

Danish - Lithuanian Environmental Co-operation

COUNTRY BOOK

1991-2000



DANCEE

Danish Cooperation for Environment in Eastern Europe
Ministry of the Environment

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Abstract

The publication presents the Danish-Lithuanian Environmental Co-operation from the beginning and until 2001. It gives an overview on the policy, history, priorities, structure, environmental effects, future perspectives etc. of the co-operation. Also it present a range of typical projects within the different sectors of priority.

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Danish - Lithuanian Environmental Co-operation 1991-2000



DANCEE

Danish Cooperation for Environment in Eastern Europe
Ministry of the Environment

PREFACE

by Steen Gade,

Director General, Danish Environmental Protection Agency

Shortly after the dramatic events that lead to the restoration of Lithuanian independence in 1991, Denmark was among the first countries to resume diplomatic activities. In September 1991 a bilateral agreement on environmental protection was entered between Lithuania and Denmark, and environmental assistance was initiated shortly after.

Belonging to the same geographic region – The Baltic Sea Region - Lithuania and Denmark share substantial common interests on environment and nature protection issues. Therefore it is logical that Lithuania is one of the major beneficiaries of the Danish environmental assistance programmes to the countries of Central and Eastern Europe.

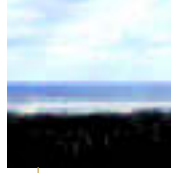
Denmark is one of the largest bilateral donors of environmental assistance to Lithuania, and during the period 1991 - 2000 the DANCEE programme has supported more than 140 environmental projects. The assistance has been carried out mainly by Danish companies in co-operation with Lithuanian partners. I am very content that - by transferring Danish know-how and environmental equipment – we have contributed to protecting the environment in Lithuania and in the Baltic Sea Region. The successful results from the environmental assistance speak for themselves.

The biggest target area of Danish assistance has been the abatement of water pollution. In this area Denmark has supported the reconstruction and rehabilitation of approximately 20 large and medium scale wastewater treatment plants, achieving pollution load reductions in the same order of magnitude as the total pollution load from all Danish wastewater treatment plants and sewer systems.

Another major target area of Danish environmental assistance is the energy sector. Danish assistance projects have resulted in less air pollution and major resource savings. Another important element of the Danish assistance is the development of a new strategy for the Lithuanian energy sector, which has been of great importance in paving the road for the closure of the Ignalina Nuclear Power Plant. The closure of the Ignalina Nuclear Power Plant has not only been of concern to Lithuania's neighbours, but it has also been a potential obstacle in relation to negotiations for EU partnership.

Approximation of Lithuanian legislation and compliance with EU environmental standards is yet another area that has shown positive results, and I am happy to note that the Danish assistance has contributed to help Lithuania close negotiations with the EU on the environmental issues.

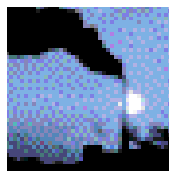
With great pleasure I have noted the progress made in Lithuania over the past ten year, also in the environmental area. It is my sincere belief that the Danish-Lithuanian co-operation in the field of environmental protection has contributed positively in this development. Therefore, I am happy to introduce this publication, which presents an overview of ten years of environmental assistance. I hope you will enjoy reading it.



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The following part of the book presents a selection of projects executed during the period from 1991 till 2001. The selection illustrates the great variety of supported projects in relation to sector, subject, size, as well as duration.

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Approximately 70 per cent of all emissions into the atmosphere are generated by mobile sources. The main stationary emission sources are in the energy, the petrochemical, and the metal industries, construction, and building materials industries. Nevertheless, only relatively few DANCEE projects are targeted directly at the industry and energy sector, since this area is a main goal of the Energy Sector Programme administered by the Danish Energy Agency.

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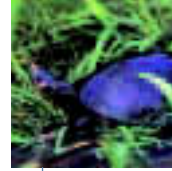
In the Danish-Lithuanian co-operation portfolio, projects relating to water quality improvements and water protection have by far the largest volume. 43 projects relating to water quality improvements have been supported directly by DANCEE with a total grant support of close to DKK 120 million (EUR 16.14 million). Approximately 50 per cent of the DANCEE support have addressed treatment of municipal waste water.

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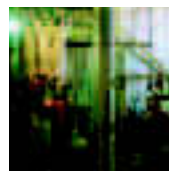
15 per cent of the Danish grants to Lithuania goes to the so-called "green projects" which all have the objective of protecting the diversity of nature. The Danish projects have focused equally on sustainable forestry and nature protection.

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In 1999, the Lithuanian parliament adopted a new national energy strategy encompassing the gradual closure of the Ignalina Nuclear Power Plant. Denmark very much applauds this decision because of the intrinsic environmental risk of this kind of nuclear reactor. From the Danish side it is, however, at the same time recognized that the closure of Ignalina NPP – at any time – will impose a large economic impact on Lithuania. Substantial financial and technical support is therefore needed from the donor countries to implement the decision taken by the Lithuanian Government and Parliament.



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Some projects have the primary objective to strengthen the set-up and capacity of Lithuania environmental institutions. Even if it is difficult to evaluate the non-tangible benefits of a given project, one criteria that could be applied is that there has been a transfer of knowledge which is found useful and valuable by the recipient of the project. Most projects supported by the DANCEE programme contain components which – more or less explicitly – are targeted on the strengthening of participating persons and/or institutions.

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Due to the decline and modernization of industrial activities in Lithuania, the pollution load from the industry has diminished since the regaining of independence. In relation to the abatement of the industrial pollution control, Danish support has primarily been implemented through projects targeted at the introduction of cleaner technologies in Lithuanian industries and projects in the electroplating industry, the leather industry and in slaughterhouses.

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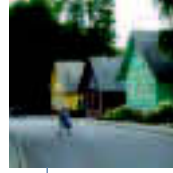
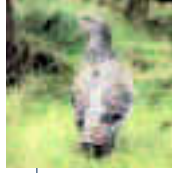
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The DANCEE programme has supported the mapping and labelling of pesticides in old and obsolete storage facilities. Apart from that, only few activities have been carried out so far in relation to chemicals and genetically modified organisms, the GMOs. However, more activities in the sector of chemicals and GMOs are planned in relation to EU approximation in the period of the country programme.

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Protection and improvement of the environment cannot only be seen as an isolated environmental task; the environmental conditions are dependent on and influenced by all sectors in society. Therefore, the activities of the sector-integrated environment programme are set up as partnerships between a range of Danish Ministries or governmental agencies and their colleagues in the recipient countries.

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Since 1992, Lithuania and Denmark have been co-operating on environment-related energy sector issues, based on a close partnership between The Danish Energy Agency and the Lithuanian Ministry of Economy (previously Ministry of Energy). Since 1992, approximately DKK 135 million (EUR 18.15 million) has been allocated to Lithuania through this programme where special priority has been given to the transfer of Danish experience and knowledge.

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In connection with the Danish environmental assistance to Lithuania, different sector programmes have been established. The objective of the sector programmes is to integrate the environmental policy into other political areas.

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THE DANISH SUPPORT FOR IMPROVING THE ENVIRONMENT IN CENTRAL AND EASTERN EUROPE

Since 1991, Denmark has supported Central- and Eastern Europe in the effort of improving the current state of the environment and to avoid degrading of the future environment. Through a serie of co-operative environmental programmes, Denmark has donated more than DKK 3.1 billion (EUR 0.42 billion) in environmental assistance to the Central- and Eastern European Countries. This makes Denmark one of the largest donor to environmental improvement in Central- and Eastern Europe. The environmental effects of the more than 1200 Danish projects are substantial. EU accession and fulfilment of Environmental EU legislation and requirements are given high priority in the DANCEE programme, especially in EU applicant countries.

Denmark adopted its first law on environmental support to Central- and Eastern Europe in 1991. Today, more than 1200 environmental projects have been initiated in more than 13 Central- and Eastern European countries. It has become part of Denmark's international policy to be in front of the global battle for protection of the environment. In 1992, the UN Conference on Environment and Development in Rio formulated the strategy of sustainable development: That environmental concerns must be integrated as an equal element in development projects and in development processes in general.

The Danish environmental assistance policy is based on the knowledge that environmental problems cannot be isolated nationally. What others are doing has an impact on us and vice versa. By helping others, we are helping ourselves. This is especially true in relation to nations which share a common sea – the Baltic – and to some extent the ambient air. Therefore, the Danish environmental assistance to Central- and Eastern Europe has mainly been directed towards the countries around the Baltic.

The Danish Environmental Objectives and Priorities

Denmark's environmental assistance policy in Central- and Eastern Europe is carried out

through different programmes and agencies. The main programme, administered by the Danish Environmental Protection Agency, is the Danish Co-operation for Environment in Eastern Europe – DANCEE.

In terms of geography, the DANCEE programme covers the following areas:

- EU candidate countries in the Baltic Sea Region and Russia
- Selected EU candidate countries in Central- and South Eastern Europe
- Selected CISs (countries)
- The Balkans

The general objectives for DANCEE are:

- Support the Central- and Eastern European EU accession countries in their efforts to implement the EU's requirements in the field of environmental protection and those of international environmental conventions;
- Contribute to the political and economic development in the direction of environmental sustainability;
- Promote the use of Danish environmental expertise and technology for the benefit of the areas covered by the DANCEE support programme.

The main five target areas by sectors are:

- Water management
- Air quality
- Solid and hazardous waste management
- Chemicals
- Biological diversity and sustainable forestry

Three cross cutting issues are prioritized in the DANCEE programme:

- Institutional strengthening and EU accession.
- Public participation in decision making
- Involvement of the private sector

DANCEE's support is directed according to a list of priorities and bilaterally agreed country programmes.

The DANCEE projects take two forms. The first is the investment projects which typically include support for project design, construction and supply of equipment. The second is the technical assistance projects which include areas as planning and analysis, monitoring, feasibility studies and institutional strengthening.

The Danish Project Criteria

The selection of environmental projects is based on the objectives and priorities mentioned above, but other considerations also play an important role.

A central criterion for the selection of DANCEE projects is the demonstration value. Most Central- and Eastern European countries are in a period of restructuring and development of the economy, and projects which demonstrate both the environmental and economic effects of using new technologies are therefore given high priority. In the same manner, projects of general interest and utility, possessing the potential for being replicated are given preference.

A second criterion is the requirement for co-financing. The funding is required as a means for promoting self-support, and it is therefore normal that the recipient country provides most of the funding for the project. The principle of financial participation secures the involvement by the beneficiary as well as the continuity of the project.

It is a key criterion that the support conforms to the requirements of the environmental legislation in the country. It is, of course, also of vital importance that the project actually brings about reduction of pollution. Projects showing a significant quantitative and/or qualitative improvement of the environment and health standards are therefore given high priority.

Finally, environmental problems are not only about reducing pollution, they are just as much about conservation of raw materials, energy, water and the protection of natural resources. This perspective is very important in the fast developing Central- and East European economies. Therefore, DANCEE has focused on pollution prevention, conservation, cleaner technologies and recycling, rather than on the reduction of existing pollution.

Danish environmental assistance programmes

There are several Danish environmental assistance programmes for Central- and Eastern Europe. The main programme is the Danish Co-operation for Environment in Central- and Eastern Europe (DANCEE) formerly called the Danish Environmental Support Fund for Eastern Europe (DESF). The programme is administered by the Danish Environmental Protection Agency (DEPA).

The sector-integrated environmental assistance focuses on special areas or issues and involves different Danish ministries and agencies. Since 1998, this kind of assistance has been part of the Government's Baltic Sea Initiative within the environment sector.

The Green Investment Facility is part of the Investment Fund for Central- and Eastern Europe (the MIØ Fund).

The Environmental Soft Loan Programme for Eastern Europe (MKØ), administered by the Danish State Export Credit Agency (EKF) in co-operation with DEPA.

The central co-ordinator and administrator of the programmes is DEPA. DEPA prepares the guidelines on the environmental approach and discusses the sector programmes with the various ministries and agencies which then implement them.

Denmark has donated more than DKK 3 billion (EUR 0.4 billion) to environmental assistance to Central- and Eastern Europe in the years 1991-2000. The Danish support has again generated the co-financing of more than DKK 10 billion (EUR 1.3 billion), making the total financial value of the Danish launched project as much as DKK 13 billion (EUR 1.75 billion).

Environmental programmes for Central- and Eastern Europe

The DANCEE and the sector-integrated environmental assistance are presented elsewhere. Therefore, only the Environmental Soft Loan Programme for Eastern Europe (MKØ) and the Green Investment facility (the IØ Fund) is mentioned here. In 1998, the Danish Environmental Soft Loan Programme was established with the purpose in promoting investments in environmental projects in Eastern and Central Europe by means of long-term, subsidised credits. The programme is





CHAPTER 1 THE DANISH SUPPORT FOR IMPROVING....

established and managed by Eksport Kredit Fonden (EKF), jointly with the DEPA.

The Danish Soft Loans are funded by annual subsidy grants on the Finance Act. At present, the programme can arrange about DKK 180 million (EUR 24.17 million) annually with a total donor element of about DKK 60 million (EUR 8.06 million). They are typically granted through banks by direct loans to the buyers in the recipient countries. The subsidies are granted by EKF's paying a financing subsidy of typically 25 per cent of the financed amount for the purpose of softening the conditions of repayment for the borrower.

The Danish Soft loans may be used mainly to finance environmental projects within alternative energy, water, waste management,

waste treatment, and district heating.

Normally, the projects must amount to more than DKK 20 million (EUR 2.69 million) in order to be eligible for soft loan support. Potential project recipients in the Central- and Eastern European countries, consultants and suppliers may apply for the support under the programme by submitting project proposals to the Danish Environmental Protection Agency, DEPA.

Another environment-related sectoral assistance programme is the Green Investment facility under the Investment Fund for Central and Eastern Europe, the IØ Fund. The fund promotes private sector co-operation between Denmark and recipient countries for projects, which also have environmental benefits.

THE DANISH-LITHUANIAN ENVIRONMENTAL CO-OPERATION ON THE ENVIRONMENT

- 10 years of environmental co-operation

The Danish environmental support to Central and Eastern Europe is mainly targeted at the countries around the Baltic Sea which includes Lithuania. From 1991 till 2001, Denmark has spent approximately DKK 520 million (EUR 69.84 million) in total support.

The environmental co-operation between Denmark and Lithuania was established in September 1991 as an agreement between the Environmental Protection Department of the Republic of Lithuania and the Ministry of Environment of the Kingdom of Denmark. The co-operation is based on direct bilateral co-operation between the authorities involved and other interested parties, including enterprises, institutions, and private organisations.

The largest environmental support programme is the DANCEE programme (Danish Environmental Co-operation for Central and Eastern Europe) which was preceded by the Danish Environmental Support Fund (DESF). The administration of these programmes rests with the Danish Environmental Protection Agency (DEPA).

Until 2001, the DANCEE/DESF has allocated approximately DKK 310 million (EUR 41.63 million) in direct grant support to projects in Lithuania, divided upon some 140 different projects.

The main target areas of the DANCEE programme have been:

- Water pollution abatement
- Improved waste management
- Nature protection and sustainable forestry
- Institutional strengthening

The cross-sector programme

Until 1994, all Danish environmental assistance was administered directly through DEPA. Since 1994, however, part of the assistance has been implemented through the "cross-sector programme" which targets environmental goals set in the Baltic Agenda 21. The aim of the cross-sector programme is to implement projects through the co-operation between the relevant sector ministries and organisations which is co-ordinated by DEPA. The development objective of the assistance is sustainable development in the Baltic Sea Region - defined as growth based on market economy, restoring or maintaining the biological and ecosystem diversity and without increased pollution or over-exploiting of non-renewable resources.

The cross-sector programmes are:

- The programme of the Ministry of Labour,
- the programme of the Danish Emergency Management Agency,
- the programme of the Ministry of Education,
- the programme of the Ministry of Housing and Urban Affairs,
- the programme of the Danish Energy Agency,
- the programme of the Danish Agency for Trade and Industry,
- the programme of the Danish Ministry of Food, Fisheries and Agriculture,
- the programme of the Ministry of Transport.

The largest of the programmes is the energy programme.

Pollution abatement from waste water treatment plants has been a major target of the DANCEE programme and the pollution reduction reached equals a non-treated waste water load from approximately 750.000 people.

Other areas that have received substantial support are air-pollution abatement, the energy sector, enhanced waste management, protection of nature, and institutional strengthening.

The energy cross-sector programme has allocated approximately DKK 130 million (EUR 17.48 million) up till 2001 and the contributions from other sector programmes add up to approximately DKK 80 million (EUR 10.76 million).

In addition to this, "Danish Soft Loans for Infrastructure Projects in the Baltic States" (Danish state subsidised loans) have been allocated to a number of investment projects primarily in connection to the rehabilitation and reconstruction of Lithuanian waste water treatment plants.

The rehabilitation of 13 waste water treatment plants have been partly financed through Danish soft loans with a total loan amount of DKK 150 million (EUR 20.17 million), the total number of environmental projects supported by the programme, which was functioning from 1994-1995, is 17 with a total loan amount of DKK 280 million (EUR 37.65 million) and a total subsidy element of DKK 75 million (EUR 10.09 million).

Hence, the total Danish Environmental Assistance to Lithuania until 2001 has had a value of DKK 520 million (EUR 69.84 million) making Denmark one of the largest bilateral environmental donor.

