The Prospects for International Collaboration in Environmental Protection and Implementation of Sustainable Development in the New EU Programming Period (2007-2013)

Edited by
Klaudia Giordano, Paulina Legutko-Kobus

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The John Paul II Catholic University of Lublin
Al. Racławickie 14, 20-950 Lublin (Poland)
e-mail: oinfo@kul.lublin.pl
http://www.kul.lublin.pl

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*Mariusz Kistowski**

The Efficiency of Implementing National Ecological Policy in the years 1995-2005 and the Sustainable Development of Poland

1. Introduction

December 2006 saw the arrival of the new National Environmental Policy (NEP) for the Years 2007-2010 Providing for a Perspective for 2001-2014 which revised the former policy which had been initiated as late as 2003. Future documents of this type should be preceded by a reliable analysis of environmental pressure and environmental quality. In particular, there ought to be an assessment of the completion of the action plans in environmental protection and their implementation during the programming period and their impact on environmental quality.

The new edition of the NEP attempts to provide this sort of assessment and cast light on the challenges of ecological policy, yet this has only been done in generic terms. The diagnosis has not been based on an in-depth analysis of the progress in environmental protection between 2003-2006. It has in fact been limited to an expert evaluation of the trends in the field and lists current problems. A particular hindrance to the evaluation of the progress during the drafting of the NEP was the lack of statistical data for the years prior to the previous programming period (2006).

A characteristic feature of the new NEP is the reframing of some objectives present in the former policy in order to adapt them to the 6th Community Action Plan for the Natural Environment. One such objective is climate protection. Another important feature is the absence of any definition of most of the quantitative environment protection indicators, i.e. emissions, harmful substance content in the environment or any other indicators to be fulfilled during the implementation period of the policy. The scope of the indicators under the new NEP is noticeably narrow. Insofar as the first mentioned change is justified, the other is unfavourable from the viewpoint of the effective completion of the NEP objectives and the monitoring of its progress. The generic qualitative formulation of the objectives is more convenient for the entities implementing them, yet it reduces the options to control their progress and, consequently, may impair the successful accomplishment of the ecological policy and the future verification of trends made on the basis of the evaluation of this progress.

* Professor, University of Gdańsk, Institute of Geography.

This article aims to weigh up the consistency of the diagnosis of the effective implementation of the ecological policy for the years 2003-2006 contained in the new draft NEP and to contrast it with the dynamic changes in selected environmental protection indicators during the previous decade. This analysis will reveal the areas in which progress in environmental protection is insufficient. This will provide the backdrop to the preliminary analysis of the achievability of the NEP quantitative objectives for the years 2007-2010 as the primary gauge of the sustainable development of Poland.

2. Previous efficiency and problems of environmental protection in the context of the 2007-2010 NEP

The diagnosis contained in the draft NEP stresses both the objectives which were not obtained in previous years, and those which were achieved. Among the ones regarded as failures there are:

- a low level of ecological awareness in Polish society resulting in, for example, consumer behaviour harmful to the environment,
- the use of anti-ecological subsidies for some forms of business activity,
- an insufficient degree of incorporating environmental protection issues into planning and strategy papers,
- the unsatisfactory improvement in the quality of surface waters despite a considerable drop in the amount of waste dumped into rivers,
- a worsening in air quality in urban areas mainly due to the growing number of vehicles (nitrous oxide emission) and exceeding the norms of dust concentration in many regions,
- an increase in noise intensity, in particular that caused by traffic,
- very limited (2%) selective municipal waste collection which results in simple disposal being the main treatment method of waste disposal,
- the imminent threats to soil quality and quantity consequent to an intensive agricultural economy and the use of vast areas of land for non-farming and non-forestry purposes.

In spite of the fact that the advancement in the conservation of biological diversity is shown to be successful in the diagnosis, there are also problems in this regard which leave the question of success open to doubt. These are:

- the pressure of investment in the high value natural areas,
- chaos and delays in the creation of the Natura 2000 Network,
- no instruments of landscape and nature conservation outside the legally protected areas.

Although not mentioned in the diagnosis, the list may be expanded by adding the fact that the stagnation in the development of new protected areas, as well as the Natura 2000 Network which is required by EU Directives as occurred.

One of the fundamental causes of the lack of efficiency and insufficient realisation of the environmental objectives is a dramatic decline in the financial resources allotted to it: from over 9 billion PLN in 1998 to 5-6 billion PLN annually in the years 2002-2005. This refers both to national resources: the state budget, regional budgets, ecological funds, as well as to external financing (mainly EU) which having been obtained are frequently used ineffectively and inadequately when compared to the opportunities available.

The failures in environmental protection outlined above are likely to greatly hinder the process of implementing the EU Directives on the conservation of water, air and biological diversity plus those on waste management.

Bearing this in mind, the successes of recent years in ecological policy seem to be somewhat partly. Yet, the major ones are:

- the decrease in industrial air pollutions,
- the reduced interplay between economic growth and the volume of produced waste, in particular industrial,
- more industrial waste being recycled,
- less pollution emission to surface waters.

A closer look at the origin of these successes and failures underpin the definition of some key actions aimed at improving the situation. They focus on the following:

- better quality and enforcement of legal regulations,
- a considerable rise in the financial outlay on the environment,
- enhanced efficiency of environmental protection instruments,
- integration of environmental objectives with policies, strategies and sectoral programmes,
- better cooperation between environmental bodies and public partners,
- institutional changes in environmental supervisory bodies,
- realization of environmental requirements at the correct and appropriate time resulting from membership of the EU.

