

National Fund for Environmental Protection and Water Management
Financial Mechanism of European Economic Area
and Norwegian Financial Mechanism

Success Grants

Best practices presentation

Warsaw 2013



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Financial Mechanism of European Economic Area
and Norwegian Financial Mechanism

Success Grants

Projects with a grant from EEA FM & NFM 2004-2009

Best practices presentation

Publisher:



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Ladies and Gentlemen,

By joining the European Economic Area in 2003 and the European Union in 2004 Poland has gained new chances for development and the possibility of social and economic changes on a whole new scale. We have received the opportunity to participate in large international projects and to cooperate with European partners in many areas. All this was possible due to funds transferred by Iceland, Liechtenstein and Norway through Financial Mechanism of the European Economic Area and Norwegian Financial Mechanism for 2004-2009.

The main focus of Financial Mechanisms' first edition was environment protection and sustainable development which acquired the largest funds. 157 environmental projects have been financed: both investment and the so-called soft – non-investment projects. Tasks were implemented to reduce and limit the flow of pollution, save energy resources, increase the ratio of energy production from renewable sources in Poland's energy balance, and provide agglomerations with systems allowing for collection and treatment of wastewater as well as managing segregated waste. Apart from supporting environmental infrastructure, the goal was also to execute projects concerning promotion and implementation of the rules of sustainable development within government and society. They were mainly related to: introducing environment-friendly production and consumption patterns, maintaining biological diversity and sustainability, increasing knowledge on how best solve local problems with employment and the environment, and the cooperation between entities involved in environmental education. Financial Mechanisms also supported initiatives assisting in administrative activities and helped other public bodies responsible for implementing and enforcing the laws of European Union pertaining environment protection.

The goal of this publication is to summarise the implementation of the first edition of Financial Mechanisms concerning environment protection and to present some of many significant projects which helped increase the quality of life for many Polish citizens. National Fund for Environmental Protection and Water Management is proud to be able to participate in those positive changes and will continue its work while introducing the second edition of Mechanisms.

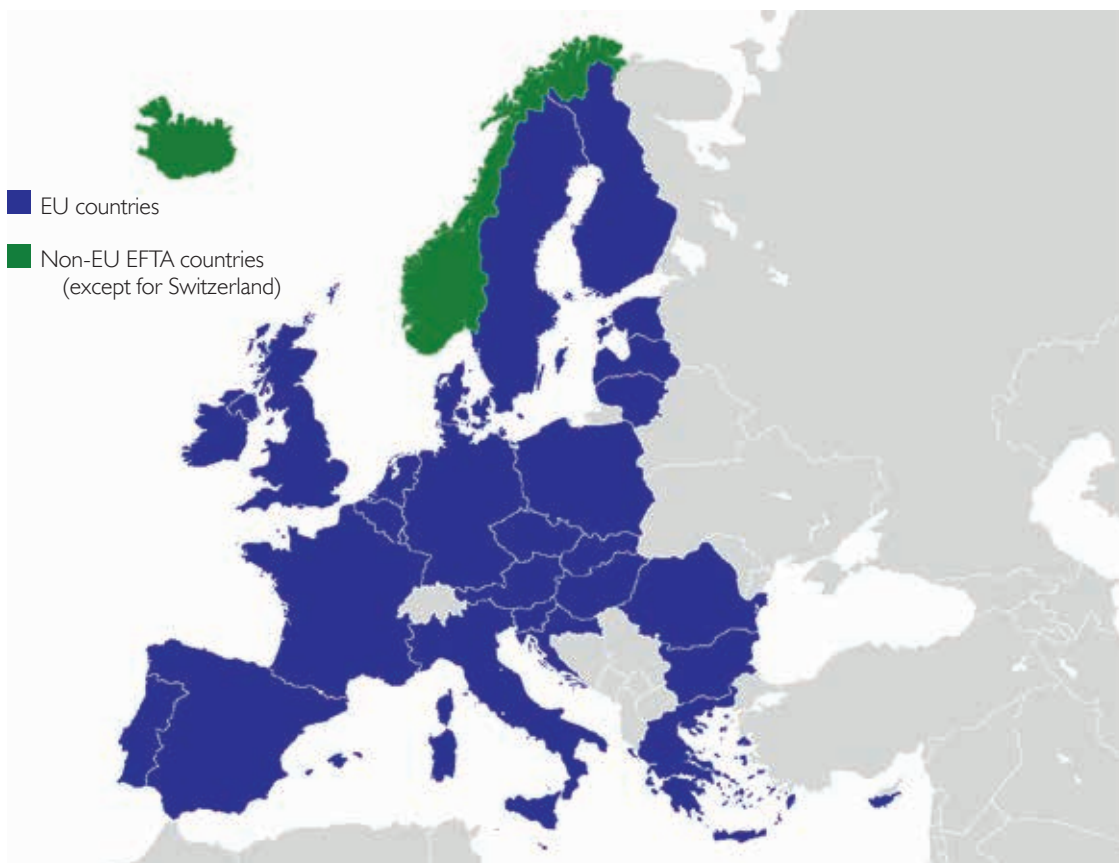
Barbara Koszula

Vice-President of the Management Board
of the National Fund for Environmental Protection
and Water Management

Grants from EEA foreign aid

The non-refundable financial aid, provided in the form of two instruments under the name: **European Economic Area Financial Mechanism** (hereinafter referred to as the EEA FM) and the **Norwegian Financial Mechanism** (hereinafter referred to as the NFM) – also known as the “**Norwegian funds**” or “**Norwegian and EEA funds**” – come from three EFTA countries (European Free Trade Association), which are also members of the EEA (European Economic Area), i.e. **Norway, Iceland and Liechtenstein**.

Consequence of Poland's membership in the European Union (EU) was accession to the European Economic Area (EEA)¹. The EEA enlargement agreement of 14 October 2003 established financial aid of the European Free Trade Association (EFTA) countries forming EEA and, thus benefiting from the opportunities offered by the internal market of the EU, for the least prosperous Member States of the EU, including Poland.



The countries that make up the European Economic Area

In October 2004, the Polish Government signed two agreements that allow the use of additional – apart from structural funds and the Cohesion Fund of the European Union – non-refundable sources of foreign aid: *Memorandum of Understanding on the implementation of the European Economic Area Financial Mechanism* and *Memorandum of Understanding on the implementation of the Norwegian Financial Mechanism*. The donors are 3 EFTA countries: Norway, Iceland and Liechtenstein.

¹ The European Economic Area – EEA covers 27 countries of the European Union and Norway, Liechtenstein and Iceland. Poland became a member of the EEA under the agreement signed on 14 October 2003 by the Minister of Foreign Affairs of the Republic of Poland concerning the enlargement of the European Economic Area.

Both FMs are covered by the uniform principles and procedures and are subject to a single system of management and implementation in Poland. The Ministry of Regional Development performs the coordination function as the National Contact Point. The implementation of the Financial Mechanisms in Poland is based on the Regulations on implementation of the EEA FM and NFM, taking account of guidelines drawn up by Donor States.

Under both Mechanisms Poland received an overall amount of EUR 533.51 million for 2004-2009. This financial support was granted in exchange for the ability to benefit from four freedoms (free movement of goods, capital, services and persons) that exist on the common market of the European Union. The primary goal of the FMs is to contribute to the reduction of economic and social disparities in the European Economic Area.

The priorities of the EEA FM and NFM 2004-2009

In the framework of the **European Economic Area Financial Mechanism** 6 priority areas were defined:

1. Protection of the environment, including human environment, through, *inter alia*, reduction of pollution and promotion of renewable energy sources;
2. Promotion of sustainable development through better utilization and management of resources;
3. Protection of European cultural heritage, including public transport and urban renewal;
4. Development of human resources through, *inter alia*, promoting education and training, strengthening the capacity of administration or public service in local governments and their institutions, as well as strengthening their supporting democratic processes;
5. Health care and child care;
6. Scientific research.

The actions supported under the **Norwegian Financial Mechanism** covered all six priorities of the EEA Financial Mechanism and, based on the principle of priority, the following 4 priority areas:

1. Implementation of the Schengen provisions, supporting National Action Plans from Schengen, as well as strengthening the judiciary;
2. Protection of the environment, with a particular focus on strengthening the administrative capacity for implementing relevant provisions which are important for carrying out investment projects;
3. Regional policy and trans-border activities;
4. Technical assistance in the implementation of the *acquis communautaire*.

The role of the Ministry of the Environment and the National Fund

The Ministry of the Environment, as an Intermediate Body of the EEA FM and NFM in priorities related to environmental protection, entrusted the National Fund for Environmental Protection and Water Management with tasks to be implemented in the 2004-2009 perspective. During this period, applications for funding of projects were accepted in the following fields:

Priority 2.1. Protection of the environment, including human environment, through, *inter alia*, reduction of pollution and promotion of renewable energy sources (investment projects).

1. Reducing the use of individual heating systems in favour of connection to the collective/municipal heating networks;
2. Replacement of obsolete sources of thermal energy with modern ecological and energy efficient energy sources;
3. Thermal modernisation works in public utility buildings;
4. Investments in renewable energy sources, i.e. use of hydropower (small hydropower plants up to 5MW), solar energy and biomass in individual heating systems;
5. Construction, reconstruction and modernisation of municipal sewage treatment plants and collective sewer systems;
6. Organisation of selective collection of waste and then its management through recovery.

