

National Fund for Environmental Protection
and Water Management
1989–2014

Renewable source of eco-development
We have changed and are still changing Poland



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Warsaw 2014

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Under the patronage of the President of Poland Bronislaw Komorowski



Honorary Committee of the 25-year anniversary of the National Fund for Environmental Protection and Water Management in 2014

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<i>Stanisław Gawłowski</i>	<i>Deputy to the Sejm of the Republic of Poland The Secretary of State at the Ministry of the Environment</i>
<i>Marcin Korolec</i>	<i>The Secretary of State of the Ministry of the Environment Plenipotentiary of the Government for Climate Policy</i>
<i>Janusz Ostapiuk</i>	<i>Undersecretary of State in the Ministry of the Environment The Chairman of the Supervisory Board NFEPWM</i>
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<i>Beata Jaczewska</i>	<i>former Undersecretary of State at the Ministry of the Environment</i>
<i>Edward Janiak</i>	<i>Fr. Bishop of Kalisz, a Conference Delegate of the Polish Episcopate for the Priesthood of Forestry, Water Management and Environment Protection Workers</i>
<i>Józef Kozioł</i>	<i>former Deputy Chairman of the Supervisory Board NFEPWM</i>
<i>Adam Krzyśków</i>	<i>Chairman of the Board of VFEPWM in Olsztyn</i>
<i>Hanna Majszczyk</i>	<i>Undersecretary of State at the Ministry of Finance</i>
<i>Maciej Nowicki</i>	<i>Deputy Chairman of the Supervisory Board of NFEPWM Chairman of the Program Council "Aura"</i>
<i>Jerzy W. Pietrewicz</i>	<i>The Secretary of State at the Ministry of Economy</i>
<i>Jadwiga Rotnicka</i>	<i>Senator of the Republic of Poland – chairman of the Environment Committee of the Senate of the Republic of Poland</i>
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<i>Adam Zdziebło</i>	<i>Senator of the Republic of Poland The Secretary of State at the Ministry of Infrastructure and Development</i>
<i>Stanisław Żelichowski</i>	<i>Deputy to the Sejm of the Republic of Poland – chairman of the Environment Protection, Natural Resources and Forestry Committee of the Sejm of the Republic of Poland</i>



Maciej H. Grabowski
Minister of the Environment

Ladies and Gentlemen,

For 25 years we have seen an amazing change in the protection of the environment in Poland. In the '80s, it was an ecological crisis, and some of the regions have even been called ecological disaster areas. Acid rains were standard. In Polish power plants there wasn't even a single SO₂ reduction station. Only a small percentage of sewage was properly treated before discharge to waters.

The 1989 was a landmark also for the environment. Not all of us remember, that the Round Table had its team dedicated to ecology. Its members recognized the need to *"make a substantial turn when determining main objectives of further social and economic development of the country. It is necessary to adopt the concept of eco-development and eco-policy when formulating strategic plans concerning changes to the economic structure of country"*.

The objective was to reduce emission of sulphur dioxide and oxides of nitrogen by 50 %, improve water quality and waste disposal. 28 postulates forming the program of activities, which should be achieved in the next decade were adopted. The implementation of these proposals required huge financial resources. The answer to this challenge was the appointment of the National Fund for Environmental Protection and Water Management supported not by the state budget, but *inter alia* by penalties and charges for the use of environment. For polluting parties this was an incentive to take action, and for the system of funds - the assurance of inflow of pollution dependant resources.

We have created our own, unique financial system for the environment. You can say, that after 25 years, it has proven to be perfect. Construction of a sewage treatment plants and sanitary sewage system in hundreds of cities, comprehensive waste management installations, modernisation of Polish energy, construction of retention tanks, removing the effects of extraordinary threats and elimination of mining damage, environmental education - today it is difficult to find an area in the field of the environment, which wouldn't be supported by the funds from NFEPM.

In the debate about Polish results of the changes, the significant leap, which we have made in the field of environment protection is noticed too rarely. This success depended to high extent on the modern system of financing the environment protection and improvement of the condition of nature, and, after all, our way of life depends on these changes. In my opinion the decision of the makers of the 3rd Republic of Poland concerning the appointment of NFEPM can be perceived today as the critical for fast rate of catching-up the backlog in the protection of the environment.

Wishing the National Fund not to surcease in its mission, I would like to congratulate Mrs President and her predecessors.

Maciej H. Grabowski
Minister of the Environment



Janusz Ostapiuk

Undersecretary of State in the Ministry of the Environment
The Chairman of the Supervisory Board of NFEPWM

Ladies and Gentlemen,

No one can deny that over the past quarter century, Poland has made great progress in every possible area, also in the protection of the environment. Not only the awareness of Poles increased but also certain standards, which we want to follow, so to provide sustainable development with respect to the environment.

When the National Fund for Environmental Protection and Water Management was established, half of the cities, including the largest ones, did not have sewage treatment plants. The industry and energy sector was not equipped with sulphur dioxide or nitrogen oxides reduction installations. Today, when looking at financial effects and ecological activities of NFEPWM, these facts seem to be fiction.

Only in the field of "protection of waters" the National Fund has concluded agreements with hundreds of cities and municipalities which amounted to over 12 billion PLN. Hundreds of sewage treatment plants were built or modernized. Thousands of kilometers of sewerage were designed and implemented. There are many facilities for the management of waste-water. The largest in the Europe, conventional power plant In Bełchatów fired with brown coal has been modernised. In the field of water management retention reservoirs, polders, weirs and water stages of fall were built. More than one billion PLN the NFEPWM spent on preventing and dealing with the consequences of exceptional risks, including the effects of floods in 1997 and 2010. The funds of NFEPWM helped in reclamation of coal and sulphur wining areas, protection of environment, forestry and national parks. The money was also spent on science, expert opinions, research and environmental education and on raising ecological awareness of Poles.

For 25 years the Fund has spent for the protection of environment and water management more than 53 billion PLN, supporting sustainable development of Poland. And this is probably the money best spent, what you will learn after reading this publication.

Janusz Ostapiuk
Chairman of the Supervisory Board of NFEPWM



Małgorzata Skucha

Chairman of the Management Board of NFEPWM

Ladies and Gentlemen,

Twenty-five years ago, in 1989, as a result of the historic events which changed the political face of Poland, the National Fund for Environmental Protection and Water Management has been established.

The President of the Republic of Poland Bronisław Komorowski has awarded this 25th anniversary celebration on establishing the National Fund a special mention: "Patronage of the President of the Republic of Poland. 25th anniversary of Freedom". It is granted to honorary projects and initiatives relating to common celebration of victory of freedom and solidarity. Initiatives proposed by us during this jubilee year compose the 25th anniversary of freedom, and are the opportunity to summarize social, political and economic transformations, which Poland goes through since 1989, with particular reference to solve environmental problems.

I am pleased to present to you a publication, which illustrates both the time of formation of the National Fund, describes the first, pioneering years, as also presents the outline of our 25-year long operations for environment protection and water management. We are proud of our achievements. For 25 years of operation and cooperation with the beneficiaries we have measurable results, which allow millions of citizens of Poland to live safe and use the improvement of the environment, while preserving our natural resources and unique nature for future generations. With satisfaction we underline that thanks to the National Fund and the environment protection funding system, the face our country has changed.

The possessions of the 25 years of activity and the role the National Fund plays in partnership with national and international institutions, in the 10th year of Polish membership in the European Union, allow us to confidently conclude that as the country and the institution we are becoming more modern and European. This is a great attribute our current and former employees, who at each stage of the development of the National Fund contributed to new solutions, improving and shaping high standards of our institution. The highest value of the National Fund are people, specialised personnel, who builds a "competence center", and serves with knowledge and experience to better and more efficiently work for the good of the country. I would like to thank them all for you contribution to the development of the National Fund, in particular to initiators, founders and first employees of the Fund, future executives and members of the Management and Supervisory Boards.

We thank our beneficiaries. We have a joint satisfaction that more than 33 billion PLN invested from the resources of the National Fund enriched our country in pro-ecological investments and projects of value approximately 130 billion PLN. The support of the Ministry of the Environment, which supervises our operations and the cooperation with the Ministry of Finance, Ministry of Infrastructure and Development and the Ministry of Economy is very important for our effectiveness and efficiency.

This publication provides tangible financial and ecological effects of our activities, which are here merely announced. To describe all the fields and projects in which we participated as a financial institution, a multi-volume publication would have to be created. We still have new tasks and challenges. We are broadening our portfolio for different types of investors. We are very pleased that our offer is so well perceived by every "Mr. Smith", as this is also one the results of our consistent support for educational projects, which shape civil society, environmentally aware and understanding the need to preserve resources for future generations.

I invite you to read the publication and to the National Fund, on our websites, where you will find much more information, especially about our current activities.

Małgorzata Skucha
Chairman of the Management Board of NFEPWM



Dedicated to Marta, who in 1991 wrote from Stockholm emotional, dramatic and poignant list addressed to Poland and Poles, to which she had never received a reply. With this publication we pay our debt from almost a quarter of century.

See Marta, as we have changed Poland, your and our Motherland.

Instead of introduction

Why Marta? In the first days of 1991, half a year after the election of Lech Wałęsa for president of the Republic of Poland, shortly after the memorable 1989, when Poland has entered a new historic stage of development, 13-year old Marta Utrata-Scholl, student of the 7th grade at one of Swedish schools, wrote to "Życie Warszawy" (polish newspaper) a poignant letter¹:

"Who is responsible for the environment? Dear Compatriots. I live in Sweden, Stockholm. My name is Marta and I am 13 years old. I am interested in protection of the environment in Poland. We all know the air we breathe is used for. We must admit that Baltic Sea is polluted in 98 percent by Poland. How many innocent children die, adults and elderly people. Does Poland have to be an extinct planet. Complete Emptiness, where we were raised as our great grandfathers did? (...) Therefore I ask the whole Polish population and the President that his first decision on this position is related to environment. And that this action is effective. They all say that they need money. But the air will not be cleaner because of the money. I am going to financially support sick children and elderly people. I won't do it if nothing will happen in this field. To stop the stinking smokestacks. I send this letter especially to Katowice Steelworks. I enclose the letter to Katowice Steelworks.

Dear editors, Please do not hesitate whether to accept this letter or not. Thanks to you, we may save Polish people. If you find time, write me. Please send me your ideas so we can save innocent people".

Marta

Who is responsible for the environment? Stockholm 12/1-91

Droży redakcy. Ja mieszkam w Szwecji, Stockholm. Nazywam się Marta i mam 13 lat. Interesuję się ochroną środowiska w Polsce. Wszyscy wiemy do czego może zechłanieć to powietrze, którym oddychamy. Trzeba przyznać, że Morze Bałtyckie w 98 procentach jest zanieczyszczone przez Polskę. Wiele niewinnych dzieci umiera, dorośli i starszych. Czy Polska ma być wymarłą planetą. Kompletną Pustką, tam gdzie jesteśmy się wychowali i nasi przapra dziadkowie? Dzieci w Rumuni nie wyglądają tak z powodu braku witamin i jedzenia ale między innymi z zanieczyszczonego powietrza, którym oddychają. W Polsce też takie dzieci można znaleźć jeżeli się im je znaleźć. Dlatego proszę całą polską ludność i prezydenta aby jego pierwszą czynnością na tym stanowisku było środowisko. Żeby to działanie było skuteczne Wszyscy muszą żeby przystać im pieniądze. Ale przecież od pieniędzy uzyskasz powietrze nie będzie. Ja podejmuję się z pomocą finansową, która będzie przeznaczona dla o smogach dzieci i starszych. Niepodjęmę się tego jeżeli nie będzie się w tym kierunku robota. Aby przystać że środowisko hominy. Ten list kieruję specjalnie do Huty Katowice. Dotarciam list do Huty Katowice.

Droga redakcy. Proszę was nie wahać się czy przyjmą ten list czy nie. Dzieci ~~zami~~ może uratujemy ludność w Polsce. Jeżeli znajdziecie chwilę czasu to napiszcie do mnie. Podajcie mi Wasze idee abyśmy mogli uratować niewinnych ludzi.

Marta

¹ Fragments. Translation from original

"To Katowice Steelworks, Stockholm 12/1-91. Ladies and Gentlemen, My name is Marta and I go to the 7th grade in Sweden, Stockholm. After seeing a documentary film from Poland, Katowice, I was shocked. Are the employees or managers as well as politicians of environmental groups - is any, not interested in to what the Katowice Steelworks have led to? Why innocent children, adults and elderly people must die on diseases created by your negligence. People in the whole world live longer than in Poland. You probably have received many such letters, but I ask the editing department to listen to me. I understand the crisis which concerns Poland and the whole Eastern Europe. Baltic Sea States is contaminated not by Sweden or other countries, but by Poland. Not only people living in Katowice breathe polluted and radioactive air. But in other countries that border with Poland, too. We know all what such polluted air can do. Among other things devastation of brain. I can organise financial assistance that will be dedicated to sick and dying persons. I won't do it if nothing will happen in this field. To stop the stinking smokestacks. I hope that this letter will leave you with something to think about".



Marta

We looked for her and we want to answer after many years

When rummaging in archives and looking for information to the book about 25 years of the National Fund, we found a yellowed letter from Marta, addressed to "Życie Warszawy", to which she unfortunately had never received a reply from Poland. In preparing the 20th anniversary of National Fund in 2009 and now the 25th anniversary of NFEPPM we were looking in the archives for facts illustrating the state of the environment in Poland from the late eighties and early nineties of the twentieth century, so to correlate them with the of image contemporary Poland. Now is the time to respond to Marta and show her new Poland.

Marta's letter is a simple and poignant description of Polish realities back almost 25 years in places, which then were related to as "areas of ecological threats". Everything has changed. We live in a better Poland, we breathe different air, although the same, now more carefully protected nature surrounds us. We can prove that - ecological condition of Poland and conditions of life are fundamentally different than 25 years ago. The National Fund, which is the biggest source of financing the environment protection in Poland, has its giant positive share in this metamorphosis.

We wanted to invite in the jubilee year 2014 the adult Marta to Poland, to show her the changes that have taken place within 25 years in the Polish environment, since the time when 28 ecological postulates were formulated at the Round Table. Going back to the past, to the beginnings of the National Fund, we want to simultaneously show contemporary, modern Poland, which the Fund has changed and still changes, consistently pursuing its mission: "We effectively and efficiently support the action for the environment".

Poland 1989. The time of historic breakthrough

What was Poland like before the historical and political breakthrough in 1989? The merciless comparisons for the Polish People's Republic are enforced by the jubilee year 2014. Here, it's been 25 years since the Round Table, at which representatives of the opposition and then-current authorities, idle in the face of the permanent state crisis, had sat together. A quarter of a century has passed since the memorable election in June 1989, after which the government was led by the first non-communist prime minister in post-war history of the country and it's been 10 years of Polish accession to the democratic European Union. Question about the "that" Poland, from before a quarter of a century, is also addressed to the ecological image of our country.

"Black Triangle" of Europe

In the 70s and 80s of the last century, Poland was at the state of progressing ecological crisis. The scientific circles even spoke about catastrophic condition of the environment threatening human life and health. Officially, 27 regions in Poland were recognized as "areas of ecological threat" with severe concentration of the most significant and burdensome pollution sources concerning sewage, dust, gas and waste, and they covered over 11% of the country, inhabited by more than 35% of the population. Only 4% of Polish rivers had clean water, and along 35% of their length water could not be even used for industrial purposes. In all urban and industrial agglomerations, pollution of the atmosphere significantly exceeds acceptable levels. All waste (including hazardous) was carried off directly to dumps. In the foreign press (the national was under the control of censorship), map with streams of "acid rain", were published, especially outside the borderline of Czechoslovakia, the GDR and Poland, that carried pollution far beyond our borders. This part of Central/Eastern Europe was called later "black triangle".

Areas of ecological threats

Let's go back to the question about the beginnings. What was Poland like 25 years ago? In what environment we lived? " ...Poland was one of the most polluted countries in Europe and in the world," writes Professor **Maciej Nowicki**, the Minister of the Environment (1991 and 2007-2010), the creator and multi-annual president of the EcoFund Foundation – *more than 30% of the population lived in areas, where the environmental levels were exceeded permanently. Material losses caused by environmental pollution were estimated at 5-10% of domestic product, without significant but intangible health loss. This was a great price for the Polish society to pay for forcing industrial development of the country without taking into account environment protection principles. No wonder, that in the '80s, many social movements and environmental organizations were established, which have called for respect of citizens' rights to live in cleaner environment*².

² Prof. Maciej Nowicki, „25 lat ochrony środowiska w demokratycznej Polsce” (25 years of environmental protection in democratic Poland), Warsaw 2014.

Poland in transition of 1989

1.02.1989 – the beginning of Round Table

10.03.1989 – end of the debate and acceptance of the protocol of the Round Table Ecological Team

4.04.1989 – political finale of the Round Table

4.06.1989 – the first, partially democratic election to the contracted Sejm and Senate. Victory of the opposition.

12.09.1989 – Sejm approved a vote of confidence to the first in the post-war history of Poland non-communistic government of Tadeusz Mazowiecki. A new government was formed.

11.11.1989 – for the first time since the end of the 2nd World War, the National Independence Day was celebrated.

29.12.1989 – Sejm changed the Constitution. Polish People's Republic officially ceased to exist. The name of the country was changed to the Republic of Poland.



Fot. Erazm Ciołek/CA.Ciołek



Fot. Ireneusz Sobieszczuk, Jan Bogacz/Forum



Fot. Chris Niedenthal/Forum



Deforested mountain slopes of Izerskie Mountains in Sudety. Photo Radomir Bałazy

One of the most important and the most complex studies of the 80's was "Przestrzenna diagnoza ochrony środowiska w Polsce" (Spatial diagnosis of environment protection in Poland) (Kassenberg, Rolewicz, 1985³), which showed the assessment of economic, spatial and investment plans from the point of view of environment protection and a detailed spatial analysis of water, air, soil and its resources, forests as well as nature and landscape. On this basis the areas of ecological threats (AET) were determined and described, included later to the national spatial plans⁴ as a new planning category. They are defined as the areas where there have been a total collapse of natural balance, and thus the ability of self-cleaning as well as the environmental immunity have been lost, together with the increase of threat to human health. The areas of ecological threats were the most industrialised regions, concentrating the largest and most burdensome sources of pollution and generating several times higher quantities of waste-water, pollutants emitted into the atmosphere, waste, degraded natural areas⁵ that average.

Direct basis to appoint AET, were two criteria: exceeded normative level or severe degradation of at least two elements of the environment or numerous or particularly burdensome exceeding of normative level, or very severe degradation of one of environmental components. On this basis, 27 AETs were distinguished, including:

- 5 areas of ecological disaster: Uppersilesian, Cracow, Legnicko-Głogowski, Rybnicki, Gdański.
- 18 Areas of polluted environment in all elements:
 - urban agglomerations: Szczecin, Bydgoszcz-Toruń, Wrocław, Łódź, Poznań.

³ Kassenberg A., Rolewicz C., 1985, „Przestrzenna diagnoza ochrony środowiska w Polsce” (Spatial diagnosis of environment protection in Poland), Studia KPZK PAN, t. LXXXIX.

⁴ In the 90s the areas of ecological threat appear in public documents as territorial units covered by plans of actions, inter alia in the 1st Ecological Policy of the Country (1991-2000).

⁵ Based on: Krok K., 2004, „Zmiany zanieczyszczenia środowiska na obszarach ekologicznego zagrożenia w Polsce” (Changes of pollutions in the areas of ecological threats), Regional and Local Studies, No 3 (17) 2004.

- major industrial cities: Jelenia Góra, Wałbrzych, Częstochowa, Kielce, Opole, Chełm, Myszków-Zawiercie, Inowrocław, Tarnobrzeg, Tarnów;
- raw material and energy areas: Konin, Turoszów, Bełchatów;
- 4 areas of heavily polluted air: Wrocław, Płock, Tomaszów, Puławy.

In addition 15 areas of outstanding risk related to unbalancing and 23 spas threatened with loss medicinal qualities⁶ were determined.



Area of ecological threats in Poland in 1985. Fig. Monika Pietras

List of 80 polluting entities

In 1989 work were started related to preparation of a list showing industrial companies of the largest ecological risk. From the original list of 211 companies, drawn up by the National Inspection for Environment Protection (NIEP), on the so-called "List of 80", one year later, 80 companies were entered that were most burdensome to the environment in the country. The list of companies was the result of cooperation between then-current NIEP and environment departments at provincial offices. The selection was made, inter alia, on the basis of: multiple exceedances of pollution released into the environment in relation to the standards, degree of concentration, nuisance, adverse effects in particular on areas that can be distinguished with population density, extraordinary natural qualities. Taking urgent remedial and control actions in relation to the listed companies was one of the most important elements of the national environmental policy consisting in quick liquidation of extreme threats to the environment in the selected points, the so-called "hot-spots".

⁶ Ibidem

⁷ In 2005 Minister of the Environment – at the request of the Chief Inspector of Environment Protection – took the decision to terminate the "List of 80" and special surveillance of the Chief Inspector of Environment Protection over the listed companies. The goal was achieved. In practice, any of the companies did not pose major hazard to people and environment.

28 postulates of the Round Table

The confirmation of real ecological risk to the public was also put into the preamble of the protocol of the Round Table Ecological Team: "For a number of years we have seen deterioration of natural environment in Poland, and thus society health conditions. Risk to human life in Poland due to environmental conditions has become one of the largest in the world. Consequences of this mostly relate to the development conditions of younger generation in particular in the upper Silesia and in other areas of ecological threats. Dying forests, polluted water and air, intoxicated soil, poisoned food cover still increasing areas. Worsening ecological crisis requires radical remedial actions. Participants of the Round Table Ecological Team believe that in the face of such a serious threat for the existence, it is



Hall of the Round Table in the Namiestnikowski Palace in Warsaw in 1989.

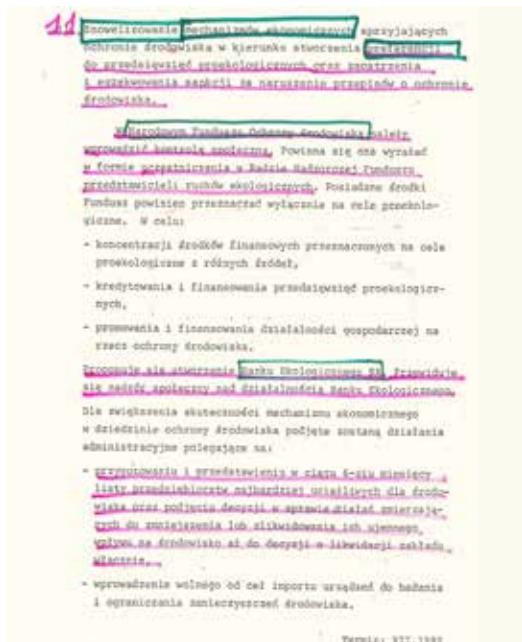
Photo Erazm Ciołek/©A.Ciołek

necessary to make a significant turn in determining main objectives of further social and economic development of the country. It is necessary to adopt the concept of eco-development and eco-policy when formulating strategic plans concerning changes to the economic structure of the country. This in particular concerns fuel and energy sector, water management, agriculture, forestry and urban development. The most urgent tasks are: reduction in emission of SO₂ and NO_x by at least 50 %, improvement of water quality in rivers, in particular in Vistula River to the 2nd grade of purity, disposal of generated industrial and municipal waste and implementation of ecological order concerning spatial planning. These tasks require a broad, international cooperation based inter alia debt for nature swap*.

The debate of the Round Table Ecological Team (named later in columns "ecological subtable") proceeded very smoothly. This was mainly due to the diagnosis of the environment condition, which did not raise doubts and larger disputes (except the opposite position to development of nuclear energy) and can also be attributed to the persons leading the debate: Prof. **Stefan Koźłowski** (chairman of the opposition-solidarity party) and Prof. **Jerzy Kołodziejski** (chairman of the coalition-government party). 28 postulates were adopted that formed the program of ad hoc measures, which should be performed within 1989-1990. The agreed postulates were grouped as follows:

- I. Pro-ecological economic activities.
- II. Legal, economic and administrative regulations.
- III. International cooperation.
- IV. Creation of Social System for Environment Protection.
- V. Investment activities.

The protocol included what follows „the agreed findings should provide guidance to develop new version of the National Program for Environment Protection, to be submitted to Sejm of the Polish People’s Republic in 1989”.



Authentic typescript (with notes) of the protocol of the Round Table Ecological Team of March 1989 with the clause 11. (From the archive of editorial office K. Walczak)

Round Table and National Fund

The mechanism of two so-called earmarked funds: environment protection and water management, already existed since 1980. But it was not the institution in a legal sense, but fledgeling, imperfect toll collection mechanism for economic environment use (mainly the big industry companies paid, but with some troubles), which gave the Ministry of Environment Protection and Natural Resources to finance environment protection. However, all the decisions were made by socialist state. The Round Table Ecological Team has reached the agreement that this mechanism must quickly obtain legal personality as an institution functioning under the social control. And so it happened: clause 11 of the 28 postulates of the "ecological subtable" finally adopted on 03.10.1989 said directly:

11. Revision of economic mechanism contributing to environment protection towards creating preferences for pro-ecological projects as well as strengthening and enforcement of sanctions for infringement of the provisions of the environment protection.

Social supervision should be introduced to the *National Fund for Environmental Protection*⁸. It should be expressed in the form of participation of pro-ecological movements representatives in the Board of Directors of the Fund. The available funds should be allocated by the Fund on pro-ecological purposes. To concentrate the funds intended for pro-ecological purposes, from different sources to credit and finance pro-ecological undertakings, promote and finances economic businesses in aid of the environment protection.

Establishment of NFEPWM

Even though part of the postulates of the Round Table has not entered into force, or has entered with the modifications in the years, the institutional arrangements concerning the National Fund for Environmental Protection and Water Management quickly gained momentum. Based on the arrangements of the Round Table:

- 27 April 1989 – the National Fund for Environmental Protection and Water Management⁹ was established, based on the Act on the change of the act on protection and preservation of environment and the Water Law (the Act came into force on 1.07.1989).
- 1 July 1989 – NFEPWM started its operations, according to the decision 11 of the Minister of Environment Protection and Natural Resources of 30 June 1989 on granting the statute to the National Fund.

What was it like in 1989?

No one is able to describe the facts as well as the authors of this success that for sure was the establishment of NFEPWM. Here are the memories of direct participants of those historical events.