The diagnosis of environmental problems outlined in the draft NEP for 2007-2010, despite its generic character, is close to the truth and reliably describes the relevant issues that have emerged in recent years. It clearly follows that there has not been effective enough protection of the environment recently, regardless of the correctly defined action plans in the former policy. This impaired effectiveness results from the malfunction of most environmental protection instruments. In particular, the educational, organisational and planning instruments seem to be operating deficiently; similarly, there is still much left to do in the area of economic, legal and environmental instruments.

3. The basic objectives of the 2nd National Environmental Policy for the years 2002-2010

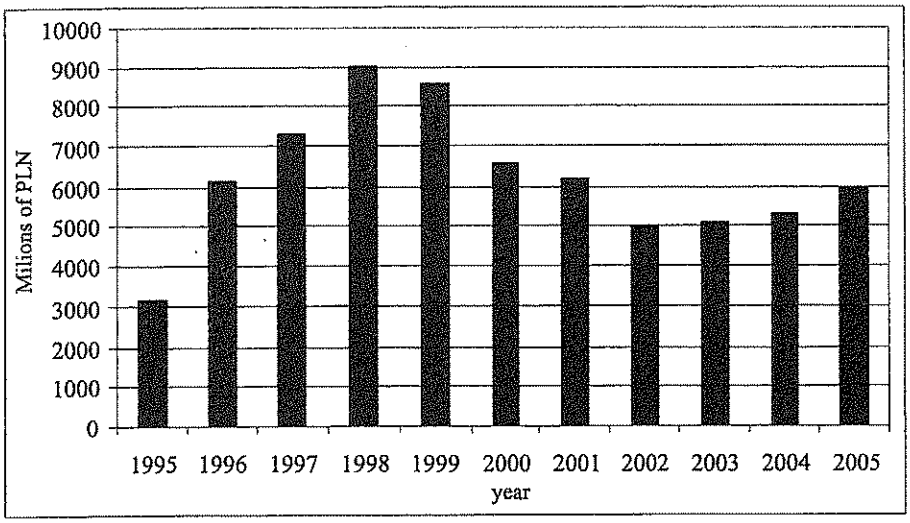
The 2nd National Environmental Policy drafted at the beginning of the 21st century and covering the years 2001-2010 defined numerous quantitative objectives which are particularly desirable in this period. They were discussed in detail in the executive programme attached to this document at the end of 2002. Although the present programming period is not yet over, the analysis of the progress made in its first half allows the evaluation of both the effectiveness of the implementation of previous goals, and the general forecast for the goals proposed in the NEP for the years 2007-2010. This NEP in fact is merely a revised version of ecological policy drafted five years previously.

Among the primary quantitative objectives defined in 2000, there are:

- reduction in water and resource consumption in production per GNP and the value of sales in industry,
- reduction in energy consumption in industry by 25% per GNP unit,
- doubling of the renewable energy share in the national energy balance between 2000 and 2010,
- reduction of emissions: dust – by 75%, SO_2 – by 56%, NOx – by 31%, LZO (without methane) – by 4%, ammonia – by 8%,
- reduction of sewage dump: from industry – by 50%, from municipalities and surface flow – by 30% each,
- maintaining the balance between reclaimed land and land planned for reclamation every year (until 2025),
- doubling the amount of recycled industrial waste.

The objectives listed above, except for 3 and 6, concern the period between 1990 and 2010.

The executive programme accompanying this policy and prepared two years afterwards included only the first three quantitative objectives mentioned above. This can be construed as a precautionary measure and a cautious approach which was visible in the first few years of the 2nd SEP and probably ensued from the downward trend in financial outlay on environmental issues at the end of the 1990s (Fig. 1).



Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 1. *Environmental financial outlays in Poland in the years 1995-2005.*

4. The quantitative objectives of the draft National Environmental Policy for the years 2007-2010 providing for a perspective for 2011-2014

The reduction of clear, quantitative objectives formulated in the strategy papers was maintained in the latest NEP, December 2006. It is difficult to pinpoint unambiguously the reasons for such an approach. It is possible that the few years' experience of devolution of the implementation of ecological policy at both the national and provincial level, according to the provisions of the Environmental Protection Law Act 2001, made decision-makers think that the achievement of quantitative objectives rather demanding, as is the monitoring of effective implementation of policies formulated in quantitative terms. It follows from both the inadequate monitoring of environmental quality and the progress in environmental protection, that there are methodological obstacles in providing proper indicators to measure these objectives. It is also possible that the drafters of the NEP and the bodies adopting this document intended to make some of its objectives vague and make the approach more general so that any progress would be harder to control, yet, if achieved, would be easier to identify, even if the actual improvement is next to minimal. By using terms such as "elevate", "enhance", "growth", "increase", "reduction", "drop" without providing – at least where it is was possible – the goals to be achieved, it is not that hard to prove after a few years of the policy that there has been an improvement, even if it is minute and does not necessarily have to follow from the actions taken.

If these truly were the intentions of the authors of the draft NEP, it does not bode well for the Polish environment. This would testify to a frequent occurrence in the administration where more attention is attached to the sole fact of preparing a legally required policy document than to the positive effects its implementation may bring.

Going back to the draft SEP for the years 2007-2010, including the perspective for 2011-2014, it provides five essential groups of objectives:

- the enhancement of the environmental management system,
- the protection of natural heritage and the rationed use of natural resources,
- the balanced use of resources, water and energy,
- the further improvement in environmental quality and ecological safety for the health and welfare of Polish citizens,
- climate protection.

When contrasted to the former policy, the new one expanded by the last of the listed objectives.