Priority 2.2 Promotion of sustainable development through better utilization and management of resources (investment and non-investment projects);

1. Reducing energy, material and water consumption in production and services through improving production resource efficiency;
2. Use of renewable energy sources;
3. Supporting the processes of creating "green" jobs and "green procurement";
4. Action to improve levels of environmental education through creating networks of environmental education;
5. Action to encourage the protection, improvement and restoration of biodiversity, including marine resources and areas included in the Natura 2000 network;
6. Action to support forest management.

Priority 2.8 Protection of the environment, with a particular focus on strengthening the administrative capacity for implementing relevant provisions which are important for carrying out investment projects (non-investment projects);

1. Improving the implementation and enforcement of environmental law;
2. Supporting institutional capacity-building of administration responsible for environmental protection;
3. Collecting and disseminating information, e.g. on the best available techniques (in accordance with Directive 96/61/EC) and "clean production";
4. Development of environmental management systems.

The NFM and EEA FM 2004-2009 programme organised three calls for proposals.

1st call for proposals

Allocation for environmental priorities EUR 74,967,893

- Priority 2.1 – Reduction of pollution and promotion of RES – EUR 68,010,6295
- Priority 2.2 – Promoting sustainable development – EUR 4,748,410
- Priority 2.8 – Strengthening administrative capacity – EUR 2,208,788

2nd call for proposals

Allocation for environmental priorities EUR 41,390,000²

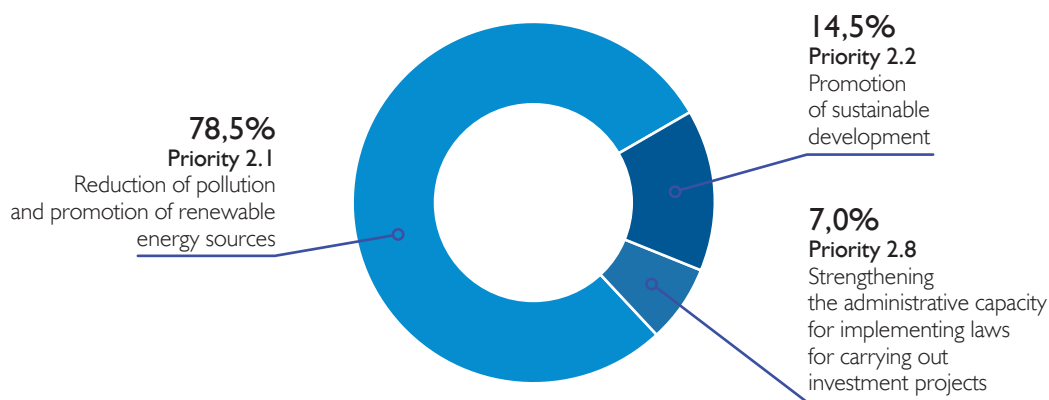
- Priority 2.1 – Reduction of pollution and promotion of RES – EUR 34,170,000
- Priority 2.2 – Promoting sustainable development – EUR 2,400,000
- Priority 2.8 – Strengthening administrative capacity – EUR 4,820,000

3rd call for proposals

Allocation for environmental priorities EUR 10,720,000 (non-investment projects)

- Priority 2.2 – Promoting sustainable development
- Priority 2.8 – Strengthening administrative capacity

Among 158 projects approved for funding the percentage share in individual priorities is as follows:

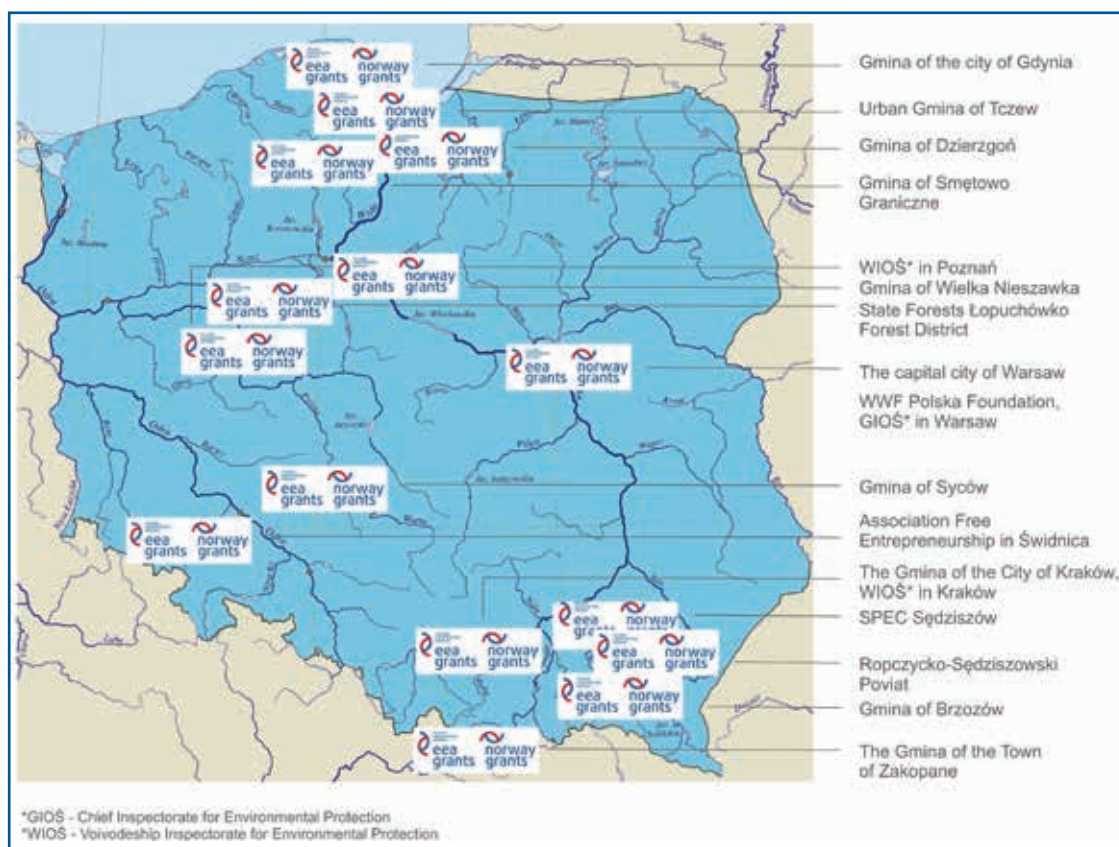


In 2008, **calls for funding individual projects and programmes** within the framework of the EEA Financial Mechanism 2004-2009 and the Norwegian Financial Mechanism 2004-2009 were ended.

The first calls for proposals in the above programme areas started in mid-2013. Detailed information is published on the site: <http://www.nfosigw.gov.pl/srodki-norweskie/nabory/>

² By way of decision of the Monitoring Committee of 29.10.2007, allocation to environmental priorities was increased by EUR 3,475,032 (savings from 1st call).

The following are presentations of several selected and completed projects with funding obtained under the 2004-2009 perspective of the EEA Financial Mechanism and the Norwegian Financial Mechanism.



Location of projects presented in the publication

Priorities of the EEA FM and NFM 2009-2014

On 10 June 2011 the Memorandum of Understanding on the Norwegian Financial Mechanism was signed and on 17 June 2011 the Memorandum of Understanding concerning the EEA Financial Mechanism. The conclusion of bilateral international agreements was the consequence of agreements signed on 28 July 2010 between the European Union and the Donor States on launching the new financial perspective of Norwegian Funds and EEA for 2009-2014. Twelve new Member States of the European Union and Portugal, Greece and Spain will be the Beneficiary States. The total amount of support will be EUR 1,788 billion of which 32% - **EUR 578 million** was earmarked for Poland.

The main objectives of the Financial Mechanisms – like in the case of the previous edition – was to contribute to reducing economic and social disparities in the European Economic Area and strengthening bilateral relations between the Donor States and the Beneficiary States. Applicants may be private, public, commercial, non-commercial entities and non-governmental organisations established as a legal entity in Poland, as well as intergovernmental organisations operating in Poland. Detailed eligibility rules have been set out in the operational programmes for each of the areas of support.

The scope of support under the new perspective is very broad. **Most funds were earmarked for the protection of the environment** – EUR 247 million, of which EUR 110 million will be provided for actions for biodiversity and ecosystems (PL02 Programme) for projects to strengthen environmental monitoring and inspection (PL03 Programme) and to support energy efficiency and renewable energy sources (PL04 Programme). The operator of PL04, PL03 and PL02 programmes is the Ministry of the Environment in cooperation with the National Fund.

| European Economic Area Financial Mechanism | |
|---|----------------|
| Programme area | Funds |
| PL02 Biological diversity and activities in favour of ecosystems | EUR 20,000,000 |
| PL03 Environmental monitoring and integrated planning and control | EUR 15,000,000 |
| PL04 Energy effectiveness and renewable energy source | EUR 75,000,000 |

Table 1. Allocation of funds from environmental protection (EEA FM 2009-2014)