Achievements of the environmental assistance

The water sector, the energy sector, the waste sector, and the preservation of nature and biodiversity have been the major target areas of the Danish Environmental Assistance to Lithuania.

In the water sector, the Danish assistance has led to yearly pollution load reductions in the same order of magnitude as the total Danish waste water load to recipient waters in 1998. Furthermore, a wide range of demonstration projects has supported the transfer of Danish knowledge and know-how in as different fields as marine oil spill abatement, remediation and clean up of ground water pollution, drinking water supply, river monitoring, waste water treatment technologies, and municipal water sector planning.

Over all distribution of DANCEE projects and financing, 1991-2000

	Number of projects	DANCEE		Other Financing		Total project costs Million EUR	
		Million DKK	Million EUR	Million DKK	Million EUR		
Air Pollution	21	43.9	5.9	85.1	11.4	129	17.3
Water pollution	43	118.4	15.9	372.8	50.1	491.2	66
Waste Management	20	42.4	5.7	51.6	7	94	12.7
Institutional Strengthening	22	41.4	5.6	1.6	0.2	43	5.8
Nature and Forestry	24	46.2	6.2	4.5	0.6	50.7	6.8
Agriculture	4	5.3	0.7	0.5	0.07	5.8	0.77
Nuclear Safety	7	12.2	1.64	0.1	0.01	12.3	1.65
Other	1	0.01	0.001	-	-	0.01	0.001
Total	142	310.3	41.7	516.2	69.3	826.5	111

The largest river system in Lithuania – the Nemunas system – has many non-regulated stretches

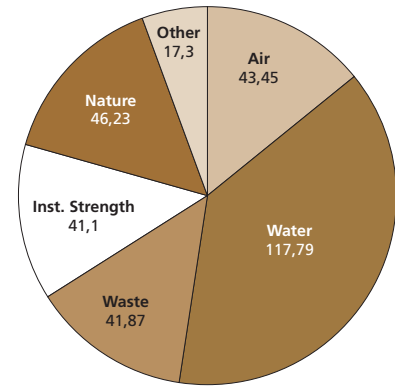
The major achievements in the waste sector are connected to the support of a demonstration project for an up-to-date landfill and waste management system in the second largest Lithuanian town, Kaunas. The support to projects strengthening the legislative framework of the waste sector, and hence supporting Lithuania's efforts to create compliance with EU-directives and regulations, has played an important role in recent years' project portfolio.

Until 1997, the Danish support to preservation of nature and biodiversity was mainly focused on national and regional park management and the development of sustainable forestry

practices. Recently, the Danish support in this area has added to progress in relation to EU requirements and regulations and the implementation of international conventions in which Lithuania is participating.

In the energy sector, a number of projects in relation to energy savings and efficient use of energy together with investment support to demonstration projects for sustainable energy (e.g. the use of geothermal sources) has paved the way for an increasing Lithuanian awareness and transfer of Danish knowledge and know-how. The Danish assistance in relation to overall energy strategy studies and the strengthening of the legislative and





DANCEE allocations 1991-2000 sector wise
(allocations in mil. DKK)

CHAPTER 2 THE DANISH-LITHUANIAN ENVIRONMENTAL...

institutional framework has furthermore supported the strategic development of the sector.

Distribution of DANCEE grants and co-financing

For the period of 1991-2000, there was a 50/50 split between allocations given for technical assistance and investment projects even if the projects targeted at technical assistance outnumber the investment projects significantly.

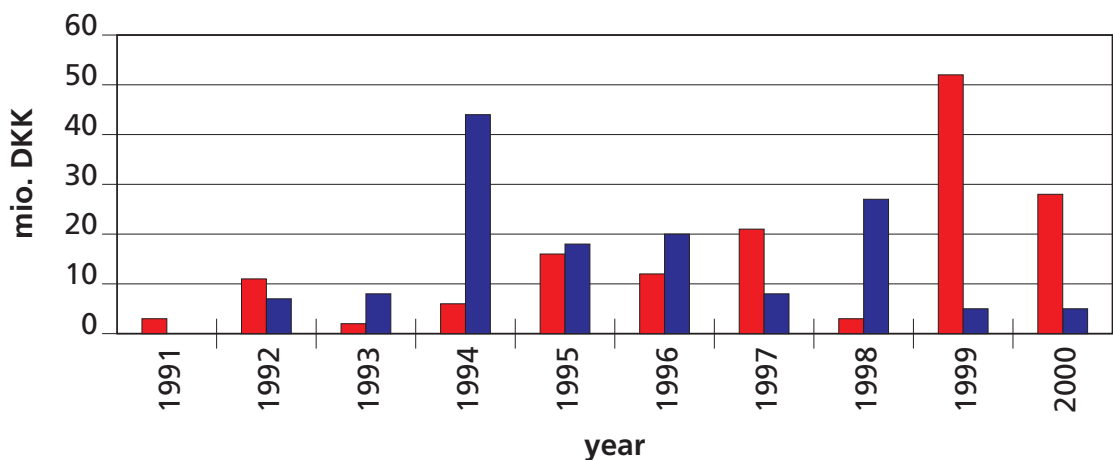
On an average, the DANCEE/DESF contribution to projects implemented in Lithuania account for a little less than 40 per cent of total project costs.

The DANCEE support to Lithuania for 2001-2003 is foreseen to be in order of a magnitude of DKK 50-70 million per year (EUR 6.72-9.41 million) of which approximately one third will be used for support to projects included in the "Ignalina Package". Projects of the "Ignalina Package" are targeted at facilitating the needed restructuring of the Lithuanian energy sector as a consequence of the closing of the Ignalina Nuclear Power Plant.

It is further expected that projects in the sub-sectors: Water, waste, and nature will account for approximately 50 per cent of the total DANCEE support to Lithuania in the period of the country programme.

DANCEE allocations per year

(TA = Technical Assistance - red, IN = Investment - blue)



THE ENVIRONMENTAL CHALLENGES OF LITHUANIA AND THE FUTURE PERSPECTIVES FOR CO-OPERATION

The environmental challenges of Lithuania are multiple. Also the topics on the environmental agenda are very diverse and entail such different issues as a safe closing of the Ignalina Nuclear Power Plant, abatement of polluted rivers and lakes, waste management, sustainable forestry, and public awareness rising. One of the most important objectives for Lithuania is the future membership of the EU.

At the start of the environmental co-operation between Lithuania and Denmark, there certainly was a lack of overview of the environmental problems encountered by Lithuania.

It soon became clear that the problems encountered in Lithuania did not differ significantly from those problems encountered in other countries of the Soviet sphere such as:

- Non-existing or poorly functioning environmental infrastructure, water treatment, water supply, waste water supply, waste water treatment plants, solid waste management, hazardous waste management etc.
- Poor energy efficiency
- Polluting industries
- Little public awareness and participation
- Low administrative and institutional capacity.

In addition, Lithuania also inherited the Ignalina Nuclear Power Plant, which has a design similar to that of Chernobyl.

These problems are, of course, not solved overnight and the environmental challenges of Lithuania are still large and multiple.

Progress has definitely been made, and since the start of co-operation, the framework in which the environmental problems are addressed has changed dramatically.

Focus on the EU membership

The first attempt to make a prioritised effort to address the environmental problems was made in the “National Environmental Strategy” for Lithuania which was adopted in 1996.

Environmental sector strategies were established in the late nineties and recently, the environmental strategy-setting and policies have been focused on the Lithuanian EU-membership.

One of the most important objectives for Lithuania is the future membership of the EU. Even though, Lithuania in recent years has made progress in the field of environment protection and has achieved a fair level of alignment, there are still major differences across sectors.

Environmental issues have been negotiated between Lithuanian and the EU. In June 2001, agreement was reached between the EU and Lithuania regarding transition periods for implementation of environmental EU-legislation.

A recent study supported by DANCEE estimates that an investment in Lithuania of approximately DKK 11.92 billion (EUR 1.6 billion), is needed in Lithuania for the country to comply with environmental EU-directives.

As for the implementation of EU-legislation, the main investments costs for the environmental chapter will be associated with projects in the water and waste areas, but also

the strengthening of the institutional set-up will be a challenging task, not least when it comes to nature protection.

Developing the co-operation

Naturally, the political development of the environmental sector is also reflected in the Danish environmental assistance to Lithuania.

Hence, the first years were characterised by a number of investigation and review studies. Since 1993, the investment projects, especially waste water treatment plant projects, came to play an increasing role in the Danish-/Lithuanian project portfolio, and in recent years, EU-approximation issues have come to play a more and more prominent role in the selection of projects. Also nature protection and bio-diversity issues have been topics, that have had still-growing attention.

In the years to come, the approximation to the EU environmental policies and standards is expected to continue its impact on Lithuanian Environmental Priorities, and it is also anticipated that the EU-support in meeting the needs for Lithuanian compliance with EU-standards will increase. Especially the water sector and the waste sector will require major public investments before EU-standards can be met. Major institutional developments will also be required.

So far, the Danish assistance with regard to EU-approximation issues has focused primarily on the transposition of Lithuanian environmental legislation, whereas EU-approximation issues with regard to implementation/investment and control-enforcement have had less emphasis.

The Lithuanian efforts towards the EU accession will go hand in hand with the DANCEE country programme for Lithuania 2001-2003, which establishes the framework for Danish-Lithuanian environmental co-operation. In the programme, the EU-approximation runs all through the Lithuanian and the DANCEE activities, and supports the Lithuanian efforts to become a member of the EU.

The closure of the Ignalina nuclear Power Plant and the restructuring of the energy sector is one of the major challenges today.



THE DANCEE-PROGRAMME AND ITS ADMINISTRATION

The current country programme, which is effective until 2004, gives priority to the water sector, the waste sector and nature resource management. It also gives priority to projects of the "Ignalina Package,, which is a joint effort between the DANCEE programme and the Energy Sector Programme to support projects targeted at the needed restructuring of the energy sector in the light of the closing of the Ignalina Nuclear Power Plant. Furthermore, the country programme gives priority to projects, which will support the Lithuanian efforts to comply with EU legislation.

In the administration of the DANCEE-programme, the DEPA applies two models, namely the application model and the tender model. Priority target areas are stated in a specific country programme, which is agreed between the DEPA and the Lithuanian Ministry of Environment, and prioritisation of projects in the pipeline of the DANCEE programme is agreed upon on biannual meeting between the DEPA and the Lithuanian Ministry of Environment

The application model is typically used by a partnership between the Danish applicant and a partner in the recipient country. The partnership identifies and describes the project according to DEPA's guidelines for application, the "Project Cycle Management Manual", the Ministry of the Environment and Energy, Denmark, 1999.

Typically, in the tender model, the DEPA and the Lithuanian Ministry of Environment identifies a specific high priority project and by the use of consultants prepares the project, which subsequently is tendered according to DEPA's procedures.

Basically, the project documents for the tender and the application model are the same.

From 1991 till 2001, there has been a tendency that the number of tendered projects per year

has been rising on behalf of projects implemented by the application model. This development clearly reflects the growing capability of priority-setting in the Lithuanian Ministry of Environment - MoEL.

The every-day work

Prioritisation of projects in the pipeline of the DANCEE programme is, in principle, agreed upon on the biannual meeting between the DEPA and the Lithuanian Ministry of Environment.

The sector programme projects are mutually agreed between relevant sector authorities in Denmark and Lithuania, the Lithuanian Ministry of Environment and the DEPA.

Everyday work of the DANCEE programme is handled by a DEPA-appointed Country Programme Co-ordinator and other staff members of the DANCEE office. The work of the DANCEE office and the co-ordination with the Lithuanian Ministry of Environment is supported by a local project co-ordinator in the Lithuanian ministry.

The Local Project Co-ordinator (LPC) assists the Danish Environmental Protection Agency (DEPA) and the Lithuanian Ministry of Environment in the co-ordination of Danish environmental assistance, and the tasks of the LPC have been mutually agreed upon by the DEPA and the MoEL.

Until the summer 2001, an EU-advisor to the Lithuanian Ministry of Environment, funded by DANCEE funds, also acted as a facilitator for the DANCEE programme.

The different priorities

Priority target areas are stated in a specific country programme, which is agreed between the DEPA and the Lithuanian Ministry of Environment.

Furthermore, the country programme gives priority to projects that will support the Lithuanian efforts to comply with EU legislation.

The current country programme, which is effective until 2004, gives priority to projects of the "Ignalina Package", which is a joint

effort between the DANCEE programme and the Energy Sector Programme to support projects targeted at the needed restructuring of the energy sector in the light of the closing of the Ignalina Nuclear Power Plant. Other prioritised areas are the water sector, the waste sector and nature resource management.

Components of public participation and institutional capacity building are seen as important parts of the prioritised projects.

The following part of the book presents a selection of projects executed during the period from 1991 till 2001. The selection illustrates the great variety of supported projects in relation to sector, subject, size, as well as duration.



GETTING A BETTER QUALITY OF AIR

In recent years, atmospheric pollution in Lithuania has decreased due to the drop in economic activities. Approximately 70 per cent of all emissions into the atmosphere are generated by mobile sources. Apart from the polluting transport sector, the main stationary emission sources are in the energy, petrochemical and metal industries, construction and building materials industries.

Being responsible for 70 per cent of all emissions into the atmosphere, the transport sector is by far the biggest polluter of the air in Lithuania, but also the industry and the energy sector are seen as serious contributors to the pollution of the atmosphere.

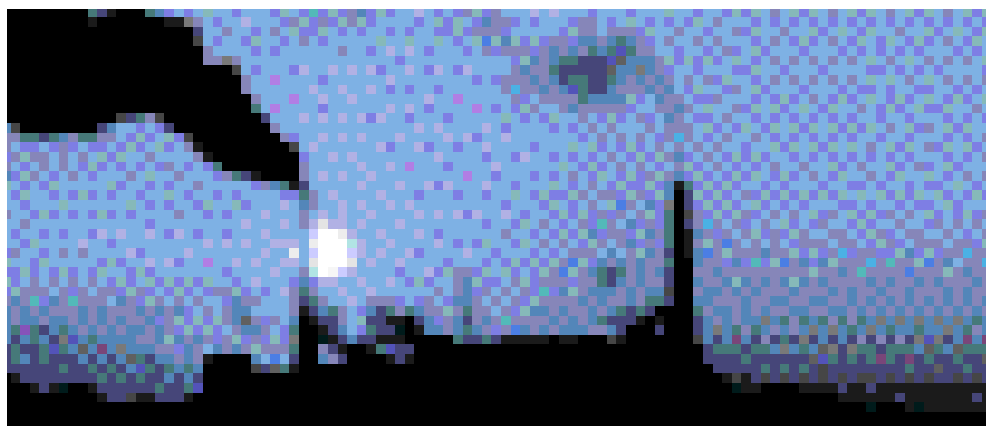
Nevertheless, only relatively few DANCEE projects are targeted directly at the industry and energy sector since this area is a main target of the Energy Sector Programme administered by the Danish Energy Agency.

The establishment of a geothermal demonstration plant in Klaipeda has however received substantial grant support from the DANCEE programme, and DANCEE has also supported the establishment of a biogas demonstration plant at Rokai, south of Kaunas.

The overall objective of the Energy Sector Programme (see chapter 15) is to support the development of an environmentally sustainable energy sector, reducing the emission of CO₂, SO₂ and NO_x from the energy production. As such this programme supports improvements in energy supply efficiencies, cleaner energy sources, promotion of renewable energy, energy saving at the end-user and institutional capacity development.

The energy sector programme is supplemented by the sector programme implemented by the Danish Ministry of Housing and Urban Affairs (see chapter 16) targeting energy saving at domestic households.

The support to cleaner technologies development in Lithuanian industries and sectors also positively contribute to air pollution abatement.



EXPLOITATION OF GEOTHERMAL ENERGY

In Lithuania, an attractive alternative to coal is available in form of indigenous geothermal energy. This provides a cost-effective alternative to other low-polluting fuels such as natural gas. Lithuania has limited domestic energy resources and almost totally depends on imported fuels from Russia. Following a National Energy Strategy which calls for closure of Ignalina Nuclear Power Plant, alternative energy resources become of vital importance to the country. One of the areas in Lithuania where geothermal fields have been investigated is Klaipeda district.

Geothermal energy produces almost no pollution in terms of particulate matter, sulphur dioxide, nitrogen oxides, or aromatic hydrocarbons. It has the additional advantage compared with natural gas that it produces almost no carbon oxides.

The geothermal resource is situated in a series of Lower Devonian aquifer sands underlying Klaipeda district at a depth of about 1,200 meters. Klaipeda was found to have superior aquifer conditions, and sufficient geothermal temperature conditions to allow for a demonstration of the extraction of geothermal energy.

The objective

Apart from the considerable environmental advantages of geothermal energy, there are likely to be long-term cost advantages as well. Lithuanian government policy supports the use of renewable energy resources in relation to the closure of Ignalina Nuclear Power Plant and as means of achieving higher air quality standards. An additional cost advantage of geothermal energy is that it can be distributed through the existing district heating networks, which means that there is limited need for major infrastructure investments.

The procedure

The project consists of two components: (a) A

technical assistance and training component, and (b) an investment component. Both components have been financed partly by grants from the Global Environmental Facility (GEF), the Danish Government, a loan from the World Bank, and local contribution.

The technical assistance and training component comprises design of necessary equipment for extracting heat from the geothermal water and transferring it to the district heating system, preparation of detailed design, testing and completion of programs, management support for project implementation including preparation of tender documents, and construction supervision, and training of the Lithuanian staff in the operation of the plant. The investment component covered establishment of two production wells and one injection well above ground facilities and piping between production wells, the geothermal plant, injection well and the district heating network.