From among fifty six detailed objectives, only seven are of a quantitative character. They include[1] (*National Environmental Policy for the years 2007-2010 ...*):

- afforestation taking into consideration the landscape and natural conditions (in 2007-2010 – 130 000 hectares, including about ¾ in the private sector);
- the improvement of industrial power efficiency, saving 9% final energy within 9 years by 2017;
- supporting the construction of new installations of renewable energy so that the share of renewable energy in the overall structure of energy carriers and energy production reaches at least 7,5% in 2010;
- assuring that the share of biocomponents in the liquid fuel market, including liquid biofuels, in 2010 reaches 5,75%;
- the completion of the programme of construction sewage systems and waste treatment plants with enhanced nutrients disposal in the agglomerations above 15 000 RLM by the end of 2010;
- a reduction in the volume of all dumped waste; the target is that by 2013 the municipal biodegradable waste will not exceed 50% of the mass of this waste produced in 1995;
- the complete elimination and neutralization of PCB[2] by 2010.

The policy also proposes a few objectives of a semi-quantitative character whose realization is scheduled in the long-term (by 2014). These are, for example:

- increased consumer awareness – recognising the EMAS logo, the PN-EN ISO 14001 sign, Clean Production, Responsibility and Care by 50% of society;

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[1] MINISTERSTWO ŚRODOWISKA: *Polityka ekologiczna państwa na lata 2007-2010 z uwzględnieniem perspektywy na lata 2011-2014*. Warszawa 2006.

[2] *Polychlorinated biphenyl.*

- rationed use of underground waters ensuring the balance between consumption and supply.

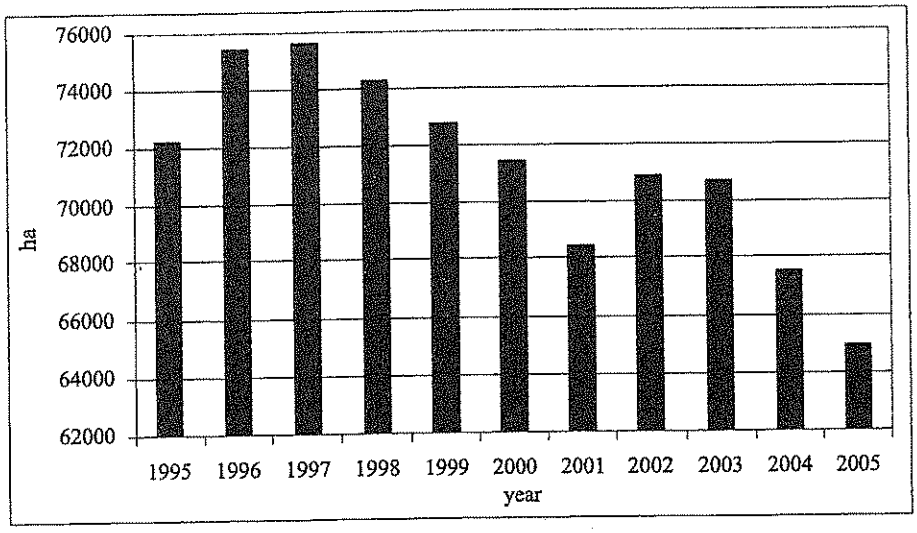
Although the draft NEP discusses in depth the Polish requirements on air protection deriving from EU Directives and other international conventions, no quantitative targets were defined among the action plans until 2010. It is possible to monitor the effectiveness of the achieving of these objectives on the basis of currently held monitoring and statistics but only to a limited extent.

5. The efficiency of the realization of polish ecological policy at the beginning of the 21st century

Relying on the statistical data of different sources, mainly from the Central Statistical Office, an analysis was made of the implementation effectiveness of ecological policy within the last decade (largely between 1995 and 2005) and concentrated mainly on the quantitative objectives provided for in the two previously binding NEP documents. Due to missing or dispersed data, the analysis failed to cover all the defined goals. The data and indicators taken into account were:

- soil degradation and rehabilitation,
- municipal and industrial waste,
- emission of selected dust and gaseous pollutions into the atmosphere,
- the use of renewable energy resources,
- waste treatment,
- forest rate and afforestation areas,
- the area of ecological farming,
- the award of ISO 14001 certificates.

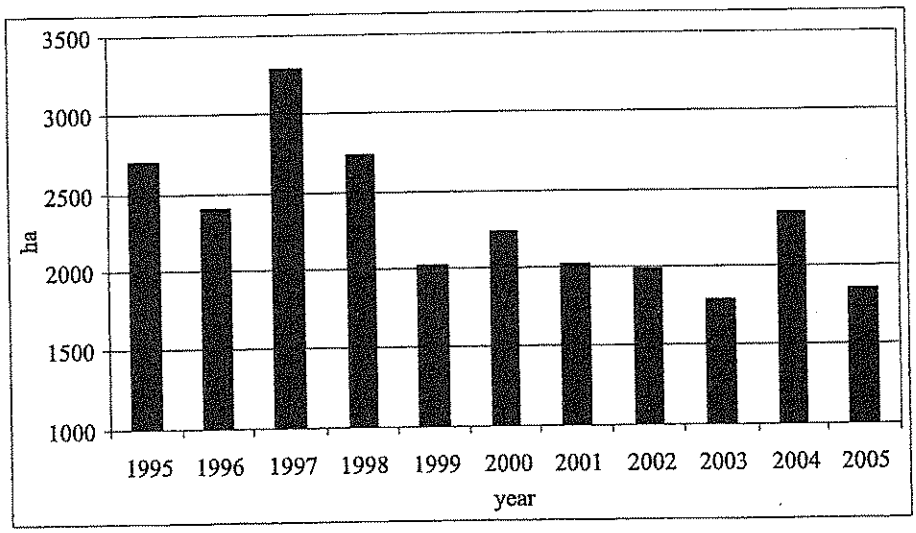
With reference to the degraded land intended for rehabilitation, the decade showed gradual progress. The area of degraded and devastated land dropped in the years 1996-2005 from over 75 000 hectares to 65 000 hectares, i.e. by about 14% (Fig. 2). It is difficult to determine beyond doubt whether this is major or minor progress.



Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 2. *The area of new devastated and degraded land in Poland in the years 1995-2005.*

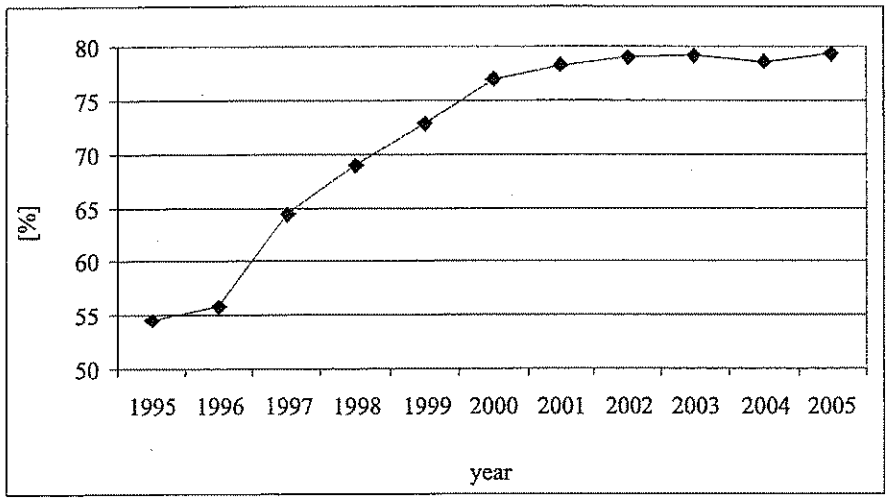
Of some concern, is the drop in the area of yearly rehabilitated land in the first decade of the 21st century to the average level of below 2 000 hectares, while at the end of the 1990s this number was 2500–3000 hectares a year (Fig. 3). This may have an adverse impact upon Poland's possibility of catching up with the European average in the neutralization of devastated and degraded land.



Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 3. *The area of reclaimed land in Poland in the years 1995-2005* .

Considerable progress was made in the field of recycling and the reusing of industrial waste. The volume of this waste has been relatively the same in the last ten years which is about 125 million tonnes yearly; only in 1998 it rose to 131 million tonnes and in 2002 dropped to 118 million tonnes. In the context of current economic growth combined with the increase in industrial production and GNP, the level of this waste remaining relatively unchanged is a positive indicator. It is even more static by the mounting volumes of recycled industrial waste (25% in the years 1995-2005) (Fig. 4).



Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 4. *The percentage of recycled industrial waste in Poland in the years 1995-2005.*

On the other hand, the larger volume of recycled waste after 2000 was slowed down and stabilized at the level of 80%. It shows the exhaustion of simple reserves in recycling methods and the necessity of investing large resources to increase this percentage. This leaves the possibility of achieving the NEP goal of doubling the recycled industrial waste in the years 1990-2010 open to doubt. Carefully estimating this percentage in 1990 at about 45%, in 2010 it should be reaching over 90%. However, it does not seem attainable in the foreseeable time-frame.

When it comes to municipal waste, the situation appears to be even worse. Indeed, between 2000 and 2005 there was a drop in the collection of municipal waste from 12,2 to 9,5 million tonnes. This is not, however, due to the reduction in the volume of waste, which at that time was around 12 m tonnes, but is the result of the following factors:

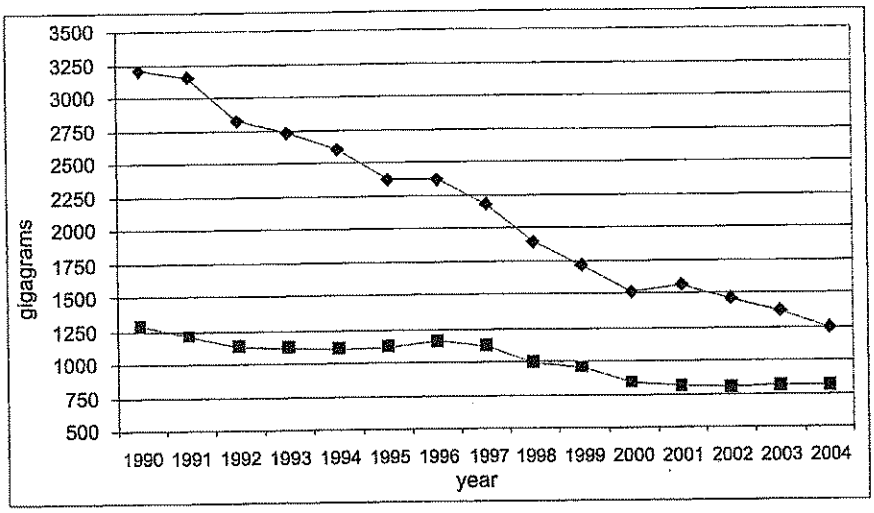
- the property owners failing to secure agreements with waste collection enterprises,

- waste dumping in illegal areas,
- lack of communes' control over the services under concluded agreements,
- thermal processing of waste in home installations (often illegal),
- reduction in the weight of waste.