EEA FM and NFM projects presented in the publication

| No. | Project name | Beneficiary | p. |
|-----|---|--|----|
| 1 | Warsaw as the capital of cleanliness | The capital city of Warsaw | 11 |
| 2 | Solar roofs for the Gmina of Dzierzgoń | Gmina of Dzierzgoń | 13 |
| 3 | Construction of a sewage system and extension of wastewater treatment plant in Brzozów and sewage system for the village of Humniska | Gmina of Brzozów | 15 |
| 4 | Eco-Gmina | Association Free Entrepreneurship in Świdnica | 16 |
| 5 | Promotion of sustainable development through the use of natural assets of Tczew | Urban Gmina of Tczew | 17 |
| 6 | OLENDER Sports and Recreation Centre in Wielka Nieszawka – construction of a heating system based on solar collectors | Gmina of Wielka Nieszawka | 19 |
| 7 | Comprehensive thermal modernisation of seven buildings in educational establishments of Gdynia | Gmina of the city of Gdynia | 20 |
| 8 | Green energy for Kociewie – Comprehensive thermal modernisation of the Training and Education Complex in Smętowo | Gmina of Smętowo Graniczne | 22 |
| 9 | Thermal modernisation of public utility buildings in the Ropczycko-Sędziszowski Powiat | Ropczycko-Sędziszowski Powiat | 24 |
| 10 | Thermal modernisation of education buildings of the Town of Zakopane | The Gmina of the Town of Zakopane | 26 |
| 11 | Modernisation of the heating system for the town of Sędziszów | SPEC Sędziszów | 27 |
| 12 | Construction of sanitary sewerage and storm drainage system, including the modernisation of wastewater treatment plant in Syców, Stage 1, Part 3 | Gmina of Syców | 28 |
| 13 | Waste Management within the territory of the City of Kraków – Collective Waste Collection Points | The Gmina of the City of Kraków | 29 |
| 14 | Construction of the education network for the environment and protection of the hermit beetle within the area selected for a Natura 2000 zone PLH 300001 Biedrusko | State Forests Łopuchówko Forest District | 31 |
| 15 | Protection of the species of lynx, wolf and bear in Poland | WWF Polska Foundation | 33 |
| 16 | Increase in efficiency of the activity of the Environmental Protection Inspectorate on the basis of Norwegian experience | Chief Inspectorate for Environmental Protection (GIOŚ) | 35 |
| 17 | Streamlining the implementation and enforcement of the environmental protection law by means of additional control and measurement equipment for the Voivodeship Inspectorate of Environmental Protection in Poznań | Voivodeship Inspectorate for Environmental Protection in Poznań (WIOŚ) | 37 |
| 18 | Intensification of inspection of compliance with the law in the field of protection and use of water resources in the Małopolskie Voivodeship | Voivodeship Inspectorate for Environmental Protection in Kraków (WIOŚ) | 39 |



Project: Warsaw as the capital of cleanliness

Beneficiary: The capital city of Warsaw

Actual total project cost: EUR 867,626

Co-financing actually used: EUR 598,271



Warsaw as the capital of cleanliness

In the period from the beginning of 2009 to April 2011 in Warsaw, the capital of Poland, a project entitled “Warsaw the capital of cleanliness” was implemented. It was an educational and information campaign dedicated to promoting the principles of separate waste collection and care for the environment. The project was carried out by the Environmental Protection Office of the Capital City of Warsaw City Hall with the use of funding from the European Economic Area Financial Mechanism.

The total value of the project amounted to more than PLN 3 million, including funding from the EEA FM amounting to PLN 2.5 million. The project consisted of two main parts:

- educational – environmental education in educational establishments in Warsaw;
- information – information campaign on separate collection of waste and cleaning up after dogs.

More than 360 educational establishments – primary schools and kindergartens were covered by the educational part in the final stage of the project. Over 47 thousand children participated therein. As part of the project, more than 120 environmental competitions were organised and prizes were provided for the participants and winners. Teachers implementing the programme received more than 30 thousand learning and teaching aids.

In 2010, a pilot was started of the environmental education programme for grades IV-VI “From knowledge to action”. Its purpose was to enrich the knowledge of teachers as well as practical preparation to conduct environmental education classes for older students of primary school. About 50 educational institutions participated in the programme.



| Indicator | Value according to the project (assumed) | Value achieved |
|---|--|---|
| The number of children covered by the environmental education programme | 30 000 | on average, approximately 40,000 children per year (total of 120 000 children within 3 years) |
| Percent of residents of Warsaw to be covered by the media campaign | 30 | 43 |
| The number of hours completed | 74 | 114 |
| The number of billboards used by the action | 960 | 988 |
| The number of radio and television adverts broadcast | 1,300 | 2 433 |
| Number of distributed learning publications | 300,000 | 300 000 |
| The number of eco-friendly gadgets given away | 54,900 | 100 178 |

Project implementation indicators (planned and achieved results)



The information part was aimed at disseminating pro-environmental attitudes among the residents of Warsaw in separate waste collection and cleaning-up after their dogs. As part of the project, billboards appeared promoting the campaign "Warsaw's dog affairs" and TV and radio adverts were broadcast. For its part, the City Hall has already purchased more than 1.5 million kits for cleaning up after dogs. Free kits for cleaning up after dogs can be obtained from housing communities and cooperatives, district Environmental Protection Departments and in labelled kiosks of the RUCH chain.

In 2010-2011, a large campaign promoting selective waste collection was carried out. Radio and TV adverts were



broadcast and billboards appeared. All activities carried out within the framework of the project are still continued and developed using funds from the budget of the Capital City of Warsaw.

For more information contact:

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Photo: Michał Babicz (City Hall of the Capital City of Warsaw)



Project: Solar roofs for the Gmina of Dzierzgoń

Beneficiary: Gmina of Dzierzgoń

Actual total project cost: EUR 655,206

Co-financing actually used: EUR 458,569



Solar roofs for the Gmina of Dzierzgoń

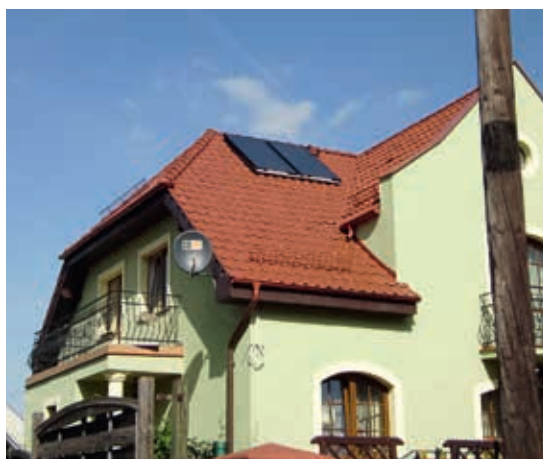
Residents of the Gmina of Dzierzgoń were able to discover that solar energy can be a good complement to conventional methods of heating. On 1.04.2009 an agreement was signed for funding the project "Solar roofs for the Gmina of Dzierzgoń". 70% of the funds came from the Norwegian Financial Mechanism, 15% from the budget of the Gmina, while the remaining 15% was own contribution of the inhabitants of households participating in the project.

The project aimed at increased share of renewable energy in the Gmina's energy balance. There were many reasons for installing solar panels. First and foremost, solar energy is free while the current consumption-oriented lifestyle causes energy demand to increase. Owing to the initiative undertaken in the gmina, individual buildings were equipped in 327 solar systems installed for heating domestic hot water. Installing an alternative heating system was preceded by a wide educational campaign, which contributed to an increase in knowledge and environmental awareness among the local community. The total area of collectors installed was 1,586.44 m². Currently, 1,548 people use solar power systems. As a result of the modernisation, production of 8,135 GJ of renewable energy was achieved in 2011.

The task was carried out in the period from November 2008 to June 2010, the systems were adapted to the individual needs of the inhabitants and households. The schedule of assembly works enabled efficient and quick installation of the collectors. For the purposes of the project a website was created: www.solary-dzierzgon.pl, which facilitates contact of the inhabitants with the local government till today. The site has posted information about the project, its financing sources, as well as the dates of warranty inspections. The implementation of the project has also contributed to the growth of local community's interest in modern technologies.

Taking this kind of initiative has had positive effects on the use of the cultural, tourism, historical and natural potential, as well as increasing the attractiveness of the gmina for external investors. The gmina is seen as an attractive, clean and eco-friendly place for relaxation and recreation. In the long term, the project will contribute to the creation of new jobs by entrepreneurs in commerce and services due to enhanced leisure values in the region and greater interest in tourism and will help to create conditions for the development of economic activities and creation of new jobs.

Implementation of the task has increased energy efficiency, reduced the cost of producing energy and has a favourable impact on the environment. Here are some of the obtained results of the project:





- increasing the share of renewable energy sources in the gmina's energy consumption (from 1.4% to 11.4%);
- reducing emissions of air pollutants from combustion of traditional fuels (reduction by more than 75%);
- respect for the gmina's environment;
- an image of the gmina as supporting innovation activities;
- increased attractiveness of the gmina, which will be seen as an attractive, clean and eco-friendly place for relaxation and recreation;
- use of natural resources, without the need for sourcing raw materials externally;
- lowering the cost of heating water in the longer term;
- reduction of environmental damage related to the extraction of raw materials and production of energy from natural resources;
- reducing the consumption of non-renewable energy resources;
- stimulation of the development of modern technologies;
- creation of new jobs.

Innovative activities of the gmina, and in particular the project "Solar roofs for the gmina of Dzierzgoń" found its positive impact reflected in placing the gmina of Dzierzgoń in the European RES Champions League – Polish edition run by the Association of Gminas – Polish Network "Energie Cités" based in Kraków. The Gmina of Dzierzgoń was at the forefront of the league, and the country village Stanówko where proportion of collectors' area to the number of inhabitants is largest took second place in 2010.

The project was also recognised by the Foundation Energy Globe Award, which granted the gmina an award for efforts to save energy and its efficient use. The official presentation of the project was during the awards ceremony on 3 June 2010 in Kigali, the capital of Rwanda. The Dzierzgoń initiative was selected from among approximately 800 projects submitted. The implementation of this project would not have been possible without the financial support from the Norwegian Financial Mechanism.