Extracts from the Journal of Law of 1989 with the provision establishing NFEPWM. [Skipped parts pointed out (...)].

⁸ The Round Table protocol used the name the National Fund for Environmental Protection, although such an institution did not exist yet in the legal sense and only in the prepared legislative documents.

⁹ The Act of 1989 also established provincial funds for environmental protection and water management, without however legal personality, which was granted in 1993.

prof. Waldemar Michna (†2013; Minister of Environment Protection 1987-1988¹⁰):

“The concept of the National Fund originated in the second half of the 80’s - even before decisions of the Round Table. The multi-annual National Program for Natural Environment Protection until 2010 was formed back then. It said that public resources will contribute to the expenses related to environment protection. The amount appeared to be quite shocking. Anyone who had experience in official works , was aware that this program cannot be implemented with annual budget revenues. It must have other stable source of funding. This was a starting point for further actions, when I became a minister. I have introduced a revised draft of the Act on Environment Protection to the Council of Ministers as well as revision of the Water Law. These two documents provide for establishing of NFEPWM. Unfortunately, the revision draft of the act on environment protection was too expensive and therefore had to wait a long time to be included in the Sejm debate. When it became the subject of Sejm debate, Józef Kozioł, Ph. D, was the Minister of the Environment. He agreed to various organizational changes associated with the activities of NFEPWM and defended the main assumption resulting from the thesis that the Fund will be the main instrument of the state to implement the national program for environment protection¹¹.”

dr Józef Kozioł (Minister of Environment Protection 1988-1989):

“Until 1989 there were two non-budgetary earmarked funds: fund for environment protection and water management fund. They were financed by the charges for using the environment and penalties for exceeding admissible levels. These funds did not have legal personality, what fostered subjective decisions related to their utilization. However, penalties and fees, the amount of which was not sufficiently severe for users, due to their rapid devaluation due to inflation, were anaemic instrument affecting investment activities in ecology. Weaknesses of this system were not only identified with the full keenness by the then-current management of the environment management system, but also became a strong incentive to a radical change of the status. (...) The discussion of “ecological subtable” was very fruitful. The concept was simple: one fund, with legal personality, subjected to SAO in pluralist supervisory board, which nominates a candidate for President of the board of NFEPWM. Within a few weeks, after the Round Table, the Board of the Fund was appointed, which composed of representatives of trade unions, pro-ecological organizations and experts¹².”

Old, yellowed press clippings

We have found authentic, carefully stored, yellowed clippings from over 25 years. Here are some statements of two, unfortunately already dead, chairmen of two parties to the debate of the “pro-ecological subtable”:



Decision 11 of the Ministry of Environment Protection and Natural Resources of 30 June 1989 on granting the statute to the National Fund.

¹⁰ List of ministers – heads of ministry of environment (protection) in 1984-2014 on page 85.

¹¹ „20 lat na rzecz ekorozwoju. Odnawialne źródło finansowania” (20 years of eco-development. Renewable source of financing), NFEPWM, Warsaw 2009.

¹² Ibidem.

Prof. Stefan Kozłowski (†2007, chairman of the opposition-solidarity party):

- (...) *“Generally, it is about legal, economic and organizational mechanism, boosting the operations within the scope of environment protection. But somewhat in the two planes – both the system in the hands of the state, as well as parallel – social one (...). The situation is so advanced from the point of view of conceptual and organizational matters, that there is no point to postpone this common inability concerning environment protection beyond the horizon of the next year [1990 – editorial note]. For many years, there was no significant decision of the authorities, which would show that great slogan “environment protection” (...) is really reflected in actual actions”. (...) the simplest cases, for which there is common agreement, are not put into everyday practice. Why the disincentives? we would like to overcome this inability”¹³.*

Prof. Jerzy Kołodziejcki (†2001, chairman of the coalition-government party):

- 1 (...) *“Even if we had great deal of money, without a well-functioning environment protection management system, it would be “exposed” to ineffective spending. In Poland it is not only a matter deficit, but also there are no healthy mechanisms, which would reasonably and effectively absorb this money. We don’t have the time. Because the environmental degradation processes that are entering a phase (...) of accelerated destruction. And the society has the increasing awareness of ecological threat. People simply are afraid”¹⁴.*

The Round Table has paved the way for democracy and political transformation. That is how a modern Poland was created, which in Article 5 of the Constitution of the Republic of Poland states: *“The Republic of Poland ... preserves its national heritage and ensures protection of the environment, being guided by the principle of sustainable development”*. For the National Fund the time of historic changes paved the way for the next 25 years of effective and efficient activities for the environment. Today, after 25 years, we are proud to say that we have made a positive change of the ecological face of our country. We were not alone in this work. Successful environmental policy in Poland is achieved among other things by the effectively and efficiently functioning system financing the environment protection.

Environment in Poland today

In today’s Poland, although there is much to be done in the field of environment protection and water management, there are no longer areas of ecological threats, there is no “List of 80” most burdensome industrial companies, there is no risk of the so-called “hot-spots”, which were complained about by the Baltic Sea protection Convention (inter alia a dump of raw sewage into Vistula River from Warsaw and to the Baltic Sea from Szczecin and Gdańsk was stopped). Because of consistent implementation of environmental policy objectives and tasks through legal and economic instruments as well as the ecological system funds, a significant improvement of the environment was noticed in democratic Poland. This is confirmed by periodic reports supplied by the Central Statistical Office and Inspection of

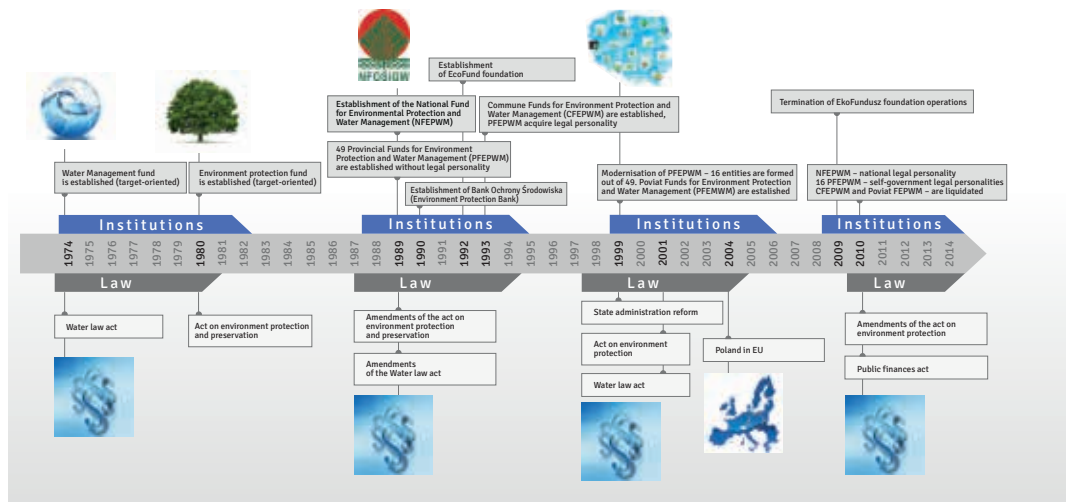


Excerpts from speech by Prof. Jerzy Kołodziejcki and Prof. Stefan Kozłowski for „Życie Warszawy” in February 1989 (from the archive of editorial office K. Walczak)

¹³ „Życie Warszawy” of 15 February 1989

¹⁴ Ibidem.

the environment protection. Within the years 1990-2012¹⁵ there was a decrease by 44% of municipal waste water and almost by 14% of industrial waste water discharged to surface waters. The cause of these changes is, among others, rationalization of water consumption in the households and industry. The quantity of waste water discharged to waster in not treated condition decreased by almost 92%. The decrease was possible mainly due to building new and modernizing the existing sewage treatment plants and sewage systems. In the years 1990-2012 there was a significant reduction in emissions of the main air pollutants. Sulphur dioxide emissions have decreased by 72%, nitrogen oxide by 34% and particulate matter by almost 79%. Carbon dioxide emissions also dropped by 30%.



The evolution of the system financing environment protection in Poland. Fig. Monika Pietras

The selected ecological effects from agreements concluded in the years 1989-2013 by NFEPM

- The waste water treated (daily average) an increase by 8.4 million m³/d
- Weight of waste recovered and recycled annually increase by 2.1 million tons/year
- Limited or avoided carbon dioxide emissions decrease by 12.1 million tons/year

What was the share of the National Fund and of the whole environment protection financing system in these and other fields (in waste management, water management, ecological education, environment protection)? Well, let the facts say by themselves. Because it is not possible to describe all the fields for which the National Fund has provided and provides financing (over 19 thousand contracts had been concluded), we focused on a few areas of operation, pointing out the participation of the National Fund in using the foreign resources, both during the period preceding Poland accession to the European Union and within the first decade of EU membership. We invite you to review our activities and activities of our partners within the past 25 years.

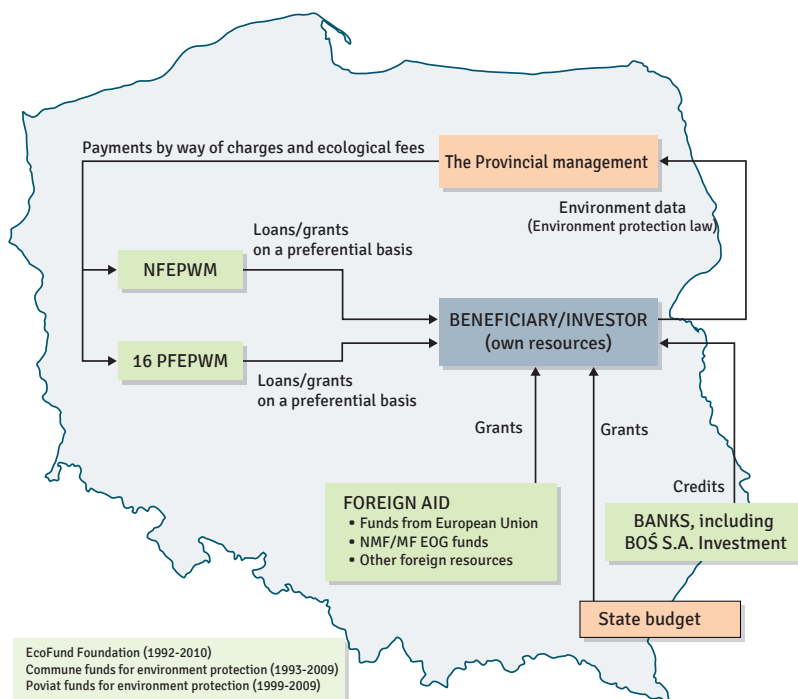
During the years 1989-2013 NFEPM, by concluding over 19 thousand contracts for co-financing, paid out of its own funds for eco-projects approx. 33.1 billion PLN. The estimated value of financed projects exceeded 130 billion PLN.

During the 21 years of activity, in the years 1993-2013, financial outlays of all the provincial FEPWMs on tasks concerning protection of the environment exceeded 31 billion PLN.

In total, the ecological funds (NFEPM and provincial FEPWM) co-financed (from national resources) environment protection projects with the sum exceeding 64.1 billion PLN.

¹⁵ The Central Statistical Office data for 2013 will be published in October 2014.

We have changed and are changing Poland together



System and the main sources of financing environment protection in Poland. Fig. Krzysztof Walczak

Fast systemic transformation (political, social and economic) has opened a path to building a unique, on a global scale, stable system of financing environment protection and water management. Bank Ochrony Środowiska S.A. (Environment Protection Bank Joint-stock company) was established (established in 1990, began working in 1991). EcoFund Foundation was established holding funds from the debt for nature swap (established in 1992, operating until 2010) and in 1993 provincial funds for environment protection and water management were established (functioning since 1989 without legal personality) and commune funds for environment protection and water management (CFEPWM). The next changes in the system took place in 1999 – poviats funds for environment protection and water management were established (PFEPWM), simultaneously, as a result of administrative reform, the number of provincial funds was reduced from 49 to 16. In 2010, as a result of the reform of public finances, commune and poviats funds were taken over directly by the budgets of self-government units, communes and poviats, with the assignment of resources for activities related to environment protection.

Currently the National Fund, as a national legal person, jointly with the provincial funds for environment protection and water management, as independent self-government entities and legal persons, on the basis of a common strategy, represent a system for financing environment protection in Poland. The National Fund is the source of funding primarily a supra-regional environmental projects. However the 16 provincial environment protection and water management funds support financing of the environment protection at the regional level.

BOŚ S.A. – Partner of the National Fund in past quarter century

In September 1990 another of the postulates included in the protocol of the Round Table Ecological Team has come true: Bank Ochrony Środowiska S.A. (Environment Protection Bank Joint-stock company) has been established. (BOŚ S.A.), which started its operations one



year later. The National Fund gained an important partner, with whom it cooperates till today. BOŚ S.A. is a bank specialising in supporting projects and tasks for the protection of environment. Within the 23 years of activity BOŚ S.A. assigned approximately 12.5 billion PLN on financial support of ecological projects. The total value of investments made with the support of the Bank amounted to more than 40 billion PLN.

BOŚ S.A. belongs today to 20 biggest banks in Poland in terms of assets. Since 1997 its shares are listed on the primary market of the Stock Exchange (SE) in Warsaw. The main shareholder is the National Fund (56.62% of the total number of votes). The offer of BOŚ S.A. is addressed to individual and institutional clients, with particular emphasis on those who are involved in ecological market operations. BOŚ S.A. actively operates in the field of environment protection, it manages a series of projects within social business responsibility. In December 2009, at the initiative of the Bank Board the Environment Protection Bank Foundation was established, which is an essential complement to activities of BOŚ S.A. in relations with local communities, leading, among other things, educational projects, promoting eco-friendly and healthy lifestyle. Bank develops also the Internet service eco-Poland.pl, which combines social responsibility of banking institution with the promotion pro-ecological attitudes.

Small credit lines of BOŚ and NFEPWM

One of the largest joint ventures of NFEPWM and BOŚ S.A. was the program of preferential credit lines for pro-ecological investments, mostly performed by natural persons. BOŚ S.A. in the years 1994-2005 was a bank operating 36 thematic credit lines, from which almost 820 million PLN was paid out from NFEPWM resources. Credit lines allowed mass implementation of such tasks as: modernization of heating systems – replacement of coal fired boilers to other, of less emission or utilization of renewable sources of energy (heat pumps, biomass boilers and other), liquidation of local boiler houses and connection of objects to the municipal heating network, thermal-insulation of buildings, removal of asbestos containing products, purchase of containers for selective collection of waste, construction household sewage treatment plants, construction and connection of the sewerage system.

The Capital Group of the Bank includes Brokerage House BOŚ S.A. -multi-annual leader of futures contracts market, awarded by the SE President for the largest activity on this market. The investment platform BH BOŚ S.A. is boss.pl – one of the most extensive services concerning exchange matters. BOŚ Eko Profit S.A. is an investment company, which complements the offer of Group BOŚ S.A. with investments in clean technologies, environment protection, and in particular in renewable sources of energy.

Working in close cooperation with the National Fund, Bank Ochrony Środowiska S.A. granted more than 22.3 thousand credits for pro-ecological projects (including more than 10 thousands on solar collectors), implemented by the operators, self-government units and natural persons. They included municipal and industrial wastewater treatment plants, flue gas treatment systems, the tasks within the scope of energy efficiency, waste management.

EcoFund Foundation

In August 1992, EcoFund Foundation was established by the Minister of Finance, the aim of which was to efficiently manage resources from the conversion of part of Poland's debt to finance the projects related to the protection of the environment, the so-called debt for nature swap. EcoFund provided funding until 2010. The primary source of revenue of the EcoFund was income from the debt for nature swap resulting from the agreements between Poland and the United States, France, Switzerland, Italy, Norway and Sweden. These countries partially reduced their dues under the repayment of the Polish debt. With the favour of creditor countries it was possible to significantly accelerate environment protection investments and focus them on solving specific problems, as well as transfer innovative technologies in five priority areas: protection of air by preventing trans-border atmosphere pollution, Baltic Sea protection by reducing inflow of pollutants to the Baltic Sea, climate protection by reducing greenhouse gases emission that change the climate, protection of nature and biodiversity, and waste management and soil reclamation. The Foundation spent in the form of grants approximately 2.5 billion PLN, granting financial support for more



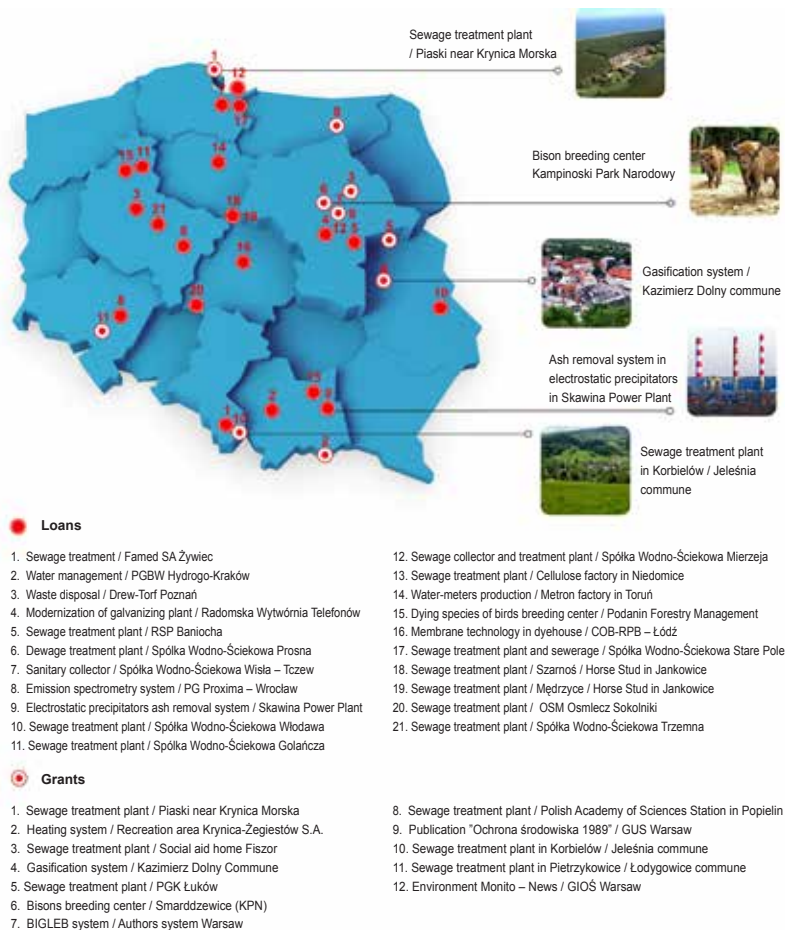
than 1 400 projects, whose total cost is estimated at around 13 billion PLN¹⁶. In 2011, after liquidation of EcoFund Foundation, the unused resources, were transferred to the National Fund for the budget of next programs concerning environment protection: more than 10 million PLN for projects implemented in the National Park in Białowieża and the value of the property (former EcoFund Foundation headquarters in the center of Warsaw), obtained by NFEPWM – to support ecological performance in environmental projects financed in the past years from the resources of EcoFund, NFEPWM and provincial funds.

The debt swap mechanism

In the mechanism of Polish debt swap, the following parties were engaged: The United States (372 million USD – 10% of the debt), France (66 million USD – 1% of the debt), Switzerland (63 million USD – 10% of the debt), Italy (\$32 million – 10% of the debt), Norway (27 million USD – 10% of the debt) and Sweden (\$13 million – 4% of the debt) – in total more than 570 million USD. Except the EcoFund budget, also Finland was involved in the swap, allocating for this purpose 17 million USD.

Pioneering years

The first months and years of the National Fund were very modest: in 1989 – 33 co-financing contracts were concluded, including 12 grants and 21 loans, most of them in the water protection. In 1990, the first full year



The first grants and loans granted by NFEPWM in 1989. Fig. Monika Pietras

¹⁶ According to accepted contractual parity EUR/PLN for the whole period of activities of the Foundation ca. 3.3 billion EUR. Ernst & Young – „Raport z oceny programu ekokonwersji realizowanego przez Fundację EkoFundusz” (Report of the Evaluation of the Debt-For-Environment Swap Program implemented by the EcoFund Foundation), Warsaw, 2010.

of operation of the National Fund, revenues were 12 million PLN, and their major source (94 %) was fees and penalties. Expenditure on environment protection amounted 9.2 million PLN. At the beginning the basic form of financing were loans, which were granted in 1990 for the amount of 6.2 million PLN. Increase of revenues from fees and penalties together with a return of installments concerning earlier loans led to the increase of resources every year. Today, after almost a quarter of century, revenues to the National Fund and expenditures for environment protection are counted in billions PLN. In 2013, payments for environment protection amounted to almost 5.6 billion PLN. This is one of the spectacular factors of environment protection financing system development in Poland. From several million to several billion PLN each year!

From transformation to accession

The mission of the National Fund within the first decade of operation (1989-1999) was to support activities to improve the state of the natural environment, its protection and rational use in accordance with the principle of sustainable development and to ensure environmental safety. Basic objectives of concerning co-financing of tasks of national or supra-regional nature and large national and international programs used to liquidate harmful pollution sources of air, water and soil, resulted from the Environmental Policy of the Country (adopted for subsequent periods 1991 -2000, 2003 -2006, 2009-2012). They were included in the priority lists , approved annually by the Supervisory Board of NFEPWM. The strategic objectives of the National Fund included stimulation investment activity related to environment protection among self-governments, national and economic entities. In the 90s, the principles concerning granting the co-financing and criteria of projects selection were created, close cooperation with provincial funds of environment protection began (joint financing of projects), and the continuously developing Bank Ochrony Środowiska S.A. became a financial partner of the National Fund, initially in large projects, requiring consortium support, then also with regard to credit lines for smaller investors. In recent years co-operation with the banking sector has been greatly enhanced.



NFEPWM performs first of all the national projects of strategic importance for the country. Regional tasks – in each of the 16 provinces of Poland – supported by provincial funds for environment protection and water management (PFEPWM). Fig. Monika Pietras



The first in Poland industrial photovoltaic farm funded by PFEPWM in Cracow.

Photo „Energia Wierzchosławice” Sp. z o.o.

Before and after accession

In the late 90s and at the beginning of the new century, a major organizational and financial task was to engage the National Fund in the implementation of Polish negotiating position within the field of “environment” long before the accession of Poland to the European Union. Years of experience of the National Fund personnel related to foreign aid utilization was of great assistance. Experience gained during the pre-accession period and high rating of foreign institutions in relation to the National Fund, as coordinator of investments financed from Phare¹⁷, ISPA¹⁸, the Cohesion Fund (financial perspective 2000-2006) and the European Regional Development Fund (discussed on p. 64 and 67), and also successful completion of foreign and national audits performed by auditing units, have been appreciated in the next financial perspective of the European Union. The National Fund has become the largest Agency implementing environmental projects co-financed by the European Commission for the period 2007 – 2013 (more on page 69). Connection and penetration of new and existing tasks of the National Fund has resulted in major organizational changes within the institution and affected the correct implementation of the investment projects coordinated by the National Fund, and funded from the European Union funds.

Contemporary stage of development

The years 2008-2013, i.e. the period of implementation, were especially important in the twenty five year long history of the National Fund. The following programs were implemented: first NFEPWM Strategy 2009-2012 and Common NFEPWM and PFEPWM strategy 2009-2012 and 2013 NFEPWM action strategy 2013-2016 with the perspective to 2020 and a common action strategy of NFEPWM and PFEPWM 2013-2016 with a perspective to 2020. In the environment protection management and financing system in Poland, the National Fund becomes an important “*competence center*” in the financing and implementing projects in the environmental field, of standards compliant with EU directives. Experienced staff uses modern management techniques in the current activities of the National Fund. Participation in consultation and legislative works as well as co-financing research, analyses and expert opinions, NFEPWM initiates important social and economic processes, e.g. in the waste management, power saving sector and optimum utilization of resources. Broad consultations performed by the National Fund,

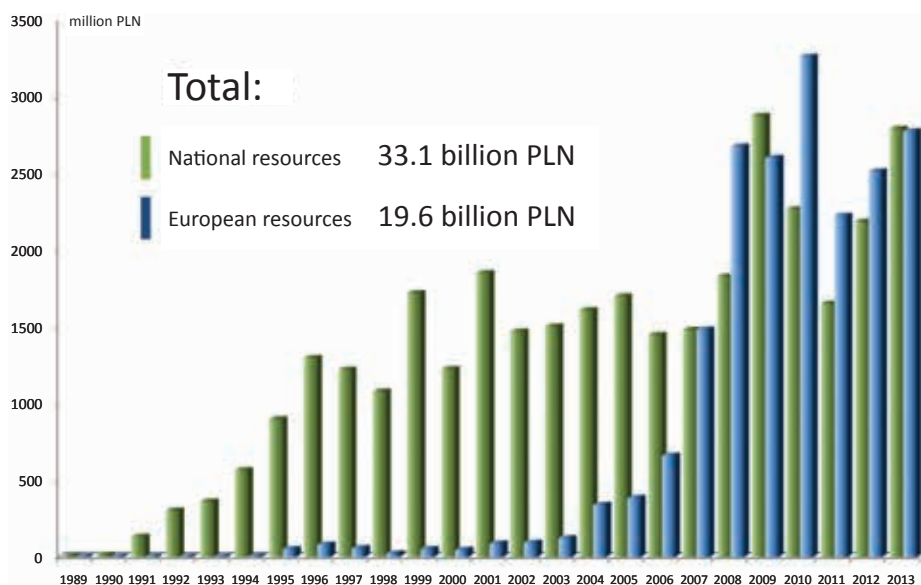
¹⁷ Phare – acronym of the pre-accession program „Poland and Hungary: Action for the Restructuring of the Economy”.

¹⁸ ISPA – acronym of the pre-accession fund Instrument for Structural Policies for Pre-Accession Assistance.



Sewage treatment plant in Sochaczew. Photo ZWiK Sochaczew Sp. z o.o.

e.g. within the scope of the Forum “Energy-Environment”, The Forum “good practices in waste management” and Forum “Ecology – Education – Eco-innovation”, initiate the new program offer and are the platform for the exchange of experiences and information about innovative technologies applied on the market. In the competition announced by the Ministry of Regional Development in 2012 the National Fund has been honoured for **“Good strategic management practices related to development in Poland”**.



