbestos fibres to air. It is particularly important that waste transport and storage conducted according to the agreed procedures should not be the source of exposure to asbestos for workers performing such tasks and should not pose a risk to the environment.

The waste generator holds the responsibility for preparing the transport of asbestos-containing waste properly.

The actual transport of hazardous asbestos-containing waste can be performed by the waste generator or another duly authorised legal entity. In either case it is necessary to obtain a permission for transport of asbestos-containing waste from the competent staroste. The above mentioned requirement does not apply to a waste generator who transports the waste produced by themselves or collects the waste produced by themselves in the place of its generation.

The transport of hazardous asbestos-containing waste should be executed in compliance with the provisions on the transport of hazardous products and the qualification criteria specified therein. In accordance with the ADR, asbestos-containing waste from construction, renovation and dismantling of buildings as well as isolation waste containing asbestos are classified into Class 9 – Various hazardous materials and objects, which results in specific requirements that need to be followed during transport. The owner of waste who transports such waste is obliged to possess a hazardous materials shipping paper.

Pursuant to the Ordinance of the Minister of Economy, Labour and Social Policy of 2 April 2004, in order to ensure safety of employees and avoid risks for the environment, the release of asbestos fibres to the environment during transport and waste disposal should be prevented, in particular by:

- tight packaging of products and waste with bulk density of or exceeding 1,000 kg/m³ in polyethylene foil not less than 0.2 mm thick;
- cementing and subsequently tightly packaging asbestos-containing waste with bulk density of less than 1,000 kg/m³ in polyethylene foil not less than 0.2 mm thick;
- tight packaging of waste remaining in contact with asbestos and qualified as waste with bulk density of less than 1,000 kg/m³ in polyethylene bags not less than 0.2 mm thick, and then placing the bags in a polyethylene bulk container and closing it tightly;
- maintaining waste in a damp condition while preparing it for transport;
- storing the waste prepared for transport in separate locations protected against unauthorised access.

Before each waste load, the vehicle load bed should be cleared thoroughly, especially of sharp and hard objects (such as nails and screws) which do not form an integral part of the vehicle body. It is appropriate to cover the load bed's floor with plastic foil in order to protect packaging against damage. The loading and unloading of waste (pallets, Big Bag containers) should be performed with the use of a crane or a forklift.

The entity transporting waste should refuse to accept a waste package when it is not labelled as asbestos-containing products and waste and when it was damaged while loading.

Parcels with asbestos-containing waste should be placed and fastened on a vehicle in such a way that would prevent their moving during transport and would not expose them to friction, shocks, falling over and falling out of a vehicle. During transport, the load should be thoroughly protected with foil or tarpaulin against damage. After each upload of waste from a vehicle, it needs to be double checked if there is no remains of the waste transported left on the load bed. In the event of identifying such remains, it should be removed immediately, while the vehicle along with its equipment should be cleaned thoroughly in compliance with the rules determined for asbestos removal works.

Hazardous asbestos-containing waste is transported to a landfill intended exclusively for storing asbestos-containing waste, where it is handed over to the next waste owner, i.e. the entity managing the landfill. This fact is recorded in the "Waste delivery chart".

The solution to the problem of ineffective transport of waste to (sometimes considerably remote) landfills can be the one applied in some countries like Denmark, which involves establishing a system of collective stations (equipped with appropriate containers) for a given region where asbestos waste from scattered sources is directed. From such station waste is transported to places of its final disposal, and as a result the burden of transport can be significantly reduced.

Another alternative, the legal basis for is currently under preparation (amendment of the Act on waste and its implementing acts), is to recycle asbestos-containing waste in the place of disposal in special mobile facilities.