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Photo: Mirosław Żywicki/Dzierzgoń



Project: Construction of a sewage system and extension of wastewater treatment plant in Brzozów and sewage system for the village of Humniska

Beneficiary: Gmina of Brzozów

Actual total project cost: EUR 2,356,700

Co-financing actually used: EUR 1,470,384



A great project in a Subcarpathian gmina

In 2005, the Gmina of Brzozów submitted an application for funding of the project: "Construction of a sewage system and extension of wastewater treatment plant in Brzozów and sewage system for the village of Humniska" as part of the first call for the EEA Financial Mechanism and the Norwegian Financial Mechanism, measure 1 priority: "Protection of the environment, including human environment, through, inter alia, reduction of pollution and promotion of renewable energy sources". The amount of funding granted from the Norwegian Financial Mechanism was EUR 1,513,937, which accounted for 85% of the total eligible cost of the project to the amount of EUR 1,781,102.

The project was carried out in the Gmina of Brzozów, in the central part of the Podkarpackie Voivodeship. It is the largest gmina in the Brzozowski Powiat, which is its business and socio-cultural centre of the whole region.

The project involved the construction of a sewerage network with a length of almost 19 km and the construction of 10 sewage pumping stations. This network was connected to the wastewater treatment plant Brzozów-Borkówka which was extended as part of the project. Construction works lasted from August 2007 to September 2008.

As a result of the implementation of the task, wastewater treatment plant capacity increased by 1000 m³/d. It is worth noting that in the wastewater treatment plant an additional, third degree of biological treatment was used (polishing lagoon), based on the Polish BIOPAX technology. The polishing lagoon, which is an artificial river, simulates self-cleaning processes occurring in rivers and does so in an intensified manner. This is aimed at the final treatment and naturalising of post-sewage water. As a result of the flow through the lagoon, the highest grade of purity of discharge water is achieved. In addition to the many advantages of this technology, resulting e.g. from low operating costs, simplicity of use, absence of disruptive odours and reliability, the plant will play the role of an ecological centre - as a place for many aquatic and coastal plants as well as animals. Wastewater treatment

is carried out in accordance with the Polish and European standards and the quality of the surface water of the river Stobnica has improved. This, in turn, resulted in the raising of the quality of life of the gmina's residents as well as the socio-economic development in the gmina.

In total, the project covered 369 new households (1,579 users), 376 buildings and 376 connections and 69 existing connections, including 887 households (3,899 users). The results of the project include: increasing the amount of wastewater treated by 1,647.15 m³/d and an increase in the level of piping by about 31.53%. The sewerage network is used by 5,162 inhabitants of the agglomeration.

This large project, when compared to the conditions of the gmina, provided piping for a substantial part of the Brzozowa agglomeration (87%), including the connection to the network of the Specialist Care Hospital in Brzozów. Septic tanks disappeared in the town and these in many cases did not meet basic sanitary standards.

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Photo: Grzegorz Wojtowicz/Brzozów





Project: Eco-Gmina

Beneficiary: Stowarzyszenie Wolna Przedsiębiorczość [Association Free Entrepreneurship] in Świdnica
Actual total project cost: EUR 683,460
Co-financing actually used: EUR 612,094



Energy strategy for 23 local governments

The Eco-gmina project was carried out by Stowarzyszenie Wolna Przedsiębiorczość [Association Free Entrepreneurship] in Świdnica between April 2009 and October 2011. The project provided expert support for 20 gminas in Dolnośląskie and 3 powiat local governments. As a result of its implementation, a set of practical action programmes was created aimed at reducing energy consumption in the gminas participating in the project. Local action programmes constituted a response to the economic challenges arising from soaring energy prices, the need to search for savings and cost rationalization in terms of energy consumption and the use of opportunities for additional revenue for the gminas from energy resources and energy-efficient construction. Strategic directions were set for the development of local energy in 23 local governments units.

The aim of the project was also to prepare local government eco-energy specialists, who will take action associated with the defined strategies. Educational programmes for municipal energy were prepared as well as those for gmina energy strategy, energy efficiency (including energy-efficient construction), energy from waste fuels and renewable sources and the management of the gmina-level RES project. Traditional training was carried out and a special on-line knowledge platform created with training and multimedia materials on energy issues. A total of 500 people were trained.



Eco-Gmina is also an original model – Autonomous Energy Region (Polish: ARE) developed in the course of the project by experts and constituting an organisational local energy management concept in decentralised systems using distributed generation in Lower Silesia. ARE is a proposal of a different strategy for energy development of the regions. The starting point for such a strategy is building energy self-sufficiency. This means implementation of projects which often go beyond the scale of a single gmina. ARE is a far-reaching way to save energy and make money on it by a group of gminas, as well as the powiat and region.

Consulting and training activities were accompanied by large-scale promotional and dissemination activities designed to increase awareness of energy management in the gminas – conferences, info-seminars and workshops. In Wrocław, an international conference “Energy Autonomy for homes, housing estates, gminas and regions” was organised, which was an overview of best practices from Denmark, Norway, Sweden, Germany, Austria and Poland in building energy security and self-sufficiency of gminas and regions. A total of 620 people attended the conferences and seminars. A lot of multi-media materials were developed to promote energy-efficient attitudes such as: 5 professional promotional videos related to RES and energy efficiency. A media campaign (press, radio, TV, Internet) was conducted regarding energy conservation, use, renewable sources of energy and its positive effects for the environment.

In the course of the implementation of the project, SWP made efforts so that, in addition to the local government units, local communities from each region could also be involved in the project by allowing them to participate in conferences, meetings and workshops and on-line courses. Local communities were an opinion forming body for the project and also allowed two-way exchange of experiences related to the reduction of energy consumption in the gminas. Owing to the actions of the project, eight agreements were concluded focused on implementing specific energy-saving activities (including a solar panel partnership) between local government units and NGOs and the social partners.

For more information contact:

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Photo: Krzysztof Brzozowski/Eco-gmina



Project: Promotion of sustainable development through the use of natural assets of Tczew

Beneficiary: Urban Gmina of Tczew

Actual total project cost: EUR 277 291

Co-financing actually used: EUR 224 217



NATURA 2000 in Tczew

From March 2009 until the end of October 2010 in Tczew, along the left bank of the Vistula River, on the stretch from the mouth of Struga Subkowska (the southern boundary of the town) to the historical Tczew Bridge, the project "Promotion of sustainable development through the use of natural assets of Tczew" was implemented.

The main objective of the project was the implementation of the principles of sustainable development, involving the use of natural resources, without compromising the sustainability of wildlife and its natural diversity and maintaining equal opportunities in access to environmental resources for future generations. The project includes action to ensure protection against human damage, targeting municipal recreation and public education on Natura 2000 – pointing out the need to protect birds in the Lower Valley of the Vistula River and promoting the Natura 2000 programme as an element of the European Union environmental protection.

Within the framework of the project, an inventory was carried out of the natural slopes of the Vistula and assessment of its value, as a result of which broad information on bird resource was ensured as well as bird watching opportunities in Tczew. Environmental Education Laboratory of the City Hall in Tczew organised lessons in schools, in which more than a thousand students participated. These included environmental education classes and children as well as young people learned about the issues of Natura 2000. A competition for teachers was organised on the most interesting lesson plan for Science classes conducted on a path.

Creating a nature path along with land management and supplementing the elements of small architecture (benches, tables, racks for bikes, telescopes) on the stretch from



Tczew Bridge to the Drybok river significantly enhanced opportunities for recreation in the area surrounding the Vistula River. The offer is even more valuable in that it also has educational and promotional value for nature conservation. The path has been available since November 2010.

In Tczew, the Valley of the River Vistula is a protected Natura 2000 site. On the basis of research by ornithologists, it is one of the more interesting places to observe bird





migration in the region. For instance, the intense migrations of Charadriidae can arouse a lot of interest of visitors to this place. The Tczew section of the Vistula river bed was part of a larger area of special protection for birds “Lower Vistula Valley”, which was approved as a Natura 2000 PLB 04003 site and constitutes a part of the Important Bird Area (IBA) Lower Vistula Valley – PL 028.

In order to analyse public awareness of Tczew residents on Natura 2000, within the framework of the project, questionnaire-based surveys were carried out twice on a group of a total of 500 people. The surveys for Tczew residents took place at the beginning of the project in May 2009 and the second survey was conducted after an inventory of nature at the end of the project in September 2010. The general knowledge on Natura 2000, since the first survey, has grown from few to more than 10 percent. Increased flow of and access to information on bird species inhabiting the area surrounding the Vistula River, through educational activities and the new nature path, increased awareness of the local community on Natura 2000 sites.

As part of information and promotion activities connected with the project:

- An information and promotion leaflet was made titled: „Natura 2000 in Tczew”
- Posters about the nature path and educational activities were made;
- Information and educational packages for students were made for those of them who took part in educational activities;
- A conference was held summarising project activities;
- An open competition was held for teachers on a lesson plan for educational activities.

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 Photo: Archive of Town Hall in Tczew



Project: OLENDER Sports and Recreation Centre in Wielka Nieszawka
– construction of a heating system based on solar collectors

Beneficiary: Gmina of Wielka Nieszawka

Actual total project cost: EUR 682,211

Co-financing actually used: EUR 556,080



“Olender” with the energy of the Sun and Earth

“Olender” Sports and Recreation Centre in Wielka Nieszawka is a unique, on a village-scale investment in Poland, which has no counterpart in the region. The facility consists of: a pool complex, sauna zone, comprehensively equipped gym and fitness club and a gym with sanitary facilities, SPA hydrotherapy, bowling club, sports and training shooting gallery, conference centre, cafes, a restaurant and a 3-star hotel. The facility is heated in 80% using renewable energy – geothermal and solar energy.