The environmental result

The geothermal plant in Klaipeda has a capacity comparable to the heating needs of 7.000 Danish one family houses. The plant will substitute fossil fuel heat production and this will lead to yearly reductions in CO₂ emissions of 46.000 tons. As the plant will substitute heat production from the fossil fuel mazut

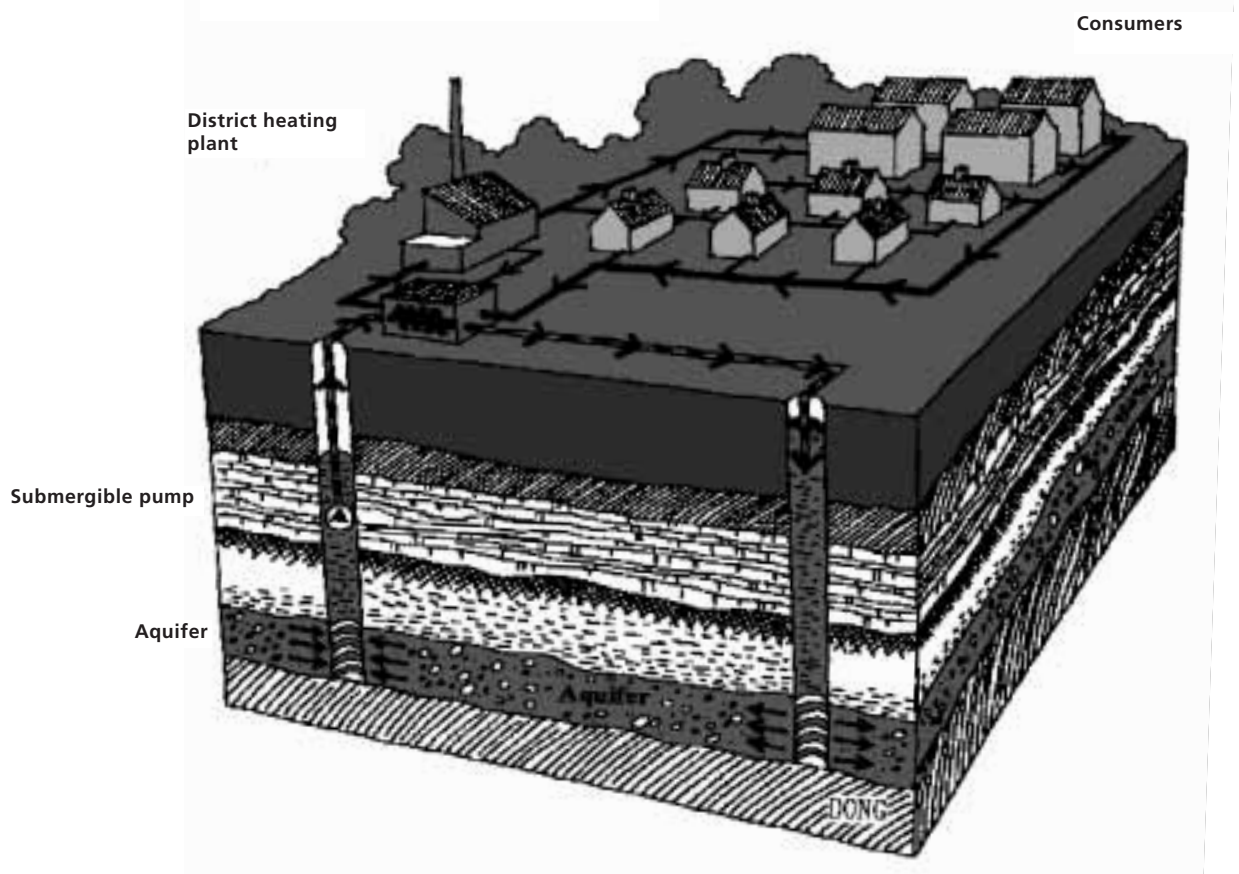
Geothermal heat is heat produced in the waterbearing aquifers in the underground as a result of heat from the earth rising towards the surface. The heat is produced by drilling wells at these layers and pumping the water through a geothermal production plant where the heat is conveyed to a district heating system by means of direct heat exchange and in some cases also heating pumps. The cooled water is then led back to the same waterbearing aquifer by means of injection wells. The locations which are most appropriate for such technique are locations with a considerable district heating system with low temperature level and having an underground with suitable waterbearing layers, i.e. a thick sand layer. Such layers are typically found at 1-3 km depth containing 30-100 degrees C hot water.

CHAPTER 1

which is a heavy oil with a high sulphur content and nitrogen, the yearly reductions in emissions of sulphur dioxide and nitrogen oxides are also huge (900 and 100 tons respectively). The reductions in CO₂ emissions are important in the perspective of climate

changes as CO₂ impairs heat loss from earth (a so called green house gas), whereas sulphur dioxide and nitrogen oxide leads to acid rain which negatively affects a range of different types of ecosystems throughout the Baltic Region.

Principle of Geothermal Heating System



CHAPTER 6

HIGH PRIORITY TO WATER QUALITY

From the beginning of the Danish-Lithuanian environmental co-operation, the protection and improvement of water quality have been given high priority in Lithuania and in connection with the Danish assistance. In the Danish-Lithuanian co-operation portfolio, projects relating to water quality improvements and water protection have by far the largest volume.

In the Danish-Lithuanian co-operation portfolio, projects relating to water quality improvements and water protection have by far the largest volume. 43 projects relating to water quality improvements have been supported directly by DANCEE with a total grant support of close to DKK 120 million (EUR 16.14 million). Approximately 50 per cent of the DANCEE support have addressed treatment of municipal waste water.

Protection and improvement of water quality are given high priority both in Lithuania and in connection with the Danish assistance. Actually, water quality improvements and water protection have by far the largest volume in the Danish-Lithuanian co-operation. In relation to water quality improvements, there are 40 projects that correspond to a direct DANCEE-grant support totalling DKK 106 million (EUR 14.25 million). In addition to this, the Danish soft loans scheme operating in 1994-1995 has disbursed loans to 13 waste water and water treatment facilities totalling DKK 150 million (EUR 20.17 million) with a subsidy element of DKK 37.5 million (EUR 5.04 million).

Substantial reductions of pollution

The support encompasses support to rehabilitation of waste water treatment plants, support to drinking water plants, renovation of sewer and drinking water networks, marine oil spill abatement, clean-up activities and remediation of soil and ground water contamination, monitoring of surface waters,

and transposition and implementation of the nitrate directive.

The Danish effort has led to substantial reductions in pollution load from previously non-existent or inefficient waste water treatment plants. Hence, it has been calculated that this reduction equals an untreated load from 750.000 person equivalents.

Furthermore, the Danish effort has supported the Lithuanian challenge to upgrade its drinking water supply, and among the other results of the Danish support could also be mentioned that the Lithuanian coast authorities now have the equipment and training needed for marine oil spill abatement.

Waste water treatment

In 1999, about 4,561 million m³ of waste water were discharged into surface water bodies, 60 per cent of the amount being treated according to standards, 28 per cent treated and 12 per cent untreated. Introduction of biological treatment in waste water treatment plants (WWTP) which were under construction or reconstruction started in 1996. In 1999, nitrogen and phosphorus was treated according to standards in 10 cities.

Surface water quality is observed in 47 rivers and 13 lakes, at the points that most characteristically reflect impacts of municipal, industrial and farming activities hydrochemical analyses are performed.

The DANCEE-programme has supported a wide range of activities relating to soil- and ground water contamination and the protection of ground-water resources. The support encompasses such activities as:

- Technical and legislative aspects forming the basis for an improved management of ground-water resources in Lithuania,
- Mapping out of and risk assessment at former Soviet military sites
- Demonstration projects on soil and groundwater investigations, risk assessment, and remediation
- Improved procedures for handling and safe-making of storage facilities.

It is anticipated that the load from the WWTPs supported by Danish assistance will result in a yearly pollution reduction of approximately:

- 16,990 tons BOD
- 5,106 tons total nitrogen
- 471 tons total phosphorus.

This amount roughly equals the load of 750,000 person equivalents non-treated waste water. In comparison, the total Danish waste water load to recipient waters in 1998 was:

- 3,525 tons BOD
- 5,166 tons total nitrogen
- 601 tons total phosphorus

The projects supported cover a wide range of technologies and scales of rehabilitation ranging from minor rebuilds to new facilities.

Hence, the largest of these projects is the reconstruction of Vilnius Waste Water Treatment Plant, but support has been given to demonstration projects for small scale/low technology solutions in treatment of domestic waste water discharges as well.

Water supply

In Lithuania all drinking water is taken from ground water, and contamination of soil is a threat because of possible leaching into underground aquifers. In fact ground water pollution has been detected in almost one third of the country's territory.

The involvement in the water supply and networks has been rather limited but the construction of a new drinking water plant in Zarasai and the demonstration of the no dig methodology for pipe-renovations in Siaulia network are examples in this area.

Also a project on "Optimisation of Alytus Water Supply" was started in 2000 and is expected to result in sustainable water supply in Alytus conforming with the EU standards which can serve as model for similar water supplies in Lithuania.

Ground water protection and remediation

As mentioned, the water supply of Lithuania is based on ground water subtraction. The larger part of drinking water supply is abstracted from deep-laying primary aquifers, but in areas not connected to central drinking water supply, drinking water is taken from shallow dug wells taking water from secondary aquifers.

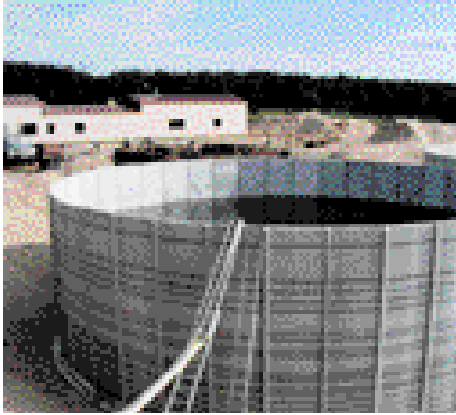
Generally, the drinking water quality of Lithuania is good even if the ground water in many areas have high contents of iron and manganese due to the natural conditions of Lithuanian aquifers.

A potential and specific threat to the ground water quality is soil and groundwater pollution at contaminated sites.

Among the most contaminated territories are the former Soviet military sites which cover 67,762 ha or 1.04 per cent of the country's territory. The military activities have had an adverse impact on all parts of ecosystem: Soil, deeper ground layers, hydrosphere, fauna and flora. In half of former military sites, a significant soil- and ground pollution with oil products, heavy metals, in some places rocket fuel is identified.

Oil spill abatement

In 1998, modern oil-spill abatement equipment was purchased and stationed in



Klaipeda. The project was co-financed by contributions from Lithuania, Finland and Denmark and had a total cost of DKK 20 million (EUR 2.69 million).

The efforts to provide support in abatement of oil spill in the Baltic Sea are further implemented through projects regarding the implementation of waste management plans and facilities for ship-generated wastes in major CEE ports around the Baltic Sea. In Lithuania, it is the State Harbour of Klaipeda.

Monitoring

The DANCEE programme has also supported the establishment of an up-to-date monitoring system for river quality through 2 projects which have assisted in the modernisation of water flow measurements and the updating of laboratory facilities.

EU approximation and the water sector

As is the case in other society sectors of Lithuania, recent priority-setting within the sector has, to a large extent, been influenced by an overall Lithuanian wish to join the European Union. Naturally, this priority is also reflected in the DANCEE portfolio.

In 1999, a project on the transposition and implementation of the EU Nitrate Directive (regulation of diffuse agricultural nitrate load) was launched with Danish support. This project will assist the Ministry in transposition of the Directive requirements and development of an implementation strategy. It is foreseen to continue activities in implementation of requirements by providing assistance to establish action programme for vulnerable zones, including mandatory measures.

Support to EU-approximation activities in this sector was extended in 2000 through a project to assist in the transposition of other EU requirements in the water sector, mainly water quality and emission standards.

A river basin management project and other activities relating to the Water Framework Directive will supplement the above projects.

In 1999-2000 the DANCEE programme has also provided support in elaboration of a financial strategy for the Lithuanian water sector. The project includes development of a methodology for preparing financing strategies. The strategy provides a detailed investment plan including funding sources.

Finally it should be mentioned that the efforts made in relation to the introduction of cleaner technologies and regulation of industrial discharges also impact water quality.

Future perspective

Support to the water sector is given high priority in the Country programme and the targets of Danish assistance are:

- Transposition of EU – water legislation
- Institutional capacity building (at all levels)
- Investment preparation (feasibility studies and financial schemes preparation)
- Investment support
- Water quality monitoring
- Control and enforcement of outlet permits
- Follow up activities on previous projects supported by DANCEE

IMPROVEMENT OF ALYTUS WATER SUPPLY

Alytus is situated 70 km south-west of Vilnius with a population of 79,000. Approximately 82 per cent of the population are supplied with water from the Water Company. The water supply distribution network is old and corroded. This leads to large water and energy losses in the distribution system and brings furthermore brown-coloured groundwater to the tap of the consumers.

In 30 years of exploitation of the main Alytus well field, more than 100 wells have been re-drilled. After the clogging of a well screen, new wells are drilled in close distance.

The main problem for the water supply today is high operational costs due to a short lifetime of the wells and due to leakage from the distribution network.

The objective

The objective of the project is a sustainable water supply in Alytus conforming to the EU standards. It is necessary to optimize groundwater exploitation in Alytus, i.e. select the environmentally and economically sound mode of water extraction, distribution and consumption. It is expected that this mode will demonstrate other water supply companies in Lithuania how to establish an integrated water supply management, improve water supply infrastructure, reduce significantly groundwater losses and save energy.

The procedure

The project covered establishment of investigation wells and a strategy against well

clogging and a well field management plan.

The staff of the Water Company has been trained in leakage detection and a plan for the continued leakage monitoring and repair of network has been established. The project also assessed an existing water consumption structure and set up an action plan for water saving at main water consumers. Existing drinking water treatment facilities have been evaluated and an action plan for rehabilitation of Alytus Water Work set up. The project has also pre-assessed the sewer system and has set up an action plan for detailed future inventory of the system.

The environmental result

The project improved the efficiency of Alytus Water company by improved well design, reduced energy consumption, reduced losses of water and a well field management plan based on the future demands, as well as plans for rehabilitation of main supply network and water treatment, for water savings and for future inventory of the sewer system. In the end of the project, the results have been discussed at a seminar with representatives from other Lithuanian water companies.

REHABILITATION AND UPGRADING OF VILNIUS WASTE WATER TREATMENT PLANT

The waste water from Vilnius, which is the capital of Lithuania and has some 575.000 inhabitants, is collected at the central waste water plant just outside the city. Ultimately the waste water is led to the Neris River which runs to the Baltic Sea through Vilnius and Kaunas. The plant is one of the environmental hot-spots identified in the HELCOM programme.

The waste water treatment plant in Vilnius is the largest waste water treatment plant in Lithuania. Despite its physical size the effectiveness of the plant and the operational costs were far from optimal when Lithuania regained its independence.

Insufficient cleaning of the water leads to pollution of the Neris River from where the pollution load will ultimately end up in the Baltic Sea. In addition, the high operational cost, impairs the economy of the plant.

A number of projects supported by DANCEE have targeted the rehabilitation of Vilnius Waste Water Treatment Plant,

and it is expected that the plant will comply with internationally agreed standards for waste water treatment, when the rehabilitation of the plant is completed in 2002.

The objective

Though a decade of DANCEE support to the rehabilitation of Vilnius the objective of the specific projects have changed, and the ambitions of waste water treatment efficiency have gradually increased.

From a target set at improving waste water cleaning at the plant and decrease operational



costs the target is now compliance with international waste water treatment standards and economic sustainability.

The pollution load to the Neris River does not only affect the local environmental conditions the river also functions as a transport for nutrient pollution load which will ultimately end up in the Baltic Sea and hence add to the pollution of the sea.

Being one of the major sources of pollution in the Baltic Sea, the waste water treatment plant has been included in the HELCOM list of specific environmental hot-spots in the Baltic Sea region.

The procedure

The first projects supported from Danish side included the establishment of feasibility studies on how the rehabilitation of the Vilnius Waste Water Treatment Plant could most efficiently be carried out. Based on the outcome of the feasibility studies the rehabilitation of the treatment plant was started in order to

upgrade treatment efficiency to the standards of a mechanical-biological treatment plant. This second project was initiated in 1995. During this work it was discovered that efficient removal of phosphorous and nitrogen from the waste water could be implemented with only little additional costs, and it was decided to incorporate nutrient removal into the project. The project is co-financed by Danish soft-loans, PHARE and the Water Company of Vilnius. The total estimated cost of the project is DKK 120 million (EUR 16.11 million).

The environmental result

When finalised in 2002-2003, the waste water treatment plant will comply with the EU outlet standards and the project will lead to yearly pollution load reductions of 500 tons BOD, 2.000 tons nitrogen and 155 tons phosphorus. The reductions will not only lead to immediate improvements of the environmental conditions in the Neris River; it will also reduce the pollution load to the Baltic Sea.



Exercise in the use of oil spill abatement equipment.