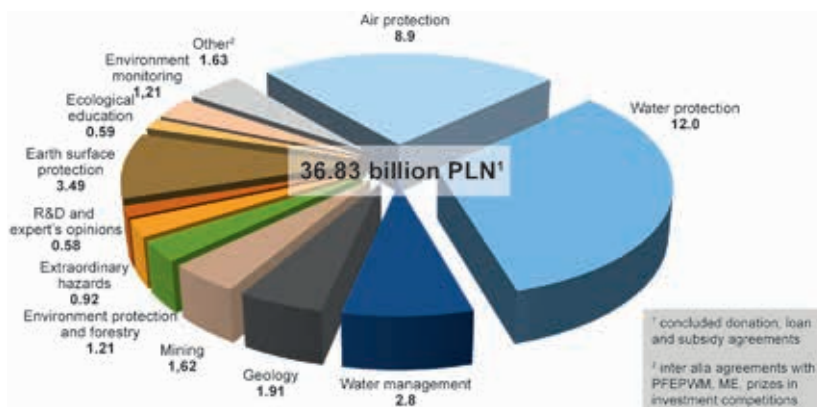
Financing environment protection by NFEPWM in the years 1989-2013 (resources paid).

Currently the National Fund implements a key project *implementation of Excellence Model in NFEPWM EFQM*¹⁹, the results of which will be translated to operation of the whole institution. The objective of the project is broader look at the organization from the standpoint of the process, improvement of the performance, adaptation of the organization to ambient requirements, in particular to the new EU financial perspective 2014-2020. NFEPWM has new challenges related not only to the financing of the environment protection, but also to the support of beneficiaries in the process concerning application for the funds.

After twenty-five years of operation, the National Fund faces the need of redefining priority directions of financing. In the 90s they had a simple, civilizational dimension associated with negative impact on the environment. At the brink of XX and XXI century, activities of the National Fund started to evolve in the direction to make best use of resources from the European Union and other foreign assistance sources. At the end of the first and in the second decade in XXI century, the National Fund is getting more and more involved in an effective policy concerning energy saving, climate and atmosphere protection, in developing renewable energy sources and eco-innovation.

Functioning of the National Fund

The way of functioning, as well as the bodies of the National Fund, are determined by the Environment protection law (which substituted the Act on environment protection and of 1980) and the Statute given by the Minister of Environment. Works of NFEPWM are managed by the Management Board, which represent the Fund, takes decisions on co-financing environmental projects, prepares a list of priority programs and supervises the use of foreign assistance operated by NFEPWM. The activities are controlled by the Board of Directors, appointed by the Minister of Environment, who defines directions of development of the National Fund (by approving plans and strategies), sets out the rules for granting financial support, approves the priority programs and criteria for the selection of projects, adopts activity reports, approves the budget and finances tasks exceeding the equivalent of 1 million EUR in the case of loans and of 500 thousand EUR in the case of grants.



Main areas financed by NFEPWM in 1989-2013 (acc. to concluded contracts).

Renewable financing source

The Environment Protection Law specifies basic principles concerning financial management as well as strategic directions of environment protection, in which the National Fund should be involved. The financial resources disposed by the National Fund, are public resources within the meaning of the law on public finances, thus the financial support granted by NFEPWM must take place in accordance with the rules included in this law. Every year

¹⁹ EFQM Excellence Model (European Foundation for Quality Management) has been developed by the European Fund for Quality Management in 1991.

the National Fund (among others in the Sejm and Senate) a report on the activity, correctness and effectiveness of spent public resources is controlled by the national institutions, including Supreme Audit Office.

The national and provincial funds operate in the form of renewable funds, so-called revolving. To preserve the renewability principle of the fund resources, the basis form of financing environment protection projects should be loans granted on preferential conditions in relation to standard ones. Loans may also be partially amortized. If the condition that annual revenues of the fund exceed the granted non-refundable assistance within the same period is satisfied, this leads to increased opportunities concerning future aid. Repayment of installments for previous loans together with interest, causes that the fund has more money every year, than it would result from its revenue.

Charge for the use of environment

The national and provincial funds for environment protection are supported by external sources from fees for the use of the environment and cash penalties levied for breach of environmental requirements. Charges for the use of environment are taken, inter alia, for: discharge of waste water, air pollution, waste disposal, mining of minerals, use of resources, logging of trees and shrubs, agricultural and forestry lands used for other purposes. The amount of charges and penalties is determined by the Minister of Environment. The amounts are paid by the entities to marshal offices and transferred to the funds. An additional source of income of the National Fund is operating and concession charges, collected based on the Geological and mining law. These revenues are posted on a separate account from which only projects concerning mining and geology may be financed. Return of installments from loans with interest represent significant item in the NFEPWM budget. Other sources of NFEPWM revenues are incomes from the sale of greenhouse gases and other substances emission units, which affect the so-called "climate account".

Other sources of finances transferred to the National Fund are also specified by the Environment protection law, but, in addition, by other laws, too. The income of the National Fund consists, among other things, of revenues



Modernised energy system in Provincial Hospital in Kalisz. Photo Wojciech Grzelak



Wind farm in Kamieńsk co-financed by NFEPWM. Photo NFEPWM archives

collected under the Act on obligations of entrepreneurs within the scope of management of some waste as well as product charge and deposit fee. The National Fund also receives income from compensatory charges and penalties resulting from the Energy Law. Power companies, which do not comply with the obligation to supply a certain quantity of electricity produced from renewable energy sources, determined by the Energy Regulatory Office (ERO), pay compensatory charges to the National Fund. Revenue of the National Fund is also the incomes from charges resulting from the act on recycling decommissioned vehicles. The Council of Ministers has identified principles for the distribution of resources and deadlines for receipt of application for co-financing the recycling of vehicles.

Priority programs

Since 2009, the National Fund manages the public finances, for ecological operations, through priority programs, which are the offer to a potential beneficiary and the implementation tool of the NFEPWM Strategy. Priority Programs are created on the basis of priorities identified in the Strategy and the “List of priority programs within NFEPWM”, approved annually by the Supervisory Board of NFEPWM. One of the most important tasks completed in 2013, determined by the “NFEPWM Strategy”, was the review and consolidation of offer program of the National Fund²⁰.



Management Scheme of priority programs in NFEPWM.

The priority programs include environmental needs, needs and financial capabilities of beneficiaries and are the response to the changing environment. They are also “guides” for the beneficiaries, within the scope of how and on what conditions it is possible to obtain resources from the National Fund for projects planned in the area. Public consultations and market research as well as the analysis of environmental needs and results of current programs preceded the programs development. The result of the public consultation performed by NFEPWM are modern, often innovative, “right-sized” financial products. They stimulate the market, create jobs, improve the quality of products and services, lower prices, and often demarcate new directions of action and are ahead of upcoming legislative changes. Information and promotional campaigns are the elements promoting the NFEPWM

²⁰ List of priority programs for 2014 year, p. 76-77

products. They are performed together with self-government as well as social and economic partners, in particular with non-governmental organizations. The introduction of new program offer is accompanied by broad training action organized by NFEPWM.

Classic management of priority programs have been enriched with consultation of the priority programs assumptions using the mentioned program initiatives, such as: The Forum “Energy-Result-Environment”, Forum “Ecology-Education-Eco-innovation”, Forum “Good practice in waste management” and market research at the stage of preparation and implementation. The public finances management system using priority programs provides the National Fund with the following options:

- control of cost-effectiveness of projects and own institutional efficiency;
- dynamic adjustment of financial offer to the changes in the environment;
- assurance of close relation of purposes and budgets of the priority programs for the conduct of fair and transparent financial management.

Projects selection criteria

The National Fund applies three basic procedures for selecting projects for funding: competition, continuous recruitment and transfer of resources to national budget entities (NBE). Within the scope of competition, a ranking list is prepared, and the applications for financial support are assessed by a working committee / team. In case of continuous recruitment, if the assessed projects cannot be compared with each other, awarding of the funds is based on the order of submission of the applications for co-financing within the framework of the assumed resources. Each priority program has a specific budget and after its exhaustion, further applications are not accepted. In some cases, two-stage procedure is applied: at first, brief, initial application for co-financing, and after its positive recognition – proper application. For the projects financed by public resources (limited by the regulations of free market competitiveness of the European Union), only positive recognition of the initial application allows for starting the project. An important role in the selection criteria is played by the cost-effectiveness, calculated by NFEPWM using mostly the DGC index (technical cost of obtaining ecological result unit) or WK index (methodology of analysing the cost effectiveness and cost analysis as well as social benefits of the project).

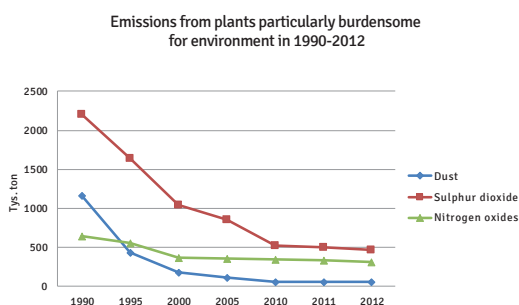
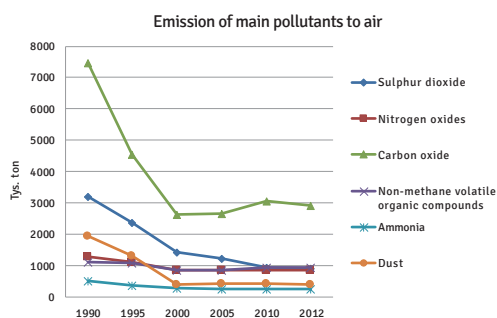
Actions taken by the National Fund enjoy a good reputation among the beneficiaries and applicants, as confirmed by the research of the level of “Satisfaction with the results of the National Fund for Environment Protection and Water Management” conducted annually since 2009.



Visualization of the Plant for thermal processing of waste in Cracow. Photo Krakowski Holding Komunalny SA

Climate and air protection

In the first few years of the new political regime in Poland, as a result of the restructuring, many environment burdening sectors of industry, but also as a result of large investments in the energy sector, a significant reduction of emission (maintaining in the following years), has been noticed, generated during power combustion of fuels, such as sulphur dioxide, carbon monoxide, oxides of nitrogen, particulate matter and industrial pollutants, such as volatile organic compounds and heavy metals. The reduction of emission – in addition to economic transformation and eco-friendly structural changes in the industry – was affected by a series of actions taken in order to limit contamination, e.g. implementation of highly efficient sources in the commercial and industrial power industry as well as construction of coal enrichment installation. Modern (national and foreign) technologies for flue gases and fuels desulphurization as well as systems to reduce emission of nitrogen oxides and flue gas desulphurization in the industrial power industry were also introduced. The reduction of pollution was possible to great extent because of rigorous levels concerning emission to air and creating efficient system financing pro-ecological projects. Own resources of investors, mostly companies and self-government entities, which using the national financing system – caused the effect multiplying ecological success, played a very important role.



Source: „Ochrona Środowiska 2013” (Environmental Protection 2013), GUS, Warsaw 2012 – Estimated data, reported to the Climate Convention (UNFCCC) and the United Nations Convention on trans-border transport of contamination across long distances.

Modernisation of Polish energy

The last decade of past century and the period before Poland’s membership in the European Union is a continuation of great changes in the Polish energy and heating sector including modernisation or building of power generating objects, in most cases falling under the cross-border emission sources. One of the elements that shaped the investment process and affected the pace of works was the already inevitable Poland’s accession to the European Union. As a result of pre-accession negotiations, in many cases it was possible to obtain transitory periods, so that Polish economy and infrastructure, with national and foreign resources, was able to gradually meet the stringent levels of Union Directives, among the others, concerning air protection.

Because scale of NFEPMW aid, in this and any other area of the environment protection, is counted in thousands of projects, we select only the exemplary projects from a long list of reference projects, co-financed by NFEPMW. Among the first and at the same time the biggest projects related to reduction of harmful emissions, special attention is drawn to:

Almost 9 billion on protection of air

More than 3.4 thousand contracts concerning grants for an amount exceeding 8.88 billion PLN is the effect of co-financing the projects in the field of air protection in 1989-2013 by the National Fund. The cost of these tasks exceeded 37 billion PLN.

- construction of flue gases desulphurization installation in the Polish commercial power plants, including in Bełchatów (from 1992), Łaziska, Siersza, Complex of Power Plants Pątnów-Adamów-Konin, Łagisza, Skawina, Turów, Ostrołęka, as well as in large Polish combined heat and power plants, in Łódź, Mielec, Gdańsk, Wrocław (since 1993);
- construction of an installation that reduces nitrogen oxide emission in Pątnów power plant;
- installation of NO_x low-emission burners in Zakłady Sodowe "Janikosoda" S.A. in Janikowice;
- installation of low-emission burners to limit the emission of NO_x in one of the power units in Kozienice Power Plant;
- hydrodesulphurization installation of Diesel oils in PKN ORLEN S.A.

In the years 1995-2001, the works concerning modernization of the largest brown coal fired conventional power plant in Europe, located in Bełchatów, were continued. The list of major investments, which began in the mid-'90s, or which were the continuity of major modernization works in the power industry, includes, among the others:

- Łaziska Power Plant (flue gases desulphurization installation for four power units);
- Turów Power Plant (since 1995);
- Wybrzeże S.A. Power Plant in Gdańsk;
- optimization of heating system in Wrocław (since 1999).

Most of the investments modernizing the power industry were continued in the first decade of the new century, among the others:

- development of CHP Lublin-Wrotków by a gas and steam unit;
- construction of gas CHP in Siedlce, connected with a liquidation of old La Monte'a CHP;
- development of CHP Rzeszów by a gas and steam unit;
- construction of steam boiler generating energy from a biomass in Szczecin Power Plant;
- new power units 460 MW in Pątnów and Łagisza Power Plants.



With the resources of NFEPPM, during 25 years, the largest Polish power plants were modernized. Photo NFEPPM archives

Modern energy and energy efficiency

The National Fund, in its strategy for 2009-2013, underlined strongly the financial programs, purpose of which is to protect climate and improve air quality, especially reduce emission, increase efficiency of generation, transfer, distribution and utilization of electrical energy and heat. Special attention should be drawn to investments, which thanks to NFEPWM resources, allowed for the implementation of the Best Available Techniques in companies (BAT). Modern technologies have made it possible to significantly reduce emission from energy generating sources using hard and brown coal and derivatives of petroleum. In the selection of projects for funding ecological criteria (magnitude of ecological result) and economic criteria (unitary cost of liquidation of pollution in relation to the cost of the project and funding amount) were applied .

SPG – smart grid

The program that can be included among the EU package 3x20x2020 is the program implemented in 2013 called „Smart Power Grids” (SPG), which was to optimize the power consumption. NFEPWM granted co-financing promises to 12 applicants to amount ca. 172 million PLN. Planned reduction of CO2 emission will amount 35 thousand tons / year.

When selecting projects for funding objectives written in the national strategic documents are taken into consideration. Priority programs of NFEPWM, being implemented since 2009, contribute to the fulfillment of the commitments by Poland concerning EU energy – climate package (3x20x2020), i.e. an increase by 2020, energy efficiency by 20%, increase the share of energy from renewable sources to 20% of the total final energy consumption in the European Union and a reduction of greenhouse gas emission by 2020 by at least 20%, as compared to 1990, with a possible growth in the value even up to 30%. NFEPWM is involved in all actions striving to the fulfillment of objectives specified for Poland in the energy and climate package of EU. They are tailored for our country (in accordance with the negotiated arrangements) and defined in detail in the adopted and implemented policies and strategies. The aim is to carry out the obligations under the Directives and acts containing transposition of EU law to Polish law.

Modernization and construction of combined electrical energy and heat generation units, which meet the requirements of highly efficient cogeneration were financed within the scope of the IX priority of the Operational Program – Infrastructure and Environment²¹ OP IE- (Action 9.1 high efficiency power generation), among other things in CHPs in Mielec (gas cogeneration) and Opole (Energetyka Ciepna Opole SA), moreover, the next step of construction of new cogeneration unit with ORC turbogenerator supplied with boiler fired with biomass in Krosno have also been completed.

High efficiency cogeneration OP IE

As a result of the implementation of projects within the scope of the priority OP IE (Action 9.1 high efficiency power generation), total power from heat energy installed in cogeneration amounted ca. 226 MW and from electrical energy in cogeneration ca. 94 MW.

The National Fund is also an Implementing Institution regarding the Action 9.2 Effective distribution of energy within the scope of OP IE. The implemented projects concern modernization of grids and district heating substations. In this case 43 contracts were concluded amounting ca. 846 million PLN.

Thermal efficiency improvement in the construction industry

Each recruitment and competition of applications announced by NFEPWM within the programs related to thermal efficiency improvement of buildings (low energy buildings) enjoys enormous popularity among applicants, especially of self-government institutions. But “thermal efficiency improvement” is not only simple and common

²¹ more on OP IE – p. 69.

insulation systems, but also modernisation of all components that affect the change and improvement of energy efficiency, together with replacement of HVAC systems, transmission networks, modernization of energy source (using RES), heating and energy supply system. In programs implemented by NFEPWM, it is preferred to equip the objects with equipment of the highest, economically justified, energy efficiency together with thermal efficiency improvement of the buildings.

Thermal efficiency improvement in the Middle Pomorze

The list of thermal efficiency improvement projects coordinated by NFEPWM includes among other things the largest project in Poland, covered by the Action 9.3 OP – IE of value 52 million PLN and co-financed by UE in amount almost 40 million PLN, executed by 25 self-governments and 6 poviats in the Middle Pomorze.

In the NFEPWM offer for self-governments and public sector entities, there were and still are a few projects related to the thermal efficiency improvement. One of them, financed from OP IE (IX priority 9.3 Thermal efficiency improvement of public utility buildings) resources, was to reduce energy consumption in the public sector. The scale and interest in the thermal modernization are reflected by the results of competition organized in 2009 – 135 applications were submitted for the support of the project of total value almost 2.2 billion PLN, and the value of applied assistance exceeded 1 billion PLN. Because it substantially exceeded the planned EU budget, in 2012 the program budget was increased to 422 million PLN. NFEPWM has started additionally its own program “Co-financing the IX priority axis of OP IE” part 1) subsidies to bank credit interests for projects implemented within the scope of the Action 9.3 “Thermal efficiency improvement of public utility buildings”.

The thermal efficiency improvement was financed also from the resources of the Mechanisms of the European Economic Area and Norwegian Financial Mechanism (2004-2009)²². Among other things, 70 projects were co-financed (“Thermal efficiency improvement of public utility buildings”) the cost of which amounted almost 60 million EUR, and the co-financing amount was 44 million EUR.”

The Green Investment Scheme – GIS

Kyoto Protocol performed under auspices of the Framework Convention of the United Nations on the change of climate **creates an opportunity for international trading with assigned greenhouse gases emission units**. Poland, which has ratified the Protocol in 2002, has committed to reduce greenhouse gas emission in the period 2008 – 2012 by 6% compared to base year 1988. Since the attained reduction of emission several times exceeded Polish duties, Poland has the option to sell the assigned amount unit (AAU).

The system of financial support for the investments in the field of protection of climate and reduction of CO₂ using resources obtained by Poland from international transactions of sale of AAU to the emission of CO₂, granted within the scope of the Kyoto Protocol is called the Green Investment Scheme (GIS). As a result of contracts concluded with the Japanese partners and European Bank for Reconstruction and Development, World Bank, the government of Spain, more than 778 million PLN has already been collected. These re-

The effects of GIS

Having analysed all projects in the GIS system, it is planned to reach the ecological effect in the form of annual reduction of CO₂ at the level of over 2 million tons and additionally, as a result of thermal efficiency improvement of buildings, energy saving at the level over 1 million GJ/year.

Almost half a billion for GIS projects

Since 2010, the National operator of GIS system, i.e. the National Fund, has announced 14 competition-based recruitments in seven priority programs within the scope of GIS. As a result of the competitions, 319 contracts were concluded for co-financing projects for a total amount of more than 478 million PLN.

²² More on FM EEA and NFM – p. 68.

sources, invested in GIS projects are the effect of the basic principle of the system consisting in “greening the income”, i.e. investing in the climate protection and further reduction of greenhouse gases emission. Except the measurable results for the environment, we may also speak about supporting the economic development in the form of maintaining jobs in the sector of building industry and agriculture, increase of orders for construction and installation materials sector as well as specialist devices.

Wind power plants in the national grid

In the priority program “Green Investment Scheme (GIS) – Part 4) Construction, development and modernization of power grids in order to connect generating sources based on wind energy” it is expected that total power of wind farms connected to the National Power Grid (NPG) will amount 743 MW, and the total amount of electrical energy introduced to the NPG will exceed 1.6 million MWh/year.

In the priority program GIS systems, the following projects are supported:

- Energy management in public buildings;
- Agricultural biogas plants;
- CHP and Heat generating plants fired with biomass;
- Construction, development and modernization of the power grids in order to connect the generating sources based on wind energy;
- Energy management in buildings of the selected entities of public finances sector;
- SOWA – energy efficient street lighting (the program started in 2013);
- GAZELA – low-emission urban transportation (program started in 2013).

Competition-based recruitment in the following projects enjoyed significant interest: Green Investment Scheme (GIS) Part 1) Energy management in public buildings, (six competitions were organized within 2010-2014) and the Green Investment Scheme (GIS) Part 5) Energy management in the selected buildings of public finances sector (two recruitments organized in 2011, 2013). Budget of the first of the programs amounts 1565 million PLN, including 555 million PLN is donations from resources from transactions with AAU or other resources of NFEPWM and 1010 million PLN – loan from NFEPWM resources. Budget of the other program expects the demand for 545 million PLN from resources from the sale of AAU or other NFEPWM resources. Among other things, thermal efficiency improvement of the National Library and Great Theatre – National Opera in Warsaw were performed.

NFEPWM in aid of the climate

Strategy of NFEPWM operation for 2003 – 2016 with the perspective to 2020, legislative regulations, political, strategic and executive documents in force being prepared for the next planning period underline the importance of actions in aid of the climate protection. Estimates (some programs or their parts are still in progress) specify that within 2014-2020, the National Fund will allocate ca. 7.4 billion PLN for co-financing projects related to environment protection (in the form of loans and donations). Expected ecological effects are reduced or avoided emission of CO₂ during that period, at the level ca. 4 million Mg/year.

Energy efficient buildings

In 2012 the National Fund has launched another program in the field of energy efficiency and atmosphere protection: Efficient use of energy. Part 4) LEMUR – Energy efficient public buildings. One year later, contracts with banks were concluded to grant credits with a subsidy from the National Fund (with the budget 300 million PLN) for energy efficient apartments and houses. The program will be implemented until 2020.

In 2012 the National Fund also has launched a program called Improvement of energy efficiency. Part 3) Part of the subsidies to the credits for the construction of energy-efficient houses, directed to natural persons building a single-family house or buying a house / apartment from a developer (understood as well as cooperative). Co-financing is in the form of a partial repayment of bank credit capital incurred for the construction / purchase of house or purchase of apartment. Budget of the program is 300 million PLN. The commencement of the program

is linked, among other things, with the European Union Directive of 2010 on the energy performance of buildings, which obliges Member States to ensure, that from the beginning 2021 all newly built buildings are “objects of almost zero energy consumption”. The priority program is to prepare investors, designers, producers of construction materials and contractors to requirements of the Directive. It is an incentive for the market to change the way the buildings are built and except the financial benefits for beneficiaries, it will have a significant educating effect for the society. This is the first national instrument of support for the contractors of apartment buildings of low energy consumption.

Renewable energy sources

The use of renewable energy sources (RES) has always been a priority among the tasks applying for financial support from the funds of the National Fund. Considering the obligations arising from the Accession Treaty, the National Fund co-finances the construction of: wind farms, small hydro power plants, biomass fired boiler rooms, biogas plants, installations of energy sourcing from geothermal sources as well as installing heat pumps, solar collectors and since 2014 the photovoltaic cells. The scale of the market engagement of NFEPWM on the market of “green energy” is reflected by more than 460 contracts, related to the use of RES (since 2007) and assignment for this purpose of over 545 million PLN, at estimated value of the investments exceeding 1.3 billion PLN.

With financial support of the National Fund heat derived from biomass is used, among others:

- Czarna Białostocka – town located within the area of Green Lungs of Poland, surrounded by Landscape Park of Knyszyńska Backwoods (heat generating plant using wooden chips of power 14.5 MW),
- Nowa Dęba (municipal heat generating plant of power 8 MW),
- Hydro Biological Station of the Ecology Institute of the Polish Academy of Sciences in Mikołajki,
- Sępólno Krajeńskie,
- Płońsk (modernization of a heating system),



Funding of wind energy is one of several priority programs of NFEPWM. Photo Ernest Schmidt

- Trzebiechowo Lubuskie Probince (historical buildings),
- Archeological Museum in Buskupin (boiler house combusting wooden chips)
- Museum – Castle in Łañcut
- Department of Border Patrol in Kętrzyn, Warmia-Mazury

Heat pumps and solar collectors have been installed in a number of objects, including:

- group of buildings belonging to Zespół Pieśni i Tańca „Śląsk” in Koszęcin,
- Basilica in Przemyśl,
- hospital in Gostynin – Kruk,
- Sucha Beskidzka.

800 MW of green energy within five years

The National Fund spent approximately 2.5 billion PLN in the years 2009- 2013 from national resources to 800 MW of green energy within the scope of programs supporting investments in renewable energy sources and high efficiency cogeneration objects.

Major investments, using the wind energy, co-financed from the funds of the National Fund, include the following:

- wind power plant of power 30 MW in Kamieńsk (loan 110 million PLN),
- wind farm located in Cisów by the sea (nine wind power plants of power of 2 MW each).
- Park of Wind Power Plants in Tymień (near Koszalin) of power 50 MW (25 turbines).

From the investment projects related to the use of water energy the following projects were co-financed, among others, construction of small hydro power plants (SHPP) on the cascade Upper Odra River: Januszkowice, Krępna, Krapkowice, Dobrzeń.

Largest budget of the priority program for projects in the renewable energy sector and high efficiency cogeneration objects. Part 1). amounted 1.5 billion PLN (included among other things, high efficiency cogeneration systems in CHPs in Ciechanów and Lublin as well as Wind Power Plants in Wydminy and Bierków as well as in communes Ślesin and Śmigieł, small water power plant in Janowice). Resources were also assigned for implementation of smaller projects within the scope of the priority program for, i.e. for projects in the field of renewable energy sources and high efficiency cogeneration. Part 2) Implementation in cooperation with PFEPWM

Use of thermal water

The National Fund is also a source of financing the development of Polish geothermics (pioneering systems in Podhale and Pyrzyce), which fact has contributed within the last years to many test drillings in order to analyse, document and practically use the thermal water resources, among other things in Gostynin, Kleszczów, Poddębice, Tarnów Podgórny, Poręba Wielka. In Rewal, a commune by the sea (project of 2012) geothermal heat and geothermal water will be used by the Rehabilitation and Relaxation Complex “Trzęsacz Palace”. Since 2012, geological works (with the financial support of NFEPWM) are also carried out in the field of search for deposits of thermal water in Staniszków and Karpniki near Jelenia Góra. The aim here is to use geothermal water energy for the production of heat for the Castle in Karpniki, Oak Palace, local housing development and planned Aquapark.