Under a financial agreement concluded with the National Fund for Environmental Protection and Water Management a heating installation was built in the facility based on solar collectors. Heating installation consists of 5 systems of heat pumps with heating nodes, inter alia, for a sports swimming

pool and a leisure swimming pool and the hotel. A total of 11 WILO heat pumps were installed with a total power of almost 790 kW.

Solar installation was built with three batteries of solar panels, consisting of 64 panels with a total area of nearly 129 m², installed on the south roof slab of the building.

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www.olender.info





Project: Comprehensive thermal modernisation of seven buildings in educational establishments of Gdynia

Beneficiary: Gmina of the City of Gdynia

Actual total project cost: EUR 3,836,096

Co-financing actually used: EUR 1,997,919



Thermal modernisation of educational buildings in Gdynia

Gdynia has for years been consistently implementing programmes affecting the protection of the environment, energy conservation and ultimately a higher quality of life. Thus, owing to the funding granted by Norway a project was carried out in 2007-2009 and it was called: Comprehensive thermal modernisation of seven buildings in educational establishments of Gdynia under the Norwegian Financial Mechanism 2004-2009 (priority "Protection of the environment, including human environment, through, inter alia reduction of pollution and promotion of renewable energy sources").

The aim of the project was to improve the state of the environment in the Tricity agglomeration by reducing the amount of pollutants emitted into the atmosphere. This aim was achieved thanks to the significant improvement of the energy status of seven public utility buildings in Gdynia, resulting in a significant reduction of energy consumption.

All thermal modernisation works i.e.: replacement of windows and doors, insulation of walls and flat roofs and modernisation of heating systems were carried out using the highest quality technologies meeting the criterion of best available techniques (BAT). This made it possible to obtain the optimum relationship between thermal energy saving and comfort of users and the financial investment made. A total of over 1,600 windows (over 5,000 m²) were replaced and 36 exterior doors. Over

17 thousand m² of walls were insulated and 12.5 thousand m² of flat roofs. Hot utility water installations were modernized as well as central heating installations and nodes. More than 850 radiators were installed and almost 1300 thermostatic valves. Applied technology solutions allow for long term use of facilities, without having to perform costly repairs and renovations. School buildings located in different districts of the city gained new appealing facades, ideally matching the architecture of each district. This in turn raised the attractiveness of Gdynia, instilling a sense of pride among locals.

Following the thermal modernisation, the actual consumption of thermal energy in school buildings in 2009 declined



by an average of 68%. Thanks to the significant reduction in demand for thermal energy in buildings (by approx. 30% more than the assumed target value), a measurable ecological effect was achieved, i.e. reduction of carbon dioxide emissions (estimated at approx. 2.4 thousand tonnes/year) and harmful particulates into the atmosphere (estimated reduction of emissions of PM 10 particulate matter is approx. 0.75 tonnes/year). The improvement of air quality thus achieved positively affects the quality of life and health of the residents of the city. An important result of the project is improved learning and working conditions in thermally modernized facilities, where now approx. 5 thousand people learn and work together. The funding obtained from NFM allowed for a comprehensive investment in a relatively short period of time. Without external support, the project would have been carried out gradually over a period of at least 10 years.



Excellent results of the project and experience gained in the course of its preparation and implementation has served as a model for preparation and implementation of a thermal modernisation project for the next 9 school buildings, within the framework of the Regional Operational Programme for 2007-2013 of the Pomorskie Voivodeship. In

addition, the project has contributed to increased interest in the topic of improving air quality. Organising press conferences, placing information on websites and locating information and promotion boards on thermally modernized buildings has also raised public awareness in Gdynia in terms of the results of involving EFTA states in promoting the implementation of pro-development projects, contributing to reduced economic and social disparities within the European Economic Area.

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Photo: Archives at the Municipal Office of Gdynia





Project: Green energy for Kociewie – Comprehensive thermal modernisation of the Training and Education Complex in Smętowo

Beneficiary: Gmina of Smętowo Graniczne

Actual total project cost: EUR 362,095

Co-financing actually used: EUR 275,012

Green energy for Kociewie

Gmina of Smętowo Graniczne is located in Kociewie in Pomorskie Voivodeship. It is a natural and agricultural area, and it is located on the edge of Tuchola Forest, which features exceptional natural and tourist values and is covered by the Natura 2000 programme. Environmental protection tasks represent one of the priorities of gmina authorities. Hence the idea of the local government members to conduct the thermal modernisation of the school – a public-utility building – in order to reduce the air pollution emissions and to reduce the thermal energy consumption through thermal modernisation of buildings.

The implementation of the project entitled: “Green energy for Kociewie – Comprehensive thermal modernisation of the Training and Education Complex in Smętowo” was planned in three stages:

- Thermal modernisation of the old school pavilion in 2008,
- Thermal modernisation of the northern wing and the passages in 2009,

- Thermal modernisation of the kindergarten and gymnasium in 2010.

The material scope of the project covered the following tasks: thermal modernisation of roofs with an area of 1,723 m² and ceiling (385 m²), thermal insulation of walls with the construction of facades (2,247 m²), replacement of window and door woodwork (185 pieces with an area of 672 m²), construction of the facade 2,247 m² and installation of 32 solar collectors and associated equipment. Furthermore, the funds saved as a result of tender procedure made it possible to install additional seven solar collectors with an water heating facility, including three of them on the Gmina Office building and four of them on the amenity building in Lalkowy. All the buildings covered by the project had low thermal insulation of walls, ceilings, roofs and windows, which resulted in considerable ongoing maintenance costs. Because the school is a public-utility building that is maintained by public funds of Gmina of Smętowo Graniczne, the maintenance costs are a direct burden for the taxpayers – the inhabitants of the gmina. Besides, the thermal



modernisation was to be an incentive for the inhabitants to take similar tasks and for the school to implement environmental education on the basis of the example of the implemented project.

As a result of the investment, the energy balance for buildings of the Training and Education Complex in Smętowo, the Gmina Office building and the amenity building in Lalkowy changed in accordance with the environmental protection strategy, which contributes to the improvement of air quality within the territory of Gmina of Smętowo Graniczne. As a result of the thermal modernisation of the Training and Education Complex in Smętowo and installation of 39 solar panels, the following effects have been achieved:

- reduction in the demand for thermal energy by 4,351 GJ a year;
- CO₂ air emission reduction by 85 tons a year;
- dust emission reduction by 0.43 tons a year.

The employees and pupils of the Training and Education Complex and the Self-Government Kindergarten in Smętowo Graniczne were the main beneficiaries of the advantages associated with the implemented project, in total 62 employees and 459 pupils, and indirectly 5,437 inhabitants of the gmina. A good effect of the implemented project encouraged local government to launch further investments: construction of the rehabilitation building with four solar collectors, construction of a gymnasium by the school in Kopytkowo with five solar collectors and construction of a depot and a community centre in Smętowo Graniczne with the installation of three solar collectors.

The implemented task had a positive impact on the inhabitants by increasing their environmental awareness and increased the interest in thermal modernisation of buildings



and was an inspiration to construct individual sets of solar cells. Tasks in the field of environmental education were implemented in the school through the conduct of education classes to promote renewable energy sources, a conference was organised for the inhabitants on environmental protection and application of unconventional sources of green energy, promotional materials and advertisement spots were distributed.

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Photo: Archive of the Gmina Office of the Gmina of Smętowo Graniczne



Project: Thermal modernisation of public utility buildings in the Ropczycko-Sędziszowski Poviát

Beneficiary: Ropczycko-Sędziszowski Poviát

Actual total project cost: EUR 2,044,796

Co-financing actually used: EUR 1,691,553



Successful method for low emissions

The Ropczycko-Sędziszowski Poviát (with seat in Ropczyce), from March 2008 to June 2010, implemented one of the largest projects of thermal modernisation of public-utility buildings with co-financing under the EEA Financial Mechanism. The thermal modernisation covered as many as eleven public-utility buildings (buildings of schools, training and education institution, practical education school, health-care facility) located within the territory of the Ropczycko-Sędziszowski Poviát.

The implemented project resolved or significantly reduced the problems associated with:

- low emissions – by-products of coal combustion. The previous boiler rooms consumed several hundred tons of coal per year, which resulted in substantial air pollutions in the town centre;
- high building operation and heating costs. They resulted from excessive heat loss via the building partitions and failure in general to adjust the building heating system to the contemporary utility standards;



- uncontrollability and limited flexibility of the working central heating installation and the boiler room, as well as decreased efficiency of the heat source in comparison with the current needs and standards;
- technical tear and wear of school buildings and technical problems in the operation thereof, including but not limited to: condensation, improper ventilation, bad condition of the facades;
- reduced attractiveness and quality of buildings, which had impact on the comfort of education for the children and youth and the work.

The following effects have been achieved owing to project implementation:

Economic effects – the effects aimed at reduction of expenditure on operation and repairs and on the maintenance of school buildings. The economic effects applied mainly to heat generation unit costs and global heating costs.

Social effects – social benefits should be examined in the area of healthcare and in the economic area. In the former case, there was an improvement in the health condition of the citizens as a result of reduced air pollution. There was a substantial improvement in the conditions of education, work and living in the aspect of e.g. room heating temperature. In the latter case, lower costs of maintenance of facilities mean lower expenditure from the State treasury, and thus from the taxpayers wallet. Resources saved this way can be spent for other purposes.

Ecological effects – the effects that concern environmental protection: loss of energy has been drastically reduced, and as a result of reduced low emission, considerable environmental effects emerged in the town. The waste stream from combustion has been reduced as well.