The growth of selective waste collection from 13 000 tonnes in 2000 to 243 000 tonnes in 2004 (0,1 and 2% of the produced municipal waste respectively), seems considerable. However, it calls into question the objective of the National Waste Management Plan which anticipates the volume of selectively collected waste reaching 10% in 2010.

The most impressive achievement in environmental protection of the last decade was the reduction of dust and gaseous emission into atmosphere. Between 1990 and 2002, emissions were reduced by 75% – the number to be achieved by 2010. However, in the last few years there has been a slight increase in emissions, which may have an adverse effect on this satisfactory result. Similarly, in the middle of the present decade, all the anticipated 2nd NEP objectives on emission reduction were met. Before 2004 the following emissions had been reduced (Fig. 5):

- sulphur dioxide by 61% (target: 56% for 1990-2010);
- nitrous oxide by 37% (target: 31%);
- volatile organic compounds by 30% (target: 4% for emissions from anthropogenic sources);
- ammonia by 42% (target 8%).



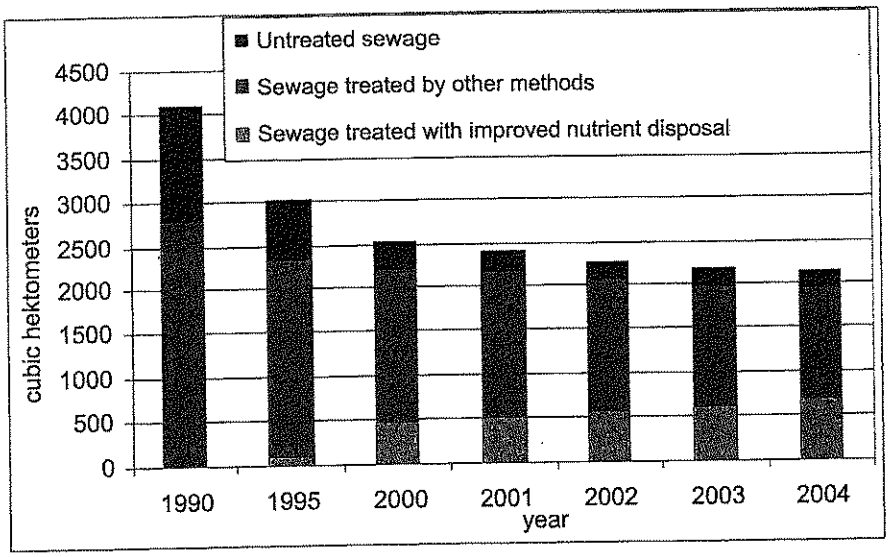
Source: Główny Urząd Statystyczny: *Ochrona środowiska 1991-2005*, Warszawa.

Fig. 5. *The emission of sulphur dioxide (upper line) and nitrogen oxide (lower line) in Poland in the years 1990-2004*

While the reduction of SO_2 emission in the last 15 years has been fairly constant, the level of NO_x has remained stable in the first decade of the 21st century and averaged about 800 Gg annually. Moreover, the emissions of ammonia dropped significantly in the mid-1990s and for five years has remained relatively fixed at the level of 320 Gg. Similarly when it comes to the volatile organic compounds whose emissions from anthropogenic sources totals about 600 Gg annually. In the case of the two last groups of pollutants, the objectives seem unthreatened even if emissions grow as a result of the economic boom. Yet, the situation may deteriorate in connection with the rise in NO_x emission and, in particular, carbon dioxide emission which had been displaying a downward trend until 2000 but began to rise few years later. It is of importance due to the dominating quantitative share of these pollutants which now consist of almost 98% of all gases discharged to atmosphere. In general, however, apart from other socio-technical actions, the reduction of industrial emission should be regarded as a success story from the previous decade.

One of the basic methods of reducing harmful emissions into the atmosphere is the change in the used energy resources. Thus, it is the primary goal of Polish ecological policy to raise the share of these resources in the structure of produced and used energy, both primary and electric. This goal is also important because its share has hitherto been minimal and much more limited than in the old EU countries. Between 1995 and 2004 the renewable energy share in the overall national energy balance only rose by 0,2 percent, i.e. from 3,4 to 3,6%. The resources mostly rely on water which supplies about 95% of renewable energy (including 80% from large hydroelectric power plants). Of marginal value among the renewable energy resources are: wind, biomass and sunlight. Hence, the 2nd NEP objective of 2000 which proposed doubling renewable energy in the overall energy balance in the years 2000–2010, seems unattainable in the light of the progress made to date. If in the first four years it reached 0,2 percent, it is unreasonable to look ahead to a rise of sixteen times in six years time, i.e. to 3,2 percent. It also concerns the absolute quantity of the energy produced from renewable resources whose growth in the years 2000–2004 totalled about 600 TJ, i.e. 7%. The rate of growth of the renewable energy resources in the last decade has been largely inadequate in relation to the needs resulting from the domestic and EU environmental and energy policy.

Substantial progress in the quantity and size of waste dumped into surface waters has been made in the last decade. Between 1990 and 2005, the volume of municipal and industrial waste requiring treatment was reduced on two occasions (Fig. 6), and after 1995 there was a considerable rise in the treatment of sewage with improved nutrients disposal, that is, the most effective means of disposal. While in mid-1990s this sort of treatment was marginal, ten years later about 35% of sewage was treated in such a way.