Solar collectors for everyone

In 2009, NFEPWM has announced a new offer for natural persons and cooperatives: subsidies program for the bank credits for solar collectors. Budget of the program (in conjunction with a great deal of interest was increased in 2012 from 300 million PLN to 450 million PLN) is intended for grants in the form of subsidies to credits (45% of the eligible costs) for the purchase and installation of solar collectors. The aim of the program (executed in the years 2010-2014) is limitation or elimi-

Success of the program of subsidies to solar collectors

Since March 2014, on the basis of the applications submitted by banks, NFEPWM paid out subsidies in amount ca. 381 million PLN of over 57 thousand beneficiaries. The installed collectors covered almost 390 thousand m², and the ecological result is limitations of CO₂ emissions by 61 thousand Mg/year.

nation of CO₂ by ca, 65 thousand Mg/year. The program budget allows for financing 60 – 70 thousand solar installations of total area 420 thousand m². Anyone who has a right to dispose with a building and is not connected to a heating grid for the purposes of heating the water is entitled to benefit from the offer.



The program of 45 percent subsidy for partial repayment of bank credit capital used for the purchase and installation of collectors is exercised by NFEPWM with the cooperation of the banking sector. Within the scope of two recruitments (2010-2011), 7 contracts with banks were concluded. The first credits with subsidy have been granted in August 2013. For the implementation of this program, NFEPWM has received a prestigious mention – Best Practices Certificate, the European Award of the Public Sector 2011.

Bocian (Stork) and Prosumer

In the years 2013-2014, the National Fund has prepared another program offer, designed to limit or eliminate CO₂ emission by the increase of energy production from installations using renewable sources. Priority program “Support for distributed, renewable energy sources”. Part 1) BOCIAN (STORK) – an increase in the share of distributed, renewable sources of energy, implemented in the years 2014-2020 with a budget 420 million PLN, is to co-finance investments in RES, among others: wind power plants of total power up to 3 MWe, photovoltaic systems of power from 200 MWp to 1 MWp, sourcing energy from geothermal water (power from 5 to 20 MWt), small hydro power plants of power up to 5 MW, heat sources fired with biomass up to 20 MWt, biogas plants understood as objects generating electricity or heat using agricultural biogas of power from 300 kWe Up to 2 MWe, installations of agricultural biogas plants generation in order to introduce it to the distribution and direct gas grid and electricity generation in high performance cogeneration using biomass of power up to 5 MWe.

The program “Support for distributed, renewable energy sources – Part 4) Co-financing line for purchase and installation of microinstallations of renewable energy sources (adopted in February 2014 by the Board of Directors of NFEPWM) is intended in the years 2014-2020 (with a budget of 600 million PLN) to financially support small installations generating energy for own purposes from renewable sources. Program „Prosumer” is intended to promote new RES technologies and prosumer attitudes (increase of investor and ecological awareness) as well as development of the market of suppliers of devices and fitters and to increase the number of jobs in this sector. The program will be a continuation and extension of the subsidies program for partial repayment of bank credit capital for the purchase and installation of solar collectors that ends in 2014. Funding for projects will include both purchase and installation of the new installations and microinstallations of renewable energy sources of prosumer type, for the production of electricity or heat and electricity for residential buildings or apartment houses, including the replacement of existing installations to more efficient and environmentally friendly. Natural persons, housing co-operatives, housing communities and units of territorial self-government, who have been offered a donation, loans or resources offered to a bank selected in the mode of a tender, for donations and bank credits, will be able to benefit from the program.

Low-emission management plans in 1/3 of Polish communes

Another financial offer of the National Fund directed to self-governments is OP IE program, for the Ation 9.3 Thermal efficiency improvement of public buildings – low-emmission management plan (LMP). Competition-based recruitment brought a record-breaking result: 873 communes actively participate in the competition (35% of Polish communes).

The program will be a continuation and extension of the subsidies program for partial repayment of bank credit capital for the purchase and installation of solar collectors that ends in 2014. Funding for projects will include both purchase and installation of the new installations and microinstallations of renewable energy sources of prosumer type, for the production of electricity or heat and electricity for residential buildings or apartment houses, including the replacement of existing installations to more efficient and environmentally friendly. Natural persons, housing co-operatives, housing communities and units of territorial self-government, who have been offered a donation, loans or resources offered to a bank selected in the mode of a tender, for donations and bank credits, will be able to benefit from the program.

Low emission limitation

Financing the projects striving to eliminate low emission is of special importance, directly contributing to the improvement of aero-sanitary conditions in the areas this phenomenon occurs. As regards elimination of low emission, NFEPWM has financed hundreds of tasks of various size and character. The financial support covered first and foremost the investments located in areas of particular environment protection, in resort or rest and recreation areas as well as in urban locations, mostly in urban and industrial agglomerations. Among other

things the support was provided for modernization of heating systems in the following cities: Wrocław, Pleszew, Sochaczew and modernization of single heat generation plans and CHPs e.g. in: Augustów, Tarnów, Kielce, as well as local boiler houses supplying public buildings, e.g. hospitals, schools or nursing homes.

In the years 2009-2013 NFEPWM implemented priority program "Co-financing of programs development for the protection of air and plans of action" intended to co-finance air protection programs (APP) in the so-called zones – determined by Minister of the Environment. The obligation to prepare APPs was imposed on the self-governments by the Act on environment protection. The priority program supports implementation of the obligation given in the act as well as aims to implement duties resulting from the Directive 2008/50/EC on air quality and cleaner air for Europe (the so-called CAFE Directive). So far, the programs have been financed in 31 zones, with the financing intensity up to 50% of eligible costs. By the end of 2013 NFEPWM has concluded 17 contracts concerning development of documentation on protection of air for a total of 1.44 million PLN.

The low emission plans aim among other things to contribute to reach the targets specified in the climate-energy package of the EU by 2020, i.e. reduction of greenhouse gases emission, increase of share of renewable energy sources, reduction of final energy consumption, which should be enforced by increasing energy efficiency. The LMP is also to improve air quality in areas where there have been permissible levels of concentrations in air exceeded, and moreover (reclaiming) programs for air protection (APP) are implemented together with short-term action plants (SAP).

KAWKA in cooperation with provincial funds

Due to the financial problems of local self-governments which are obliged to implement recovery programs included in the Air protection programs, in 2013 NFEPWM announced national priority program "Kawka – liquidation of low emission to support growth of energy efficiency and development of distributed renewable energy sources". Its purpose is to reduce exposure of the population to the effects of dust PM 10, PM 2.5 and carcinogenic benzo(a)pyrene that endanger health and lives of people in the areas where there is a significant exceeding of the admissible and target levels for these pollutants. Synergy action in this program will allow for a doubling of the budget declared by NFEPWM from 400 million PLN to 800 million PLN within the scope of joint funding scheme of NFEPWM and PFEPWM. The program has had a great deal of interest and already in the first recruitment, 11 PFEPWM have submitted applications, which in the majority concerned projects involving the elimination of coal-fired furnaces and boilers, connection of recipients to urban district heating or replacing coal-based heating (individual and housing development) to gas heating. In many cases, thermal efficiency improvement projects applied for financial support, mostly in buildings where the heating agent was changed to gas, in order to further reduce energy and heating costs. In several projects, it was planned to install solar collectors, which would support, emission-free, generation of hot water.

New programs for entrepreneurs

In the last days of December 2010, the Board of Directors of NFEPWM adopted a priority program "Efficient use of energy" – the first ever NFEPWM financial instrument (from national resources) dedicated only to entrepreneurs. The program is composed of two parts (with a budget of 40 million PLN + 780 million PLN) and opens a possibility to finance energy audits in companies and investment, resulting from audits, which will increase energy efficiency and reduce demand for electricity. The first applications were submitted in 2011 and the second part of the program was launched that covers co-financing investments projects, aiming to increase energy saving or energy efficiency at companies.

KAWKA program result

It is estimated that implementation of all projects covered by pending applications on the KAWKA program will allow for liquidation of almost 15 thousand, inefficient coal-fired heat sources, leading to elimination of combustion of 45 thousand tons of coal per year. This will contribute to the reduction of emissions of individual pollutants estimated as follows: dust PM 2.5 – 426 mg/year, dust PM 10 – 443 mg/year, SO₂ – 1.1 thousand mg/year, NO_x – 156 mg/year, benzo(a)pyrene – 163 kg/year, CO₂ – 68,3 thousand mg/year.

Two years later the consolidated priority program was created “Support for entrepreneurs in the low-emission and resource-saving management” as a financial instrument (from national measures) dedicated to entrepreneurs. This new priority program, in addition to the previous range, has also been extended by a module (E-Cumulator- Ecological Accumulator for the Industry) in the form of loan funding for projects leading to reduction of the demand for raw materials, reduction of emission and utilization of waste and waste sediment for power generation purposes. During the same 2013 year, entrepreneurs have received another offer: priority program funding, from the resources of the National Fund, projects which after positive evaluation, did not receive financial support within the scope of OP IE because of lack resources in the EU budget 2007-2013. This new financing tool is dedicated mostly for investments in the atmosphere protection field (reduction of SO₂ and NO_x).



Installation for wet desulphurization and catalytic denitrating of flue gases in CHP Siekierki. Photo Tomasz Banasik

Rational waste management and protection of land

A serious risk to the environment in Poland was and still is unfortunately waste, whether industrial or municipal. Its illegal and improper disposal is another problem. That is why, there are numerous actions implemented to low-waste, clean production technologies, providing utilization of all components of raw materials. There are comprehensive systems for waste management, together with its selection, recycling and disposal. Changes that have occurred in the early 90s, as a result of transformation within economy and in relation to the process adapted to the EU requirements, enforced also the changes in the waste management.

More than a thousand contracts in the field of land protection and waste management

In the field of the protection of the land (including waste management) in the years 1989–2013, the National Fund has entered into an almost 1.1 thousand contracts (mainly grants and loans) to the amount of nearly 3.5 billion PLN, and the value of these projects amounts to 10 billion PLN.

New orders in the industrial waste

In the years 1994-1998 (with continuation in 2001) a program funding projects concerning construction/retrofitting installations for the reprocessing waste oils was started in NFEPM. The main aim was to rationalise national waste oil management by increasing the share of oils subjected to recycling. The program has led to completion of the following programs: "Retrofitting used oils collection bases" and construction of installation for hydro-refining in Rafineria Nafty Jedlicze S.A. Also in 1994, a ten-year period of providing subsidies (continued in 2011-2013) has been started in order to support projects in the field of construction / retrofitting installation for processing industrial waste into raw materials. Particular attention should be drawn to: projects concerning rendering harmless of waste in Plock refinery (now PKN Orlen S.A.), Copper Steelworks Głogów (production of road aggregates and post-copper slag), construction of waste incineration plant in Jedlicze. One year later, a many year long process of liquidation and reclamation of inactive and unauthorized hazardous waste dumps was started, including so called waste repositories, i.e. old and insufficiently protected locations for storing overdue and hazardous chemicals. One of the completed projects was also the complex inactivation of waste together with reclamation of land after Chemical Plant in Tarnowskie Góry. NFEPM has also financially supported the "Program for the construction of regional hospital waste incineration plants" in a few dozens of cities in Poland.

Waste repositories – liquidated hazard

Liquidating 113 so called waste repositories, i.e. old and insufficiently protected locations for storage of overdue and hazardous chemicals by 2008 using NFEPM resources, and in the subsequent years 2009-2001 another 180 waste repositories as well as 97 warehouses containing overdue pesticides, one of the most severe problems concerning the environment was solved.

Commune waste management in rural areas

At the initiative of the National Fund, within 1995-2001 a great contest was organized "Waste management in rural areas", whose aim was to stimulate societies in small and medium-sized municipalities to perform modern and safe management of waste. In four editions of the contest, organized even during the pre-accession period, 817 communes and commune unions participated in the project, (one third of Polish communes), which were awarded prizes and mentions amounting 107.5 million PLN. In addition, the National Fund, assigned 1.1 million PLN which was dedicated for prizes for schools and organizations operating in these communes that distinguish with ecological education among children and youth. Laureates of the contest were obliged to use prize money for pro-ecological investment in rural areas. All prizes granted to the communes as a result of the contest represented then a significant financial input in the commune budgets.

National Plan for Waste Management

Based on the first National Waste Management Plan (NWMP) implemented in 2002, the provincial, poviát and commune plans were also prepared. In 2006, the Council of Ministers adopted revised and extended NWMP 2010. These strategy documents and Ecological Policy of the country set the targets to be achieved in the determined time horizons, to provide efficient protection of land and water against collected industrial and municipal waste. They are also indicative for actions undertaken by the National Fund in determining priorities in the scope of funding individual projects in waste management. A tool to finance projects in the field of construction of complex, modern, urban waste management plan was created. The purpose of this, still continued program, is to increase the quantity of municipal waste that is managed in accordance with the waste hierarchy as set out in the Polish and EU legislation and in NWMP. Special attention should be drawn to comprehensive municipal waste management installations located in: Łężyce (Eko-Valley in Wejherowo commune. Gdynia), in Cracow – Barycz, in Toruń, in Kalisz („Orli Staw”), Radom („RADKOM”), Trzebinia (MZO Leszno), Wrocław, in Gdańsk – Szadółki, in Knurów („KOMART”), in Czestochowa, Biała Podlaska and Sosnowiec.

Waste in recovery and recycling

Contracts concluded in the years 1989-2013 concerning financial support in the field of waste management allowed for recovery and recycling more than 2 million mg/year of municipal waste (without recycling of end-of life vehicles).

Liquidation of old hazards

The reference list of projects completed based on NFEPPM resources within the scope of waste management includes also highly complicated and hazardous projects: e.g. limitation or liquidation of threats resulting from so called old contamination, including on the areas of former Russian Army Bases. In 2002 – 2005, cleaning up and reclamation of areas degraded by Russian Federation army (so called JARs), as well as by industry and transport was performed, and the largest objects cleaned of oil derivatives are located in: Świnoujście, Stargard Szczeciński, Bagicz, Borne Sulinowo, Świątoszów, Żagań, Brzeg, Szprotawa. Dangerous effects of industrial operation of Sodium Plant in Cracow were also liquidated. A tool for financing projects related to liquidation of hazardous PCB pollution (polychlorinated biphenyls) was introduced.

The first three years of Poland's membership in the European Union is the time of the two major projects “cleaning” the environment from hazardous waste. In the years 2004-2006 (as continued in 2010-2013), an option has been developed to finance projects from the scope of construction, development, modernisation and purchase of installations for the reprocessing of waste of non-ferrous metals. The aim was, among other things, to create a technical conditions for the safe disposal of zinciferous waste produced in the country, in particular from hydro-metallurgical slurries and steel dust. The Bolesław Recykling Company is at the moment the sole plant in Poland that processes zinciferous waste to such a great scale. The increase of processing capacities of the installation will allow for elimination of these hazards. Zinc recovery from waste can help reduce consumption of domestic zinciferous raw materials. Within the same years (2004-2006), the financial support included projects within the scope of construction, development, modernisation and purchase of installations to process battery scrap and selective collection of waste batteries and accumulators. One of the beneficiaries (disposal of waste electrolyte) is Baterpol S.A. in Katowice.

Recycling of end-of-life vehicles

The environmental law has appointed in 2006 the National Fund to use the resources from charges concerning recycling of end-of-life vehicles. The Council of Ministers determined the principles of distribution of resources from the recycling charges, which are collected in NFEPPM, based on the Act on recycling of end-of-life vehicles and dates for accepting the applications for financial support of vehicles recycling. Half of revenue

Less waste in storage yards

It is expected that because of the contracts concluded only in the years 2009-2013 for financial support of projects in the field of waste management, the flow of municipal waste transported to the yards will decrease by more than 5.5 million tons.

from these fees is intended to be used, in the form of grants, as subsidies for companies involved in disassembly of end-of-life vehicles. The investment projects concerning disassembling, waste management and collection of old vehicles are supported with preferential loans. 30% of the revenue is assigned for this purpose. The remaining 20% is transferred to communes for collecting abandoned vehicles. In the years 2006-2013, as a result of the implementation of the act, about 715 million PLN was assigned for that purpose.

Amendment Law on environment protection of 2008 creates an option to assign part of the resources from not fully utilized, so called recycling subfund, also for other purposes, among other things for organization of COP 14 in Poznań (XIV Conference of the Framework Convention Parties of the United Nations on the change of climate) as well as for financial support of investments, which are financed mostly from the EU grants (ISPA, Cohesion Fund). The co-financing amounted approximately 1 350 million PLN.

Best practice in the waste management

Actions taken by the National Fund concerning waste management are closely linked to the requirements of so-called framework directive on waste, which, among other things, imposes an obligation to achieve specified levels of preparation for re-use and recycling. By 2020 it is necessary to prepare at least the following waste for reuse and recycling: paper, metal, plastics, household glass in quantities minimum 50% by weight and other hazardous construction and demolition waste at the level of 70%. In the light of the reform of waste management system, since 1 July 2013, communes are fully responsible for organizing the collection and processing of municipal waste and for limiting

The plan of Cleaning the Country of Asbestos

Particular attention should be drawn to two projects, liquidating asbestos-containing waste in Ogrodzieniec and Szczucin communes. Implementation of the NFEOWM program (management of waste other than municipal) contributed to real progress in fulfilling the goals of the program „Plan of Cleaning the Country of Asbestos” (PCCA). Programs implemented together with PFEPWM within 2010-2013 allowed for removing 118 thousand Mg asbestos of asbestos-containing products.



Automatic waste sorting line in Eco-Valley Photo Piotr Wittman

biodegradable waste storage. In recent years priority programs of the National Fund have created an opportunity to finance centres for selective collection of municipal waste, implementing exemplary solutions among other things in Białystok, Gliwice, Zabrze, Lublin.. NFEPWM supports also the projects related to management of waste other than municipal, projects concerning recovery technologies, including recycling and implementing technologies for final disposal of waste and liquidation of hazards resulting from their storage.. Liquidation of other sources of severe negative impact on the environment (i.e. ecological bombs) takes place within the program, in which the National Fund cooperates with the Chief Inspectorate of Environment Protection. With the financial assistance from NFEPWM resources, the problem of proper management of waste in the form of used batteries and accumulators was practically solved in the country (Orzeł Biały S.A. installation).

Operational and concession fees

Since 1991 NFEPWM assigns the revenues from operational and concession fees to support projects in the field of geology and mining. In 2002, as a result of the amendment of the Geological and Mining Law, NFEPWM took over the duties of creditor from the concession bodies, concerning fees, what resulted in more tasks, but also in the increase of NFEPWM revenues and better opportunities for financing geology and mining. One year later, as a result of enforcement of the act on restructuring hard coal mining, in 2003-2006, all receivables of the Minister of Environment by way of operational fees not paid by the mines in aid of NFEPWM have been cancelled for the period until the end of 2001 together with interest of total amount 965 million PLN. This has resulted in the debt reduction of the coal mining industry and improved mines profitability. In 2006, for the first time in the history, revenues from operational and concession fees for NFEPWM exceeded 200 million PLN. In 2010, NFEPWM activated the resources from a multi-annual liability "mining" in amount of 150 million PLN for urgent goals related to the need of eliminating the effects of flood, among other things for the rebuilding of infrastructure, restoration of damaged rescue equipment and vehicles, financing the recognition and elimination of landslides. In the years 2012-2013, there was a qualitative breakthrough due to the e-OPLATYgeolog IT system implemented by NFEPWM which has revolutionized public operations. The system is part of the whole package of implementation of IT solutions and electronic customer services. It is to facilitate mining sector companies in Poland and concession bodies, in fulfilling their duties resulting from the Geological and mining law and propagation of e-services. Because of this, the goals of the strategic Program for Integrated Implementation of IT Solutions in the country, adopted by the Council of Ministers in 2014 (more on the electronic service of beneficiaries by NFEPWM on p. 79) are met within the area of operational and concession fees.

Liquidation of mining damage

From the beginning of financing this domain by NFEPWM (1992) the total amount of the subsidies concerning implementation of 207 contracts concluded until 2013 in the "mining program", in the form of grants and loans, amounted over 1.6 billion PLN, and the cost of completed projects exceeds 3.2 billion PLN.

The income from operational and concession fees financially supports the operations of the National Hydro-geological Services (NHS) and the State Geological Services (SGS). Over the past five years, expenditure for implementation of NHS and SGS tasks amounted ca. 70-80 million PLN per year. The year of 2013 and years 2014-2015 are the periods of fast increase of these expenditures, which is mostly related to the enforcement in 2012 of the amended Act on Geological and mining law that determines new SGS areas. After 2015, the annual expenditures necessary to operate both these services, will shape at the level of 100-110 million PLN per annum.

Protection of the environment in the mining sector

The third full year of operation of the National Fund (1992), is also the beginning of funding projects related to environment protection in the mining sector, maintained on the average level of around 50-60 million PLN per year. Tasks are funded primarily in the form of grants from the operational and concession fees (former so-called mining subfund). Most of the tasks concerned reclamation of land on areas damaged by mining, recovering or restoring utility or environmental properties, improvement of physical and chemical properties of land, regulation of hydrographic conditions, reclamation of soil and reinforcement of embankments. Spectacular projects,



Significant financial contribution of the National Fund was transferred to so abandoned workings in salt and coal mining. Photo Salt Mine „Wieliczka” P. P.

financed mostly by the National Fund, were operations related to extinguishing burning waste mining heaps (e.g., “Ruda” in Zabrze Biskupice, “Staszic” in Walbrzych or heaps in Nowa Ruda). Other projects were also financed concerning adverse effects of mining operations, e.g. regulation of Rawa river in Katowice, which fact eliminated flooding of the centre of the city.

Reclamation in the “Black Triangle”

The National Fund also participated in major financial assistance (grants and loans) for reclamation of brown coal mining areas, among other things within the region of “Black triangle” at the border of Poland, Czech Republic and Germany (reclamation, management and liquidation of hazard posed by subsidence of dump towards borders of adjacent countries). Financial assistance was also received by brown coal mines: „Konin” (reclamation of post-mining working), „Sieniawa” (reclamation of areas after deposit mining) and „Bełchatów” (loan was also assigned to protect Widawka river against pollution). The National Fund co-sponsored the construction of coal and fine coal enrichment plants together with waste management (e.g. in “Budryk”, “Mysłowice”, “Czczott” and “Piast” mines). With the financial support of the National Fund, projects to reduce saline water discharge to surface water courses and the collection and treatment of mining water were implemented, among other things, reduction of sulphides and chlorides load in water discharged to Odra river basin. Significant financial contribution of the National Fund was transferred for backfilling of abandoned workings in salt and coal mines (Bochnia, Wieliczka, Łęzkowice, Bielszowice, Sobieski, Budryk) and in zinc and lead ores mines (Trzebinia). The National Fund financed the projects, which constitute a serious threat to the environment as a result of mining other raw materials, such as the reclamation of sediment pond containing waste from inactive uranium concentrates production plant and in former mine in Kowary, stabilization of landslide in old sandstone quarry in Kozy (Silesian Province) or sedimentation of radioactive elements in the workings of underground mines “Piast”, “Czczott” and “Ziemowit”.

Liquidation of sulphur mining

In 1994 one of the largest multi-annual programs co-financed from the funds of the National Fund was started: financing liquidation and reclamation works in the sulphur mining on post-mining areas in Sulphur Mine Machów S.A. in the areas "Machów-Piaseczno", "Jeziórko", "Basznia" in sulfuric field in Lubaczów; later also (2001-2015) in sulphuric field (KiZPS "Siarkopol") in

Tarnobrzeg. Concentration of sulphur mines and sulphur processing plants in the area of Tarnobrzeg, Machów, Piaseczno, Grzybów has led to infringement of balance in the environment and, as a result of which there are large areas of heavily degraded surface and locally modified chemical composition of surface and groundwater, significant soil acidification, changed vegetation, disturbed relief and hydrographic conditions. Presence of harmful factors required intensive, systematic and multi-directional recovery actions in these areas, in particular in situation concerning termination of sulphur mining and liquidation of mines. From 1994 to the end of I quarter of 2001, financing of the work is provided from two sources: from the budget in the disposal of Ministry of Economy and the so-called mining subfund of NFEPWM, as the supporting source, for reclamation of areas (multi-annual projects ending with a concrete ecological effect). In 2001 the Council of Ministers adopted a program of restructuring the mining and sulphur processing industry in Poland. This is the basic document comprehensively presenting the scope and variant costs of liquidation and reclamations works necessary on the areas affected by sulphur mining and processing operations in sulphur field in Podkarpacie and Świętokrzyskie As it results from the liquidation and reclamation programs, their costs at the end of 2015 will amount ca. 1.6 billion PLN. The percentage progress in relation to the costs covered by the liquidation programs for three sulphur companies are estimated at the level exceeding 90%. Since the second quarter of 2001 state budget refused to finance activities of sulphur companies. The only source of funding the liquidation and reclamation works in the sulphur mining is the National Fund. Only small costs were covered by companies engaged in the liquidation of sulphur mining (PP Sulphur mine „Machów”, KiZPS „Siarkopol” under liquidation, Sulphur Sp. z o.o.) from the resources gained from liquidation and from PFEPWM.

Areas returned to the nature

In the past five years 2009-2013 the area where proper condition of ecosystems has been restored or provided as a result of contracts concluded by NFEPWM exceeded 3.4 million hectares.



Lake after reclamation of sulphur mine working. Photo NFEPWM archives

Rescue for Wieliczka

The 1992 was dramatic in the history of the National Fund: disastrous leak of saline waters at one of the levels of Salt Mine in Wieliczka threatened not only its historical part made available to tourists but also the city. It caused changes in rock mass and on the surface. The lowest level was flooded and part of the workings were filled with clay and sand material from outside the deposit range. A trough of significant size was formed on the surface (professionally called „suffosion trough”). This was the most severe uncontrolled leak of saline salty waters considered as catastrophic in the modern history of the mine. This is how the multi-annual financial support process of NFEPWM for mine started. The mine is one of the most valuable Polish treasures, entered by the UNESCO on the first List of World Heritage. The remaining projects co-financed from the funds of the National Fund (1992,1994) have led to the liquidation of effects of the catastrophe as well as prevented and secured the mine against other hazards.