As a result of thermal modernisation of buildings, in total 14,000 m² of wall and over 7,000 m² of ceilings and flat roofs have been insulated, nearly 3,000 windows and doors have been replaced, as well as 1,500 heaters and thermostatic valves. The cubature of the buildings that underwent thermal modernisation amounts to nearly 113,000 m³.

For the Ropczycko-Sędziszowski Poviát, this project was undoubtedly a huge milestone in the process of development and modernisation of the local technical infrastructure. The investment, which consisted in thermal modernisation of most poviát buildings in Ropczyce and Sędziszów Małopolski, on the one hand means savings from reduced costs of maintenance of facilities, including the reduction of emissions of exhaust gases and on the other hand – aesthetic and functional values.

We partially have changed the appearance of both towns and thus contributed to the improvement of their image. It is a very large investment implemented owing to the financial support by the funds commonly referred to as "the Norwegian Funds". It should be pointed out that implementation of such a project to such a great extent would not be possible if not for such a huge external co-financing. It can be commented this way: *there was a great idea, it was conducted effectively and reliably, so there are advantages and benefits for the society.*



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Photo: Archive of the Powiat
Starosty in Ropczyce





**Project: Thermal modernisation of education buildings
of the Town of Zakopane**

Beneficiary: Gmina of Town of Zakopane
Actual total project cost: EUR 1,074,002
Co-financing actually used: EUR 509,979



Thermal modernisation in the capital of the Polish Tatra Mountains

The project was implemented in Zakopane, the capital of Polish Tatra Mountains, with support from the Norwegian Financial Mechanism, and it comprised thermal modernisation of six education buildings, including four primary schools, a lower-secondary school and a kindergarten. The thermal modernisation consisted in thermal insulation of building walls, replacement of windows and doors and modernisation of central heating.

The project was implemented in Zakopane in 2007-2010. The effect of the performed thermal modernisation consisted in reducing the heat loss, reducing the consumption of the heating medium, and thus in reducing the emission of greenhouse gases and reducing the cost of heating the buildings. In addition, the modernisation resulted in enhanced aesthetics of the buildings.

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Project: Modernisation of the heating system for the town of Sędziszów

Beneficiary: Sędziszowskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o.

Actual total project cost: EUR 1,028,220

Co-financing actually used: EUR 415,499



Modernisation of the heating system in Sędziszów

The modernisation of the heating system in Sędziszów as an investment project financed by the EEA Financial Mechanism was carried out from December 2008 to July 2009, and it included:

- disassembly of a WR5 boiler with a capacity of 5.8 MW (it was replaced with a 8.5 MW KRM module boiler and five boilers with capacity of 4.25 MW each);
- connection of high-parameter, pre-insulated heat water network to the Primary School No. 1 along a section of 427 m;
- installation of a heat distribution substation for the Primary School No. 1 with a capacity of 600/180 kW.

The task was covered by a loan from the Voivodeship Fund of Environmental Protection and Water Management in Kielce, and the implementation of the investment was assisted by company shareholders, i.e. Fabryka Kotłów „Se-fako” SA and the Gmina of Sędziszów. As part of the second task, further public-utility buildings and residential houses in Sędziszów were connected to the network, allowing the elimination of small dusty boiler rooms. In the Primary School No. 1 and in the central modernised boiler room, a memorial plaque was placed to commemorate the co-financing of the investment by Iceland, Norway and Liechtenstein by the European Economic Area Financial Mechanism.

Sędziszowskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o. is a company established by Fabryka Kotłów SEFAKO SA and the Gmina of Sędziszów (Świętokrzyskie Voivodeship). In 2005, SPEC was granted a heat production and transmission concession by the Energy Regulatory Office.

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Photo: Archive of SPEC Sędziszów Sp. z o.o.





Project: Construction of sanitary sewerage and storm drainage system, including the modernisation of wastewater treatment plant in Syców, Stage 1, Part 3

Beneficiary: Gmina of Syców

Actual total project cost: EUR 3,924,822

Co-financing actually used: EUR 1,763,792



Treatment plant and sewerage system in Syców

The project with co-financing by the Norwegian Financial Mechanism covered the construction of a sanitary sewerage and storm drainage system within the territory of the town of Syców (Dolnośląskie Voivodeship) and modernisation of the existing wastewater treatment plant. As part of sewerage works, nearly 3 km of the sanitary sewerage and storm drainage system and 1.1 km of the sewerage system connections were built.

In the part concerning the wastewater treatment (capacity of 1,680 m³/d, 14,000 PE), the existing facilities were modernised, and they included the following: wastewater pumping station, basket screen, combined water pumping station, a string of mudfields, holding tank, staff and maintenance building. At the same time, new facilities were constructed under the project, such as biological chambers integrated with a secondary settling tank, recirculation and excess sludge pumping station, PIX feeding station, sludge oxygen stabilisation chamber, supplied sewage drainage basin, grit screen, filtration press station, mudfields, valve chamber on the compressed-air pipeline, storage and lime-feeding silo, pipelines and channels between facilities, measuring chamber.

Project implementation has contributed to implementation of objectives of Directive (91/271/EEC) of 1991 concerning urban waste-water treatment (amended by Directive 98/15/EC of 1998). The main project assumption was to provide access to the main technical infrastructure and protection of the condition of the environment. A prospering sanitary sewerage system that meets the technical requirements provides a guarantee of secure discharge of wastewater to the facilities, where it undergoes treatment. The pipeline distribution system prevents uncontrolled "wild" discharges of wastewater to the ditches by roads, which gradually causes degradation of the environment. On the other hand, a modernised treatment plant means reduced quantities of pollution loads discharged to the soil and surface waters, and hence improvement in the condition of the environment. Owing to the modernisation and extension, the wastewater treatment plant will assure the required level pollution reduction in the wastewater that undergoes treatment. A hermetic sewerage system will make it possible to largely reduce the infiltration of groundwater into the sewerage system. Therefore, the inflow of storm water to the wastewater treatment plant decreased, and hence it is possible for it to work more efficiently.

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Photo: Archive of the Town Hall and Gmina Office of Syców





Project: Waste Management within the territory of the City of Kraków – Collective Waste Collection Points.

Beneficiary: City Gmina of Kraków (project implementer: Zarząd Infrastruktury Komunalnej i Transportu w Krakowie [Management Board of the Municipal and Transport Infrastructure in Kraków]).

Actual total project cost: EUR 2,103,937

Co-financing actually used: EUR 1,619,582



“Junk yard” in Kraków

The goal of the project entitled „PL 0332 Waste Management within the territory of the City of Kraków – Collective Waste Collection Points”, which is co-financed by the Norwegian Financial Mechanism, was to create and promote a modern, pilot Collective Waste Collection Point that will serve as a pattern for the creation of a network of similar points within the territory of the city and the region in the future.

The Norwegian grant and own financial contribution of the City Gmina of Kraków made it possible to implement the investment and to design the municipal facility in an untypical way. The modern form, emphasised by the use of interesting finishing materials, has become as important as the functionality of the facility. The location of the first Collective Waste Collection Point in Krakow – “Junk Yard” – has been selected on the basis of numerous analyses and public consultations. The area in the city centre and adjacent to the main base of Miejskie Przedsiębiorstwo Oczyszczania Sp. z o.o. w Krakowie [Municipal Waste Treatment Enterprise in Kraków] was chosen as the area for the investment.

The “Junk Yard” was designed so as to protect the natural environment. The constructed hermetic sub-grade and own closed sewerage system prevent any migration

of water into the soil. The area has been isolated though a protection zone (green area and soundwalls), which prevents the point’s impact on the surrounding.

The existing valuable trees and bushes represent a huge value for the land development of the facility, and it was decided to keep them and to create elliptic “green islands” surrounding the manoeuvring square. The project’s composition was based on an oval line, which ran along the plot border in an irregular manner. Entry, car scales and porter’s lodge are located by the first edge of that curve. Next, the curve changes into an unloading ramp with a semi-transparent roof. After the next arch, there are administration and staff buildings in the form of simple cubic blocks with parking slots, which are connected on the ground floor. It made it possible to locate the process rooms of the hazardous waste sorting facility and a temporary storage thereof. A part of the sorting facility is made available to the customers of the “Junk Yard”. The administrative part was located over the hazardous waste receipt point on the second floor.

The second building on the second floor is intended as a staff room for the workers of the “Junk Yard”. The area under the structure was used as roof for the collection of waste that is ready to be exported by recycling companies. Despite





its purpose, the building combines innovativeness and the surrounding landscape, which melts into the surrounding green area. Roofed ramp (unloading platform) located over a number of containers assures that the waste is stored in accordance with the applicable standards and regulations; furthermore, the personnel operating the "Junk Yard" has the specialist knowledge on waste storage and protection. The state-of-the-art technology and storage equipment was designed and purchased.

The inhabitants can bring their sorted waste there, which will be afterwards left in special containers within the area of the point. The useful area of the "Junk Yard" was divided into two levels. At the lower ones there are containers for waste and a room in which hazardous waste is to be stored. From the higher level, the users can discharge sorted waste to the waste receptacles and containers that are located below. Thanks to special labelling, information, rules of procedure and assistance of the personnel working in the point, the use of constructed infrastructure is simple and intuitive.