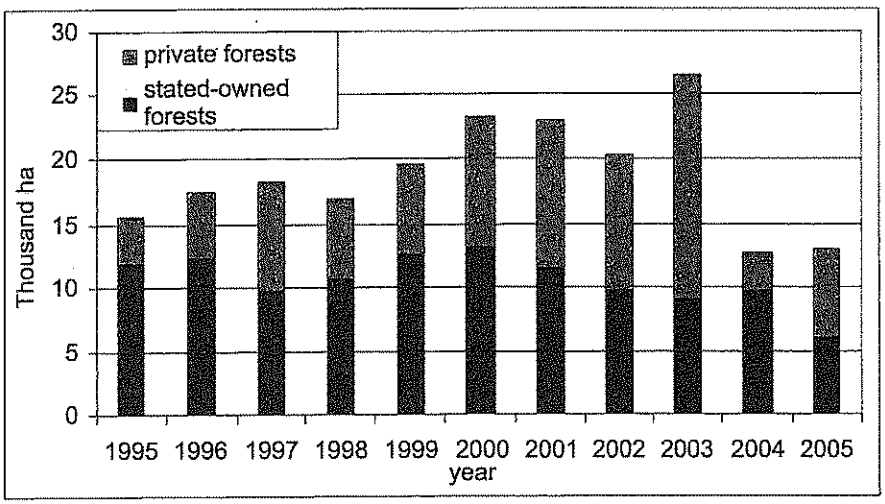
Source: Główny Urząd Statystyczny: *Ochrona środowiska 1991-2005*, Warszawa.

Fig. 6. *The level of sewage treatment in Poland in the years 1990-2004 (Central Statistical Office).*

Consequently, one can note that the 2nd NEP objective of 2000 concerning the reduction of industrial waste discharge by 50% and municipal waste discharge by 30% was achieved about five years before the deadline. However, this does not mean that this volume, due to the growth in production, will not rise in the following years. A positive aspect is certainly a visible reduction in untreated sewage which in 1990 consisted of 35% of waste requiring treatment and fifteen years later only 9%. Despite the above mentioned progress, the upgrading of the condition of Polish surface waters is still far from satisfactory. This may be because of several processes, for example, a prolonged period of self-purification, the release of waste from residue at the bottom of rivers and lakes, as well as a huge volume of pollution carried by hard-to-monitor surface flow.

The most important environment-oriented action plans include the creation of biologically active areas, mostly forests. This indirectly contributes to the conservation of all natural components: atmosphere and climate, water resources, soil and biological diversity. Because Poland is not ranked among the states with a high rate of afforestation, this objective is given priority in the hierarchy of eco-policy targets. In the last ten years (1995-2005) much development was done in this respect. Consequently, there was a growth of afforested areas from 8 756 000 hectares to 9 million hectares. The afforestation rate in Poland rose from 28 to 28,8%. If this rate of afforestation is maintained, it will be possible to achieve the objective proposed in the State Afforestation Programme, which is 30% afforestation by 2020. On the other hand, the rate of

afforestation has been held up recently (Fig. 7). If in the years 2000-2003 the annual afforestation reached 20-25 000 hectares, in the last three years there has been a drop to 13 hectares annually. If this trend is maintained, the goal under discussion may not be achieved.

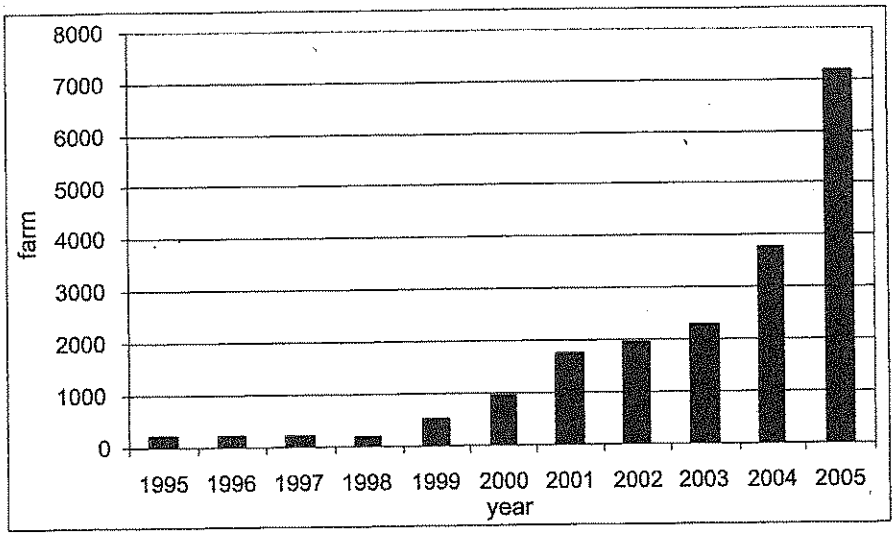


Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 7. *The area of private and state afforestation in the years 1995-2005.*

It is also necessary to pay attention to the fluctuating rate of afforestation on state-owned and private land. In connection with the availability of the EU funds, the afforestation in the latter areas rose noticeably (by 50% and more) in the years 2000-2003. Lately however, there has been a drop to the level of the mid-1990s (i.e. 25-30% of overall afforestation).

Although the ecological policies do not provide clear goals as regards the area of ecological farms, it is an essential indicator of the effectiveness of the conservation and the shaping of biological diversity in the rural areas. Despite this, in recent years there has been a noticeable growth in the number of farms holding ecological certificates (Fig. 8) and those changing into ecological production (from 235 farms in 1995, 950 in 2000 to 7200 in 2005), which largely results from subsidies under the Ecological Farming Act and also from the Development Programme for Rural Areas funds under agricultural and environmental EU programmes. However, the area of such farms in Poland is fairly small and increased from 0,063% of the overall arable land in 2000 to about 0,5% in 2005. In comparison to many other EU member states where the area of ecological farms totals 13% of the arable land (Austria), or about 7% (Finland, Sweden, Italy), and the EU average is 4,4%, our domestic values are particularly small.