Rescue and protection of the mine (both the part made available for tourists and the one still mined) is a complicated as well as long-term process, especially because the geological structures with meandering salty water are not stable. Financial support of the National Fund for Wieliczka mine in subsequent years included, among others: disposal of saline water (1999 – 2003) construction and commissioning of the system for desalination of mine water together with modernization of energy supply and modernization of saltworks (1999-2003), protection of surface against formation of cavities and depressions as well as not controlled inflow of extra-deposit water to the mine (2001-2006), protection of surface as well as surface and groundwater against adverse effects of natural hazards in the liquidated Frasch process mine Barycz, adjacent to northern part of the monumental salt mine in Wieliczka (2005 – 2013). Next contracts for financing Wieliczka salt mine were implemented also in 2007-2008 (near Kościuszko shaft) and in 2007-2013 (west of Sutoris shaft). Since 2012 further works are planned which will be financed by the National Fund, in order to protect the land surface as well as surface and groundwater resources against the effects of fall of roof, mining protection of liquidated chambers and liquidation of eastern part of the mine. So the fight is not only about saving the historical part of the mine, but also for the most part of the city, because the central part of the development of contemporary Wieliczka is located just above active



Michałowice chamber along the tourist route in salt mine in Wieliczka Photo Salt Mine „Wieliczka” P. P.

rock mass. The list of projects financed by NFEPWM covers also limitation of fresh water inflow to the historical part of salt mine in Bochnia.

Geological cartography

The beginning of financing geological and mining works in Wieliczka (1992) coincided with the conclusion of contracts by the National Funds concerning financial support of geology from the operational fees. This is also the initial stage of geochemical cartography development in Poland. Works from that scope are being continued today, among other things in the form of developing maps in the scale 1:10 000 of urban agglomerations (inter alia Warszawa, Poznań, Wrocław), maps of industrial regions (LGOM – Legnicko-Głogowski Okręg Miedziowy, GZW – Górnośląskie Zagłębie Miedziowe), detailed maps, inter alia of Upper Silesia. A project related to execution of detailed geological map of Poland in scale 1:50 000 is being carried out since 1994 (approximately ca. 285 million PLN). The result is reflected in the coverage with detailed geological photo of the area of the whole Poland (1085 sheets), creating technology for the procedures concerning development of digital maps, using databases in the Geographic Information System (GIS).

Tatry, IKAR and SOPO

Within 2005-2006, implementation of a few very extensive projects started in the field of geology of great importance for Poland, among other things, integrated system of geological cartography IKAR related to implementation of EU Directive INSPIRE within the scope of cartographic presentation of geological structure of Poland. By 2016 a new digital version of the “Detailed geological map of Tatra Mountains” in scale 1: 10 000 will be prepared, considering the results of development works of the past 40 years as well as new field studies. This will be an active presentation, having huge documentary and didactic values, of geological structure – unique in the scale of the country – of tectonic unit of Inner Carpathians as well as correlation of the cartographic picture of the Polish part of Tatra Mountains with the Slovak’s. Since 2006, one of the most important programs of the Minister of Environment is implemented (planned to last 10 years): **Landslide Prevention System SOPO**. This will be a complete database on the risks of mass movements (landslide), which clearly has grown in recent years, thereby creating real risk to homes and people, leading to local disasters, among other things at the foothills areas. The SOPO’s task is to perform inventory of all landslides in Poland – identification of their accurate location, range and activity. Data from the SOPO project will help to create a system limiting the negative impact of landslides by: better planning of construction and communication investments (outside the areas endangered with mass movements), raising public awareness of the dangers related to landslides and effective and early warning against the landslide phenomena. Maps are passed to self-government units, acting as the basis for development of local studies and plans of spatial development as well as while granting construction permits. One of practical applications of SOPO was active participation (mainly in the years 2010-2011) in aid for the victims of landslides after catastrophic floods.

Two billion for geology

In the years 1989-2013, the National Fund has concluded almost 1.3 thousand contracts (grants mainly) for almost 2 billion PLN in the field of financing geology projects.

Shale gas

The other half of first decade of the XXI century is also the increase of works related to great hope of the Polish economy, raised by documented resources of gas entrapped in shale structures. In the years 2008-2011 the National Fund financed the work titled “The History and origin of thermal events in the Polish basin and in its sedimentary base – their importance for reconstruction processes concerning generation of hydrocarbons”. This paper significantly contributed to formulating the prognosis related to presence of significant resources of shale gas in the Polish Lowland. The National Fund also participated in financing other projects, including information and education, associated with shale gas, which is potentially important for Poland’s energy security.

Protection and sustainable management of water resources

The National Fund, since the beginning of its existence, was one of the main sources of financing large investments in the water management: water retention reservoirs, polders, weirs and water levels. A list of already completed water reservoirs and financed by the National Fund, carried out by the Regional Boards for Water Management (RBWM) includes: Wióry on Świślina River, Sosnówka on Czerwonka Stream, Klimkówka Ropie River and Kozielno and Topola on Nysa Kłodzka River. Świnna Poręba reservoir is under construction. In the years 1994 - 2006 the National Fund provided a financial support for the construction of the reservoir Nielisz on Wieprzu River, and in 1992 – Cieszanowice Reservoir in the former Pi-otrzkowskie Province (reservoir constructed by the Provincial Boards for Melioration and Water Devices PBMWD). This list must also be supplemented by Buków polder on Odra River and preliminary works before construction of great Racibórz polder on Odra River. The total amount of the grants provided by the National Fund for the construction of large, multi-purpose reservoirs exceeded 1 billion PLN. Volume of large reservoirs built with financial participation of the National Fund has enabled the retention of more than 150 million m³, and after the completion of the construction of Świnna Poręba this volume will increase by another 161 million m³ of water. The list of multi-annual investments co-financed by the National Fund and implemented by RBWM covers also water levels: Dwory and Smolice on Vistula River and Lipki weir and water level Malczyce on Odra River. More than 650 million PLN in the form of a grants was allocated for that purposes. The National Fund finances several other, equally important, though less investment, implemented by RBWM and PBMWD. They are, among others, repair of hydrotechnical objects, river training works, protection against flooding, removing and repairing flood damage. The value of any of these investments is more than 200 million PLN. In addition, in the years 2004-2013 the National Fund financed modernisation and adaptation of the Augustowski Channel for tourist traffic, which is a historical and cross-border water path, assigning for that purposes more than 63 million PLN.

Almost 3 billion PLN for water management

In 1989-2013, in the water management sector, the National Fund has paid for this purpose approximately 2.9 billion PLN, mostly in the form of grants.

4 million people protected against flooding within five years

Contracts concluded only in the years 2009-2013 on the financing of projects in the field of water management provide coverage of more than 3.9 million people with flood protection measures.



A dam on Wióry reservoir. Photo Piotr Klimek

In the early days of the National Fund, it co-financed multi-annual investments in the field of water management, which amounted equal to the amount of budget resources. In the years 2000-2001 the NFEPWM resources were the only source of financing 6 large investments in water management, however, at present, NFEPWM grants are the main source of financing the construction of Świn reservoir on Poręba River (almost 750 million PLN was already spent) and the Malczyce water level (almost 590 million PLN).

Retention in the regions

The quantitative and qualitative improvement of water resources in Poland (being the lowest in Europe) is one of most important tasks of the water management. The National Fund since its very beginning, financed local and regional projects supporting the increase of water resources. The effect of NFEPWM works, especially in the 90s, with a significant cooperation of provincial funds for environment protection and water management, is co-financing projects located in 12 provinces, the conclusion of more than 45 contracts for financing the construction or modernization of ca. 130 objects, mostly retention reservoirs:

- **large, of volume exceeding 1.0 million m³:** Radzyny, Michalice, Mielimąka, Jeżewo, Murowaniec, Majdan Zahorodnyński, Kraśnik, Stare Miasto;
- **average, of volume exceeding 500 thousand m³:** Zadębie, Ryczeń, Słupsko, Dębowy Las, Joachimów-Ziemiary, Krynka;
- **and much less of volume 50-300 thousand m³:** Siennica Różana, Stańków, Sitawka, Jasionówka, Żarzeczany, Stradomia Wierzchnia, Czarnocin, Nieznamierowice, Borki, Topornia, Próba (over 30 reservoirs).

In the field of co-financing projects in the field of low retention in the years 1992-2008, the National Fund spent almost 57 million PLN. The result of the investments is the retention of over 35 million m³ of water (surface retention).



The hierarchy of needs for low water retention in Poland (on the basis of the work of 1995 of the Institute of Meteorology and Water Management and the Institute of Melioration and Water Resources). Fig. Monika Pietras

Over 12 billion PLN for water protection

Construction, development and modernization of the sewage treatment plant and the sewage systems, in the agglomerations and in the industrial facilities the most burdensome for the environment, involves liquidation of discharge (so-called hot spots) a huge load of sewage into surface waters. Poland has committed itself to such activities, when ratifying international agreements related to the protection of the Baltic Sea. Municipal and industrial sewage discharged to the Baltic Sea threw the marine environment out of balance. Large agglomerations and industrial facilities located in the vicinity of the shoreline and adjacent to rivers that fall directly into the sea are the main sources of contamination of the Baltic Sea. The inflow of nutrients, i.e. nitrogen and phosphorus from municipal waste water and agricultural activities as well as livestock farming, is an important threat to biodiversity in the marine environment.

Protection of the support of NFEPWM

In the years 1989-2013 in the field of "protection of water" the National Fund has concluded more than 3.6 thousand contracts amounted to over 12 billion PLN, and the value of co-financed water and sewage projects has exceeded 53.5 billion PLN.

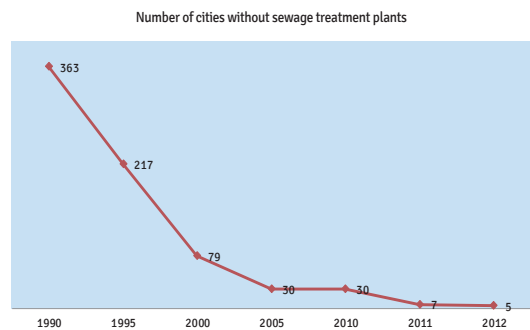
In recent years there has been a clear progress achieved. Large investment projects brought an increase in the number of commissioned sewage treatment plants and the improvement of water quality and effectiveness of existing water treatment plants. Many kilometres of sewerage system were built allowing for collection and treatment of significant quantity of municipal sewage generated in the country. The primary objective of the National Fund financial assistance in the field of water protection was obtaining optimum ecological effect, expressed by the improvement of surface and groundwater quality and an increase of water resources.

In the field of water protection, the basic ecological effects are specified by the reduction of pollutant load discharged into the environment in urban waste water. This load is identified with Population Equivalent (PE). Capacity of the sewage treatment plants is expressed both in m³/d and in PEs. As a result of the implementation of sewerage projects, the conditions were created to treat waste water, the load of which amounted 20 mil-



Sewage Treatment Plant "Czajka" in Warsaw. Photo Kacper Kowalski for the Urban Water and Sewage Company

lion PE. It is to be noticed that accession of Poland to the European Union caused the increase of requirements concerning the quality of treated sewage and the management of sewage sediment. In addition, in the past quarter century, there was rapid development of modern technology in the field of sewage treatment and disposal of sediment, which resulted in the growth of the modernisation investments, which covered also relatively new sewage treatment plants. The National Fund co-financed several hundred of such objects.



Cities without sewage treatment plants 1990-2012

Source: „Ochrona Środowiska 2013”, GUS, Warsaw.

Loans for construction of treatment plants and sanitary sewerage were used by hundred of cities in the whole Poland, located in the basins of main rivers and the coastal zone of the Baltic Sea, among the others: Świnoujście, Koszalin, Słupsk, Darłowo, Ustka, Kamień Pomorski, Tczew, Gdynia-Dębogórze and many towns more. The National Fund co-financed the development of sewage treatment plant Gdansk-Wschód, which improves purity of coastal waters in the Gulf of Gdańsk and the condition of recreation areas, beaches as well as surface water in Vistula River Delta. The financial support of the National Fund was also used for the construction and modernization of sewage treatment plants, sanitary sewerage systems in: Wrocław, Cracow, Łódź, Poznań, Radom, Kielce, Lublin, Wałbrzych, Częstochowa, Toruń as well as in Warsaw.

National Program for the Treatment of Municipal Sewage

In the field of water protection, Poland for a number of years has implemented an active policy, which aim is to provide proper condition of water resources. As one of the signatories of the “Convention on protection of the marine environment of the Baltic Sea” of 1974 and 1992 (the so-called Helsinki Convention), Poland has committed itself to treat municipal waste using a method ensuring removal of nitrogen and phosphorous to the level which does not lead to eutrophication of the Baltic Sea. Due to the fact that almost all the territory of Poland belongs to the basin of the Baltic Sea, ratification of the Convention obligates Poland to apply proper treatment of waste. Directive 91/271/EEC on municipal waste water treatment and transitory period adopted to it in the Treaty of Accession, impose on Poland the duty to equip (in specific periods) all agglomerations of population equivalent greater than 2000, with sewage systems for municipal waste and provide its biological treatment. In December 2013, in order to implement the Accession Treaty, the Minister of Environment prepared the National Program for Treatment of Municipal Sewage (NPTMS), which was approved by the government, and updated then in 2005, 2009 and 2010. The 4th update of NPTMS is pending. The program contains the list of necessary projects within the scope of construction and modernization of sewage treatment plants and collecting sewerage systems.

NFEPWM in NPTMS

Within the framework of the National Program for the Treatment of Municipal Sewage, 470 contracts were concluded in 297 agglomerations. The achieved ecological effect in 167 constructed or modernized sewage treatment plants is the reduction of pollutant load amounting over 5 million PE. The length of built sanitary sewerage system exceeded 5 thousand kilometres. The total cost of all investments exceeded 3.1 billion PLN, and funds paid from the National Fund (1 353 million PLN) represented ca. 43% of expenditure spent by beneficiaries.

Share of NFEPWM in NPTMS

Due to significant extent of the investment program to be achieved by 2005, the National Fund, acting in accordance with the Ecological Policy of the Country, has found the actions resulting from NPTMS as priority in 2004-2005. This was then the greatest and most expensive project co-financed by the National Fund together with provincial funds. Preferential principles for granting loans and grants as well as projects selection criteria

were specified. Special preferences were created for these investments, which contributed to achievement of ecological effect until 2005, i.e. completion of the first period of deliverables. The National Fund has implemented favourable financing principles (low-interest loans up to 80% of the project costs, option to amortize half of the loan, grant for preparation of documents), in order to activate investment activities concerning sewage management. Self-governments and other entities were responsible for the utilization of all financing resources concerning the investments, which have significant effect on further improvement of environment condition in Poland, according to EU standards. Preferential principles of financing projects entered on NPTMS list, implemented in 2004-2005 and the continuation of the support by the National Fund from national resources in the field of sewage projects and sewage treatment have brought significant results in the following years.

Program “Water and sewage management in agglomerations”

In 2013, “Water and sewage management in agglomerations” priority program was approved, that consolidated the programs pending in NFEPWM in the field of water protection (taking over also their budgets). It details conditions of financial support offered by NFEPWM since 2014, for the projects in the field of water protection. The basic conditions are as follows:

- size of agglomeration in which a project is implemented, is no less than 2000 PE,
- agglomeration is included in the current version of NPTMS,
- available forms of financial support: loan (with the option of partial amortization for the selected projects), subsidies to the credit interest or the price of bonds purchase,
- sanitary sewerage system and / or sewage treatment plants being the subject of financial support, will meet, upon completion of the project, the requirements of the Council Directive 91/271/EEC.

The expected amount of payments in the program, resulting from the contracts concluded in the field of water protection in 2010-2013 and obligations planned to be undertaken in 2014-2015 amounts almost 600 million PLN.

Household sewage treatment plants

In 2011-2013, the National Fund has announced the recruitment of applications for financial support concerning connection of buildings to the existing sewerage system and construction of household biological sewage treatment plants on the areas of distributed development. Within three years 76 loan contracts were concluded for the amount 83.3 million PLN and 166 grant contracts for the amount 139 million PLN. Within the scope of already concluded and planned contracts, almost 6 thousand household sewage treatment plants will be constructed, used by 30 thousand people and over 35 thousand sewerage connection for more than 187 thousand people.



Modernization of sewage treatment plant in Grodzisk Mazowiecki co-financed by EU.

Photo Marta J. Grabowska

Extraordinary hazards and environment monitoring

The system transformation of 1989-1990, caused that since the beginning of the 90s, the demand for knowledge about actual condition of the environment in Poland increased rapidly, also because that in the former years, the government blocked the access to information and the censorship limited its publication. Opening of Poland to the world, taking international obligations in the scope of environment protection, implementation of market mechanisms in the economy, and first and foremost accession of Poland to the structures of the European Union, imposed also the necessity to create modern system for gaining, collecting, processing and making available the information about environment. Monitoring data has been awaited by the economy and the society demanded reliable information about environment condition and hazards..

National Environment Monitoring

In the second year, NFEPWM started the financial support for the environment monitoring. It started with the support for Research and Environment Control Centres (main measurement and laboratory base), which later were the basis for establishing Provincial Environment Protection Inspectorates (PEPI), i.e. some sort of "ecological police". Since 1992, the National Fund financed projects related to organization and functioning of the system of the National Environment Monitoring (NEM).

The purpose of the financial support is to create a base and implement measurement works within the scope of NEM, including implementation of research and measurement works resulting from the international obligations of Poland. Until now, the projects in the field of monitoring were financed in close agreement with the Chief Inspectorate for Environment Protection, which coordinates, based on legislation, the NEM system with multi-annual NEM programs. As a result of this many-year-long cooperation and financial assistance provided to the Environment Protection Inspection in all PEPIs and field offices, a certified quality system has been implemented. Because of that, a network of modern laboratories has been created in Poland that operated based on the European criteria.

Almost 680 million PLN for environment monitoring.

Within the scope of environment monitoring, until the end of 2013, the National Fund financed 559 projects. The total amount of financial support for that purpose amounted almost 679 million PLN, with the estimated value of co-financed projects at the level of 845 million PLN.

Countermeasures and elimination of results of the extraordinary hazards

The year of "great water" in the modern history of Poland (1997), has revealed the magnitude of tasks to be taken within the scope of flooding protection and water retention. For the elimination of effects of that flood, NFEPWM has spent ca. 290 million PLN in the environment protection and water management related objects. Unfortunately another great flood in 2010, brought catastrophic results as well. The National Fund has spent for their



Radunia Channel in Gdańsk modernized after the flood. Photo Lech Makara



Flood wave on Nysa Kłodzka in 1997. Photo RZGW Wrocław

liquidation ca. 430 million PLN NFEPWM financially supports the implementation of ISSP system, **IT System for State Protection** against extraordinary hazards. One of the system components is the preparation of flooding hazard and risk maps as well as preparation of the IT system warning about hazards.

This action promotes also the **National Rescue and Extinguishing System**, the purpose of which is to harmonize activities of rescue character, taken in emergency situations for life, health, property and the environment. For many years NFEPWM supports modernization of State Fire Department, Volunteer Fire Department, Police, Border Patrol, organizations performing rescue actions (VRST- Volunteer Rescue Services in Tatra Mountains, VRSM – Volunteer Rescue Services in Mountains, WVRS). From 2006 purchase of equipment for these units are made based on the Arrangement of the following Ministries: Environment and Internal Affairs and Administration on cooperation in combating hazards to the environment. The total amount of the subsidy for these tasks amounted approximately 292 million PLN.

Over one billion for countermeasures and elimination of effects of extraordinary hazards.

The National Fund, in 1989-2013, for the prevention of extraordinary hazards for the environment and elimination of their effects, has allocated ca. 1012 million PLN in the form of grants.

Maintenance of the national hydro-meteo services

In 2001 the National Fund took a significant part of the responsibility for financing the activities of the national hydrological and meteorological services, operation of which has been entrusted, in accordance with the act on Water Law, to the Institute of Meteorology and Water Management. Resources of NFEPWM finance both current operations such as: maintenance of measurement and observatory network station, maintenance of the system of collecting, processing and developing hydrological and meteorological data and information as well as investment activities, involving the construction of new and modernization of existing stations, located throughout the country.

More than 640 million PLN for the National hydrological and meteorological services

In 2001 – 2013 the National Fund has appropriated over 640 million PLN for co-financing activities of the national hydrological and meteorological services.

Protection of biodiversity and ecosystem functions

The list of several thousand contracts concluded since 1989 in the area of nature and environment protection looks impressive. It should be borne in mind that the protection of the environment (animated and not animated nature) requires complementary, multi-annual measures. Nature protection is not a set of single projects. In order to achieve an effect (in forestry also) they should be implemented and repeated for many years. They do not always bring visual effects at the beginning. By financing the investment and non-investment tasks in the field of environment and nature protection, mainly from grants, NFEPM supported the implementation of national programs for species preservation, including:

- **restitution and restitution breeding of European bison** – since 1989 in 7 closed bison breeding centres and in free herds. NFEPM financially supported entities involved in restitution breeding of bison;
- **active protection of capercaillie and grouse** – aviary breeding in Wisła forestry management has been established and the Polesie National Park and the protection of habitats of these birds has been implemented.
- **active protection of bats in Poland** – program implemented in the “Nietoperek” reservation and in other gatherings of bats in the Wielkopolska region;
- **protection of emys orbicularis** – among other things, breeding center was established in the Poleski National Park;
- **migratory fish restitution** – the program is conducted in the selected areas of Poland and it is to restore among other things the population of vimba vimba, salmon, sea and lake trout. NFEPM participated in

Over 1.1 billion PLN for the protection of nature and forestry

In 1989-2013, the National Fund has concluded over 2.3 thousand contracts concerning implementation of projects in the field of nature and forest protection over 2.3 thousand for the total amount of financial support over 1.1 billion PLN. Costs of these projects exceeded 2.6 billion PLN.



Protection of aquatic ecosystems in horse breed in Roztoczański National Park. Photo Paweł Marczakowski

the restoration of ichthofaun species composition in river and lake biocenosis by stocking with the selected fish species, as well as increasing breeding in five stocking centres of the Polish Angling Association.

Except the listed programs, the National Fund supported actions to protect many species of plants and animals, e.g.:

- kestrel (increase of habitats), capercaillie, peregrine falcon, tadorna tadorna, black storkeagle owl;
- golden eagle, clanga pomarina, clanga clanga – by constructing a nest platforms and biotope shaping;
- co-financed projects concerning preservation breeding of Polish horse and Hucul pony.

In the scope of protection of gene pool of plant species, the National Fund supported, among the others:

- gene conservation of under the “ex situ” conditions (Botanical Garden of the Polish Academy of Science, Botanical Garden of the University of Warsaw, winter garden in Łódź);
- bank seed crops and their ancestors – the Plant breeding and acclimatization institute.

Landscape and national heritage

As part of the landscape protection, a protection of historic palaces and parks is implemented by providing financial assistance to restore the most valuable natural assets in the country in the field of garden and park art. Financial aid was provided among the others, to the historical parks in:

- Castle Museum in Łańcut, Łazienki Królewskie Museum in Warsaw, Zamoyscy Museum, Wilanów Palace Museum;
- Palace Park in Puławy, Park in Żelazowa Wola, Palace Park in Antonina, Kórnik and Rogalin;
- parks Kudowa and Szczawno Zdrój.

Pearls of Polish Nature – national parks

The Contract with the number 6/1989 (concluded with Kampinoski National Park) is the start of financial support provided by the National Fund for the projects in national parks, mainly in the field of nature conservation and



Modernized shelter in Five Lakes Valley with NFEPPM resources in Tatra Mountains. Photo Shelter in Five Lakes Valley



The amount of contracts concluded by NFEPPM in national parks in the period 1989-2013. Fig. Monika Pietras

ecological education. The National Fund financed in the national parks not only investment tasks (e.g. educational centers and museums of nature, sewage treatment plants, technical infrastructure), but also, non-investment undertakings, concerning e.g. protection of valuable ecosystems, both terrestrial and aquatic, preservation of rare and endangered species of plants and animals, as well as the development of protection plans. Within the scope of supporting tasks concerning protection of habitats, implemented by the national parks :

- drafts of plans were prepared concerning 22 national parks (only the National Park in Tatry made it from its own resources) and for 7 landscape parks;
- ca. 900 hectares of land was purchased for renaturalisation purposes (the largest program of land purchase has been started in 1996 in Kampinoski National Park).

Several national parks have received support from NFEPPM already at the stage of their establishing (1990-Poleski National Park, 1993 – Biebrzanski National Park, 1995 – Magurski National Park, 1996 – Bory Tucholskie National Park, 1998/2000 – Ujście Warty Na-

Almost half a billion PLN for national parks

In the period 1989-2013 the National Fund has concluded 1476 contracts with 23 national parks in Poland for co-financing of projects worth more than 483.4 million PLN. Total cost of co-financed tasks is almost 785.6 million PLN. Percentage share in these projects of NFEPPM is almost 62%. It is estimated that financial participation of the National Fund to support current scientific, education and didactic operations in the Polish national parks is on average approximately 25-30% per year.

tional Park). Significant NFEPWM support was provided in 1992 for the International Reservation of Biosphere “Eastern Carpathians” – the first UNESCO reserve located on the area of three countries. Later, high score of Bieszczady National Park, the kernel of UNESCO reservation, has brought the prestigious awards, including European Diploma. In 1995 investment grants have allowed NFEPWM for the construction of educational and methodical centers as well as didactic and museum centers, which enriched the entire package of educational and scientific activities in national parks.

Forest ecosystem under protection

Already in the first years of the National Fund, it had to face the new challenge: financing of liquidation of large forest fires, which in the 90s, among other things, devastated among other things Rudy Raciborskie, Potrzebowice, Sokołów Podlaski Forestry Managements. The costs and scale of the works related to elimination of fire results and management of vast conflagrations, confirmed the important role of the National Fund as an institution providing financial support for fire prevention, that covered: inter alia, on-land observation and quick response, allowing for early detection of fire, quick access and extinguishing of fire. For the national forest fire protection system in the years 1998-2012 National Fund spent more than 55,3 million PLN. The Fund also financially assisted the forest managements in liquidating the results of flooding in July 1997, among other things in Ustroń and Bardo Śląskie Forest Managements. In July 2002 the National Fund has provided grants for almost 2.5 million PLN and loans in amount ca. 10 million PLN for management of forests destroyed by hurricane in the North-East Poland, especially in Piska Backwoods.