The construction of the Collective Waste Collection Point "Junk Yard", which is a part of the integrated waste management system, contributes to the implementation of EU directives and the domestic acts of law on waste management. The facility makes it possible to reduce the quantity of the stored waste, including the biodegradable waste (wood, paper, green waste, etc.) and the waste that must not be stored due to the content of hazardous components. The "Junk Yard" is also a good place to promote recycling of cardboard and plastic packaging, large panels made of wood or plastics, as well as other types of packaging that can be re-processed. The facility promotes waste sorting "at source" and shows that used-up items and packaging can be used as raw materials to produce new products. During the construction, within the territory of Krakow, an intense promotional campaign was being conducted to contribute to broaden and increase the knowledge of the society about the functioning of the facility, about the condition of natural environment and the city aesthetics.

As a result of the tender procedure, Miejskie Przedsiębiorstwo Oczyszczania Sp. z o.o. w Krakowie [Municipal Waste Treatment Enterprise in Kraków] has become the facility's operator, being responsible for the correct management and operation thereof.

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Photo: Mariusz Twardowski & ZIKIT/Kraków



Project: Construction of the education network for the environment and protection of the hermit beetle within the area selected for a Natura 2000 zone PLH 30000 I Biedrusko

Beneficiary: Lasy Państwowe Nadleśnictwo Łopuchówko [State Forests Łopuchówko Forest District]

Actual total project cost: EUR 347,681

Co-financing actually used: EUR 194,305



Modern education network

Adverse phenomena in the human environment result, among other things, from the lacking environmental awareness. It becomes necessary to take measures associated with environmental protection and restoration of biodiversity of ecosystems to be conducted simultaneously with the formation of proper social attitudes towards the understanding of the measures aimed at respect for natural resources and nature conservation. Environmental education in Poland is the subject of activity of e.g. environmental organisations, national parks and landscape parks and State Forests. The main goal of the project is: to increase the level of environmental education that forms proper social attitudes for the environment, to establish sustainable co-operation networks and environmental education information sharing, to provide sustainability and existence of hermit beetle and its habitats. The project entitled: "Construction of the education network for the environment and protection of the hermit beetle within the area selected for a Natura 2000 zone" consists of the following projects:

- Establishment of the Virtual Laboratory for Interactive Education (Utworzenie Wirtualnego Laboratorium Interaktywnego Nauczania – WLIN) based on environmental monitoring. The virtual laboratory system forms a platform that supports the transfer of information about the forest and water environment and the phenomena occurring in the atmosphere. The main advantage of the system involves full availability of the information, presentation thereof in an attractive and unconventional way and an opportunity to use it in the education process. The system is connected to devices that make it possible to constantly observe the surrounding (interactive photo cameras used to conduct phenologic observations) and measurements of weather conditions (weather stations). A cycle of classes has been developed, and they, conducted with the assistance of a teacher using the system functionalities, will represent an additional value that is aimed at arousing interest of the pupils in the matters association with environmental protection. The Virtual Laboratory is available under the following address: www.wlin.pl.
- Establishment of a Protection Centre of the hermit beetle in Łysy Młyn. The centre was established with a view to launching active protection of the hermit beetle within the Biedrusko zone selected for Natura 2000 and within the entire Warta valley, and the development of rules of conduct for protection for common use. Because of its environmental requirements, Hermit beetle is an indicative species for forest ecosystems that are closest to the natural ones, in which dead wood





can be found at various stages of decay. At the same time, it is an umbrella species, which generates conditions in its environment for the development of a number of other species, first of all for insects and fungi. The Forest Laboratory functions under these tasks, and pupils from schools of all education levels can use it. The goal of the Forest Laboratory involves environmental education of pupils and students. The Forest Laboratory could not exist if it was not possible to observe the world of insects. To that end, in the watermill building renovated due to the efforts of the Forest Inspectorate Łopuchówko, a part was also selected for an entomology workshop. The collected optical preparatory equipment makes it possible for the interested people to observe the world of insects. A website devoted to the hermit beetle and the activities of the Forest Education Centre "Łysy Młyn" in Biedrusko is available under the address: www.pachnica.pl.

- The creation of an exhibition devoted to the role of dead wood in forests. The exhibition presents the complexity of forest ecosystems on the example of old and withering trees and the dead wood that remains in the forests.
- Establishment of an educational path related to the role of water in the environment. Water is the main element for the maintenance of balance in the natural environment. Further, water represents the environment of life of numerous organisms, which are the best bioindicators of its physical and chemical properties. Finally, water is the source of the greenest renewable energy. Those matters are presented at the stops on the educational path chosen around the watermill pond. The education provided there is aimed at increasing the awareness associated with reasonable management and water protection.

The project has been implemented within the territory of the Forest Inspectorate Łopuchówko in co-operation with Poznań Supercomputer and Networking Center, Institute for Agricultural and Forest Environment (IAFE) of Polish Academy of Sciences, In-Service Teacher Training Centre, Department of Forest Entomology of the Poznań University of Life Sciences, Gmina Office in Suchy Las, Polish Environmental Protection Association „Salamandra”.

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 Photo: Archive of the Forest Inspectorate Łopuchówko



Project: Protection of the species of lynx, wolf and bear in Poland

The Beneficiary: WWF Poland Foundation

Actual total project cost: EUR 659,448

Co-financing actually used: EUR 593,041



Predators under protection

The protection of large predators has been one of the WWF Foundation priorities for long time. The organisation was one of the originators supporting the establishment of the 1995 *Large Carnivore Initiative for Europe* – a joint project of scientists that deal with the research on large predators and practitioners acting for their protection. This international initiative focuses particular attention on the social aspect of protection of predators on the Old Continent. The project entitled: “Protection of the species of lynx, wolf and bear in Poland”, which was granted co-financing under the EEA Financial Mechanism and the Norwegian Financial Mechanism, was developed in such vein as well. The main project goal involves actions for the preservation of viable populations of lynx, wolf and bear, environmental protection of their habitats and mitigation of the effects of social tensions arising from the need to protect those animals. The project included five measure-modules, among which three (I, II, III) concerned the protection of individual species (lynx, wolf and bear), measure IV – improvement of conditions for migration, and hence the common problems for all three species and measure V, which covered the information and promotion tasks and project management.

Under Measure I (implementation of the bear protection programme), 35 electric fencing sets were purchased and given to beekeepers within the places of occurrence of bears (mainly within the region of Bieszczady). As part of improvement of the nutrition base for bears, old orchards have been restored. Approximately 3,000 trees have been pruned and exposed and over 1,000 fruit trees





have been planted within 12 Bieszczady Forest Inspectorates and the Magura National Park.

Measure II included the tasks aimed at mitigation of conflicts associated with the occurrence of wolf. Within the territory of the Podkarpackie, Małopolskie, Warmińsko-Mazurskie and Podlaskie Voivodeship, farmers were given a total of 81 electric fence sets and 18 Polish Tatra Sheepdogs for protection of livestock. The assessment of the effects of implementation of those tasks is included in the report prepared for the area of South-Eastern Poland, where they were implemented most intensely.

The tasks conducted under Measure III concerned first of all the reintroduction of lynx within the area of Masuria – an initiative launched and conducted by the Park of Wild Animals in Kadzidłowo [Park Dzikich Zwierząt w Kadzidłowie]. Throughout the project duration, three reintroduction aviaries have been built, and six lynxes were released into the nature using the born-to-be-free method. In 2011, within the area of Pisz Forest and Napiwodzko-Ramuckie Forests, winter stalking of lynxes was conducted, and on the basis thereof the presence of 8 lynxes was identified within this area.

Measure IV contained a wide variety of tasks aimed at improving the conditions for the migration of large predators. It included, among other things: the distribution of 25 warning signs of possible intrusion of a predator in naturally valuable regions of Poland (in the Bieszczady Mountains, in Masuria and Podlasie) and an educational action entitled “Slow down! Animals on the road!”. These measures resulted, *inter alia*, in a survey of accidents with animals and many

studies and reports, e.g. proposals for legislative amendments concerning the protection of ecological corridors and action plans to improve ecological connectivity in selected locations.

Measure V – apart from management, it contained project promotion and educational and informational tasks. Among other things, four documentaries devoted to the issues of protection of lynx, wolf and bear and the need to protect ecological corridors were prepared. The TV premiere of three movies took place in the autumn in 2012. In 2009-2010, in co-operation with the Foundation of Bieszczady, two large outdoor events were organised (“Dzikie Bieszczady” [Wild Bieszczady] and “Dzikie Karpaty” [Wild Carpathians]). Under the Polish-Norwegian co-operation in this project, a prominent Norwegian expert in the field of research and protection of large predators, Prof Jon Swenson, prepared a study entitled: “Protection and management of the populations of large predators in Sweden and Norway”.

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Photo: Stefan Jakimiuk/Armin Kobus



Project: Increase in efficiency of the activity of the Environmental Protection Inspectorate on the basis of Norwegian experience

Beneficiary: Chief Inspectorate of Environmental Protection (GIOŚ)

Actual total project cost: EUR 2,066,534

Co-financing actually used: EUR 1,612,924



In co-operation with the Norwegian KLIF

Project PL0100 "Increase in efficiency of the activity of the Environmental Protection Inspectorate on the basis of Norwegian experience", carried out in 2007-2011, was a joint measure of the Environmental Protection Inspectorate (IOŚ) and the Norwegian Pollution Control Authority (SFT), now the Norwegian Climate and Pollution Agency (KLIF). On the Polish part, the project participants included: Chief Inspectorate of Environmental Protection (GIOŚ), under pilotage two Voivodeship Inspectorates of Environmental Protection in Warsaw and in Rzeszów and inspectors from other fourteen Voivodeship Inspectorates of Environmental Protection (WIOŚ) (in selected project measures).