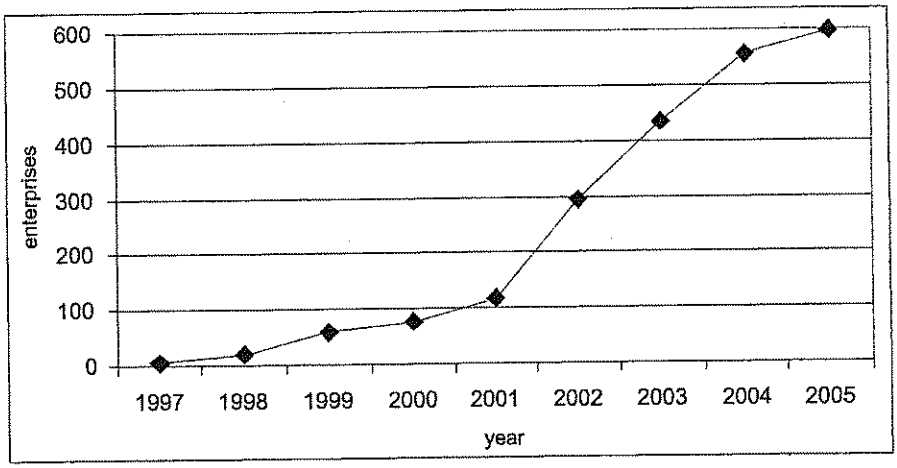


Source: Główny Urząd Statystyczny: *Ochrona środowiska 1996-2006*, Warszawa.

Fig. 8. *The number of ecological farms and farms transforming to ecological production in Poland in the years 1995-2005.*

The implemented legal, economic and organizational instruments are insufficient to approach the levels of the aforementioned countries.

An important element of environmental conservation management and the propagation of ecological knowledge, referring mainly to industrial companies, is the certification under the binding norms and systems known as ISO 14001 or EMAS. In the mid-1990s Poland had no companies with such certificates (Fig. 9).



Source: [Online:] http://www.ecology.org.jp/isoworld/english/analy14.htm; http://ec.europa.eu/environment/emas/pdf/5_5articles_en.pdf.

Fig. 9. *The number of Polish enterprises awarded with ISO 14001 certificates in the years 1997-2005.*

A dynamic growth in the number of ISO 14001 certified enterprises (environmental management) has been witnessed in the last five years. In 2001, there were 119 and in 2005 almost 600 such entities. This fivefold rise made up for the negligence of the former decade. Compared to other states, Poland's position is rather modest. According to R. Peglau's[3] data, at the beginning of 2006 there were about 103 500 certificates issued worldwide. Japan leads the way (about 19 500 certificates) followed by China (nearly 12 700). In Europe, most certificates were issued in Spain, Italy and the United Kingdom (6-8 thousand). In Europe, Poland is ranked 25th after Hungary and Romania.

The situation is even less satisfactory when reviewing the awarded EMAS certificates (EU Eco-Management and Audit Scheme). The total number of institutions included in this scheme in the EU is over 3500[4] (data from February 2007). Strictly speaking this amounts to 1500 in Germany, 666 in Spain and 570 in Italy. The Polish result of merely six companies is rather modest. Despite visible progress, in particular with respect to ISO norms, there is still much to be done.

The picture of the execution of the SEP based on the analysis of the changes in the selected environmental protection indicators in the last decade is not unambiguous. With reference to the environmental pressure manifested in the area of degraded land and the volume of emissions into the air and water, the situation has largely improved, in particular with respect to the emission of some gases and dust into atmosphere. Similarly, much progress has been made in the recycling of industrial waste, sewage treatment, ecological farming and norms and standards of environmental management. Conversely, the area of annually rehabilitated land has diminished. Likewise, in the case of most indicators cited above the rate has slowed down considerably in the last 3-5 years. At the same time, when comparing this progress to the advance in environmental protection in the majority of EU states before the 2004 enlargement, our distance is often extensive and in some sectors requires a multiple upgrading.

Also alarmingly slow is the improvement in water quality and other environmental components despite the lessening of anthropogenic pressure. This problem – due to the dispersed data sources and methodological obstacles in calculating the environmental quality indicators – is not to be discussed in this paper. Nevertheless, it is justifiable to assume that this situation follows from the qualities of the natural environment related to its stability referred to as the relaxation time, i.e. the time of returning after the ceasing of an action of an incentive to the condition close to the one before the action took place. This may also be related to the appearance in the last decade of new concentrated environmental threats like the emission of greenhouse gases (mainly by vehicles), waste of different chemical composition, the loss of biological and land-

[3] [Online]: http://www.ecology.or.jp/isoworld/english/ analy14k.htm.

[4] [Online]: http://ec.europa.eu/environment/emas/pdf/5_5articles_en.pdf.

scape diversity whose synergetic impact is not entirely recognizable. These facts may have a material influence upon the effective realization of ecological policy scheduled for implementation in the latter half of the first decade of the 21st century.

6. The preliminary forecast of the realization of quantitative objectives of the drafted NEP for the years 2007-2010

A useful premise for forecasting the effectiveness of the implementation of the ecological policy in the years to come is the execution level of the discussed policy in the previous decade. Certainly, the execution conditions undergo some changes, which will have an impact on the success or failure of its implementation; yet the effect of these conditions may be multi-directional and even mutually exclusive, which might produce results similar to today's. The circumstances that are factors in environmental improvement may be the high degree of implementation of EU Regulations into our domestic law. Similarly, the bettering of economic conditions related to the inflow of structural and other funds. Regrettably, the financing trends planned for the budget period 2007-2013 prove to be more of an obstacle than a stimulus for environmental protection. The diversity and uncertainty of the available factors makes this forecast only approximate and may require major changes in the future.