COMBATING OIL SPILLS IN THE SEA

The Republic of Lithuania has joined a number of international conventions in relation to the protection of the coastal zone and the marine environment against pollution with oil and other harmful substances. The International MARPOL 73/78 Convention as the HELCOM Convention 1974/HELCOM Convention 1992, all related to the protection of the marine environment, have been acceded or signed and ratified.

As a signatory of the Helsinki Convention for environmental protection in the Baltic Sea, Lithuania has accepted a commitment to establish protective measures against marine oil pollution incidents.

The objective

The objective of the overall Danish assistance in combating oil spills in the Baltic Sea is to assist Lithuania in contributing to the protection and sustainable use of the natural resources and recreational amenities at the coastal areas of Lithuania by minimising the consequences and impacts of oil pollution caused by accidental or deliberate oil spills from ships and other potential oil pollution sources.

The procedure

The Danish government has conducted a preparatory study which comprised an overall oil pollution analysis including identification of ecological sensitive areas, risk assessments, evaluation of existing facilities, legislative and administrative set-up, and assessment of the technical, economic, and socio-economic impact of actual and potential oil pollution incidents.

Danish technical assistance was also used in the implementation of a National Marine Oil Spill Contingency Plan in Lithuania. This work has been carried out in close co-operation with the Klaipeda State Sea Port Authorities under the Ministry of Transport and the Lithuanian Ministry of Environment.

With Danish assistance, the operational requirements from a hardware standpoint with the aim to set up equipment requirements with spill response capacity have been determined.

A Lithuanian-Swedish co-operation project has resulted in the establishment of an information decision-making platform for national authorities responsible for combating marine oil spills. The project has helped in the application of maps of coastal areas that are sensitive to marine oil spills.

The environmental result

Lithuania has now the National Oil Spill Contingency Plan which helped to develop an appropriate administrative structure dealing with combating marine pollution and fulfil the international commitments due to ratification of international marine conventions.

Existing oil spill combating equipment set-up has been rehabilitated and supplemented with the purchase of new equipment and facilities. The total value of the equipment purchased was DKK 20.278.185 (EUR 2.723.402). The financing of the equipment has been shared in equal parts by the Danish, the Finnish and the Lithuanian Governments.

Oil spill contingency projects have been parallel on-going in all three Baltic States, and they were used to develop subregional co-operation between Estonia, Latvia, and Lithuania in relation to marine oil spill contingency.

IMPROVING THE MANAGEMENT OF WASTE

Nearly all domestic waste in Lithuania, about 98 per cent, is landfilled. This causes environmental problems. Nevertheless, considerable achievements with continuous Danish support have been reached. This means that some of the new waste constructions already comply with the EU requirements for waste management. The DANCEE support in relation to waste management has a project portfolio of 20 projects and a total Danish grant support of DKK 42 million (EUR 5.65 million).

In 1999 about 6.234 million tons of non-hazardous waste were generated in Lithuania. 98 per cent of all the domestic waste is landfilled. Even though that most of the about 800 landfills in Lithuania are poorly designed, some new constructions already comply with the EU requirements.

Also in 1999 105.600 tons of hazardous waste were generated. This causes problems because the existing treatment facilities can handle only a small part of the waste. The rest is stored on enterprises' own sites. According to the planned treatment system there are three groups of hazardous waste which can be handled in following ways: incineration, physical and chemical treatment, and disposal.

Projects related to hazardous waste problems and management are a part of the Danish-Lithuanian project portfolio, and cover such activities as: "Action plan for unused pesticides", "Intermediary hazardous waste storage facility in Klaipeda", and "Training activities for hazardous waste management".

In total the DANCEE support in relation to waste management (1991-2000) has a project portfolio of 20 projects and a total Danish grant support of DKK 42 million (EUR 5.65 million).

One of the targets of the agricultural sector programme is the use and control of pesticides.

Danish support to solid waste management

A demonstration project on solid waste management in Kaunas (which has some 470.000 inhabitants) was launched already in 1992, and the co-operation with the environmental authorities in Kaunas regarding the project has been continuously elaborated.

Also the DANCEE programme has supported projects in other cities of Lithuania as well as in the capital Vilnius, where DANCEE support has been provided for a risk assessment and feasibility study for utilisation of landfill-gas.

Waste management compatible with the EU requirements

In the waste sector DANCEE has been very much involved in the Lithuanian effort to transpose its legislation and to comply with the regulatory framework for the waste sector set up by the European Union.

The transposition of Lithuanian legislation in relation and regulation of solid waste management was launched with DANCEE support in 1997. The Waste- and IPPC approximation project has assisted Lithuania to



The leachate from the landfill at Kaunas is collected and treated as part of the DANCEE project at "Lapes landfill".

develop legislation and regulations compatible with the EU requirement as well as the establishment of Strategy plans for the future network of landfills and municipal waste recycling strategy.

The transposition effort led to a thorough revision of the Lithuanian Waste Management Law. Hence in recent years the DANCEE support in relation to the waste sector has to some extent been focused on the implementation of the new Lithuanian waste legislation.

Among these projects is a project that has established guidelines for the establishment of county and municipal waste management plans as called upon in the law and another technical assistance project, which clarifies the possibilities for inter-municipal co-operation.

As mentioned above the DANCEE has supported the elaboration of a Lithuanian environmental investment strategy. This study also covers the waste sector and its investment requirements in order to reach EU-standards in the Lithuanian waste area.

Future perspective

The waste sector is given high priority in the DANCEE country programme for Lithuania.

As mentioned above Lithuania's effort to transpose and implement EU-legislation has not been completed. In relation to investments needed for the implementation of EU-standard main bottlenecks exists in relation to project preparation and the project implementation capacity.

Hence, the focus of DANCEE assistance will be:

- Technical assistance to national strategy development for solid and hazardous waste management
- Institutional strengthening (primarily projects targeted at local governments and waste companies)
- Investment preparation (feasibility studies and financial schemes preparation)
- Investment support
- Follow up activities on previous projects supported by DANCEE



WASTE MANAGEMENT IN KAUNAS

In Kaunas, Lithuania's second largest city, one of DANCEE's oldest projects is still being implemented. Waste management in Kaunas has an important demonstration effect, as the project has given the city a powerful boost towards living up to EU standards. EU membership has high political priority in Lithuania and it is one of the country's highest priorities for the future.

Thirteen kilometres outside Kaunas in Lithuania lies a landfill that often has the honour of visits from politicians, administrators, students, and journalists.

This landfill which serves Lithuania's second largest city, is one of the first in the Baltic States that is on its way towards meeting the requirements imposed by the EU on potential member states.

The objective

Waste management in Kaunas has an important demonstration effect, as the project has given the city a powerful boost towards living up to EU standards. The landfill is also one of the most highly praised projects according to reviews of Danish initiatives in Central and Eastern Europe. This is partly because of a relatively long period and with sustained, well motivated help from the local authorities and partners responsible.

The procedure

DANCEE and Kaunas' authorities entered their alliance back in 1992 and are still co-operating during the fourth phase of the project.

The Kaunas waste management project has received about DKK 13.5 million (EUR 18.2 million) in Danish assistance. The total project cost was more than DKK 21 million (EUR 2.82 million) with co-funding from the Lithuanian authorities and other donors such as the Finnish Ministry of Environment.

Kaunas Municipality and the local waste disposal company introduced the first pilot trials with fractionating and recycling of refuse.

The waste disposal company rationalised the collection and transport of waste from Kaunas' 430,000 inhabitants, and the landfill was enlarged in line with modern principles to encourage the continued improvement of waste management.

For controlling leachates, Kaunas' landfill, as well as the other most modern landfills, is lined with a plastic membrane so that this liquid can be collected and treated. The project included covering and closing down part of the landfill site which reduced the amount of leachate by no less than 80 per cent. Meanwhile, a drainage system was laid in the part that was still to be used so that leachates could be collected and treated. Modern plastic membranes were also laid in new sections of the site.

An active sludge plant that removes 99.5 per cent of the organic components present in leachates was then built.

Lastly, Kaunas Municipality and the waste disposal company established a recycling station, which has increased the site's scope for recycling glass, paper, green waste, and building refuse.

The environmental result

Generally, waste disposal at landfills causes soil and groundwater pollution due to leaching of heavy metals, chloride, and nutrient compounds. The biological degradation of organic waste also creates two greenhouse gases, methane and CO₂.

The environmental benefits of upgrading Lithuania's landfills comprise a reduction of leaching from landfills into the groundwater and a reduction of emissions of methane gas into the atmosphere. Better treatment of leachate will also reduce emissions of organic nutrients that cause eutrophication and oxygen depletion in rivers, lakes, and in the Baltic Sea.

The project has a demonstration effect and the dissemination of methods and results of waste management in Kaunas has been conducted through co-operation with the engineering faculties at the universities in Kaunas and Vilnius. Throughout the project, seminars that have been attended by representatives from large municipalities in Lithuania and the other Baltic States have been held.



PROTECTING THE DIVERSITY OF NATURE

15 per cent of the Danish grants to Lithuania goes to so-called green projects, which all have the objective of protecting the diversity of the nature. The Danish projects have focused equally on sustainable forestry and nature protection. About 11.5 per cent of Lithuanian territory are officially protected, but even in an optimal system of protected areas, it is not possible to protect all the landscape and biological diversity. Therefore, attempts are made to find ways of creating an ecological compensation zone, as a balance against the network of technological territories.

The present-day Lithuanian landscape has formed itself against a background of long-term human agricultural activity. In terms of the intensity of the anthropogenic effect and land use, the following main landscape types can be identified in Lithuania:

- cultural (urban and agrarian).
- natural, or semi-natural ecosystems; which includes forests, wetlands, meadows, water bodies and sand. This covers approximately one-third of Lithuania. Species density is variable, especially in forests.

To protect species and communities the Lithuanian Red Data Book has been compiled and protected areas have been established.

The Red Data Book includes 501 species:

- 210 plants
- 210 animals
- 81 fungi which are grouped according to their rarity.

Danish support to eco-tourism

The Danish "green projects portfolio" in Lithuania from 1994 – 2000 amounts to DKK 46 million (EUR 6.19 million) or 15 of the DANCEE grants to Lithuanian projects. The vast majority of the projects have been technical assistance projects focusing mainly on capacity building and transfer of knowledge and methodology. Projects in this area

are jointly prepared and managed by the DEPA and the Danish Forest and Nature Agency and their Lithuanian counterparts.

The themes of the projects, subject of the DANCEE programme, have focused equally on sustainable forestry and nature protection. But they have also had components of eco-tourism and cultural environment enhancement.

Examples of major projects are:

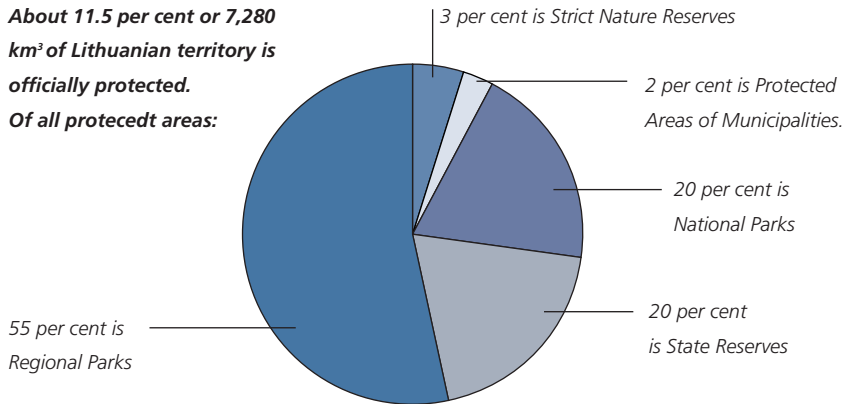
- State Park institutional development;
- Afforestation of abandoned agricultural land;
- Management plans and programmes for Nemunas River Delta Regional Park and Kursiu Lagoon;
- Approximation of Lithuanian capacity, policy and procedures on nature protection to EU requirements, Birds and Habitats Directives;
- Baltic InterSAVE programme for Vilnius Old City;
- Sustainable forest management in private forests.

Public access, eco-tourism and controlled recreational use are elements of Danish supported nature projects.

A national plan for the biodiversity

In 1995 Lithuania ratified the Convention on Biodiversity, and is thus obliged to prepare a national biodiversity study, strategy and action plan. The Lithuanian Biodiversity Conservation

About 11.5 per cent or 7,280 km² of Lithuanian territory is officially protected. Of all protected areas:



The north European Pond Turtle has its northern extension in the southern part of Lithuania.

Strategy and Action Plan has been adopted by the Governmental institutions in the beginning of 1998. They cover a 20-year period although most of the actions are meant to be implemented within 5 years.

In 1993 Lithuania accessed to Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat and Bern Convention on the Conservation of European Wildlife and Natural Habitat. Lithuania has recently ratified CITES Convention on the International Trade in Endangered Species of Fauna and Flora and Bonn Convention on the Conservation of Migratory Species of Wild Animals by mid of a year 2001.

Even in an optimal system of protected areas, it is not possible to protect all the landscape and biological diversity. Therefore, attempts are made to find ways of creating an ecological compensation zone, as a balance against the network of technological territories. In Lithuania a juridical legitimised nature frame concept exists. All the natural protected areas are linked into the nature frame, as are other ecologically important and sufficiently natural territories which safeguard general lands stability, to create a general landscape management ecological compensation zone system.

In the period of the country programme previous target areas will be retained, but projects will be focused more specifically on particular issues within each target area, as follows:

- Protected areas and nature protection in terms of public participation/awareness and international conventions and EU policies
- Sustainable forest management in terms of public environmental awareness and environmental knowledge among private forest

owners, and policy/institutional development pursuing implementation of international recommendations, including EU forest policies

- Preparation of environmental nature and forest projects for other donors like EU and UN funding organisations.
- Coastal zone management.



STATE PARK INSTITUTIONAL DEVELOPMENT

According to the National Act on protected areas, all national and regional parks are subject to planning schemes as a tool for their future management. The planning methodology was in need of further development and improvement and experience on implementation of planning schemes was scarce in Lithuania. In order to speed up the process and to improve the quality and future utilisation of the planning schemes, a project with Danish assistance was set up.

The project provided guidelines on how to rationalize and improve the planning procedures and how to effectively implement the planning schemes. The project introduced a new kind of planning, named Park Management Plan that was more dynamic and open for revisions and supplements and more flexible as the conditions were changed. The plan forms the basis of the planning scheme and park action plans for concrete actions in the coming three years, revised each year in connection with the budget.

The objective

The main objective of the project was the comprehensive institutional development of the state (national and regional) parks in Lithuania. The National Strategy for the Development of the System of Lithuania's Protected Areas was published in order to improve the management of protected areas in Lithuania.

The procedure

Planning schemes were prepared for Meteliai, Panemuniai and Nemuno Kilpos regional parks and site management organised in all the three parks.

The information campaign "Discover Nature 2000: Welcome to the National and Regional Parks of Lithuania" was initiated by the project in close co-operation with the Lithuanian Ministry of Environment. Based on the

experience obtained, it was recommended that the Ministry organises such campaigns every year.

Booklets and leaflets were published. Educational trails, information boards, visitor centres and nature schools were established in order to inform society about Meteliai, Nemuno Kilpos, and Panemuniai regional parks. A website was also devoted to public information about the protected areas and the process and results of the project.

During the project, a great amount of attention was paid to the training of the working party of state park administrative staff and the staff and consultants of the Department of Forests and Protected Areas in order to extend the positive reforms after the termination of the project. Methodological publications were published and study tours and workshops were organised.

The environmental result

The project has resulted in the draft of the National Strategy for the Development of Protected Areas. Planning schemes including Management Plans for Meteliai and Panemuniai Regional Parks have been prepared in addition to recommendations for guidelines for the planning of protected areas.

The planned site management has been carried out in all three regional parks and

involved many landowners, local authorities and other stakeholders.

The information campaign performed during the project has increased the attention of the public at large on the protected areas and given good experience to the staff of the Ministry of Environment and the state parks.



THE CLOSURE OF THE IGNALINA NUCLEAR POWER PLANT

In 1999 the Lithuanian parliament adopted a new national energy strategy encompassing the gradual closure of the Ignalina Nuclear Power Plant. Denmark very much applauds this decision, because of the intrinsic environmental risk of this kind of nuclear reactor. From the Danish side it is however at the same time recognised that the closure of Ignalina NPP – at any time – will impose a large economic impact on Lithuania. Substantial financial and technical support is therefore needed from the donor countries to implement the decision taken by the Lithuanian Government and Parliament

The Ignalina Nuclear Power Plant in north-eastern Lithuania is a reactor of the same type (RBM) as the Chernobyl reactor in Ukraine, and as such the NPP causes a high health and environmental risk. Consequently, there has been a strong drive – not least from the international society - to decommission the plant.

In the autumn of 1999 the Lithuanian Parliament adopted a revised energy strategy encompassing a gradual closure and decommissioning of the Ignalina NPP.

The final decision in Lithuania on the future of Ignalina NPP has been a long and difficult process, due to the present low costs of electricity from Ignalina NPP and the very high decommissioning costs. The decision taken in 1999 is therefore an important decision for both Lithuania and the Baltic region. It is also a decision with unsolved financial and economic questions as Lithuania will not be able to bear the full costs of the legacy from the Soviet time; the Western European countries are needed both for financial and technical assistance.

The Danish assistance

In June 2000 the first Donor Conference on the Ignalina NPP decommissioning was held in Vilnius. A very large number of countries participated and pledged a total sum of more

than DKK 1.487 million (EUR 200 million) for the decommissioning and derived areas.