The main objective of the project was to improve the implementation and enforcement of the environmental law in Poland while the detailed objective was to increase the effectiveness of inspections carried out by the Environmental Protection Inspectorate by increasing efficiency and improving the work of inspectors. The objective has been accomplished through the implementation of the following measures:

Implementation of an effective inspection data processing system

- Under the project, an IT inspection assistance system (ISWK), which collects and processes the data on controlled facilities and its results, was established. In order to ensure the proper functioning, servers were purchased and connections were leased, as well as data were imported from systems operated by Voivodeship Inspectorates of Environmental Protection (WIOŚ) and training was conducted for administrators and inspectors (including the tools for generating reports).

Methodological strengthening of inspections

- In consequence, in co-operation with the Norwegian partner and using the experience of Dutch and Scottish, Control System was developed, and it consists, among other things, of transparent procedures for performing inspections, industry checklists (10 lists for 10 types of industry), horizontal checklists (8 thematic lists), verification checklists and sample documents used in the everyday work of an inspector. For the first time in the functioning of the Environmental Protection Inspectorate, the classification of plants including five risk categories was developed and implemented, which affects the scope and frequency of inspections; also, checks on the basis of documentation without field trips were introduced. Besides, rules for the performance of inspection in large plants of high and increased risk were developed, as well as control rules for the Market Supervision and Guidebook on the exercise of controls, in which, apart from the rules for the conduct





of inspection adjusted to the applicable laws, a division of competences within the inspection was presented, as well as requirements for the qualifications of inspectorate staff and assessment of the effectiveness of the work of the inspectorate and the rules of co-operation with the public. Five guidebooks for the inspectors on the control process were developed as well. A web forum for experience sharing was established for the inspectors in the Chief Inspectorate of Environmental Protection.

Purchase of hand-held equipment for the inspectors

- 30 sets, each consisting of a portable measuring instrument to examine basic parameters of pollution in wastewater in the field and hand-held electronic devices were purchased under the project: portable computer, scanner, printer, GPS and photo camera. Measuring equipment allows a quick preliminary assessment of wastewater quality and the assessment of water pollution, in particular during the intervention inspections, in order to determine the need to involve Voivodship Inspectorates of Environmental Protection laboratory in the performance of the measurements. The inspectors conducting inspections of plants use the electronic equipment to document the inspection findings, which increases efficiency and reduces the time of the procedure to be performed.

Development of a system for dissemination of information among the public

- Under the project, on the basis of examples of Norway, the new portal of the Chief Inspectorate of Environmental Protection was developed, which, in addition to new graphics, has received new



functionalities such as: "communication with the public" and sub-website "inspection of point emissions", where one can find information about the inspections of the Chief Inspectorate of Environmental Protection and the data about the emissions of pollution. A part of the portal has also been developed in English. In addition, an information brochure entitled: "How to proceed in case of irregularities that might have an adverse impact on the environment" has been released and published on the GIOŚ website.

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 Photo: Archive of GIOŚ



Project: Streamlining the implementation and enforcement of the environmental protection law by means of additional control and measurement equipment for the Voivodeship Inspectorate of Environmental Protection in Poznań

Beneficiary: Voivodeship Inspectorate of Environmental Protection in Poznań

Actual total project cost: EUR 801,359

Co-financing actually used: EUR 673,367



Top-class monitoring

From April 2009 to December 2010, the Voivodeship Inspectorate of Environmental Protection in Poznań benefited from the support provided by the Kingdom of Norway through a grant from the Norwegian Financial Mechanism for the project PL0455 entitled: "Streamlining the implementation and enforcement of the environmental protection law by means of additional control and measurement equipment for the Voivodeship Inspectorate of Environmental Protection in Poznań" under Priority 2.8 "Environmental protection with emphasis on strengthening the administrative capacity".

The aim of the project was to improve the condition of the environment as a result of better compliance with the law, and the direct one – monitoring of environmental pollution and control of entities that discharge pollution to the environment. Voivodeship Inspectorate of Environmental Protection in Poznań, a governmental administration entity responsible for the control of enforcing the compliance with the requirements of environmental protection and monitoring of the environment in the Wielkopolskie Voivodeship.

The transferred funds were used in 2009 to purchase nine pieces of technologically advanced control and measurement equipment such as three gas chromatographs, two ion chromatographs, two liquid chromatographs and an ICP spectrometer and AA spectrometer. This equipment was installed in the entities of the laboratory of the Voivodeship Inspectorate of Environmental Protection in Poznań, Kalisz, Konin and Piła. The new equipment allows for the full implementation of the tasks and guarantees the achievement of limits of quantification, precision and accuracy of the results of environmental research samples – as required by the laws – that reflect the actual state of pollution of the environment.

Also, specialist training for the personnel of the laboratory of the Voivodeship Inspectorate of Environmental Protection were conducted under the project. The training was implemented in two stages. The first stage, installation training, included the knowledge on the structure, rules for operation and proper handling of the purchased equipment. The second stage of the training concerned the analyses of environmental samples and operation of the control programmes. The project has trained a total of 18 people in the use of chromatographs and four people in the use of spectrometers.

In 2010, due to the savings arising in the project, the Voivodeship Inspectorate of Environmental Protection requested that its implementation be extended to the end of 2010 and the available co-financing funds be reallocated





with proportional co-financing for additional tasks, i.e. the purchase of 40 pieces of equipment to supplement the laboratory equipment: equipment for environmental sampling and analysis thereof and field measurements. By the end of 2010, the equipment was delivered and installed in the laboratory of the Inspectorate.

Owing to the PL0455 project, there was an improvement in the technical equipment of the WIOŚ laboratory with modern devices to perform the analysis of organic and inorganic compounds in various environmental components such as water, soil and air. This apparatus replaced the worn-out devices and therefore extended the capabilities (the number of samples analysed per unit of time) and the extent of operation (the number of monitored indicators of pollution) of the laboratories. A measurable effect involves the improvement in the quality of monitoring tests and control examinations

of the entities that discharge pollution into the environment and more complete diagnosis of the condition of the environment. The results of monitoring are made available to the public free of charge in the annually published report on the condition of the environment in the Voivodeship and on the website www.poznan.wios.gov.pl.

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Photo: Archive of WIOŚ in Poznań



Project: Intensification of inspection of compliance with the law in the field of protection and use of water resources in the Małopolskie Voivodeship

Beneficiary: Voivodeship Inspectorate of Environmental Protection in Kraków

Actual total project cost: EUR 1,819,207

Co-financing actually used: EUR 1,546,326



Inspection and protection of water resources in Lesser Poland

The PL0302 project entitled “Intensification of inspection of compliance with the law in the field of protection and use of water resources in the Małopolskie Voivodeship” was implemented in 2008-2010, and it covered:

- purchase and installation of control and measurement equipment,
- implementation and validation of test methods for the determination of priority and hazardous substances in water and internal and external control of the tests performed as part of the project,
- optimisation of the water monitoring network,
- development and implementation of the IT system for the collection, storage, processing and making available of the environmental data online,
- project promotion and management.

The project was implemented in two stages:

- stage 1 (May 2008 – December 2009). The main goal of this stage was to carry out the research on the priority substances in surface waters and groundwater and to develop and implement modern IT tools. All the tasks have been implemented within the deadlines and the scopes in accordance with the schedule. The tasks were implemented by the personnel of the Local Office of the Voivodeship Inspectorate of Environmental Protection in Tarnów;
- stage 2 (January – December 2010). Owing to the savings made during the implementation of stage 1, it was possible to continue the project implementation. The main objective in stage 2 was to implement the methodology of examination of dammed reservoir, in particular the methods for examination of biological elements. The tasks were implemented by the personnel of the Local Office of the Voivodeship Inspectorate of Environmental Protection in Tarnów and Nowy Sącz.

During the implementation of tasks, 17 experts co-operated with each other. They came from: Warsaw University of Technology, Cracow University of Technology, Polish Academy of Science, Nicolaus Copernicus University in Torun, Poznań University of Life Sciences, the National Water Management Authority, Institute of Meteorology and Water Management in Warsaw and Wrocław.

The obtained project results – effects on the local and regional scale:

- 3 new monitoring systems were implemented: regional groundwater monitoring, monitoring of priority substances in surface water and groundwater abstracted for consumption, monitoring of biological elements in dammed reservoirs;





- 641 analyses of surface waters and groundwater containing more than 10,000 results of substances present in the water were conducted;
- modern equipment, measurement instruments and means of transport were purchased for ca. PLN 4 million;
- 20 research methods were introduced and they made it possible to mark 87 water quality indicators;
- data on the type, range and scope of pressures on the water bodies earmarked for drinking water supply for the population were obtained;
- 32 training sessions and workshops were organised, including: 19 in the field of operation of equipment, 11 – computer programmes, 2 – implementation of research methods, and the total training time amounted to approximately 400 hours;
- training and workshop sessions were attended by 96 people, including the employees of the Voivodeship Inspectorates of Environmental Protection from Rzeszów, Kielce, Katowice, Opole, Wrocław and their local branches (21 people);
- the computer hardware and software was purchased for approximately PLN 1.3 million, which allowed WIOŚ to be equipped with uniform type of computer operation system;


- for the needs of dissemination of information on the environment, Water Monitoring Database was developed and implemented, and its assumptions have become the basis for the module “Water” of the IT System of the Environmental Protection Inspectorate called Ekoinfonet;
- new methods for assessment of water condition were developed.

The obtained results were presented to employees of Environmental Protection Inspectorate from the entire Poland at a conference organised in December 2009 in Tarnów. Project results are published on the website: <http://www.wios.tarnow.pl/pl0302/>.

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Photo: Archive of WIOŚ in Kraków



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