Referring to the quantitative objectives of the new draft National Environmental Policy, it appears more and more apparent that many of them have little chance of fulfilment. It is hardly feasible to plant forests on 130 000 hectares of land in the next four years. Previously, seven years (1999-2005) were needed for afforesting an area of a similar size. Thus, it is hard to believe that the action in question will not be done quicker. The complementary goal of afforesting ¾ of the overall target in the private sector will also be hard to achieve. In the last seven years, the share of afforested private land totalled 48% and nothing shows for this percentage to rise (up to 75%).

Relying on the possessed data, it is hard to assess the possibility of saving 9% of energy by 2017 – today's economic growth may even seriously impede the achieving of this objective. On the other hand, the goal that is certainly beyond reach is the production of 7,5% of energy from renewable sources since its share in the years 2000-2004 totalled a mere 0,2%. Likewise, even if much effort is made in a similar period, it is not attainable to erect so many wind farms, biomass combustion installations and solar or geothermal collectors (because to boost the potential of water energy production is out of question) and have this share at the level of additional 3,6%.

Begin confronted with such instability of legal regulations and their poor enforcement, it is hardly possible to have 5,75% share of biocomponents in the liquid fuel market although better enforcement of this point may improve the situation.

When it comes to the feasibility assessment, it is also difficult to discuss the completion of the construction of sewage systems and sewage treatment plants with improved nutrient disposal in the urban areas of over 15 000 RLM (inhabitants equivalent) by 2010. As shown in Fig. 6, the growth in the number and capacity of such installations has been fairly high (eight times in the years 1995-2004 and 70% in the years 2000-2004); this bodes well for the future. However, in order to provide a comprehensive assessment of the situation, it is necessary to take account of the needs and capacities in this respect resulting from the technical, financial and environmental conditions.

Furthermore, it is possible to reduce the volume of discharged waste because it has been proven effective for some years in industry where there is the growing share of recycled and re-useable material. This volume is also diminishing in the case of the municipal waste but, unfortunately, it is on account of the circumstances discussed in Section 5 (illegal dumping and combustion in home installations, lessened waste weight). Thus, the reduced amount of discharged but produced waste should be made an optimum sociological target. Reaching a 50% reduction in the discharge of the volume of biodegradable waste produced (1995 figures) by 2013 is completely unattainable. Similarly, the selective collection of 10% of waste in 2010 remains unrealistic as this number rose from 0,1 to 2% in four years (2000-2004). It may seem an impressive growth, yet not enough to meet the 2010 objective.

The total collection and neutralization of polychlorinated biphenyl by 2010 is also out of the question. These carcinogenic substances were mainly used in the production of capacitors and transformers but also as additives to paint and varnish from the 1950s to the 1970s. It seems that their total elimination from the environment, especially the one occupied and used by man, will not be workable for dozens of years.

Unfortunately, the prospect of mounting ecological awareness on society, i.e. consumers, is also rather remote. It seems too far-fetched to expect 50% of society to recognize environmental management certificates and other "eco-labels". It becomes apparent that the NEP purposefully fails to provide a timeframe for this objective for it is so distant that it may even be beyond reach, in particular with so inadequate and limited campaigns for balanced consumption presented in the media.

7. Conclusion

One of the foremost mainstays of sustainable development is environmental protection. The 1990s saw the paradigm of sustainable development as a highly acceptable phenomenon in many societies and governments. Although its implementation level varied, there was general approval (whether sincere or declarative – it is hard to say) – also in Poland – for the dissemination of eco-development. Regrettably, for

a few years the tendency in legal changes (e.g. Spatial Planning and Development Act, Environmental Protection Act), despite the necessity of adapting to EU law, has shown that less and less attention is paid to the principles of sustainable development than before. There is an escalating technocratic approach in the administration and the conviction that all problems – including environmental ones – can be resolved by technical measures (the reduction of harmful emissions, anti-flood protection, fighting sea shore erosion, allowing fauna migration etc.) are accompanied by limitless trust in one's own knowledge and opinions while disregarding scientific opinions and those unsuitable in the administration's view. Such an approach pooled with the inability of unwillingness to take full advantage of EU funds for environmental protection has led to the circumstances discussed in Section 5. It can be characterized as a progress in environmental protection but the one that leaves us lagging behind the old EU fifteen. This condition will be a material obstacle for sustainable development in the oncoming years. These problems have been manifest for a few years as in the case of interim conflicts over the access to the natural values and resources (e.g. the construction of Augustów by-pass and other roads, limited fishing quota in the Baltic, river regulation and the construction of a nuclear power plant).

The revised National Environmental Policy published at the end of 2006 has been analyzed only from the viewpoint of the quantitative objectives. The conclusions of Section 6 are for the most part negative. While most of the goals of the 2000 NEP were completed before the deadlines[5], in the middle of the present decade it seems unachievable to have most of the targets of the present NEP by 2010. It cannot be stated for sure whether it stems from an inflated optimism on the part of the administration, or ignorance combined with the disregard of experts' opinions. The only certain thing is that in the years to come the sustainable development in Poland will face a serious threat.

[5] It is to some extent caused by approving very high emission levels and other environmental indicators as a reference point in time (the year 1990). This reference was missing in the current NEP.

*** Translation from the Polish language by Konrad Szulga.