The pledged amount from the Danish side will mainly be allocated on a bilateral basis in close co-operation between the Energy Sector Programme, the DANCEE programme and the counterparts of these programmes in Lithuania (presently Ministry of Economy / Energy Agency and Ministry of Environmental Protection).

The Danish assistance is primarily targeted at reducing the economical impact of the closure of Ignalina NPP through energy efficiency, and the development of an environmental sustainable replacement of Ignalina NPP.

The main focus of the assistance will be :

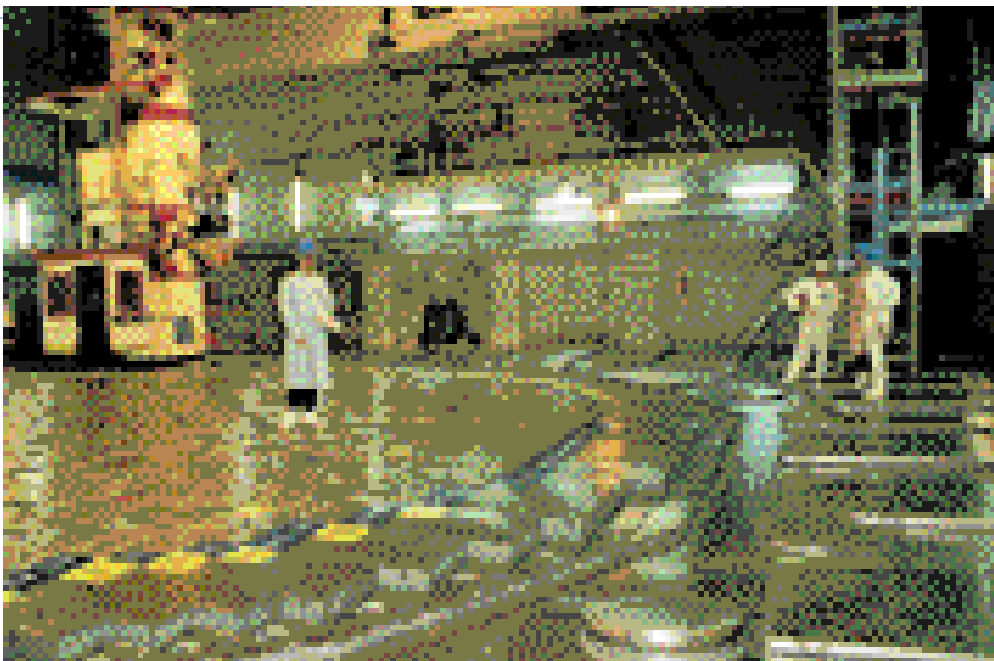
- Energy savings (reduction of energy costs for industries and households),
- continued support to restructuring and efficiency improvements in district heating, as a precondition for new combined heat and power plants in Lithuania,
- investment grant for a new demonstration plant for combined heat and power production,
- institutional development of the Ministry of Economy and Energy Agency in drafting
- implementing an Action Plan for the National Energy Strategy, as well as support to the overall energy sector reform

The total assistance for these purposes amounts to a total of DKK 100 million (EUR 13.45 million).

To support the actual decommissioning process, Denmark has pledged an amount to the Ignalina International Decommissioning Support Fund, to be established and administrated by the EBRD with a major contribution from the EU. A first contribution to this fund is approximately DKK 20 million (EUR 2.69 million).

The Danish pledge is scheduled for 2000-2002.

Additionally Denmark will consider financial and technical support to mitigate the social problems deriving from the decommissioning.



INSTITUTIONAL STRENGTHENING

Some projects have the primary objective to strengthen the set-up and capacity of Lithuanian environmental institutions. These projects range from small study tours for public servants to Denmark to medium size projects targeted at transposition effort for specific EU-requirements (such as collection of environmental information and reporting) and large scale projects targeted at major challenges and broad areas.

Even if it is difficult to evaluate the non-tangible benefits of a given project, one criterion to be applied is that there should be transfer of knowledge, which is found useful and valuable by the recipient of the project.

In this sense, all successful projects should contribute to the strengthening of the persons and institutions involved in the projects. Most of the projects supported by the DANCEE

programme contain components, which, more or less explicitly, are targeted at strengthening the participating persons and/or institutions.

Some projects have the primary objective to strengthen the set-up and capacity of Lithuanian environmental institutions.

These projects range from small study tours for public servants to Denmark over medium size

The DANCEE programme has supported several projects with activities that will strengthen the management and recreational use of the reserves along the Nemunas River and its tributaries.





In relation to soil and ground-water contamination caused by the former Soviet military bases DANCEE has supported a range of activities, primarily as capacity-building entailing demonstration of clean-up and remediation techniques.

projects targeted at transposition effort for specific EU-requirements, such as collection of environmental information and reporting and large-scale projects targeted at major challenges and broad areas.

Capacity-building

In 1997, a project targeted at the transposition of the IPPC-directive (Integrated Pollution Prevention and Control) was launched with Danish support. This project (Waste and IPPC approximation project) supported the Ministry in the development of required legislation, National strategy for approximation of IPPC directive, Training programme and assisted in the implementation of training activities.

Another large project, which focused specifically on the Lithuanian capacity to perform inspection visits to industries for

which environmental permits are required and to enforce the environmental legislation, was initiated in 1999. In the first stages of this project, an electronic database was created in order to keep track of all needed information for efficient industrial inspections in three pilot Regional Environmental Departments. In this first phase, the challenge has been to transform a similar Danish EDP database into a useful Lithuanian version and to incorporate specific Lithuanian requirements into the tool. It is planned that the full project shall provide all regional departments with similar tools. The project is a good example of the step-wise approach, which is often applied in complicated projects.

See the following project descriptions:

Waste Management in Kaunas, page 34

State Park Institutional Development, page 38

IMPROVING THE ENVIRONMENT THROUGH CLEANER TECHNOLOGY

In relation to industrial pollution control, Danish support has primarily been implemented through projects targeted at introduction of Cleaner Technologies in Lithuanian industries and projects in the electroplating industry, the leather industry and in slaughterhouses.

Due to the decline and modernisation of industrial activities in Lithuania, pollution load from the industry has diminished since the regaining of independence. It is anticipated that pollution load from industries will continue to drop since the heavily polluting enterprises with manufacturing lines based on resource consuming soviet-type process lines will not be able to compete in a open market economy.

In relation to abatement of industrial pollution control, Danish support has primarily been implemented through projects targeted at introduction of Cleaner Technologies in Lithuanian industries and projects in the electroplating industry, the leather industry and in slaughterhouses.

Presently, the Danish Environmental Protection Agency is preparing a number of projects aiming to introduce cleaner technologies and energy saving in a number of the largest resource consuming Lithuanian enterprises in co-operation with the Danish Energy Agency and the Lithuanian counterparts.

These projects are implemented as part of the Danish assistance that was committed when Lithuania made its political decision to close down the Nuclear Power Plant at Ignalina, not the least because of the Lithuanian industries' concern of that the expected higher energy prices would impair their competitiveness in an open market.

A win-win situation

As is the case with other projects in relation to the use cleaner technologies, this effort will bring about a win-win situation where resource consumption and pollution will decline at the same time as production efficiency and competitiveness for the involved industries will increase.

Environmental management and auditing is a target area of the cross sector programme implemented by the Danish Ministry of Trade and Industry and projects have been implemented in the textile, the food, the paint and lacquer industry, as well as in the electronic and the metal processing industries.

INTRODUCTION OF CLEANER TECHNOLOGY IN LITHUANIAN SLAUGHTERHOUSES

Investments in cleaner technology are expected to lead to substantial environmental improvements at the slaughterhouses in Lithuania. Except from water and electricity savings, the improvements also lead to the reduction of pollution and training which included a study tour to slaughterhouses in Denmark.

A pre-assessment of the about 20 Lithuanian slaughterhouses was carried out by Danish and Lithuanian experts. Following this, six slaughterhouses were selected to participate in a project to demonstrate the technical, economical and environmental benefit of introducing cleaner technology. One of the six slaughterhouses was selected to be the main pilot slaughterhouse for demonstrating the benefits of cleaner technology.

The objective

The objective of the Danish assistance is to assist Lithuania in reducing the environmental impact of the meat industry.

The procedure

The employees at the slaughterhouses were trained in order to increase the environmental awareness and selected persons from the industry participated in a study tour to slaughterhouses in Denmark. The Cleaner Technology Centre in Kaunas conducted the training in the slaughterhouses and further analysed their wastewater.

The Danish technical assistance was used for analysing the production and processes at the slaughterhouses in close co-operation with the slaughterhouses. Following this analysis, a plan was drafted for each slaughterhouse to



A large DANCEE supported project has targeted the introduction of cleaner technologies in Lithuanian slaughterhouses.

The CT-project in slaughterhouses has resulted in higher output, improved resource efficiency, and less environmental impact. The involved slaughterhouses have invested significant amounts in cleaner technologies.

CHAPTER 11 IMPROVING THE ENVIRONMENT THROUGH...

implement new procedures and invest in equipment for reducing the environmental impact. A model for supporting the investments was set up and each slaughterhouse received a subsidy for investments, taking into account the reduction of environmental impact and payback time.

The environmental result

The investment in hardware for reducing water use, pollution and energy use is about DKK 1,6 million (EUR. 214,955). Financing of the equipment has been shared between the Danish Environmental Protection Agency and the slaughterhouses. The slaughterhouses have covered the installation costs. The payback time has typically been between 3 and 4 years for the cleaner technology investments.

It is expected that the cleaner technologies will lead to substantial environmental improvements in the respective slaughterhouses. In the pilot slaughterhouse, for example, it is expected that there will be a yearly water saving up to 20,000 m³ and electricity saving of approximately 1,800 MWh. In another slaughterhouse, a reduction in the effluent load of the waste water is estimated to be 30 tons BOD/year.

The results of the project are described in a handbook to disseminate the project's results to other slaughterhouses and other sectors.



CHEMICALS AND GENETICALLY MODIFIED ORGANISMS - GMOS

The control of chemicals and GMOs is a challenge that applies to the global society rather than the national scenes, and in the recently revised DANCEE strategy, more emphasis is put on the field of control of chemicals.

The DANCEE programme has supported the mapping out and labelling of pesticides in old and obsolete storage facilities. Apart from that, only few activities have been carried out so far in relation to chemicals and genetically modified organisms.

The control of chemicals and GMOs is a challenge that applies to the global society rather than the national scenes, and in the recently revised DANCEE strategy, more emphasis is put on the field of control of chemicals.

It is also expected that greater emphasis will be reflected in the future DANCEE activities in Lithuania.

Hence, more activities in the sector of chemicals and GMOs are planned in relation to EU approximation in the period of the country programme. In particular, attention will be to the development of legislation to ensure full harmonisation, building up of capacity in the Lithuanian Ministry of Environment to implement the EU chemical legislation, assessment of investment needs in the public sector for implementation of the new legislation and development of pilot schemes for industries.

MANAGEMENT OF UNUSED AND OBSOLETE PESTICIDES

The former centralised pesticide supply system was poorly administered and resulted in considerable amounts of outdated partly known pesticides that accumulated in several pesticide storage facilities throughout Lithuania. Most of the pesticides were hazardous and due to poor storage conditions, they posed a risk to the public health and environment.

An inventory carried out some years ago provided a figure of 953 tons of pesticide products accumulated in 296 storage sites throughout the country. Part of the products in these storage sites was unknown due to poor attention on proper handling and storage conditions, large quantities of packaging and damaged containers.

The objective

The objective of the project is to assist the Government of Lithuania in establishing an

action plan for safe management of unused pesticides. The action plan covers identification, re-packing, re-labeling, and treatment/disposal of unused pesticides. The application of the action plan has been demonstrated in practice and investigation and remedial work has been carried out in four selected pilot storage facilities.

The procedure

The inventory revealed that approximately twice the number of pesticide active



Pesticide storage before analysis, labelling and clean up.



The DANCEE programme has supported the sorting, labelling and safe storage of obsolete pesticides in Lithuania.

ingredients than expected was present in the storage facilities. To identify unknown pesticides, a mobile laboratory from the Danish Technological Institute was provided for on-site analytical work. Prioritization of pesticide storage facilities has been based on assessment of technical storage conditions. For all storage facilities, relevant treatment and disposal methods have been outlined. Site specific activity plans have been worked out for four pilot storage facilities. They included specific safety measures, establishment of temporary working place, procedures for repackaging, handling of spillage, removal of working place, procedure for sampling and relabeling.

The environmental result

The project has provided the Government of Lithuania with recommendations on feasible treatment and disposal methods regarding unused pesticides. Some of pesticide products were proposed for agricultural use. For destruction of organic chemical compounds including pesticides, the sole universal method is incineration. Until this treatment option is available, temporary storage of unused pesticides in warehouses is recommended as a solution although allowed only for a limited period of time.



Pesticide storage after analysis, labelling and clean up.

CHAPTER 13

PUBLIC AWARENESS AND PUBLIC PARTICIPATION

Public environmental awareness and public participation have been natural components of a wide range of projects supported by the DANCEE and some projects have focused specifically on public environmental awareness, public participation and the strengthening of environmental Non-Governmental Organisations - NGOs.

Public awareness, access to environmental information, public participation in the decision-making process and environmental impact assessment are the main forms of NGO participation provided in the Lithuanian legal framework.

In 2000, a DANCEE project was designed to help the environmental non-governmental organisations of CEE and NIS to develop their abilities to carry out projects related to

environmental issues. Within the frame of this project, DANCEE allocated financial resources to Small Grant Facility managed by the Regional Environment Centre - REC office in Lithuania. The REC has conducted a tender and has selected projects in the priority field of public participation and access to information, local Agenda 21 as well as biodiversity.

Another granting programme designed by REC and supported by the DANCEE, is a Region-



Co-operation between the Lithuanian- and the Danish Ornithological Society is supported by the DANCEE programme.

wide Co-operative Grants Programme. Projects will have to address region wide problems which are shared commonly by different countries such as air, soil and water pollution, traffic congestion, deforestation, protection of biodiversity values in cross-border areas and conservation of migration species. Through this programme, the REC will also promote public participation, cross-border and inter-sectorial co-operation as one of the most effective ways to solve environmental problems.

Efforts to strengthen the public environmental awareness is an integrated part of many of the projects implemented by the DANCEE programme and especially in the projects concerning the "nature" area, public participation and public awareness raising have been major components.

Some projects, like the establishment of an environmental Internet information page in the Environmental Regional Department of Klaipeda, is a good example of a project, which has focused on public environmental awareness raising.

Strengthening the NGOs

The strengthening of the non governmental environmental organisations have also received attention in specific Lithuanian-Danish Co-operation. For example, the DANCEE has recently allocated grants for transfer of knowledge and co-operation between the Danish Ornithological Society and the Lithuanian Ornithological Society (LOD) which is the largest of the environmental NGOs in Lithuania.

Future involvement of NGOs in the different sectors of bilateral co-operation is a specific target of the co-operation programme. Priority will remain to support NGOs involvement in public participation and awareness activities. Other activities related to reporting, public access to information, and public participation are also given priority in the country programme. A project regarding the implementation of the Aarhus Convention is planned in the near future.

CAPACITY BUILDING OF THE LITHUANIAN ORNITHOLOGICAL SOCIETY

The Lithuanian Ornithological Society is the largest NGO in Lithuania. It has a unique position in promoting the results of reserve management to the Government and general public in Lithuania. In co-operation with The Danish Ornithological Society, the Lithuanian society will build a strong nationally based NGO which should be involved in the collaborative nature management and awareness-raising projects.

The need to manage wetland areas has been recognised by Lithuania. However, the realisation of how sites need to be managed is still new and further exposure to management ideas, exchange of information within Lithuania and abroad is still ongoing. The development of the culture of management as well as the training of new reserve managers is very important.

The objective

The objective of the project is to build a strong nationally based NGO involved in collaborative nature management and awareness-raising projects where relevant, in collaboration with the Lithuanian Government.

Another objective is to demonstrate the management of Novaraistis and Kretuonas



The Capercaillie (Tetrao croqallus) is on the red list of endangered species in Lithuania.

reserves through implementation of practical measures on both sites.

The procedure

In co-operation with The Danish Ornithological Society, the project assists the development of the secretariat and regional structure of the Lithuanian Ornithological Society.

The project develops management plans for Novaraistis and Kretuonas reserves. For nature conservation, an exploited peat bog in Novaraistis and an island in Kretuonas Lake will be restored.

The project provides opportunities for school children, university students and the public in general to visit these sites and learn about the ways in which wetland reserves can be managed.

The environmental result

The support to The Lithuanian Ornithological Society will assist its development as the

largest environmental organization in Lithuania and will help to develop its regional structure to cover the entire country. In the future, there will be a need for the country to have NGOs capable of assisting the government and to providing a voice on environmental issues.

In two target wetland reserves, the management issues differ, but both require coherent management input within relatively small areas in order to produce a sustained benefit for nature conservation. The management involves some control over the water levels and vegetation so that the system retains the nature values for which the areas were designated as protected. Both sites will be used as demonstration areas to other parts of the Lithuanian nature management system. Collaboration between the NGOs and the Government will be promoted. The project will also provide learning opportunities and exchange of information with reserves managed in Denmark.