Mass demonstration of insects preying on the leaves of trees, covering vast areas of forests, is now a less problem, than it has been a few years earlier. Countermeasures from land and air are usually expensive and difficult, and require a comprehensive approach. NFEPWM supported many protective actions of related to migration of pests. In the years 1994-1995 NFEPWM engaged in action for combating the biggest migration of *lymantria*



Protection of numenius arquata in key habitats of the species in Poland. Photo Krzysztof Nawrocki

monacha (area for rescue operations covered 876 thousand hectares, almost 10% of Polish forests!), providing the approximately 15 million PLN for that purpose, which was then one half of the budget for nature protection.

Reconstruction and reconditioning of stand

The rapid development of heavy industry and energy sector after the World War II was a huge risk for forest management based on cultivated pine and spruce monocultures. The most harmful factor has become primarily industrial emissions resulting in deterioration of trees and stands, massive development of secondary pests and fungus diseases and death of forests, e.g. Izerskie and Beskidy Mountains. Grants awarded by the National Fund in 1992 for the modernisation and renewal of stands were the first for the State Forests and were allocated for the support of the forest management in the areas, which have many years been strongly influenced by industrial emissions. Major works (as well as concerning the purchase of necessary forest equipment) were focused on the area of the Regional Directorate for State Forests (RDSF) in Katowice (Upper Silesia, Beskidy) and RDSF Wrocław (Sudet). Reconstruction of stands produced tangible results. From the paper of the Forest Research Institute, it results that in RDSF Katowice and RDSF Wrocław, within 1998-2002, significant improvement of forest condition was noticed (the share of damaged trees was reduced by 15-20%). Reconstruction of stands on the areas of experimental plants of universities have also been financially supported.

Forests under reconstruction

Within the period 1992-2012 the National Fund has spent over 70.7 million PLN for reconstruction of stand in Poland. Using the resources, stands of total area 76.5 thousand ha were reconstructed or renewed.

National Program for Increasing the Forestation Rate

One of the most important tasks of the National Fund was and is participation in the implementation of its National Program for Increasing the Forestation Rate (NPIFR), adopted by the government in 1995, with the aim to reach the forestation rate at the level of 30% by 2020 and 33% by 2050. The program provides for forestation of 700 thousand hectares of land. The National Fund, involving in the NPIFR, in the years 1997-2012 has provided the State Forests a financial support of more than 43.8 million PLN for forestation of 8465 hectares of post-agricultural lands and the preparation of soil for forestation of 61.5 thousand hectares.

Vast modernization of stands under influence of industrial emission, restoration of fire devastated areas and other post-catastrophe lands as well as reclamation of degraded soil, required modernization of nursery base. Thanks to donations of the National Fund (more than 31.6 million PLN) all container fully-automated nurseries, existing in Poland, and the most modern in Europe, producing cuttings in the covered rooting system, operating in the following forest managements, were provided with necessary equipment: Śnieżka (the first one, built since 1992), Rudy Raciborskie (1995 – experimental range for nursery), Jabłonna and Oleszyce. In addition, because of the financing of NFEPWM, Polish method of controlled mycorrhizal grafting of forest trees cuttings was introduced in container nurseries and in several dozen other nurseries. This is an innovative method that allows for introducing mycorrhizal fungi to soil substrate which are necessary for the proper development of young trees. Such cuttings, have high resistance to environmental stress, they are planted in particularly disadvantageous places, where traditional trees are not able to grow (e.g. post-agricultural land, degraded land, etc.). In 2001, when this method was introduced in forests, Poland was the second country in Europe, which has developed and implemented the mycorrhizal grafting technology in forest trees.

Seed multiplication and gene banks

Among the most important elements that determine the quality of future stands is to have seed material of the highest genetic parameters, originating from specimen trees. In order to preserve the most valuable gene resources a "Program for preservation of forest gene resources and selective breeding of forest trees in Poland for 1991-2001" has been developed, which includes preparation of seed and gene base of the State Forests. NFEPWM co-financed the setting up of seed plantations, purchase of specialist machines and devices, creating

storage of forest tree seeds (gene banks) with the amount up to 8.7 million PLN. The National Fund assisted in the construction of: Forest Gene Bank in Kostrzyca (1994), magazine of wet cones in Czarna Białostocka Forest Management, storage place for beech seed in Bielsko Biala Forest Management, Spruce Gene Bank in Wisla Forest Management, Regional Gene Bank in Grotniki Forest Management, warehouse for seed in Rudy Raciborskie Forest Management as well as Regional Gene Bank in Zwierzyniec. The NFEPWM financed also scientific base of gene bank in the Forestry Research Institute in Warsaw and conservation of gene resources of forest trees gathered in the collections of the Dendrology Institute of the Polish Academy of Sciences.

Program for Beskidy Mountains

One of the major projects, in which the National Fund has participated within the scope of stand reconstruction, has been implemented since 2003 "Program for Beskidy Mountains", funded by three partners: NFEPWM, Silesian PFEPWM and RDSF in Katowice. Its main objective was to prevent the processes of observed mountain forest dying, mostly in Silesian and Żywiec Beskids. Beskid forests play a special role in the environment due to their extra-production functions: water

preservation, soil protection, climate forming, landscape or educational and research values. Present condition of forest is the result of past forest management, affected by severe climatic conditions, increasing emission and industrial mission adversely affecting the environment and economic matters, i.e. fast revenues. It was estimated that 90% of spruce stands should be rebuilt, in order to return to the original composition of Beskids, mainly beech. It was necessary to enhance biological diversity of forest ecosystems, increase their resilience to the adverse impact of industry and urban development, while meeting the non-production function. The basic purpose of the Beskidy Mountains Program was reconstruction of 2 800 ha of spruce stand. Within 2003-2008, the National Fund has paid over 8.1 million PLN for that purpose. The program implemented in Beskidy prevented the process related to stand dying to the scale close to Izerskie Mountain. Effect on the environment would be disastrous.



Beskid hills with different trees.

Photo RDSF Katowice

Dynamic development of offer within the scope of environment protection

In 2008 NFEPWM launched a "fast-track" for examining applications for co-financing land acquisition in the national parks within the framework of pre-emption right in aid of the Treasury. The new financial mechanism allowed for the reduction of investment pressure on the protected areas. Two years later the two priority programs within the range of nature and landscape protection as well as protection and sustainable development of forest, were extended by another one "Sustainable development of Białowieża Backwoods", which implemented a mechanism for making available the NFEPWM resources to PFEPWM in Białystok. The program was dedicated to hajnowski powiat in relation to the planned increase of the Białowieża National Park. In 2011, the program implemented another financial instrument, which allowed the national parks to incur loans on preferential conditions to maintain financial liquidity of projects co-financed by EU and to complement the national contribution in the EU projects.

Environmental education and science for the environment

Such a dilemma cannot be solved: how to choose from more than 3.4 thousand contracts concluded by the National Fund in the field of environmental education, these few, more than a dozen, which particularly deserve a reference list, for example of good practice? There is no other such institution in Poland, which can be proud of such impressive level of co-financing such a large number of projects aimed at environmental education of our society. Without consistently pursued environmental education of the society many of investment projects in the field of environment protection would not found sufficient public acceptance. There wouldn't be more spectacular success to improve the situation of the environment. For the sustainable development of the country not only investments in modern, environmental friendly technologies and rational management of natural resources are necessary but also high environmental awareness and changing society's attitudes and behaviour towards environment protection.

The beginnings were modest, because in 1990 only six grant agreements were concluded in this area, co-financing the projects with the amount almost 90 thousand PLN. One year later it was 27 contracts for environmental education, and the financial support of the National Fund reached the level of over 600 thousand PLN. In the subsequent years, since 1994, the level of financing educational activities amounted to a few million PLN, and in the second half of 90s, each year the National Fund assigned for financing the educational projects from over a dozen million PLN to over 24 million PLN (in 1999). But record-breaking years were yet to come. Among the first grants awarded by NFEPPM in this area were both small projects (e.g. books, competitions, training aids, videos, radio and television programs, education packages for schools), as well as investment projects, which initiated greater projects. In 1991 the first grant to supplement the equipment of educational base in Ojcowski National Park initiated the development of educational establishments in the Polish national parks. In the first half of the 90s funds of the National Fund were allocated to single educational projects, later on, the list of reference educational projects included large, multi-annual and annual projects.

Education for millions

In the second half of the 90s, financial support for environmental education was already at an average level of several million PLN per year. The single educational projects were joined by more complex, long-term undertakings addressed to more recipients, to another vocational groups, social and age groups. The National Fund has financed programs which engaged from a few to a few dozen or even a few thousand people to educational actions. Estimated data from these years show that projects implemented in the field of educa-

In the field of environmental education in the years 1990-2013 the National Fund co-financed among the others:

- operation of more than 70 ecological education centers i.e. centers operating in the national parks, landscape parks, on forest areas of promotional complexes, centers of special importance in the scale of the country and region, ecological education centres and field centers for ecological education, so called "green schools" (part of the centers were supported a few times);
- implementation of over 270 national campaigns and programs for active ecological education including a few long-term ones;
- implementation of didactic programs in the scope of environment protection in over 60 universities and a few dozen high schools;
- production and broadcasting of more than 120 nature films on national TV, regular TV programs and over 30 regular radio programs;
- production of about 300 didactic aids including: educational packages, board games, quiz, educational movies on VHS and educational programs on CDs;
- publication of over 100 magazines and newspapers concerning ecology (most of the titles was financially supported for over a year);
- publication of over 3000 books, brochures, folders, maps, bulletins, posters, calendars, etc. in total volume of over 5 million copies;
- organization of about 10000 conferences, seminars, congresses, training, workshops, etc.;
- performing over 1500 competitions and events promoting ecological knowledge.

tion, with the financial support and logo of the National Fund covered in the 90s a few million people.

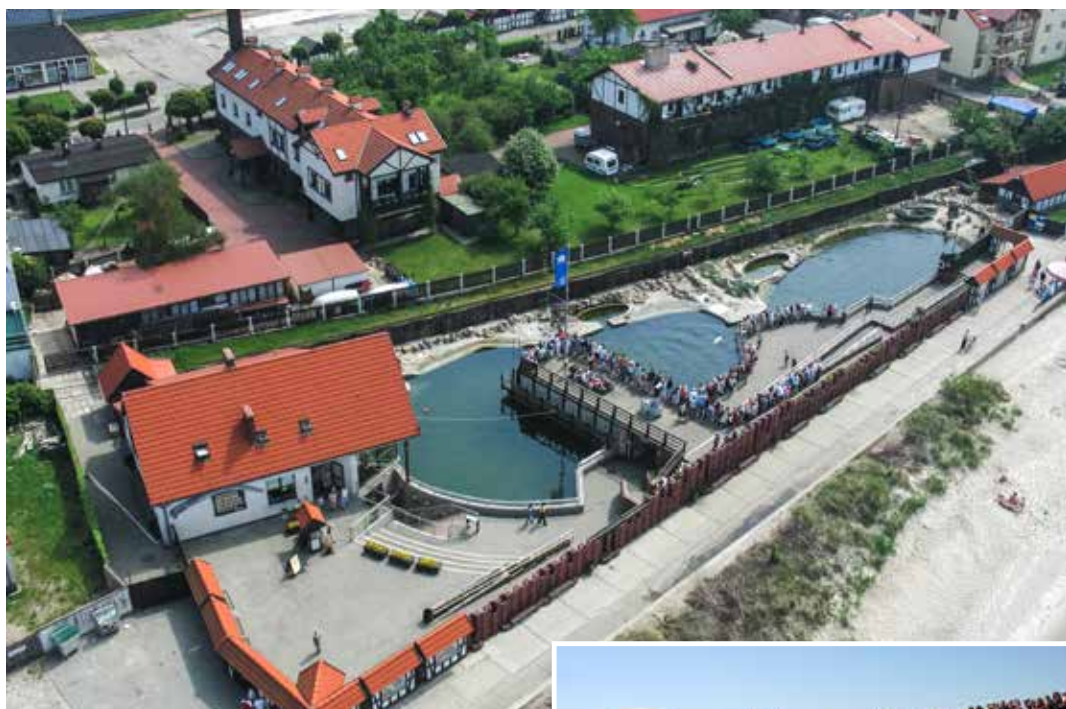
Among educational programs, implementation of which has already started in that period, particular attention should be drawn, among other things, to: international educational program for schools GLOBE, Polish-American circle, Clean Vistula River and Coastal Rivers, similar to youth campaign of Ecoteams, multi-annual programs of active education implemented in various environments (e.g. program of Clean Production in Poland, program of Local actions in aid of the Ziemia Foundation GAP), didactic programs (Olympics, competitions, training cycles, e.g. for Border Patrol, craft chambers and companies), educational programs at universities. Regular TV and radio programs and films are on privileged position on this list (among other things Polish nature movies), financial support for the ecological magazines and multi-volume publications, multi-media computer programs and educational games, educational packages supporting school and extra-school activities in various fields of the environment. This list includes also regular projects, organized every year: festivals on Earth Day, World Day of Environment Protection, Day without a car (week of sustainable transport), presentation of ecological education offer "Eko-Media-Forum" (accompanying POLEKO fairs for a few year now), festivals and competitions in the field of craftsmanship related to ecology, events engaging thousands of volunteers (e.g. "Cleaning the World – Poland since 1995). Investment projects were also continued (frequently with financial participation of national and foreign institutions) which developed the ecological education base, among other things in national and landscape parks (including didactic paths), forest promotional complexes, botanical gardens and arboretum. In the second half of the 90s, the National Fund financed ecological education centres (including scouting that were engaged in "green schools"), operation of which was covered by the patronage of the Minister of Environment and National Education. In 1997, NFEPM engaged in the construction of seal center on Hel, which in the following years has

Over a billion for education – half from NFEPM

Within 1990-2013, in the field of ecological education, the National Fund has concluded over 3400 contracts concerning financial support for projects, assigning almost 600 million PLN in the form of grants. Value of the implemented projects reaches almost 1.2 billion PLN, and the share of the National Fund reaches ca. 50%.



Educational classes in the Poleski National Park. Photo A. Różycki



Seal center in maritime station on Hel Peninsula.

Photo Dariusz Bógdał and Krzysztof Skóra

achieved a spectacular success both scientific, didactic and educational.

Each year the number of projects (exceeding two hundred in 1995) was growing together with the increase of grants provided by the National Fund to support educational activities (almost 25 million PLN in 1999). Preferred form of educational activities changes as well, in order to adapt to the needs of modern society and reach for contemporary, preferred, especially by young generations, media (multimedia, audio-visual programs, digital techniques of communication), not to forget about handicapped persons (educational paths for blind persons, school atlas unique to the world scale for blind or visually impaired persons). The Fund has financed training for animators, negotiators, eco-mediators, teachers and other persons or organizations engaged with professional social communication in the field of environment protection. NFEPMW in the following year has also defined the topics in which the preferred educational proposals were expected. Among the preferences, the issue related to waste management and broadly perceived climate protection was the most frequent.



Health prophylaxis of children and youth

In program supporting education in aid of sustainable development, the National Fund, since the mid 90s, supported health prophylaxis of children and youth from the areas where the environment quality standards are exceeded. This was the satisfaction of the requirements imposed by item 24 of the "Ecological table" of the Round Table, which envisaged the program to rescue health of young generation in the areas of ecological hazard. Within 1995-1997 the National Fund supported the prophylaxis health policy concerning children from the areas exposed to health hazards caused by lead in Miasteczko Śląskie and Tarnowskie Góry. Since 1998, the list of supported entities contained foundations and associations from Upper Silesia, Zagłębie Miedziowe and other Polish regions. In total, within 1995-2013, the National Fund has paid over 19 million PLN for that purpose.

Preventive leaves (including from the areas covered by catastrophic events) as well as monitoring of health condition of children are usually financed from a few sources: the biggest support is provided by the National and Provincial Funds, as well as city offices, commune offices, poviats, town social assistance centers and departments of education.

Support for ecological organizations

The National Fund has engaged into construction and reinforcement of organizational potential of citizen society in the field of pro-ecological operations, including education. In 2003, a program (operating since 2010) was launched, that is dedicated especially to support non-government ecological organizations (NEO). Assumptions and methods of operation of the program were developed with active participation of NEO representatives. The purpose of common operations was to develop solutions allowing for effective utilization of NFEPWM resources and transparent process for selection of organizations participating in the program. The support was provided to over 60 organizations, which received in total over 7.6 million PLN. Support of the National Fund was to reinforce the organizational potential, by financing current operations of these organizations, within the scope of environmental monitoring, intervention operations, informative and educational actions. The tasks covered by the financial support included, among the others: financial support for "green jobs", implementing "green phone" and consultation points, performing field interventions, improvement, of operations in the filed of public relations, creating and updating Internet sites, participation in trainings for NEO members and thus increase of their qualifications, implementing ecological libraries, gaining money from other sources (e.g. funds).

Eco-education for contemporary generations

The beginning of the XXI century, rapid development of digital communication techniques and implementation of many programs supported by EU, affected the evolution of the program "Ecological education" and financing this field by the National Fund. The pool of resources and targets of educational and promotional operations were frequently defined in the programs co-financed by the European Union as well as by private persons in the NFM and EEA FM programs. The national resources for educational activities supported by NFEPWM were joined by funds for the promotion of pro-ecological attitudes of the society in the programs and investments financed by ISPA/CF OP IE (especially priority V for nature and education), so called Norwegian Funds and LIFE+ Financial Instrument. Without deducting the role of single educational projects, the National Funds consistently aimed for evolutionary change of priorities, complementarity of the financing system so that the support for smaller, regional operations is provided by provincial funds for environment protection and water management and the NFEPWM engages in financing national programs, important in the scale of the whole country, of strategic meaning for the environment protection policy. The list of educational campaigns and programs, which lasted more than a year, was increased by another projects, among other things: Schools for Eco-development (local centres for ecological education, International Baltic Sea Project, campaigns of WWF-Polska (limitation of illegal trade with species endangered with extinction), youth promotion of ecological way of life "Together we protect the Earth", projects promoting NATURA 2000 network, social events that activate various environments ("Tree Day", "Adopt a river"), educational events concerning waste management: "Second life of electro-garbage"), promoting environment protection in business and self-government ("Energy saving office", "Appetite for the climate"). The construction and implementation of another financial offers of the National Funds in the priority programs were accompanied by informative, promotional and educational operations, related to e.g. energy saving building construction, protection of the climate and green investments (GIS). The list of entities supported by the National Fund was more frequently extended by multi-annual projects, of even a few million PLN budgets.

Rekord breaking years in education

Allocation of resources for educational projects resulting from contracts concluded within 2009-2012 amounted almost 174 million PLN. 2013 was record-breaking with annual allocation amounting ca. 61 million PLN. In 2013, NFEPWM Board made the decision concerning the increase of competition allocation of resources by almost 2.5 time up to 53.6 million PLN. This was the largest budget assigned by NFEPWM for a single competition within the scope of ecological education.

Science, expert's opinions and research in ecology

In the mid 90s, a multi-annual and consistently developed stage of activity and meaning of the National Fund as an institution supporting Polish science has started. In 1995, expert's opinions as well as research and development works domains were separated in the NFEPWM priorities, which aimed at the support for the operations of the Minister of Environment in this scope. These works stake out an important place in the

national system of management and implementation of ecological policy and financing environment protection and water management. They contribute to the increase of knowledge, developing opinions and search for new solutions. Mostly they are papers in the form of reports, analyses, comparisons, which are then used by the Minister of Environment to implement the national ecological policy. Their significant part concerns adaptation of the Polish law to the EU law, as well as satisfying the Polish obligations resulting from contracts, agreements and international conventions. Results of the implemented works have significant influence on shaping the law and environment protection policy in Poland. They are used while developing many legal acts, government programs as well as during their implementation. Topics necessary to develop a position of the ministry in controversial social and economic issues are also launched.

The most important works started within 1995-2013 include, among other things, development of another revisions of the National Ecological Policy, National Program of Treatment of Municipal Waste, water management plans in river basins in Poland, assessment of technical condition and safety of hydro-technical objects, implementation of "GreenEvo – Accelerator for Green Technologies" project. The largest projects in this field, that were financially supported by NFEPWM included two major Conferences of the Parties to the Framework Convention of the United Nations on the change of climate (COP 14 in 2008 in Poznań and COP19 in 2013 in Warsaw). The financial support of NFEPWM covered also the preparation and provision of support during Polish Presidency in the European Council (Presidency at EU) and educational, informative and promotional events accompanying it, within the scope of the Ministry of Environment competences. Among the last papers (in the context of winning shale gas), there is, among the others, a environmental risk assessment related to prospecting, recognizing and winning non-conventional deposits of hydrocarbons.

Gekon – Generator of Ecological Concepts

In May 212, a contract was concluded between NFEPWM and the National Center for Research and Development, and in autumn that year, the Board of NFEPWM adopted a priority program Gekon – Generator of Ecological Concepts. This is the first discipline-oriented program of pro-ecological actions prepared and implemented together by two institutions: National Center for Research and Development and the National Fund for Environment Protection and Water Management. The program (with total budget amounting 400 million PLN) supports projects from the private sector, dedicated for research and development works and then for implementation of pro-ecological technologies developed on their basis. Already the first recruitment of applications in 2013 confirmed huge interest in "Gekon" and the anticipation of scientific fields, research and implementation centers as well as companies for implementation of new financial instruments activating eco-innovations.

Half a billion for research and development works and expert's opinions

Within 1995-2013, in the field of expert's opinions and research and development works, 1390 contracts were concluded to total amount ca. 586 million PLN.

On the way to Brussels

Bilateral assistance of 11 countries

The National Fund, since the beginning of its operations, cooperates with foreign institutions. The ecological fund established in Poland, which did not have its counterpart in the Western Europe countries, activated huge interest of the foreign countries, as a potential partner in implementing projects in the field of environment protection. Initially, the cooperation was limited to implementing the Polish debt-for-nature swap in relation to Finland. Further experience was brought by the implementation of Swedish aid (SIDA²³), which was used by the National Fund to grant loans in the revolving system.

In the 10th year of membership in the European Union (2004-2014) we start to forget the merits not only of European countries, within the scope of so called bilateral assistance, for the development of Polish environment protection. Within 1990-2008, the National Fund was responsible for distribution of financial resources within the scope of bilateral contracts with 11 countries as well as for preparation and implementation of the selected projects. The grants were dedicated to these sectors of

economy and social life, which after the first historical political and economic changes 1989-1990 were found to be particularly neglected. Assistance provided by the Nordic Countries, especially Denmark, Finland and Sweden as well as Holland and USA was priceless. Total amount of financial engagement of these five countries amounted 229.5 million USD which represented 87.7% of the bilateral assistance in total. The remaining countries providing assistance to Poland for the environment protection, during the pre-accession period: Belgium, Japan, Norway, Germany, Switzerland and Great Britain. Accession of Poland to the European Union and the opportunity of freely use different Union budgets (200-2006, 2007-2013 and in perspective 2014-2020) meant the termination of bilateral assistance for our country (except the Norwegian Program – p.68). The Swedish Partnership Ecological Fund SIDA operated by the National Fund in 2014 is an exception.

Bilateral assistance for Poland

The amount of bilateral assistance of eleven countries (operated by NFEPWM) since 1990 amounted in total 263.4 million USD, i.e. about 800 million PLN (exchange rate 2014) This amount was allocated for financing 435 ecological projects.

Office of the Program for the Environment Management Strategy

A meaningful development impulse in the first decade of the National Fund functioning was taking over in 1994 the Office of the Program for Environment Management Strategy, previously functioning in the Ministry of Environment Protection. Together with the personnel, the National Fund has also taken over the duties related to operation and management of bigger foreign assistance resources. These were the beginnings of ISPA fund and of departments using huge resources of the Cohesion Fund, already in the second decade of the existence. The project was implemented within 1990-1996 based on the credit contract amounting 18 million USD concluded between the Republic of Poland and the World Bank. Its main purpose was determination of the most important ecological problems in Poland as well as assistance in decentralization of the environment protection management system. Within the framework of the Project "Environment Management Strategy" among other things computer equipment and specialist instrumentation for environment protection laboratory was purchased, ecological surveys in 38 industrial plants were performed, automatic air quality monitoring networks



Museum of nature in Drozdów. Photo Zbigniew Biernacki

²³ SIDA – Swedish International Development Cooperation Agency

were implemented on Upper Silesia. An important element of the National Fund operation, in the context of accession to competitive free market, was the support of the domestic production and manufacturing potential, as an important element of economic stabilization and protection of jobs. Transfer of tasks by the Minister of Environment Protection, Natural Resources and Forestry to NFEPWM, related to the use of foreign assistance has opened for the National Fund a path to establish direct contacts and continue cooperation with many foreign institutions, organizations, funds and banks.

Phare pre-accession program

The second half of the 90s was the time of intensive preparations to obtain membership in the European Union, as regards political, organizational and legislative, as well as investment and economic disciplines. Tasks (started in 1990) were continued, concerning water and sewage management, protection of soil and air, implemented and co-financed within the scope of pre-accession Phare^{24,24} (*Poland and Hungary: Assistance for Restructuring their Economies*). Experience resulting from Phare was used to prepare the ISPA pre-accession program and during implementation of projects within the scope of Cohesion Funds (CF), since the beginning of new century. The Phare program was to support economic transformation and assistance for Poland in meeting the conditions put before future members of the European Union, as well as preparation of qualified personnel to use much bigger resources available upon accession.

Phare – helping hand from EU

Within 1990-2003, the whole budget of Phare for Poland was 3.9 billion EUR. Assistance of the European Commission amounting almost 154 million EUR was allocated for implementation of 142 projects from various fields in the protection of environment and adaptation of the national legislation to the EU law.

While implementing the tasks entrusted by the Minister of Environment, NFEPWM as a unit implementing Phare program, prepared and monitored the implementation of investment projects, organized tenders according to the procedures specified by the European Commission. Assistance from Phare program was focused mostly on three fields (over 70% of assigned resources): protection of water and water management, protection of air and protection of nature. Within the scope of water protection, the financial support was provided among other things on development of sewage treatment plant (Gdańsk-Wschód, Wrocław) and construction of sewage treatment plant in Bydgoszcz („Fordon”) and in Bytom – Radzionków. Within the field of air protection, resources from Phare fund were allocated for the limitation of emission of gaseous and dust pollutants to atmosphere. The financial support was provided among other things for modernization of heating system in Sochaczew, liquidation of low emission and optimization of the heating system in Wrocław. Within the scope of PHARE LSF (Large Scale Facilities) program started in 1999, the following projects were implemented: water and sewage project in Bielsko-Biała, system of geothermal heating in Podhale and protection of environment on rural areas. The Phare funds were used to finance among other things: delivery of devices for geothermal heating plant in Pyrzyce, Regional Program for Environment Protection on Upper Silesia, purchase of license for the production of devices for desulphurization of flue gases in power plants, Program of Forestry Development, purchase of devices for sewage treatment plants (Warsaw, Sieraków, Złotów, Częstochowa), purchase of equipment for municipal waste collection in the area of Great Lakes of Mazury.

Connection of non-budget funds with the funds of foreign assistance, mostly in the form of grants, allowed for the increase of financial efficiency. It also facilitated the access to advanced technologies concerning management and implementation of projects protecting natural environment. Preparation for membership consisted in focusing the assistance on two key priorities concerning the adoption of *acquis communautaire*²⁵, i.e.

²⁴ “PHARE” is the acronym for „Poland and Hungary: Action for the Restructuring of the Economy”. As the transformation process developed, range of the program (identified as Phare) significantly increased and included new countries. Gradually, Phare has become an instrument supporting integration with EU as well as an instrument for the construction of more efficient system of assistance reception. In 1997, the Phare program, transformed into pre-accession assistance program, was dedicated to 10 countries being the candidate for the membership in the European Union – among other things Poland.

²⁵ Legal heritage of the Union.

- investment support where about 70% of Phare budget resources were assigned;
- establishing and reinforcing public institutions, i.e. institutional building, financed from about 30% of Phare budget resources.

Projects supporting public administration in order to adapt it to the requirements of membership in EU were developed within the scope of institutional building. The instrument most frequently used in this program, next to the technical assistance, was so called twinning, using the experience and heritage of “old” Union members.

Ecological Partnership Fund Phare

In 1994, former Minister of Environment Protection, Natural Resources and Forestry, imposed on the National Fund the responsibility for operational financial management and control of the Ecological Partnership Fund EFP Phare. The fund was created from the repayment of credit granted from the Phare PL2002 Program to RAFAKO company for the purchase of devices, instrumentation and licences for the production of fluidized bed boilers. Resources from the Ecological Partnership Fund Phare were used within the scope of future Indicative Programs. Four of them were implemented and completed, implementation of the fifth one (with the budget 16 million PLN) is pending until exhaustion of EEP resources.

Joint Implementation Program

Since 1996, Polish Joint Implementation (JI) secretariat was functioning in the National Fund, which was one of the first units of this type in Europe. The purpose of the JI Secretariat was the satisfaction of Polish duties resulting from the Framework Convention on Climate Change, i.e. to stabilize emission of greenhouse gases in by 2000. The JI secretariat provided content-related and technical support for Polish and foreign partners submitting JI projects, it provided its opinions, analysed and verified projects submitted to the Minister of Environment for approval. In July 1999, Executive Office of the Climatic Convention (EOCC) was established in the National Fund, which has implemented new financial mechanisms.



Biomass fired boiler in Jaworzno III Power Plant. Photo Wojciech Piechocki

Poland participates in projects performed based on the JI principles, in the character of a host country, because the costs of greenhouse gases emission reduction in Poland are significantly lower than costs of such reduction in any other investing countries. Interest in the JI concept results from the opportunity to access modern technologies and capital. Because in the global picture, it is necessary to reduce greenhouse gases emission, regardless of the place there are generated in, the investing country, through its companies, in cooperation with Polish economic entities, implements the JI project in Poland, and the settlement between the project partners is based on the transfer of so called Emission Reduction Units (ERUs). The JI projects are financed by foreign investors, their governments, Coal Funds, Polish partners as well as co-financed from the National Fund which allocated for that purpose ca. 260 million PLN. The category of projects qualified as the mechanism of joint implementation JI covers: investments into renewable resources of energy, operations within the scope of saving and effective utilization of energy as well as projects providing technological development and gaining new equipment. National purpose of each project implemented within the scope of JI mechanism

is reduction of greenhouse gases emission. In total, in all JI projects completed or pending, in the first settlement period, i.e. 2008-2012, the reached reduction of emission can be estimated to 12 million tons of CO₂.

The reference list of JI projects operated by the National Fund covers among other things the projects with investors from Great Britain (e.g. reduction of nitrous oxide emission in ANWIL S.A. and Kędzierzyn S.A. facilities), Japan (reduction of nitrous oxide emission in Zakłady Azotowe in Tarnów Mościce), Denmark (use of landfill gas in Białystok, Łubna near Warsaw and Sosnowiec, wind farms: Ostrowo, Kamieńsk, Duninowo, Łebcz, Zajączkowo, geothermal energy in Zakopane), Holland (wind power plants in Tymień 50 MW, Puck 22 MW, Zagórze 30 MW), Spain (complex of wind farms in the Carpathians), Germany (utilization of methane from the mines in Upper Silesia).

NFEPWM as the partner of the World Bank

In October 1998, the National Fund has concluded a memorandum with the World Bank (and in 2000 a loan agreement) on financing a pilotage program "Environment protection in rural areas" from foreign and Polish resources (in total 16 million USD). The purpose of the project (implemented since 2006 with the participation of the National Fund) was the reduction of pollutants from the inbreeding of cattle and pigs by proper storage and management of animal droppings. The project co-financed by the World Bank in the form of credit and from donation of NEFCO (Nordic Environment Finance Corporation), GEF (Global Environmental Facility), European Union (PHARE – LSIF'99) and the National Fund covered the communes near, Toruń, Elbląg, Ostrołęka and Łomża and poviats: węgrowski, ostrowski and sokołowski. Own resources for implementation of the project were also provided by private farmers and local self-governments. One of the significant tasks of the project, very well assessed by the World Bank, was the strategy of its multiplication (as good practices in agriculture) in the areas of significant inbreeding and animal production. This strives to consideration of the Union Nitrate Directive concerning protection of water against nitrate pollution from agricultural sources, which became mandatory after accession of Poland to the European Union.



Wind turbine in Kamieńsk Power Plant.

Photo NFEPWM archives

A decade in the European Union

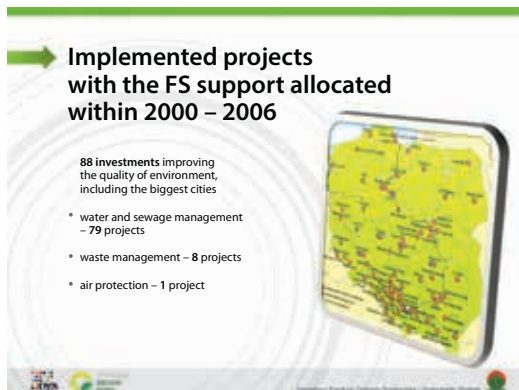
ISPA and cohesion fund 2000-2006

Considering the amount of allocated resources, both foreign and domestic, the biggest and most responsible task of NFEPWM within 2000-2006 was the coordination of 90 projects (8 investment and 2 concerning technical assistance projects), which within the framework of pre-accession fund ISPA Instrument (Structural Policies for Pre-Accession Assistance) and Cohesion Fund received a financial assistance of the European Commission. This was then the biggest investment program in the environment protection, which significantly changed the image of the technical infrastructure, especially within the scope of water and sewage management in urban agglomerations. The sum of eligible costs of all projects amounted 4.287 billion EUR, including grant from the Cohesion Fund / ISPA amounting 2.850 billion EUR. The remaining part, i.e. 1.437 billion EUR were provided from national resources. The biggest group of projects, i.e. 79 projects concerned water and sewage management, 7 projects concerned waste management. One project applied to the protection of atmosphere and covered saving of energy and liquidation of low-emission. Until the end of 2013, the European Commission has performed the final settlements and allocated the final payments for the beneficiaries of 50 projects from this group. For the 50 completed and settled projects, the cost of implementation of the eligible scope of tasks amounted over 114\$ of the eligible expenditures specified in the European Commission decisions. Almost 98% of allocated amounts in the form of grants were obtained from the Union resources (average for the whole group of 50 projects). Beneficiaries of all the projects have paid the contractors for the completion of the eligible scope of works the amount of 4.655 billion EUR.

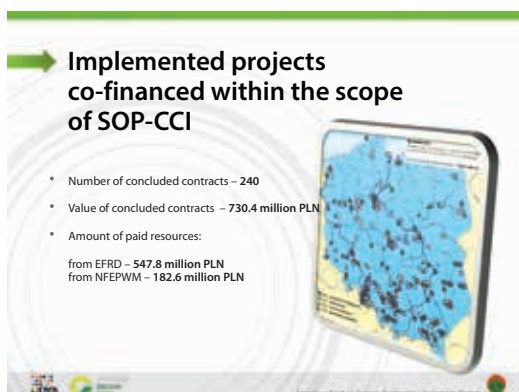
The National Fund, efficiently supported the implementation of 90 ISPA / Cohesion Fund projects with own resources. The beneficiaries have received 3.626 billion PLN in the form of investment loans. Payment of loans providing financial liquidity for the beneficiaries amounted 582 million EUR and 100 million PLN.

EU program for entrepreneurs: SOP-CCI

In 2005, the implementation of the Sectoral Operational Program for Companies Competitiveness Increase (SOP-CCI "Union for the resourceful – Competitiveness program") has been started, dedicated to companies interested in the increase of its competitiveness under condition of Uniform European Market. Investments in the protection of environment are one of the support directions of the program, implemented through the action 2.4 SOP-CCG, where NFEPWM was the implementing institution in 2005-2009. This was the first instrument of EU financial assistance for Polish entrepreneurs within the scope of pro-ecological projects, co-financed at the same time by NFEPWM. Investment projects in the companies in the field of water and sewage management, protection of air and projects re-



Projects implemented with the support of the Cohesion Fund assigned for the years 2000-2006

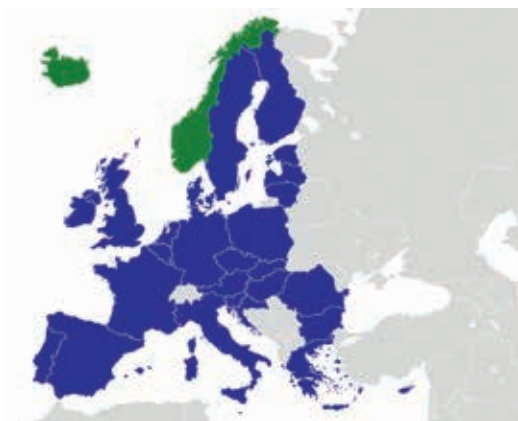


Projects implemented with the financial support within the scope of SOP-CCI

lated to implementation of integrated approach to the prevention and reduction (control) of pollution were financially supported as well as those concerning adaptation to the requirements of *best available techniques (BAT)*, resulting from the obligation to obtain integrated permit, i.e. some sort of “ecological pass” for further operations. Investments in the waste management companies, with particular consideration of hazardous waste were also financed. Projects changing the production technologies to more environmentally friendly and well as “end-of-pipe” projects, with particular support for the first ones have also received assistance. Special attention should be drawn to significantly high share of private resources (65%) engaged in pro-ecological investments implemented within this program.

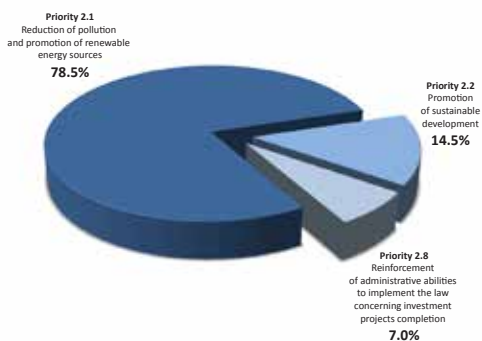
FM EEA and NFM

Another, ambitious task entrusted in the first decade of the XXI century by the Minister of Environment to the National Fund, as the Supporting Institution, was the duties related to preparation, assessment and co-ordination of projects implementation, co-financed from the NFM (Norwegian Financial Mechanism) and the FM EEA (Financial Mechanism of the European Economic Area). Option to use NFM / FM EEA was related to accession of Poland to the European Fund and to the European Economic Area (EEA). Three countries, outside the EU: Norway, Island and Liechtenstein, which belong to EEA and at the same time to the European Free Trade Association (EFTA), have established the forms of non-refundable financial assistance for less prosperous countries of the European Union, including Poland. The main purpose of the FM EEA and NFM is implementation of pro-development projects, contributing to the reduction of economical and social differences within EEA. Moreover, implementation of projects is to provide closer bilateral cooperation between Poland and donor countries. Within the scope of FM EEA and NFM instruments, Poland has received 533.51 million EUR for 2004-2009, including three environmental priorities (see the graph) over 133 million EUR.



European Economic Area

Within the scope of environmental priorities of FM EEA and NFM, 2004-2009, three recruitments of applications for financial support of individual projects and programs were performed (2005, 2007 and 2008). Over a thousand applications were submitted, and their value exceeded many times the pool of resources destined for Poland. The final allocation within the scope of three environmental priorities amounted over 112 million EUR and was transferred for implementation of 158 projects. They included among other things, reduction of pollution, saving the energy resources, increase of renewable energy sources share in the energy balance of Poland, provision of collection and treatment of waste and segregated waste management in urban agglomerations. Except the support for infrastructure within the scope of environment protection, projects concerning the promotion and implementation of sustainable development principles among the authorities and society were implemented. They mostly concerned: implementation of environmentally friendly production and consumption methods, maintaining lifespan and



Distribution of resources in three environmental priorities FM EEA and NFM

biological variety, increase of knowledge on environment protection, cooperation between entities engaged in ecological education. Financial mechanisms also supported initiatives assisting operations of administration and other entities responsible for implementation and enforcement of the European Union law within the scope of environment protection.

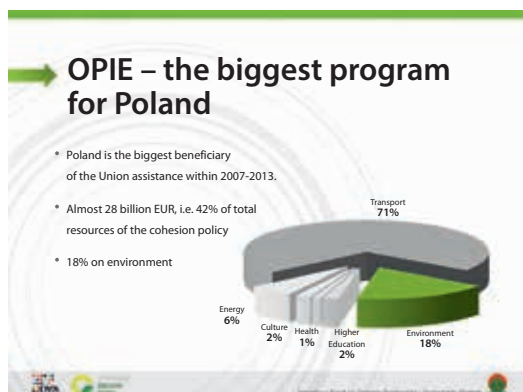
Environmental priorities of FM EEA and NFM 2009-2014

In 2011, bilateral international contracts were concluded as the consequence of arrangements between the European Union and donor countries on the implementation of new financial perspective from the Norwegian and EEA Funds for the years 2009-2014. The beneficiary countries, within the scope of new financial perspective, were twelve new member states of the European Union as well as Portugal, Greece and Spain. Total amount of the support is 1.788 billion EUR, from which 32% – 578 million EUR is for Poland. Most resources are allocated for the environment protection – 180 million EUR, for the protection of biodiversity and ecosystems (Program PL02-20 million EUR), for projects leading to reinforcement of the environmental monitoring and control operations (Program PL03-15 million EUR) as well as for the support of energy effectiveness and renewable energy sources (Program PL04-145 million EUR). Operator of the Programs PL02, PL03 and PL04 is the Ministry of Environment with the aid of NFEPWM. The first application in the mentioned program areas was filed in the first half of 2013.

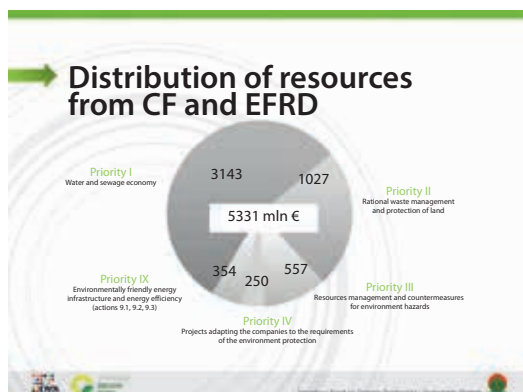


Operational Program – Infrastructure and Environment

In 2007, implementation of the biggest, as regards the value and importance of the projects, investment program related to reconstruction of Poland, within the area of environment protection since our accession to the European Union has been started. While in the previous program (ISPA / Cohesion Fund 2000-2006) Poland partially used the pre-accession funds, in the Operational Program – Infrastructure and Environment (financed from the budget of the European Commission 2007-2013) we participated as a member state of the European Union. Current successes and experience of the National Fund in



OP IE the biggest program for Poland



Distribution of resources from CF and EFRD within the scope of five OP IE priorities operated by NFEPWM

coordination of the projects co-financed by the UE (before accession to the Community and within the first years of the membership) were recognized both by European and Polish Institutions. At first in June 2007, a Contract has been concluded between the Minister of Environment and NFEPWM to implement OP IE within the scope of the I, II and IV priority axis (budgets and scope of the priorities on the above graph). and in October 2007, a Contract has been concluded between the Minister of Economy and NFEPWM within the scope of IX priority (Actions 9.1, 9.2, 9.3). One year later, the National Fund has taken over the obligations of the Implementing Institution for the

III priority OP IE. The first application recruitment has also started that year. In 2009, NFEPWM has started its cooperation with the Center for Environmental Projects Coordination, during selection of projects implemented within the scope of the V priority, OP IE, "Environment protection and shaping ecological attitudes", starting at the same time own program providing financial support for these projects from national resources (since January 2014, 105 contracts have been concluded for amount almost 33 million PLN, of total budget of the projects ca. 260 million PLN). The Program Infrastructure and Environment is pending (many projects will be completed within the upcoming years) and until February 2014, the amount of concluded contracts exceeded 15.3 billion PLN.

15 billion PLN for projects OP IE

Until the end of March 2014, the National Fund, acting as an Implementing Institution, has concluded 457 agreements for financial support of projects implemented within the scope of OP IE for the amount of 15.4 billion PLN.

Status (at the end of February 2014) of concluding contracts by NFEPWM for financial support of projects implemented within OP IE (in PLN)

Priority	All projects		including Individual Projects	
	Concluded contracts for financial support	Financial support amount	Concluded contracts for financial support	Amount of the financial support
I	84	7,880,028,895	24	3,836,350,538
II	22	2,706,223,820	14	2,049,772,640
III	24	2,293,020,575	24	2,293,020,575
IV	228	996,792,474	—	—
IX Actions 9.1, 9.2 i 9.3	99	1,449,042,211	—	—
TOTAL	457	15,325,107 975	62	8,179,143 753

Time for completion of most of the projects implemented within the scope of OP IE is 2014-2016. The Program Infrastructure and Environment is a great challenge for Poland and the institutions, which participate in its implementation. Almost 28 billion EUR is assigned for Poland, this is the biggest amount ever offered by an



Odra Śródmiejska River in Water Junction in Wrocław. Photo RZGW Wrocław

operational program in the countries of the European Union. The list of almost half a thousand ecological projects implemented within the scope of five priorities, where the National Fund is the Implementing Institution, includes among the others: high capacity sewage treatment plants and sewage systems (e.g. in Warsaw, Poznań, Toruń), large flooding protection systems (e.g. in Wrocław, in Odra river basin, on Żuławy), as well as investment in high efficiency cogeneration, installations for energy savings in the industry and reducing power consumption in public buildings. Six municipal waste incineration plants are under construction (inter alia thermal utilization plant in Cracow, Łódź, Szczecin) of total throughput up to 1 Mg/year and cost 3.6 billion PLN. All these investments affect the increase of life standards of Polish citizens.

Financial Instrument LIFE+

September 2008 is another important date in the history of the National Fund, as an institution responsible for using the resources from the European Union. NFEPWM has taken over the responsibility for implementing the Financial Instrument LIFE+ in Poland. Based on the agreements with the Minister of Environment, the National Fund has been appointed to be the National Institution Implementing the Financial Instrument LIFE+ in Poland and fulfils the duties of the National Contact Point for all LIFE+ components. In practice, this means current cooperation with applicants, including among other things, thorough consultations while preparing applications, performing recruitment of applications for financial support from LIFE+ and its transfer to the European Commission.

NFEPWM has created a unique system for supporting applicants and beneficiaries of LIFE+ projects. The Board of Directors of NFEPWM has adopted a priority program of financial support of LIFE+ projects from national resources, which fact was the basic barrier in applying for LIFE+ resources. Because of this mechanism, project which will obtain financial support from the European Commission (even up to 95% of eligible costs of the LIFE+ project), has a chance for further financing from NFEPWM. Thus, the governmental and self-governmental administration, non-governmental organizations, universities, national institutions and commercial organizations may plan projects, engaging only 5% of the costs from own resources. LIFE+ is the sole financial instrument of the European Union that focuses only on co-financing projects in the field of environment protection. Important



Protection of xeric grasslands – environmental project co-financed by NFEPWM. Photo Krzysztof Matysiak

feature of LIFE+ is the promotion of new solutions in the field of environment protection, thus the projects prepared for financial support should be of demonstrative or innovative character, and in case of solutions related to environment protection, they must be based on the best practices in a given field.

The National Fund performed the function of the National Contact Point of LIFE as well as the new financial perspective if EU 2014-2020. As before, projects implemented by the beneficiaries from Poland, except for the financial support from LIFE resources, will be able to obtain additional financial support from NFEPPM resources.

Success of LIFE+ in Poland

Since the moment NFEPPM has taken over the responsibility for the implementation of the Financial Instrument LIFE+. Poland started using the LIFE+ resources more intensively. The recruitment in 2008-2012, Poland obtained 66 million EUR for pro-environmental projects (ca. 95% of national allocation assigned for Poland). Until the end of 2013, 56 contracts for financial support were concluded for almost 210 million PLN, of total budget amounting ca. 507 million PLN/.



International project LIFE+ "Protection of acrocephalus paludicola in Poland and Germany" with the financial support of NFEPPM. Photo Zymantas Markvenas

Strategy for the coming years

New directions of operations, new priorities and attitudes towards efficiency, quality and effectiveness have been drawn up in two documents adopted in 2012 by the Board of Directors, according to the requirements of the Environment protection law: „Common strategy of operation of the National Fund and provincial funds for environment protection and water management for 2013-2016 with the perspective until 2020” and the “Strategy of NFEPWM operations for 2013-2016 with the perspective until 2020”. They determine the path for the next years for the whole system of environment protection financing in Poland. Both strategies, with the experience of the successful implementation of OP IE projects (since 6 May 2014, Implementing Institutions have concluded with the beneficiaries of the Operational Program Infrastructure and Environment 01 contracts for financial support to the total amount of the support from the EU resources of 19.6 billion PLN), have prepared the institutions of the environment protection financing system in Poland to another budget period of the European Union 2014-2020.

The effect of work over Common Strategy is the merit to the very well cooperation of the National Fund with the provincial funds for environment protection and water management. Common Strategy is a uniform attitude for the strategy of individual funds, whose mission is efficient support of actions in aid of the environment, and the general purpose the improvement of environment condition and sustainable management of its resources through stable, efficient and effective support of projects and initiatives in the field of environment. Based on the Common Strategy, NFEPWM has prepared “Strategy of action of the National Fund for Environmental Protection and Water Management for 2013-2016 with perspective until 2020”.

“National Fund for Environmental Protection and Water Management – leader in financing protection of environment and water management in Poland with the attitude towards EFFECT” – this is the vision that is currently being implemented “Strategy of NFEPWM operations for 2013-2016 with the perspective until 2020”. This means that NFEPWM will strive to become an Institution:

- E** – ecological (respecting and promoting the principles of sustainable development),
- FF** – financing (effectively financially supporting actions within the scope of environment and water management),
- E** – elastic (adapting to the needs of recipients),
- C** – competent (reliably fulfilling the duties of public institution),
- T** – transparent (performing its duties using ethical, clear methods).

General purpose of NFEPWM Strategy 2013-2016 **„Improvement of environment condition and sustainable management with its resources through stable, efficient and effective support of projects and initiatives in the field of environment”** is implemented within the scope of four priorities:

- Protection and sustainable management of water resources
- Rational waste management and protection of land
- Protection of atmosphere
- Protection of biodiversity and ecosystem functions

Within the framework of these four priorities, tasks relate to ecological education, expert’s opinions, innovative-ness, low-emission and resource-saving economy as well as environment monitoring and hazards prevention are performed in parallel with the support of environment management systems, mostly the EcoManagement and Audit System (EMAS).

According to NFEPWM Strategy 2013-2016, 5 partial strategies were adopted, which mutually complement each other, determining goals and priorities in the field of: communication, ecological education, implementation of IT solutions, HR management and defined in the Capital Strategy of NFEPWM.

The strategy 2013-2016 determines ambitious goals for NFEPWM as a dynamic and creative institution, organization able to efficiently and flexibly function, which attains results in response to the needs of entrepreneurs and citizens, resulting from the constitutional principles of sustainable development. Balance of the first year

of implementation of the NFEPWM Strategy 2013-2016 (see below) show that the National Fund is on a right development path as an experienced, effective, transparent institution reacting to the needs of the country and market as well as prepared for next challenges.

2013 – record-breaking year for the National Fund

The first year of the Strategy 2013-2016 was spectacular. Almost 5.6 billion PLN of payments, almost two thousand concluded contracts, over 3/7 thousand submitted applications – is the effect of NFEPWM operations in 2013. In the last year, two records have been set – in the field of financing the environment protection and water management, NFEPWM has paid out the highest amount in the history. This is over 5 571 million PLN – by 826 million PLN more than in 2012. NFEPWM has also paid grants from own resources amounting 1 744 million PLN, which is also the highest in the history, annual payment within the scope of non-refundable financing from national resources. In 2014, further increase of payments is assumed by another 378 million PLN.

In the discipline oriented conceptualization related to the environment protection in 2013, the flow of non-refundable financing was mostly directed on the protection of climate – 393 million PLN, protection of earth – 367 million PLN, water management – 337 million PLN, protection of environment and co-financing of LIFE+ – 90 million PLN. Countermeasures related to environmental hazards and liquidation of their effects were supported with the amount of 108 million PLN. The last year's results consisted also of the payments from European resources, mostly from the Operational Program Infrastructure and Environment, in amount 2.8 billion PLN and loan-based financing which amount over a billion PLN. In 2013, the loan-based financing from own NFEPWM resources increased by another 12% and it is planned that in 2014, it will rise by another 119 million PLN.