CHAPTER 14

THE SECTOR- INTEGRATED ENVIRONMENTAL ASSISTANCE

PART II

Protection and improvement of the environment cannot only be seen as an isolated environmental task. The environmental conditions are dependent on and influenced by all the different sectors in the society. Therefore, the countries around the Baltic Sea adopted in 1998 the Environmental Sector Programmes. The objective of the programme is to support sustainable development in all sectors in the Baltic Sea area and to assist in the adaptation to EU legislation and the establishment of implementing systems.

The overall objective of the Sector-Integrated Environment Assistance in the Baltic region is to promote environmental sustainable development based on market economy principles in Estonia, Latvia, Lithuania, Poland and the Russian regions of St. Petersburg and Kaliningrad. The programme builds on objectives set in the Baltic Agenda 21, rooted in Global Agenda 21 and the Rio Conference in 1992 and adopted by the countries around the Baltic Sea in 1998. The assistance focuses on environmental issues in specific sectors.

The activities of the sector-integrated environment programme are scheduled as partnerships between a range of Danish Ministries or government agencies and their

colleagues in recipient countries. The programmes are assisted and co-ordinated by the DEPA and the Lithuanian Ministry of Environment. The programmes are further – depending on needs – being implemented in a close co-operation with the DANCEE programme.

The decentralised scheme of this assistance ensures a close integration of environmental sustainability into the general sector development.

The Danish authorities administering the Sector Programmes and the allocations from the different programmes are:

Allocations from the environmental sector programmes to Lithuania until 2001.

Danish Energy Agency	DKK 134.2 million (EUR 18.05 million)
Ministry of Housing and Urban Affairs	DKK 25.7 million (EUR 3.46 million)
Emergency Management Agency	DKK 21.5 million (EUR 2.89 million)
Ministry of Food, Agriculture and Fisheries	DKK 17.3 million (EUR 2.33 million)
Danish Agency for Trade and Industry	DKK 7.1 million (EUR 0.95 million)
Ministry of Labour	DKK 3.4 million (EUR 0.46 million)
Ministry of Transport	DKK 2.7 million (EUR 0.36 million)
Ministry of Education	DKK 1.0 million (EUR 0.13 million)

THE ENERGY SECTOR PROGRAMME

Since 1992, Lithuania and Denmark have been co-operating on environment related energy sector issues, based on a close partnership between the Danish Energy Agency and the Lithuanian Ministry of Economy (previously Ministry of Energy). Since 1992, approximately DKK 135 million (EUR 18.15 million) has been allocated to the Lithuanians through this programme where special priority has been given to the transfer of Danish experience and knowledge.

The overall objective of the Energy Sector Programme is to promote an environmental sustainable energy development in Lithuania, in line with the Lithuanian governmental policies and the international agreements on environment relating to the energy sector (The Baltic Agenda 21, The Climate Convention, The Kyoto Protocol, The Energy Charter, The Aarhus Declaration etc).

The overall targets of the Energy Sector Programme are therefore the following areas:

- Promotion of cleaner fuels: replacement of environmentally polluting fuels with less polluting fuels like natural gas and renewable energy.
- Promotion of efficiency improvement in production and supply of energy: lower consumption by combined heat and power production, change in heating technology, better fuel management, lowering of transmission losses etc.
- Energy saving at the end-users: energy conservation through insulation, automation, energy management and change in behaviour concerning energy awareness.
- Capacity-building and training both as an integrated part of each project and as general activities towards the energy sector.

Following the decommissioning decision of Ignalina NPP, the Energy Sector Programme has especially focused on assistance for the decommissioning and the replacement of

Ignalina NPP. This is done through transfer of experience and knowledge from Danish strongholds relevant to the Lithuanian situation.

Project support and achievements

The development in the project portfolio since 1992 reflects the development in the Lithuanian energy sector. Starting with numerous demonstration projects, feasibility studies and general energy-awareness projects, the programme has over the years moved to policy-oriented projects, business-plan projects and training projects. This is mainly due to the increasing awareness of energy costs and environmental effects, as well as more detailed policies from national and regional level.

District Heating

More than 50 per cent of the total allocation over the years have been used in the district heating sector.

Lithuania has a highly extended district-heating sector, which, if efficiently operated and maintained, is an important element of a sustainable heat supply. As well is the existence of district heating systems an opportunity for the use combined heat and power production, with a far higher fuel efficiency than separate production.

District heating rehabilitation studies have been performed in a number of cities (Vilnius,

Improvements and energy savings in the Lithuanian district heating system is one of the target areas of the Energy Sector Programme.

Kaunas, Klaipeda, Alytus, Marijampole, Panevezys, Palanga, Kedainiai), as well as a number of investments project demonstrating the feasibility of different technical solutions have been made. The studies have been performed according to the requirements of the international financing institution to ensure a proper documentation for loan-financed renovation.

Due to the financial crises in Lithuania in the recent years, only limited loan financed renovation has been initiated. The transfer of knowledge during the feasibility studies has, however, initiated the renovation process financed by the limited resources of the district heating companies themselves. It is expected that, within the next years, a major loan-financed renovation process in the district heating sector will be seen, not the least due

to a legislative and regulatory reform of the whole energy sector which will provide a far more transparent economy for the operation and renovation of the district heating sector. A district heating training network was initiated in 2000. This network trains not only technicians, but also economics from the utilities and municipalities as owner of the systems.

Natural gas

Lithuania is supplied with natural gas from Russia and has a widely developed network. This network is, however, not very well maintained, resulting in a high emission of methane gas from the network. Being a far more harmful climate gas than e.g. CO₂, the reduction of unintended leaks of methane from the network has been supported widely. Specific projects to rehabilitate the network



have been supported, as well as the development and implementation of qualified operation and maintenance strategies. The reduction obtained of the harmful climate gas, methane is equivalent to several million tons of CO₂.

The efficient use of natural gas in Lithuania (in balance with electricity and district heating) is at present not very good. The initiated energy reform and the increasing use of detailed energy planning in Lithuania is expected to increase the possibility of a more efficient use of the natural gas. Natural gas will probably be the most important fuel for electricity production when the closing down of the Ignalina NPP becomes a reality. The Energy Sector Programme is hence preparing for assistance in this field to promote a more sustainable use of natural gas which is being the most environmentally friendly fossil fuel.

Electricity

The Lithuanian electricity sector is almost totally dominated by the Ignalina NPP, generating 80-90 per cent of the electricity consumed in Lithuania. The plant is however of a design which cannot be modernised to a Western European safety level. An early closure of the Ignalina NPP has therefore been a highly prioritised issue from the western community. The present low cost of electricity from Ignalina NPP and the high cost of decommissioning have, however, been a rather difficult barrier for a political decision in Lithuania. The Energy Sector Programme assisted in 1998-99 on the background studies for the National Energy Strategy which eventually included the graduate decommissioning decision. The Energy Sector Programme will further assist in the implementation of the Action Plan to the National Energy Strategy.

Energy Efficiency

The potentials for energy saving at the end-users in Lithuania are very high. The use of energy is simply at a very high level compared to the product obtained (industrial product, heat comfort etc). The incentives for energy saving are in general hindered by a lack of transparency in organisation and pricing in the energy sector. The process of financial unbundling, the first step in establishing market prices, is still ongoing and the restructuring of incentives for energy saving at end-users are not fully completed either.

The high cost of energy in Lithuania is not only a burden on the domestic households, but a serious burden on the Lithuanian macro economy as well and thereby the competitiveness of Lithuanian economy. The accession to the EU, and thereby the opening of the Lithuanian market and direct competition, will require a large reduction of the energy intensity, to facilitate favourable conditions for the Lithuanian industry and trade in the open competition with other EU countries.

The Energy Sector Programme has been supporting projects at two levels regarding energy saving:

- Demonstration projects on energy saving, which has covered industry, buildings and a hospital
- activities at the Energy Efficiency Centre in Vilnius, a centre under the Lithuanian Energy Agency.

The latter have included both training of energy auditors (buildings, industry, energy management etc) and specific campaigns to enhance the general public energy-awareness.

With the ongoing financial unbundling of the energy sector and the clarification of incentives

for energy efficiency, the possibilities for further development of energy saving activities will be increased.

Furthermore, the decommissioning of the Ignalina NPP and thereby the extended use of fossil fuel for electricity production, will necessitate more attention to energy saving for environmental reasons. The fulfilment of especially the Kyoto protocol on the reduction of CO₂ emissions, will necessitate the development of new legislative and fiscal tools for increasing the efficient use of energy and thereby reduce the CO₂ emissions at the production plants.

Renewable Energy

Except from the limited use of hydropower, Lithuania is not using its renewable energy sources very much. A main renewable energy source in Lithuania is biomass derived from straw and wood. The Energy Sector Programme has been supporting a number of demonstration projects in form of a new boiler for district heating production based on biomass. Other donors, especially the Swedish NUTEK programme, have been supporting with new boilers as well. The projects concluded that the transfer of new technologies (including operation and maintenance) are fairly easily adopted in Lithuania and that the heat economy is acceptable. A large scale development of biomass for both the heat and the combined heat and power production, is, however, in need of more detailed development of generic project documentation for dissemination as well as detailed focus on the market and logistics for biomass. This area will be explored further in co-operation between the Energy Sector Programme the DANCEE programme and the Lithuanian counterparts.

Capacity-building and training

The legacy from the Soviet period left only limited tradition and capacity of strategic energy planning and regulation, as well as policy preparation within the central administration. A modernisation of the approaches and the methodologies in the market economic energy sector regulation has only been limited. With the invitation of EU accession negotiation, the focus on administrative capacity within the energy sector and the central administration has increased dramatically, but has at the same time been restricted by the financial constraints of the public finances.

The Energy Sector Programme has been assisting the Ministry of Economy with the development of the National Energy Strategy in 1999 and is committed to assist further on the implementation of this in the form of both policies, legislation and action plans. The ongoing process of EU harmonisation is currently the most important task for Lithuania, but the adoption of international environmental agreements in Lithuania will in the future require much more attention in the energy administration. The Danish Energy Agency is furthermore participating in an EU Phare Programme financed Twinning project with the Ministry of Economy which is focusing on the adoption of the EU legislation to the energy sector and capacity-building within the energy administration. The Energy Sector Programme is in parallel assisting on specific training and capacity building projects.

Future plans and targets

The strategy for the future assistance from the Energy Sector Programme is to increase the focus on national energy planning, policy formulation and regulation, as well as energy



saving and renewable energy. The development of environmentally sustainable policies, tools and action plan on the energy sector is very important, not only to ensure a sustainable development in Lithuania as such, but also to assist Lithuania in the replacement of Ignalina NPP, in the accession to the EU and in the implementation of international environmental agreements in Lithuania.

The very much needed technical renovation of the Lithuanian energy sector can be expected to be implemented on a business level due to legislative, regulatory and pricing reform which will facilitate far more feasible options for commercial loans and investments. Technical assistance is however still needed and will be prioritised by the Energy Sector Programme.

Further information on the Energy Sector Programme is available from:

The Danish Energy Agency
Amaliegade 44
DK - 1256 Copenhagen K
Telephone: + 45 33 92 67 00
E-mail: ens@ens.dk
Homepage: <http://www.ens.dk>

THE OTHER SECTOR PROGRAMMES

Housing and Urban Sector Programme

In order to promote energy efficiency improvements in the residential and public sector, the Lithuanian Government signed a loan agreement with the World Bank and started the Energy Efficiency Housing Pilot Project (EEHPP) in 1996. The Danish Ministry of Housing and Urban Affairs provides different kinds of assistance for the project in terms of financial support to five Advisory Centres, elaboration of a Strategy to promote Building Renovation and Energy Efficiency in Residential Buildings as well as assistance to the Housing and Urban Development Foundation (HUDF).

The main tasks of the five Advisory Centres for Homeowners Associations – located in Vilnius, Kaunas, Klaipeda, Alytus and Panevezys and organisations connected to HUDF - are to provide financial, organisational, technical and legal advice to all Homeowners Associations (HOA). However, the Advisory Centres are mainly dealing with HOAs who want to finance investments in building renovation and energy efficiency by using the ETB-loan provided through EEHPP. Due to financial support from the Danish Ministry of Housing and Urban Affairs, advice and assistance from the Advisory Centres are free of charge. Furthermore, the Advisory Centres participate in a Public Information Programme with the aim to motivate and encourage HOA to invest in energy efficiency.

Until the end of 1999, The Danish Ministry of Housing and Urban Affairs financed 100 per cent of the expenses of the Centres. In a three-year period (2000 – 2002) the Danish contribution will gradually be reduced and from 2003 the Advisory Centres should be 100 per cent locally financed.

The Strategy of Energy Efficiency was finalised in 2000. One of the proposals given by the Strategy is to establish training programmes for chairmen and board members in HOA with respect to negotiation, administration, legislation etc. The Danish consultant at HUDF has started this work and a new training programme has been introduced in the beginning of 2001.

The lessons learned from EEHPP by now, shows an increasing interest for investments in energy efficiency and building renovation in Lithuania, i.e. 169 loan agreements with HOAs and 24 with single family houses for the total amount of Litas 30 million (EUR 8.43 million), were signed by the end of June 2000.

Nuclear Emergency Preparedness and Response Education Sector Programme

The sector programme administered by the Emergency Management Agency has two target areas. One target area is nuclear safety, warning systems and emergency preparedness and the other is the handling of emergency situations in relation to accidents with hazardous substances.

In relation to the “nuclear” part of the programme, the objective of the Ministry of Interior’s sector-integrated environment programme is to promote nuclear emergency management in the Baltic region and bolster security of the region’s nuclear power plants and test reactors. In addition, the programme grants aid for monitoring the radiation environment and cleaning already polluted sites.

Even before the introduction of the concept of sector-integrated environmental programme, Denmark has assisted all the three Baltic States in the nuclear field. The Danish



Ministry of Interior started the implementation of projects in Lithuania in 1994. The major achievements of the programme have been the following: A large network of early warning stations of Danish design are installed and integrated in a network with existing automatic stations. Emergency management systems are installed at the central authorities and institutions. A decision support system (ARGOS NT) is used as the main tool for the presentation of data from monitoring network. Training courses in the use of the systems have been performed.

The objective of the programme for Emergency Preparedness and Response Education is to assist in the development of a well functioning and relevant national and cross border emergency preparedness and response in case of major accidents with hazardous substances.

Under this programme a number of training courses have been held for commanding rescue units, civil defence, fire and rescue administrators in the field of emergency preparedness and response planning.

Further information on the programme is available from:

The Emergency Management Agency
Datavej 16
DK - 3460 Birkerød
Telephone: + 45 45 82 54 00
E-mail: brs@beredskabsstyrelsen.dk
Homepage: <http://www.brs>

Environmental Sector Programme for Agriculture and Fisheries

The overall objective of the Environmental Sector Programme for Agriculture and Fisheries is to support sustainable development of agriculture and fisheries in the Baltic Sea area.

Another important objective is to assist in the adaptation to EU legislation and the establishment of implementing systems.

The present sector programme is a continuation and an extension of activities which were started already in 1994.

Some illustrative examples of topics that the programme has supported are:

- Development and implementation of decision support systems concerning sustainable use of pesticides.
- Organic production and trade.
- Improvement of the Fertilising Normative – Especially Manure Standards.
- Introduction of test procedures for field sprayers and improvement of the plant protection certificate.

Further information on the programme is available from:

The Danish Directorate for Food, Fisheries and Agro Business
Kampmannsgade 3
DK - 1780 Copenhagen V
Telephone: + 45 33 95 80 00
Fax: + 45 33 95 80 26
E-mail: dffe@dffe.dk
Homepage: <http://www.dffe.dk>

The Business Related Environmental Programme

The business related part of the sector-integrated environment assistance aims at participating in prevention and remedy of environmental loads occurring within the business community. Consequently, the sector programme of the Danish Agency for Trade and Industry focuses systematically on implementing environmental management systems (EMS) in East European companies and to demonstrate how environmental

management systems can become an integrated part of all business development.

The overall objective of the Business Related Environment Sector Programme is to promote growth and partnership in the Baltic Sea Region based on market economic principles and environmentally sustainable development.

It is expected that the projects of the programme will lead to:

- Savings at the companies through better management of energy and raw material consumption which means lower costs.
- Improvement of the companies' international competitiveness. ISO 14001 and EMAS certification can be the end result of implementing environmental management.

In Lithuania, projects on the EMAS and the ISO 14001 certification, which combines market economic principles and environmentally sustainable development, have been demonstrated in the food industry, the electro and metal plating industry, and the textile industry.

Future projects within the Business Related Environmental Programme starting in the year 2001 are intended to have a broader scope focusing on environmental management, waste management, integrated pollution prevention and control (IPPC), improvement of working conditions and transfer of cleaner technology. Furthermore, integration of the environmental related business programme with other business related programmes will be pursued to obtain synergy between the different initiatives under the Business Sector Programme.

Further information on the programme is available from:

The Danish Agency for Trade and Industry
Dahlerups Pakhus, Langelinie Alle 17
DK - 2100 Copenhagen Ø
Telephone: + 45 35 46 60 00
E-mail: efs@efs.dk
Homepage: <http://www.efs.dk>

The Sector-integrated Environment Programme of the Ministry of Labour

The sector-integrated environment programme of the Ministry of Labour is aimed at strengthening health and safety in the recipient countries at the same time integrating environmental matters in traditional labour market policy tools.