Financial support for the environment protection was implemented by the Fund with fixed employment and decrease of revenues by a billion PLN. The decrease resulted from satisfying the requirement by electric energy producers concerning the production from renewable resources. For NFEPWM, this means lack of income from compensatory payments in amount ca. 426 million PLN, and transitory reduction by half – only in 2013 of the charges for using the environment, as a result of the implementation of annual charges instead of half-year charge for entrepreneurs.

In 2014, more money is expected for the beneficiaries – mostly territorial self-government and municipal entities – the growth of payments is assumed to be record-breaking amount of 6.1 billion PLN. This year financial offer (see: Priority Program entities 2014 – p. 76) is used by many sectors of the national economy. Traditionally, self-governments and entrepreneurs will benefit the most – the planned obligations of NFEPWM, from own resources only, amount over 3 billion PLN. Natural persons will be able to benefit from the increasing offer of NFEPWM. Subsidies for the purchase of solar collectors and for the construction of energy-saving houses and apartments will still be provided. New financial program “PROSUMER” has been launched for the parties interested in the construction of micro-installation generating electrical energy and heat.

Operational Program Infrastructure and Environment 2014-2020

In January 2014, the Council of Ministers has adopted a Partnership Agreement – the most important document specifying the strategy concerning the use of new pool of European Funds as well as the projects of national operational programs, including the Program Infrastructure and Environment. This is the result of a few-year-long work related to creating common vision for the country development, which is the program of civilization leap to be made by Poland until 2020. Poland has received 25% of the total pool of the cohesion policy for 2014-2020. In this financial perspective, 6 national operational programs will be implemented, including one extra-regional for the Eastern Poland Provinces, as well as 26 regional operational programs. Self-governments of the Provinces will manage, within the scope of regional programs, with a pool of European money, bigger than at the moment. Within 2007-2013, they had at their disposal ca. 25% of all resources for Poland, in the new perspective, this will be almost 40% of the pool. The biggest national program will be the Operational Program – Infrastructure and Environment (OP IE) with a budget of 27.5 billion EUR from the Cohesion Fund.

The low-emission economy, environment protection, including countermeasures and adaptation to the climate changes, as well as transport and energy safety, protection of health and cultural heritage are the fields which will receive the biggest amount of resources from the allocation program for the new perspective. The OP IE 2014-2020 program, alike its predecessor (OP IE 2007-2013), is primarily to support the development of- infrastructure of the country, which in result will contribute to sustainable development of the economy and the increase of its competitiveness. By the sustained cohesion and balance between the investment operations into infrastructure and support dedicated to the selected fields of economy, the program will efficiently implement the assumptions of the strategy Europe 2020, with which its main goal is related – support of economy effectively using the resources and environmentally friendly and fostering territorial and social cohesion. Main beneficiary of the new program will be public entities, including territorial self-government entities as well as entrepreneurs.



Low-emission economy – one of the priority of the program OP IE 2014-2020. Photo NFEPWM archives

Priority axes of OP IE 2014-2020 related to environment protection:

- **Reduction of the economy emissions** – improvement of energy effectiveness and utilization of renewable energy sources in companies, public and apartments sector, promoting low-emission strategies, development and implementation of smart distribution systems.
- **Protection of environment, including adaptation to the changes of climate** – development of environmental infrastructure, protection and deceleration of biodiversity decrease, improvement of urban environment quality, adaptation to the climate changes.
- **Development of environmentally friendly and important to the European scale transport infrastructure** – development of road and railway infrastructure in TEN-T²⁶ network, railway connections outside this network and in urban agglomerations, low-emission urban transport, naval transport and inland transport, improvement of safety in air transport, smart transport systems.

The role of the National Fund in the new financial perspective was not settled yet. NFEPWM with its many-year-long experience aspires to fulfil the function of Implementing Institution for the selected investment priorities in the priority axis I and II of OP IE 2014-2020, as well as to fulfil the function of the institution implementing the financial instrument. Regardless of the final shape of the institutional system, the National Fund actively participates in the process of preparing new programming period, striving to use the experience of former perspectives, as well as the need to reduce the administrative burden for the beneficiaries.

²⁶ Trans-European Transport Network (TEN-T)

Priority program NFEPWM 2014²⁷

1. Protection and sustainable management of water resources	
1.1. Water and waste management in urban agglomerations	
	<i>Part 1) Co-financing of the I priority axis of the Operational Program Infrastructure and Environment</i>
	<i>Part 2) Sewage management within the scope of the National Program for Treatment of Municipal Sewage</i>
1.2. Construction, reconstruction and modernization of hydro-technical objects	
2. Rational waste management and protection of land	
2.1. Rational waste management	
	<i>Part 1) Commune systems for commune waste management</i>
	<i>Part 2) Waste management installations</i>
	<i>Part 3) Modernization of the vehicles disassembly stations</i>
	<i>Part 4) Complementation of financial support of the II axis of OP IE.</i>
2.2. Protection of the earth surface	
	<i>Part 1) Projects indicated by Chief Inspectorate for Environment Protection – “ecological bombs”.</i>
	<i>Part 2) Reclamation of degraded areas and municipal waste dumps.</i>
2.3. Geology and geo-hazards	
	<i>Part 1) Getting to know the geological structure of the country and management of mineral deposits resources and ground water</i>
	<i>Part 2) Countermeasures concerning landslide and liquidation of its results for the environment</i>
2.4 Reduction of nuisance resulting from minerals recovery	
3. Protection of atmosphere	
3.1. Improvement of air quality	
	<i>Part 1) Financial support for the development of air protection programs and short-term operation plans</i>
	<i>Part 2) KAWKA – Liquidation of low-emission supporting the growth of energy effectiveness and development of distributed, renewable energy sources</i>
3.2. Improvement of energy effectiveness	
	<i>Part 1) Smart power grids</i>
	<i>Part 2) LEMUR – Energy efficient public buildings.</i>
	<i>Part 3) Subsidies to the credits for energy efficient houses construction</i>
	<i>Part 4) Energy saving investments in small and average enterprises</i>
3.3. Support for distributed, renewable energy sources	
	<i>Part 1) BOCIAN – Distributed, renewable energy sources</i>

²⁷ Program offer will be flexibly adapted in order to implement the statutory obligation of the National Fund, which is absorption of foreign non-refundable resources.

	<i>Part 2) Program for projects concerning renewable energy sources and objects of high efficiency cogeneration</i>
	<i>Part 3) Subsidies for partial repayment of bank credits to be used for purchase and installation of solar collectors for natural persons and residential communities.</i>
	<i>Part 4) Prosumer – the line of financial support used for the purchase and installation of micro-installations of renewable energy sources</i>
	3.4. GIS – Green Investment Scheme
	<i>Part 1) Energy management in public buildings</i>
	<i>Part 2) Agricultural gas plants</i>
	<i>Part 3) CHP and Heat generating plants fired with biomass</i>
	<i>Part 4) Construction, development and modernization of the power grids in order to connect the generating sources based on wind energy (RES)</i>
	<i>Part 5) Energy management in the selected entities of public finances sector</i>
	<i>Part 6) SOWA – Energy-saving street lights</i>
	<i>Part 7) GAZELA – Low-emission urban transport</i>
	4. Protection of biodiversity and ecosystem functions
	4.1. Protection of areas and species valuable for the nature
	5. Inter-disciplinary
	5.1. support of the Minister of Environment in the scope of the country ecological policy implementation
	5.2 Tasks imposed by the legislator
	<i>Part 1) International waste transport</i>
	5.3. Support of the environmental monitoring operations
	<i>Part 1) Environmental monitoring</i>
	<i>Part 2) Hydrological and meteorological Services</i>
	5.4. Countermeasures for environmental hazards together with liquidation of their effects
	5.5. Ecological education
	5.6. Co-financing by LIFE+
	5.7. SYSTEM – Support of operations in the field of environment protection and water management implemented by NFEPPM
	<i>Part 1) Removal of asbestos-containing products</i>
	<i>Part 2) Financial support for household sewage treatment plants, local sewage treatment plants together with sewerage systems and connection of buildings to the collective sewerage system.</i>
	5.8. Support for entrepreneurs within the scope of low-emission and resource-saving management
	<i>Part 1) Energy audit at a company</i>
	<i>Part 2) Increase of energy efficiency</i>
	<i>Part 3) E-ACCUMULATOR – Ecological accumulator for the industry</i>
	5.9 Gekon – Generator of Ecological Concepts

Instead of summary

It is a very difficult, or even impossible, task to describe the heritage of the National Fund and the changes that took place in Poland within 25 years on a few dozen pages. But even this abbreviated register of activities of the National Fund as the main link of the environment protection financing system, omitting many aspects from its operations (some of them only mentioned), shows spectacular image of comparisons between memorable 1989 and Poland today. We are a conjugated country in a modern family of the European Community, where the main incentive of operations is the good of the society, asked for by teenage Marta. We live in a country departing far away from the one described by her and the one she remembered from her childhood. We are very sorry that we have not found her that we cannot show her our country, as it is today. But maybe we were able to describe at least a fragment of positive changes in the Polish reality, in which we had and still have a significant share.



More efficient and effective system

Within 25 years of the National Fund, it fulfilled not only the role of the financing source for environment protection in Poland, but it also was and still is an important element of management and policy in the area of economy for the Minister of Environment. Also the Polish law concerning ecological issues and the public finances system, and for a few years now the legislation concerning the membership of Poland in the European Union structures, bears some sort of a mark of the National Fund. Many legal acts and practical solutions were implemented within the 25-year history, among other things thanks to initiatives of specialised personnel of the National and provincial funds for environment protection and water management. Regular meetings of the Convention of Presidents of Provincial Funds for Environment Protection and Water Management, management of the Board of NFEPWM and Bank Ochrony Środowiska S.A. with the board of the Ministry of Environment were the element of modern management. The years of cooperation, implementation of four-year strategies, have led to the consolidation of this sector, to unification of strong system financing environment protection in Poland. Because of that, we have a mechanism that allows for efficient management in the field of environment protection, and the effects of such policy in the field of ecology....? Well, they may be appreciated by the next generations. Maybe someone, someday, maybe a thirteen year old kid, will write to the National Funds: thank you Poland!

Modern public institution and friendly employer

The National Fund for Environment Protection and Water Management is a continuously improving financial institution, where the personnel is the best quality. Each progress has its price. Change of the National Fund's headquarters and taking over three office buildings on ul. Konstruktorska on Służewiec in Warsaw, affected the organization and method of work, not excluding the relations between people. However, since the beginning of the National Fund, everyone who used to work or started their professional career, starting with ministers to regular employees, knew that they create something really important for the protection of environment and Poland. Many of these people, who provided foundations for our institution, still works for the National Fund. Since the beginning of its existence, two persons and sixteen persons for twenty and more years. Some of them left, other got promoted or retired, but there were some who worked among us until the end of their lives. We remember the dead, we respect the creators of the National Fund and with satisfaction receive signals concerning high rate of our personnel, which is our best quality.

High professional level, experience in operating financial resources and investment projects as well as non-investment projects, were the indicators deciding about personnel policy of our institution since the beginning of the National Fund. Each subsequent year and obligations imposed on the National Fund raised standards for persons applying for work in the biggest institution engaged in financing pro-ecological projects. Recruiting high class specialist from various domains in the field of environment protection, economy, engineering, finances, public procurement law, etc., was necessary, especially in the process related to preparation and introduction of projects concerning implementation of European Union funds. High professional level of the National Fund's personnel is confirmed by audits performed by national and foreign institutions, as a results of which we were entrusted with a responsibility to use a few dozen billion EUR from another EU budgets.

In total, the National Fund employs over five hundred people (including about two hundred engineers), most of them with university diplomas (91%). More than half

From a notebook to a Conclusion Generator



Archival notebooks with handwritten contract from the pioneering years of NFEPPWM.

The oldest employees of NFEPPWM recall the beginning of "digital" operation of the National Fund, which consisted of four computers and a simple server under a desk. Only since 1992, the National Fund switched from manual financial accounting (so called "American") to the computer system of C-Land company, which was used, with a few modifications, until 2002. Original notebooks with handwritten records of concluded contracts, annotations of employees, accountancy services and financial analysts are still available. Evolution of electronic service, both inside the institution as well as of beneficiaries and applicants, must follow fast changing reality.

Today, the Internet calling card of the National Fund consists of a dozen web sites (including the main site, Bulletin of Public Information, portal of the Program Infrastructure and Environment) devoted to individual fields and priority programs, a few internal portals (HR, ENFOŚ-News for employees, Lotus), and first and foremost modern instruments dedicated to beneficiaries of the National Fund, among other things, concerning applications and projects with the financial support of the EU (Applications Generator for OP IE Payment), Applications Generator for Financial Support (for the electronic service concerning national applications), e-OPLATYgeolog – system for operational and concession charges service related to ePUAP (platform for public administration).

Developed IT system of NFEPPWM consists of a few dozen modules and smaller applications and tools developed using various IT technologies. At the moment, the National Fund, according to the IT Strategy adapted in 2013 for the years 2013-2016 with the perspective until 2020, prepares to implement the Integrated IT Platform, among other things as a response for the needs of beneficiaries and according to the information society policy, both at the national level (e-government, e-employment) and on the European level (eEurope 2020. Information Society for All).

"We were lucky to have met great people"

What was the work like in the National Fund in the pioneering 90s? Employees with longer seniority, recall with nostalgia the family atmosphere in the old building of the "ecologists environment" on ul. Wawelska (the first headquarters of NFEPWM in 1989-1994) where everyone knew everyone and worked in a small team, feeling the heartbeat of the Fund. „We were a well-oiled team, for whom work for the National Fund meant much more than only a good job”; „We were lucky to have met great people”; „Many cases were settled on corridors, without writing down and organizing meetings. I think that we have lost some of that” – only the selected fragments of memories from the pioneering years.



The first half of the 90s include two major events in the history of the Office of the National Fund. At the turn of 1991/1992 – IT services at NFEPWM were implemented and three years later (1995), the NFEPWM Office was moved to new headquarters (initially this was only one building, adapted for offices on Industrial Stuzewiec), from ul. Wawelska 52/54 (building of the Ministry of Environment) to ul. Konstruktorska 3A. Together with new obligations, personnel of the National Fund grew as well, and the headquarters was developed by another two old buildings, adapted for offices, on ul. Konstruktorska. In 2011, some of the employees of the National Fund were moved to the office on ul. Bracka, where until 2010, the EkoFundusz Foundation had its headquarters. Both in the statutory activity (financing environment protection and water management) as well as the accompanying operations, the National Fund, as a holder of "Green Office" certificate, applied the principles of Corporate Social Responsibility (SCR) with particular attention drawn to social dialogue and limiting adverse impact on environment. One of the elements of these pro-ecological actions was the installation of solar collectors on the roof of NFEPWM headquarters. Nesting boxes for urban birds, including swifts, were located next to them.

of the personnel with university degree completed post-graduate studies, including 136 employees on two different majors. A few dozens of people have Ph.D. degrees, and 14% of employees have additional specialist professional licenses, e.g. expert in the field of preparing the assessments of environmental impact, construction certificates, auditor's titles, engineering specialist licenses in the field of technical infrastructure or environment protection, trainings completed with examinations in the field of administration, legal advisory, counsel advisory, MBA courses. Over a hundred people has the Projects Management Methodology Certificate PRINCE2 Foundation, 67 the Projects Management Methodology Certificate SME. It is not possible to mention all professional licenses possessed by our employees. This is constantly in progress („*The National Fund – learning organization*”), and the system of trainings provided both inside the institution as well as using outsourced specialist training and advisory centers is still being developed. The form of tele-working in the fields where task-based form of cooperation is possible is valued by our employees.

People employed in the Fund are engaged not only in the professional work. Many of them fulfil various social functions, they are advisers working in the self-government structures, sport activists as well as journalists, sailors, chess players, apiarists.... Alike in any other discipline, we have hotheads for music, painting, photography. Trade unions are present in the Fund as well as social committee, and older colleagues meet in the Retired Circle of NFEPWM. Integration leaves and meetings are the tradition as well as participation of employees in actions and campaigns organized by ecological organizations. We are engaged in the protection of environment not only as professionals financing and implementing projects. That is why, we take part in the events such as "Earth Day", "Cleaning the World" or "Day without a Car", not only by the professional duty, but also because of own beliefs, that eco-development depends on all of us. Simply saying: we are pro-ecological.

But the "Fund people" include not only our personnel Modern organizations are built on trust, both among cooperating institutions and entities using the support provided by us, as well as among the employees themselves, local societies and in the public opinion. Creation of positive image of our institution consists also of starting cooperation with new persons and extending the circle of friends and allies of the National Fund. We



Educational play before NFEPWM stand on Earth Day 2014 in Warsaw. Photo NFEPWM archives

have new proposals and solutions in that field, among other things, Code of Ethics and Spokesman for Ethics, HR portal and Internet Bulletin for employees ENFOŚ News.

In 2013, the Strategy for Human Resources Management at NFEPWM was passed for the years 2013-2016 with the perspective until 2020. It presents the main goal: *The National Fund – modern institution and friendly employer*. The emphasis is put on modernity, good practices, innovativeness in the operations but also attention was drawn towards employees, providing them with good working conditions. Four HR processes were found to be priority: motivation, integration, management (leadership) and interpersonal communication. In 2013, the process of improvement and raising personal, professional and management competence of employees was continued, application of flexible forms of employment, including tele-working, operations in the field of Code of Ethics, employing dialogue with social partners on employee-related matters as well as continuation of free-of-charge student apprenticeships.

Summary

The National Fund for Environmental Protection and Water Management has been established in 1989, in the historical period of system transformation in Poland, when the frameworks of efficient environment protection have opened, concerning repair of many-year-long negligences in this field and when Poland was rapt by deep economic crisis, which fact precluded financing ecological operations from the state budget.

System for financing the environment protection from the funds: National and provincial appeared to be the most effective. The mechanism of charges for using the environment and penalties for infringement of environment protection requirements allowed for creating the economic instrument that initiated and supported ecological investments but also imposed duties on companies, enforcing pro-ecological operations. The support mechanism from public resources allowed for, as an incentive, initiating many projects, among other things, within the scope of air protection, waste management, water and sewage management, education and environment protection, which without ecological funds would not have sufficient budget for implementation.

The system of funds, tested in practice, has also become a partner for foreign institutions, which started another program of financial support in the field of environment protection in Poland, both within the pre-accession period and after accession of Poland to the European Union.

The National Fund, within 1989-2013, spent 33.1 billion PLN from own resources, involvement of this amount allowed for implementation of projects of value ca. 130 billion PLN. Value of foreign resources operated and at the disposal of the National Fund exceeded 19.6 billion PLN.

Role, especially of the National Fund, for the development of Poland (provincial funds concentrate on financing regional projects), is additionally emphasized by huge share in financing budget tasks, of strategic importance for ecological safety of the country, protection and rational, efficient use of resources, improvement of conditions and maintaining proper standard of life.

As a result of engagement of the National Fund resources, a few million people obtained proper protection against flood hazards and a few dozen million people use the water and sewage system and the system for waste disposal. Probably not everyone realize that they live in cleaner surrounding and use modern infrastructure because of financial engagement of the National Fund.

NFEPWM offer is addressed in the recent years directly to households (among other things, household sewage treatment plants, solar collectors and other sources of "green energy", energy efficient houses and apartments), but it also can be perceived as unit creating citizen society, aware of its impact on the environment and rationally planning its operations, so that future generations are able to live in clean environment and use its resources.

Members of NFEPWM Board within 1989-2014

Lesław Puczniewski

Vice-President of the Board
acting as President of the Board (until appointment of the President of the Board) 1989.07.01 – 1993.02.17

† Tadeusz Pusiak

Deputy President of the Board 1989.07.01 – 1991.08.01

Bronisław Kamiński

President of the Board 1991.02.05 – 1992.03.13

Władysław Jasiński

President of the Board 1992.03.13 – 1993.02.17

† Kazimierz Chłopecki

Deputy President of the Board 1992.05.01 – 1992.12.14

Jan Rey

Deputy President of the Board 1992.12.15 – 1993.05.11

Marek Gruchelski

President of the Board 1993.02.17 – 1994.03.03

Mariusz Popiótek

Deputy President of the Board 1993.01.05 – 1994.07.12

Jerzy Kędzierski

Deputy President of the Board 1993.03.10 – 1997.12.22

acting as President of the Board 1997.12.22 – 1998.03.09

Deputy President of the Board 1998.03.09 – 25.05.1999

† Kazimierz Chłopecki

Deputy President of the Board 1994.02.01 – 1994.03.03

acting as President of the Board 1994.03.03 – 1994.07.20

President of the Board 1994.07.20 – 1996.06.25

Jerzy Kędzierski

acting as President of the Board 1996.06.26 – 1996.09.30

Józef Zegar

President of the Board 1996.10.01 – 1997.12.22

Janusz Ostapiuk

Deputy President of the Board 1994.05.06 – 1997.12.02

Wojciech Bieńkowski

Deputy President of the Board 1995.11.01 – 1998.01.30

Maria Zajączkowska

President of the Board 1998.03.09 – 2002.07.07

† Sławomir Skrzypek

Deputy President of the Board 1997.11.27 – 2000.03.29

Lech Płotkowski

Deputy President of the Board 1998.03.09 – 2002.01.17

Zbigniew Myczkowski

Deputy President of the Board 1999.06.17 – 2000.06.27

Kazimierz Kujda

Deputy President of the Board 1998.01.30 – 2000.07.07

acting as President of the Board 2000.07.07 – 2000.08.18

President of the Board 2000.08.18 – 2001.11.26

Cezary Starczewski

Deputy President of the Board 2000.04.01 – 2001.11.26

Wiesław Longota

Deputy President of the Board 2000.08.18 – 2001.11.21

Zofia Hekiert Deputy President of the Board	2000.11.22 – 2001.11.26
Jerzy Witold Pietrewicz President of the Board	2001.11.27 – 2003.03.20
Jan Traczyk Deputy President of the Board	2001.12.14 – 2002.06.06
Jerzy Małachowski Deputy President of the Board	2002.01.17 – 2005.11.21
Jerzy Swatoń Deputy President of the Board	2001.12.14 – 2003.03.20
President of the Board	2003.03.20 – 2004.05.02
suspension of the function due to election to the function of the Minister of the Environment	2004.06.30
† Jan Hawrylewicz Deputy President of the Board	2002.01.17 – 2005.03.21
acting as President of the Board	2004.05.05 – 2005.03.21
President of the Board	2005.03.22 – 2006.01.02
Ryszard Ochwat Deputy President of the Board	2002.06.07 – 2003.03.20
Jerzy Kędzierski Deputy President of the Board	2003.03.20 – 2006.01.17
Janusz Stanisławski Deputy President of the Board	2004.07.19 – 2006.06.08
Kazimierz Kujda Deputy President of the Board	2005.11.21 – 2006.01.02
acting as President of the Board	2006.01.02 – 2006.10.20
President of the Board	2006.10.20 – 2008.01.21
Lech Płotkowski Deputy President of the Board	2005.11.21 – 2006.10.19
Oskar Kowalewski Deputy President of the Board	2006.02.02 – 2006.10.19
Bernadetta Czarska Deputy President of the Board	2006.06.12 – 2008.06.03
Artur Michalski Deputy President of the Board	2006.09.25 – 2008.01.03
Jerzy Wolski Deputy President of the Board	2006.10.20 – 2008.01.21
Jan Rączka President of the Board	2008.01.28 – 2012.12.31
Władysław Jan Majka Deputy President of the Board	2008.01.03 – 2012.12.31
Małgorzata Skucha Deputy President of the Board	2008.01.21 – 2012.12.31
Jan Wiater Deputy President of the Board	2008.06.03 – 2012.12.31
Małgorzata Skucha President of the Board	since 2013.01.01
Jacek Gdański Deputy President of the Board	since 2013.01.01
Barbara Koszułap Deputy President of the Board	since 2013.01.01
Krystian Szczepański Deputy President of the Board	since 2013.01.01

President of the Board of Directors of NFEPWM 1989-2014

Bronisław Kamiński
Józef Kozioł
Józef Stanisław Zegar
Bernard Błaszczyk
Józef Stanisław Zegar
Andrzej Walewski
† Waldemar Michna
Janina Józwiak
Dorota Jakuta
Józef Lubieniecki

Krzysztof Szamałek
Krzysztof Panas
Krzysztof Szamałek
Andrzej Skowroński
† Sławomir Skrzypek
Tadeusz Żarski
Stanisław Gawłowski
Aneta Wilmańska
Janusz Ostapiuk (od 7.02.2014)

Ministers of the Environment (protection)²⁸ (within 1983-2014)

1983 – 1985 Office for Environment Protection and Water Management

† Stefan Jarzębski (22.11.1983-11.1985)

1985 – 1989 Ministry for Environment Protection and Natural Resources

† Stefan Jarzębski (11.1985 – 23.10.1987)

† Waldemar Michna (23.10.1987- 19.09.1988)

Józef Kozioł (14.10.1988 – 1.08.1989)

Bronisław Kamiński (12.09.1989 – 20.12.1989)

1989 – 1999 Ministry for Environment Protection, Natural Resources and Forestry

Bronisław Kamiński (20.12.1989-14.12.1990)

Maciej Nowicki (12.01.1991 – 5.12.1991)

† Stefan Kozłowski (23.12.1991 – 5.06.1992)

Zygmunt Hortmanowicz (11.07.1992 – 4.05.1993)

Bernard Błaszczyk (05.1993 – 18.10.1993 ministry manager)

Stanisław Żelichowski (26.10.1993 -17.10.1997)

Jan Szyszko (31.10.1997 – 19.10.1999)

1999 – Ministry of the Environment

Antoni Tokarczuk (19.10.1999 – 19.10.2001)

Stanisław Żelichowski (19.10.2001 – 3.03.2003)

Czesław Śleziak (3.03.2003 -2.05.2004)

Jerzy Swatoń (2.05.2004 – 25.04.2005)

Marek Belka (25.04.2005 – 24.05.2005 acting as the Ministry Chief as the Prime Minister)

Tomasz Podgajniak (24.05.2005 – 31.10.2005)

Jan Szyszko (31.10.2005 – 16.11.2007)

Maciej Nowicki (16.11.2007 – 1.02.2010)

Andrzej Kraszewski (2.02.2010 – 18.11.2011)

Marcin Korolec (18.11.2011 – 27.11.2013)

Maciej Grabowski (od 27.11.2013)

²⁸ The years 1972-1983 were omitted, when the environment protection was included in the Ministry of Administration, Land Management and Environment Protection. The period of acting as the minister of separated office is given in brackets.

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