The sector programme has the following elements:

- Strengthening the environmental awareness in the Lithuanian Ministry of Labour and Social Affairs and the affiliated institutions
- Promotion of environmental considerations in the evaluation and implementation of actual employment projects
- Setting up of best practice catalogue containing employment projects which have integrated environmental aspects
- Updating of labour market courses, teaching qualifications for those in charge of training supervisors in environmental awareness and management
- Labour market courses in the food and building industry will undergo revision with a view to improving environmental, health and safety aspects.

The Sector-integrated Environmental Programme for 1999-2001 runs parallel in Estonia, Latvia and Poland testing and piloting various combinations of employment, training and environment elements.

Transport Sector Programme

Sector-integrated environment assistance in the transport field is targeted at supporting the water and railroad transport by smoothening and rationalising procedures and document processing. In addition, the programme will be evaluating environmental impacts of the various modes of transport.

The programme is targeted at:

- Promotion of environmentally friendly transport modes like railways
- Development of multimodal transport
- Environmental Impact Assessment (EIA) of transport infrastructure projects
- Evaluation of external costs of transport
- Traffic safety
- Other projects in the transport sector, contributing to development of sustainable transport

In 1999, the first project of the sector programme was initiated in Lithuania. The project regards Environmental Impact Assessment (EIA) of transport infrastructure projects and deals with an Environmental Impact Assessment of a harbour project in Klaipeda.

From November 1999 to July 2000, a project identification programme has been carried out in Lithuania where needs, priorities, wishes of possibilities for co-financing have been analysed.

This has led to the tendering and contracting of 3 projects which are all related to the environmental aspects of traffic planning.

Further information on the programme is available from:

The Ministry of Transport, International Division
 Frederiksholms Kanal 27
 DK - 1220 Copenhagen K
 Telephone: + 45 33 92 55 00
 E-mail: trm@trm.dk
 Homepage: <http://www.trafikministeriet.dk>

Education

The sector programme for education which is administered by the Danish Ministry of Education was only initiated in 2000 and consequently, the activities of the programme have up to now, been relatively limited.

The Danish Ministry of Education
 Frederiksholms Kanal 21
 DK - 1220 København K
 Telephone: + 45 33 92 50 00
 Fax: + 45 33 92 55 47
 E-mail: uvm@uvm.dk
 Homepage: <http://www.undervisningsministeriet.dk>

COUNTRY CHARACTERISTICS

Lithuania is situated on the eastern coast of the Baltic Sea and covers 65,300 km² which is roughly the same size as Belgium. Lithuania is the largest of the three Baltic countries.

Lithuania has a population of 3.7 million. The landscape is shaped by the glacial times and is very similar to that of Denmark. Approximately 30 per cent of the country is covered by woods. The largest river, the Nemunas, gathers and carries the waters of many tributaries to the Baltic Sea wherein lies Lithuania's famous "amber coast". It has 99 km of coastline.

Lithuania has a functioning and viable market economy which is back on track of growth and financial stability after the trade shock in the aftermath of Russian financial crisis.

In 2000, the GDP grew by 3.3 per cent. The GDP per capita in Lithuania in 2000 was USD 3039 (EUR 3.382). Inflation was 1.4 per cent in the year 2000. National average unemployment rate was 11.5 per cent the same year.

The economy in Lithuania experienced a decrease in investment in the recent years. According to national accounts, the share of total fixed gross capital formation comprised:

- 24.4 per cent of GDP in 1998,
- 22.7 per cent in 1999
- and, by preliminary data, 20.7 per cent in 2000.

This was mainly due to profound reduction in public sector investment activities which, measured as public material investment, have fallen from LTL 720 million (EUR 200 million) in 1998 to LTL 117 million (EUR 32 million) in 2000.

According to the principles of the new Government, the public investment activities shall be gradually restricted to financing Government priorities (free market economy, restructuring, privatisation, promotion of foreign investment, high-tech and IT orientation), mainly for infrastructure development purposes.

Lithuania has applied for EU membership. The accession to the EU requires that Lithuania in the future allocates considerable financial resources to fulfil the EU legislation.

Estimates of the costs for the implementation of EU requirements in Lithuania for this are given in the table below:

Item	Investment, million EUR
Air	10
Water Supply	200
Waste water	290
Waste	137

The present Constitution of the Republic of Lithuania was adopted on October 25, 1992.

The Republic of Lithuania is headed by the President and the Government, while the law-making body is Seimas which has 141 members. The President is elected by the citizens of the country for five years on the basis of universal, equal and direct suffrage with secret ballot. Seimas members are elected for four years in single and multi-mandate electoral districts on the basis of universal and equal suffrage, secret ballot in direct elections of a mixed system.

The territorial administrative units of the Republic of Lithuania are the counties and the

Area:	65,300 square km
Population:	3.7 million. 80 per cent of the population are Lithuanian, 11 per cent are Polish and 7 per cent are Russians. Dominant religion is Roman Catholic
Capital city	Vilnius
Currency	Litas (1 litas = 0,28 EUR)
Official language	Lithuanian (lietuviu)
Political system	Republic. New constitution ratified in October 1992. The country is governed by a president, a supreme legislative body Seimas (a unicameral Parliament of 141 members) and the Government
Application for EU accession	8 December 1995. Accession negotiations started in February 2000.

municipalities. There are 10 counties and 60 municipalities.

Municipalities manage and maintain their environment, municipal economy, provide communal services to local inhabitants and perform other functions provided for in the Law on Local Self-Government of the Republic of Lithuania. Municipalities prepare, approve and implement programmes and schemes of environmental protection and use of natural resources of municipalities.

Counties are the higher territorial administrative units of the Republic of Lithuania, the governing of which is organised by the Government through the governor of the county, the Ministries and other Governmental institutions. Counties implement state policies in the fields of social maintenance, education, culture, health care, territorial planning, monument protection, land use and protection, as well as agriculture, environmental protection, and other fields. Counties implement state and inter-regional programmes.



LIST OF PROJECTS IN THE PERIOD 1991-2001

AIR SECTOR

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
127-0269	City Model, Environmental Master Plan, NEED	2,339,200	408,000	2,747,200	1992	NEED
124/025-0037	Mobile Air Laboratory, Brüel & Kjaer	987,386	108,400	1,095,786	1994	Brüel & Kjaer
127-0571	Kleipeda Geothermal Demonstration Plant, Initial Up-front Engineering Study, PGI	1,663,000	0	1,663,000	1994	PGI
124/025-0028	Biogas Demonstration Plant in Rokai, Folkecenter	3,809,140	544,600	4,353,740	1995	Folkecenter
124/025-0056	New Pumping Stations Kaunas	1,005,158	148,500	1,153,658	1996	NEED
124/025-0007	Klaipeda Geothermal Demonstration Project, Implementation Phase, Dansk Olie og Naturgas A/S	21,691,000	83,558,000	105,249,000	1996	DONG
124/025-0024	Klaipeda Geothermal Demonstration Plant, Nordic Consulting Group	300,000	0	300,000	1997	Nordic Consulting Group
124/025-0100	Recovery of gasoline Vapours, COWI	418,200	91,800	510,000	1999	COWI

WASTE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
127-0221	Handling of Waste, COWI	1,059,952	193,000	1,252,952	1992	COWI
124/025-0032	Registration of Localities with Chemical Waste, Krüger	2,543,399	0	2,543,399	1992	Krüger
124/025-0038	Waste Minimization Opportunity Audits to Introduce Cleaner Technology, The University of Lund	1,866,380	0	1,866,380	1993	University of Lund

WASTE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0043	Municipal Solid Waste Management in Kaunas, Phase II, COWI Consult	5,588,000	0	5,588,000	1993	COWI
124/025-0008	Hospital Waste Management, Danwaste Consult A/S	938,000	27,150,700	28,088,700	1994	Danwaste
124/025-0042	Investigation and Dredging of Oil Pollution at the Former Military Air Base in Siauliai, Kruger A/S	2,607,150	1,497,000	4,104,150	1994	Kruger
124/025-0008	Hospital Waste Management, Danwaste Consult A/S	511,300	0	511,300	1995	Danwaste
124/025-0004	Hazardous waste management in Siauliai, Moe & Brodsgaard, Chemcontrol	893,000	0	893,000	1996	Moe Broedsgaard, Chemcontrol
124/025-0016	Solid Waste Management Improvement, Kaunas, Phase III, Cowi	3,191,050	3,718,950	6,910,000	1996	COWI
124/025-0066	Consultancy Services for Hazardous Waste Management in Klaipeda, Kruger Consult A/S	2,162,000	15,388,000	17,550,000	1997	Kruger
124/025-0060	Fabijoniskes Landfill: Risk Assessment and Gas Utilization, Kruger A/S	7,587,000	658,000	8,245,000	1997	Kruger
124/025-0119	Project mission, support to Vilnius Municipality on Waste management	258,529	100,000	358,529	1999	NIRAS
124/025-0135	Pre-project for "Technical assistance in developing waste management data systems"	453,719	0	453,719	1999	COWI
124/025-0122	Guidelines for preparation of Municipal Waste Management Plans	992,465	0	992,465	1999	COWI

WASTE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0120	Waste reception facilities in Klaipeda	1,759,360	0	1,759,360	1999	Carl Bro
124/025-0128	Solid waste management improvements, Kaunas, phase IV	3,500,332	3,029,625	6,529,957	1999	COWI
124/025-0135	Pre-project for "Technical assistance in developing waste management data systems"	42,712	0	42,712	2000	COWI
124/025-0016	Solid Waste Management Improvement, Kaunas, Phase III, Cowi	566,834	409,500	976,334	2000	COWI
129-0171	Appraisal and tendering, Vilnius Waste Project	738,464	0	738,464	2000	Water and Power Planners
124/025-0157	Intermunicipal co-operation on solid waste in Lithuania	1,622,344	0	1,622,344	2000	COWI

WATER

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
127-0222	Design Studies for Improvement and Completion of Vilnius WWTP, Kruger	2,100,000	0	2,100,000	1992	Krüger
127-0171	Demonstration Plant for Biological Waste Water Treatment, Puritek	3,109,500	0	3,109,500	1992	Puritek
124/025-0039	Waste Water Treatment in Small Urban Societies and Houses, Hedeselskabet	2,049,144	1,869,566	3,918,710	1993	Hedeselskabet
124/025-0046	Completion of Water Purifying Plant and Technical Water Supply in Siauliai, Miljo-Teknik International	330,000	20,490,000	20,820,000	1994	Miljo-Teknik Intl.
124/025-0015	Waste Water Sludge from WWTP, JH Consult	2,993,710	523,964	3,517,674	1994	JH consult

WATER

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0012	Biological Water Purifying Plants in Six Towns, Puritek	7,110,000	41,679,000	48,789,000	1994	Puritek
124/025-0040	Preparation and implementation of oil spill contingency plan for Lithuania, Envision A/S	512,160	0	512,160	1995	Envision
124/025-0044	Installation of Decanter for the Sludge Draining at Marijampole WWTP, Niro Separation A/S	2,035,736	0	2,035,736	1995	Niro-separation
124/025-0014	General management of surface Water in Lithuania	5,795,700	0	5,795,700	1995	Hedeselskabet
124/025-0011	Completion of Vilnius WWTP, Phase 2, Kruger Consult A/S	14,096,477	105,903,523	120,000,000	1995	Krüger
124/025-0002	Assistance Projects, Technical pre-investigations of Six WWTPs, COWI	260,000	0	260,000	1996	COWI
124/025-0051	Rotor Aerator Demonstration Project for Lithuania, Krüger	300,000	1,023,000	1,323,000	1996	Krüger
124/025-0022	Management of Ground Water Resources and Improvement of Drinking Water Supply in Lithuania, Krüger	763,466	12,000	775,466	1996	Krüger
124/025-0031	Upgrading and Renewal of Anyksčiai Water Treatment Plant, HOH	1,293,000	7,404,000	8,697,000	1996	HOH
124/025-0030	Implementation of National Oil Spill Contingency Plan, Carl Bro International	2,278,687	7,109,000	9,387,687	1996	Carl Bro
124/025-0034	Environmental Protection and Water Supply, The Municipality of Copenhagen	747,872	1,500,826	2,248,698	1992	Municipality of Copenhagen

WATER

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0053	Upgrading and Renewal of Anyksčiai and Ukmerge WWTP, Samfundsteknik/ Carl Bro	4,300,000	40,200,000	44,500,000	1996	Carl Bro
124/025-0018	Upgrading and Renewal of Alytus, Sirvintos and Vilkaviskis WWTP, De Smithske/Krüger	5,100,000	39,100,000	44,200,000	1996	Krüger
124/025-0051	Rotor Aerator Demonstration Project for Lithuania, Krüger	175,000	0	175,000	1997	Krüger
124/025-0059	Sleeper Impregnation Plant in Kaunas, Phase 1, COWI	1,169,000	350,000	1,519,000	1997	COWI
124/025-0020	Environmental Management with Respect to Protection of Water Resources in Lithuania, Krüger Consult	5,474,000	560,000	6,034,000	1997	Krüger
124/025-0085	Construction of the Zarasai Water works	700,000	2,000,000	2,700,000	1998	BioBalance
124/025-0067	Upgrading of Vilnius WWTP for N and P removal, Krüger	4,015,000	0	4,015,000	1998	Krüger
124/025-0087	Oil Spill response equipment, Ro-Clean-Desmi A/S	6,759,395	13,518,790	20,278,185	1998	Ro-Clean-Desmi
124/025-0121	Audit on support given to Vilnius WWTP	582,969	0	582,969	1999	COWI
124/025-0113	Evaluation of the Danish support to 16 WWTPS	1,132,438	0	1,132,438	1999	COWI
124/025-0102	No-dig pipe rehabilitation, Lithuania, Per Aarslev	1,750,000	8,750,000	10,500,000	1999	Per Aarslev
124/025-0090	Approximation of Environmental Legislation with EU Nitrate Directive in Lithuania	1,996,742	145,000	2,141,742	1999	Carl Bro
124/025-0140	Trakai-Lentvaris WWTP turn-key project	2,503,375	18,010,125	20,513,500	1999	Puritek

WATER

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0130	River Monitoring and Pollution Control in Northern Lithuania - Musa, Venta, Bartuva and Nemunelis	2,527,725	1,109,000	3,636,725	1999	Hedeselskabet
124/025-0090	Approximation of Environmental Legislation with EU Nitrate Directive in Lithuania	164,400	0	164,400	2000	Carl Bro
124/025-0155	Upgrading of feasibility study Ignalina WWTP, HUDF, Lithuania	187,686	0	187,686	2000	COWI
124/025-0156	Upgrading of feasibility study Trakai WWTP, HUDF, Lithuania	501,138	0	501,138	2000	Carl Bro
124/025-0121	Audit on support given to Vilnius WWTP	769,481	0	769,481	2000	COWI
124/025-0143	Silute waste water and drinking water strategy	2,613,457	150,000	2,763,457	2000	COWI
124/025-0118	Improvement of Alytus Water supply	3,665,930	531,000	4,196,930	2000	VKI
124/025-0146	Investment support to Ignalina WWTP	4,200,000	9,300,000	13,500,000	2000	Biobalance

NATURE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0035	Mapping out of Nature Values in the Former Military Areas, WWF Denmark	340,000	112,560	452,560	1992	WWF Denmark
124/025-0036	Organizational Support to Nature Protection Fund, WWF Denmark	229,265	0	229,265	1994	WWF Denmark
124/025-0013	Multiple-Sided Forestry Planning, Hedeselskabet	499,100	20,000	519,100	1995	Hedeselskabet

NATURE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0047	Integrated Control Programme for Lymantra Monacha, Dendremus Pini and other Defoliators, Novo Nordisk	1,449,000	1,743,260	3,192,260	1995	Novo-Nordisk
124/025-0023	Management Plans and Programmes for Nemunas River Delta Regional Park and Kursiu Lagoon, WWF Denmark	6,017,843	0	6,017,843	1995	WWF Denmark
124/025-0061	Institutional Strengthening of Protected Areas Administration, ANKERHUS	204,240	0	204,240	1996	Ankerhus
124/025-0055	Integrated Control Programme for Lymantra Monacha, Dendremus Pini and other Defoliators, Novo Nordisk, 1996	781,377	49,811	831,188	1996	Novo-Nordisk
124/025-0048	Integration of Environmental Values in Lithuanian Forestry, Landbohøjskolen	2,440,000	0	2,440,000	1996	Landbohøjskolen
124/025-0103	Appraisal of project document for "Afforestation of abandoned Agricultural Land".	42,080	0	42,080	1998	Modus Consult I/S
124/025-0097	Project Design: EU-approx. Habitat and Bird Directive. Rambøll	183,250	0	183,250	1998	Rambøll
124/025-0079	State Park Institutional Development, Hedeselskabet	9,325,000	170,000	9,495,000	1998	Hedeselskabet
124/025-0132	Project design mission on the project "Strengthening of public awareness and education on ecology, landscape and biodiversity.	168,081	0	168,081	1999	Friluftsrådet

NATURE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0138	Project Preparation: Implementation of the Cities, Bonn and Bern conventions	181,650	0	181,650	1999	Danagro
124/025-0124	Expert Evaluation of Coastal Zone measures and Coastal Zone Management in Lithuania	251,000	0	251,000	1999	Kyst-inspektoratet
124/025-0079t	State Park Institutional Development, Hedeselskabet	560,000	0	560,000	1999	Hedeselskabet
124/025-0117	Sustainable forest management in private forests	2,913,420	0	2,913,420	1999	Skovdyrkerforeningen
124/025-0137	Baltic inersave programme for Vilnius. Lithuania	4,283,052	1,025,456	5,308,508	1999	Byfornyelses-selskabet Danmark
124/025-0141	Approximation of Lithuanian capacity, policy and procedures on nature protection to EU-requirements. Birds and Habitat Directive	7,250,000	0	7,250,000 1	999	Ornisconsult
124/025-0126	Afforestation of abandoned agricultural land (Danish Forest and Nature Agency, DFNA)	8,158,557	1,370,000	9,528,557	1999	Danagro
124/025-0171	Appraisal of PD: Development of Integrated Environmental Education with Field Activities, Lithuania I	68,286	0	68,286	2000	Rambøl
124/025-0099	Appraisal of project document for EU-approx. for Habitat and Bird Directive.	8,947	0	48,947	1998	Danagro A/S

NATURE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0098	Project Design: "Afforestation og abandoned agricultural land", Danish Forestry Extension	296,032	0	296,032	1998	Dansk Skovdyrkerforening
129-0113	Tendering:EU approximation Birds and Habitat Directive	173,883	0	173,883	1998	
129-0028	Tendering: "State Park Institutional Development"	177,825	0	177,825	1997	
129-0116	Tendering: Afforestation of abandoned agricultural land	182,715	0	182,715	1998	

INDUSTRIAL POLLUTION CONTROL AND RISK MANAGEMENT

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0041	Environmental Action Plan for the Lithuanian Railways, DSB-Danrail Consult A/S	622,250	0	622,250	1994	Danrail consult
124/025-0062	Fact-Finding Mission to Lithuanian Slaughterhouses, Danish Meat Research Institute, COWI	253,040	0	253,040	1995	COWI
127-0086	Reduction of environmental problems in the galvanic Industry in the Baltic Countries, Institute of Product development	1,532,500	0	1,532,500	1995	Institute for product development
124/025-0045	Implementation of Demonstration Project in Cleaner Technology in the Lithuanian Galvano Industry, Institut for Produktudvikling	3,539,000	0	3,539,000	1995	Institut for produkt-udvikling

INDUSTRIAL POLLUTION CONTROL AND RISK MANAGEMENT

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0041	Environmental Action Plan for the Lithuanian Railways, DSB-Danrail Consult A/S	622,250	0	622,250	1994	Danrail consult
124/025-0025	Assistance to Project concerning Implementation of Cleaner Technology in Lithuanian Slaughterhouses, Slagteriernes forskningsinst.	234,000	0	234,000	1997	Slagteriernes forskningsinstitut
124/025-0033	Project Identification Mission for a Cleaner Technology Programme in Lithuania, PlanMiljø	424,968	0	424,968	1997	PlanMiljø
124/025-0074	Project to Strengthen the Framework and Administration of Lithuanian Laws on Waste Management and Environmental Management of Industry, COWI	13,600,757	0	13,600,757	1997	COWI
124/025-0080	Implementation of Cleaner Technology in a Lithuanian Slaughterhouse, COWI	7,134,450	173,000	7,307,450	1998	COWI
124/025-0136	Study-tour for civil servants, environmental control and enforcement medium and small enterprises	87,062	0	87,062	1999	
124/025-0105	EU approximation on control and enforcement	283,877	0	283,877	1999	
124/025-0139	Technical Assistance to the Development of Inspection and Enforcement in Lithuania	5,742,566	0	5,742,566	1999	Kommunedata
124/025-0139	Technical Assistance to the Development of Inspection and Enforcement in Lithuania	137,989	0	137,989	2000	Kommunedata

CHEMICALS

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
127-0239	Environmental Evaluation of Agricultural Chemicals, COWI	1,897,903	0	1,897,903	1992	COWI
124/025-0026	Action Plan for Unused Pesticides	3,352,395	0	3,352,395	1995	COWI
127-0099	System study for chemical waste handling, Chemcontrol	1,629,500	0	1,629,500	1991	Chemcontrol

NUCLEAR SAFETY

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
127-0217	Ignalina NPP, Brüel & Kjaer	3,779,740	12,500	3,792,240	1992	Brüel & Kjaer
127-0487	Feasibility Study on Improvement of Ignalina NPP, Rovsing International A/S	457,000	0	457,000	1993	Rovsing International A/S
124/025-0005	Improvement of the Safety of Ignalina NPP, Rovsing International	4,115,300	0	4,115,300	1994	Rovsing
127-0802	Training of Safety Stewards at Ignalina NPP, SiD	387,114	0	387,114	1995	SiD
124/025-0003	Supervision of the project on Vibration Monitoring System at Ignalina NPP, Odegaard & Danneskiold-Samsøe A/S	361,182	0	361,182	1996	Odegaard Danneskiold Samsøe
124/025-0005	Improvement of the Safety of Ignalina NPP, Rovsing International	721,029	90,774	811,803	1998	Rovsing
124/025-0131	Emergency Management on the aquatic environment surrounding the Ignalina NPP: Strengthening of the institutional and informational basis.	2,452,898	35,200	2,488,098	2000	WaterConsult

HORISONTAL

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0006	Institutional Strengthening Through Information Technologies, COWI	1,564,800	0	1,564,800	1997	COWI
124/025-0114	EU-approx on information and reporting	1,820,062	0	1,820,062	2000	Carl Bro

INSTITUTIONAL STRENGTHENING

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0010	Feasibility Study in Connection with Institutional Strengthening of Environmental Legislation, Miljø Kontakt	268,740	0	268,740	1995	Miljø Kontakt
124/025-0073	Feasibility study to strengthen Lithuania's environmental laws, Milieu Ltd.	317,455	0	317,455	1995	Milieu Ltd.
124/025-0017	Managing Consultant for Cooperative Activities between EPML and DEPA	770,000	0	770,000	1995	
124/025-0073	Feasibility study to strengthen Lithuania's environmental laws, Milieu Ltd.	122,000	0	122,000	1996	Milieu Ltd.
124/025-0009	Strengthening the Capacity of EPML in Approximation Process, Envira	1,465,000	0	1,465,000	1996	Envira
124/025-0017	Managing Consultant for Cooperative Activities between EPML and DEPA	13,382	0	13,382	1997	
124/025-0110	Local Project Co-ordinator, 1999-2001	1,150,765	0	1,150,765	1999	ENVAS
124/025-0116	Development of environmental financing strategies	1,474,377	0	1,474,377	1999	Glen Anderson

INSTITUTIONAL STRENGTHENING

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0147	In House Advisors to the HCF	6,325,132	0	6,325,132	1999	Carl Bro
124/025-0116	Development of environmental financing strategies	176,200	0	176,200	2000	Glen Anderson
124/025-0154	Long term Institutional support to the MoEL on EU-integration	997,801	0	997,801	2000	ENVAS
124/025-0151	Technical assistance to the MoEL , preparation of ISPA applications	2,171,656	1,400,000	3,571,656	2000	Rambøll
129-0022	Tender Evaluation of "Project to strengthen Framework and Administration"	179,220	0	179,220		

IGNALINA PACKAGE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0183	Energy and Env. audit at ship terminal AB Juru Krovinu Kompanija	741,041	0	741,041	2000	MEF Erhverv
124/025-0182	Energy and Env. audit, AB Dirbtines Pluosa and AB Vernitas	786,784	0	786,784	2000	COWI
124/025-0179	Energy- and environmental audit, Lifosa	789,186	0	789,186	2000	COWI
124/025-0166	Energy and Cleaner production audits in 15 most energy consuming industries in Lithuania	806,363	0	806,363	2000	Water and Power planners
124/025-0180	Energy and Env. Audit, Akmenes Cementas	818,354	0	818,354	2000	COWI
124/025-0152	Environmental and Energy Audits at Alytaus Textile plant	897,661	0	897,661	2000	Dansk Energi Management

IGNALINA PACKAGE

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0185	Energy and Env. Audit, wood-processor Klaipedos Mediena	900,084	0	900,084	2000	Dansk Energi Management
124/025-0186	Energy and Env. Audit, Dairies AB Marijampoles and Zemitos Pienas	903,329	0	903,329	2000	Dansk Energi Analyse
124/025-0187	Energy and Env. Audit, paperworks AB Grigiskes and AB Klaipedos Kartonas	904,440	0	904,440	2000	Dansk Energi Analyse
124/025-0181	Energy and env. audit at Shipyard Baltijos Laivo Statykla	989,917	0	989,917	2000	Dansk Energi Management
124/025-0184	Energy and Env. audit, iron-caster AB Kauna Ketaus Liejykla	1,065,810	0	1,065,810	2000	DTI
124/025-0163	Energy and Cleaner production audits in EKRANAS	1,149,242	0	1,149,242	2000	Rambøll
124/025-0168	Fertiliser factory Achemna in Jonava, Lithuania afcto	1,213,288	0	1,213,288	2000	COWI

OTHER

Ref. No.	Title	Grant DKK	Other financing	Total project costs	Year of grant	Responsible Danish Partner
124/025-0106	Bicyclism in Lithuania	496,769	0	496,769	1998	Anders Nyvig
124/025-0077	Development of Code of Good Agricultural Practice, Landbrugets Rådgivnings-center	1,090,250	360,741	1,450,991	1998	Landbrugets Rådgivningscenter
124/025-0077t	Development of Code of Good Agricultural Practice, Landbrugets Rådgivnings-center	116,000	0	116,000	1999	Landbrugets Rådgivningscenter

ENVIRONMENTAL EFFECTS OF THE PROJECTS IN LITHUANIA

PART III

	Environmental effect	Preliminary effect	Estimated effect	Unit	
Ordinary waste	Established depositing capacity	-	100,000.00	t	
	Reduction of waste	-	15,000.00	t/year	
Drinking-/ groundwater	Established amount of water	2,510,000.00	-	m ³ /year	
Hazardous waste	Established depositing capacity	-	3,500.00	t	
Industrial waste water	Economical reduction	1,000,000.00	210,000.00	m ³ /year	
	Reduction of Phosphorus (p)	45.00	-	t/year	
	Reduction of Nitrogen (N)	100.00	-	t/year	
	Reduction of heavy metals	-	1,495.00	t/year	
	Reduction in oxygen consumption (BOD)	1,250.00	125.00	t/year	
	Environmentally friendly energy	Carbon dioxide CO ₂	5,800.00	46,000.00	t/year
		Nitrogen oxide NO _x	-	100.00	t/year
Sulphur dioxide SO ₂		-	900.00	t/year	
Nature	Nature protected	89,700.00	-	Hectare	
Nuclear conditions	Nuclear conditions	-	-	No information	
	Equipment supply	-	-		
Prevention of oil pollution	Equipment supply	-	-		
Recipient	Equipment supply	-	-		
Waste water	Reduction of phosphorus (P)	103.00	327.00	t/year	
	Reduction of nitrogen (N)	731.00	4,293.00	t/year	
	Reduction in oxygen consumption (BOD)	4,580.00	11,340.00	t/year	
	Waste water m ³ /year	7,665.00	-	m ³ /year	

LIST OF ABBREVIATIONS

BOD	Biological Oxygen Demand
CEE	Central and Eastern Europe
CEEC	Central- and Eastern European Countries
CIS	Commonwealth of Independent States
CO₂	Carbon dioxide
DANCEE	Danish Co-operation for Environment in Eastern Europe
DEPA	Danish Environmental Protection Agency
DESF	Danish Environmental Support Fund DKK Danish Kroner
EBRD	European Bank for Reconstruction and Development
EDP	Electronic Data Processing
EDRF	Environment and Disaster Relief Facility - Miljø- og Katastrofefonden
EEA	European Environmental Agency
EEHPP	Energy Efficiency Housing Pilot Project
EIA	Environmental Impact Assessment
EKF	Danish State Export Credit Agency - Eksportkreditfonden
EMS	Environmental Management System
EMAS	Eco-Management and Audit Scheme
EU	European Union
EUR	Euro
GDP	Gross Domestic Product
GEF	Global Environment Facility
GMO	Genetically Modified Organisms
GNP	Gross National Product
HELCOM	Helsinki Commission – Baltic Marine Environment Protection Commission
HOA	House Owners Associations
HUDF	Housing and Urban Development Foundation
IN	Investments
IPPC	Integrated Pollution Prevention and Control
ISO 14001	International Standard Organisation
ISPA	Instrument for Structural Policy for Pre-Accession
IØ	The Green Investment Facility
LOD	Lithuanian Ornithological Society
LPC	Local Project Co-ordinator
MARPOL	International Convention for the Prevention of Pollution from Ships
MIØ	Investment Fund for Central and Eastern Europe
MKØ	Miljøkreditordningen for Østeuropa – Environmental Soft Loan Programme for Eastern Europe MoEE Danish Ministry of Environment and Energy
MoEL	Lithuanian Ministry of Environment
NGO	Non-governmental Organisation
NIS	Newly Independent States
NOx	Nitrogen Oxides
NPP	Nuclear Power Plant



LIST OF ABBREVIATIONS

PHARE	Action Plan for co-ordinated aid to Poland and Hungary (originally in French) - now also targeting other countries as pre-accession assistance for infrastructure and institution-building.
REC	Regional Environment Center
SAPARD	Special Accession Programme for Agriculture and Rural Development
SO₂	Sulphur Dioxide
TA	Technical Assistance
UN	United Nation
WWTP	Waste Water Treatment Plant

LIST OF WEBSITES

Danish

DANCEE

www.mst.dk/dancee

DANCEE's homepage. Information about DANCEE, programmes and projects, publications, procedures for application etc.

DEPA

www.mst.dk/

Homepage of the Danish Environmental Protection Agency. Information about legislation, action programmes, publications etc. Has an "international issues" site.

MOEE

www.mem.dk/

The Ministry of the Environment. Profile of Denmark and of Denmark's environmental policy. Presentations of the ministry's environmental agencies and research institutes. Overview of central publications in English.

Miljøbutikken

www.mem.dk/butik/

Miljøbutikken (The Environmental Shop) is the main information centre of the MOEE. Provides information on environment and on Danish legislation and policies in these areas. Free brochures on order, action plans, legislation and policy papers. Possible to buy all publications issued by the Ministry.

EKF

www.ekf.dk

Homepage of the Danish State Export Credit Agency (Eksport Kredit Fonden). Information about export credit and financing assistance etc.

National Environmental Research Institute (NERI)

www.dmu.dk

Independent environmental research institute under the MOEE. Scientific information on environmental issues.

Danish Forest and Nature Agency

www.sns.dk

Agency under the MOEE. Has a division for International co-operation. Information on assistance for the implementation of International Conventions on Natural Resources Management and more.

Danish Energy Agency

www.ens.dk

Agency under the MOEE. Internationally, the agency promotes exports of know-how and energy technology by Danish companies and contributes to the transfer of technology to countries in the Central and Eastern Europe.

Statistics Denmark

www.dst.dk

The central statistic office in Denmark. "Statistic Yearbook" and "Data on Denmark" available electronically.

www.statistikbanken.dk

Site under Statistics Denmark containing free statistic information on e.g. environment and energy.

Lithuanian

Center for Environmental Policy **www.aapc.lt/eng/indexe.htm**

Center for Environmental Policy is a non-profit organisation operating in the fields of environmental law, environmental economics, environmental financing, environmental impact assessment, environmental education and public relations, environmental quality monitoring and control, environmental auditing, approximation of Lithuanian environmental laws with those of European Union, and organisation of workshops. The website informs on services, projects and partners

The European Commission's Delegation in Lithuania

www.eudel.lt/english/

The homepage gives general information about the EU and the institutions and about the Lithuanian relations to the EU e.g. the PHARE programme and the bilateral relations.

The European Committee under the Republic of Lithuania

www.euro.lt

The Committee is an institution responsible to the Government of the Republic of Lithuania. Their mission is to ensure Lithuania's accession to the European Union. The homepage provides information on the Lithuanian integration process.

The Lithuanian Environmental Investment Fund (the LEIF)

www.laaif.lt/eng/info.htm

The LEIF supports public and private sectors in the realisation of environmental projects and projects to reduce the negative impact of economic activities on environment in

compliance with the Environmental Strategy of the Republic of Lithuania.

The homepage gives information on e.g. different types of financing and the application procedures

The Lithuanian Ministry of Environment **www.gamta.lt**

Homepage of the Ministry. Contains legal acts, publications (e.g. Environmental Project Development Manual) presentation of sectors, news etc.

The Lithuanian Parliament

www.lrs.lt

The homepage provides information on Lithuanian parliament, the political agenda, the different committees and commissions and the legal acts.

The Phare Programming Resource Centre for Lithuania.

www.phare-programming.lt/

The homepage aims to provide civil servants from all Ministries or Government Agencies in Lithuania with up-to-date information and concrete advice on the Programming of Phare assistance in the context of Accession to the EU.

The Regional Environmental Center for Central and Eastern Europe

www.rec.lt

REC assists in solving environmental problems in Central- and Eastern Europe. The center encourage co-operation among NGOs, governments and businesses, supports the free exchange of information and promotes public participation in environmental decision-making. The homepage describes projects and calls for tender. It gives national environmental descriptions and up-dated environmental news.

The World Bank Lithuanian Office**www.worldbank.lt/**

The Homepage provides information on different activities in Lithuania, news and events and different projects, data and Publications.

International**European Environment Agency****www.eea.eu.int/**

The EEA provides information to improve Europe's environment in a sustainable way. On the website, there are different country information from the EU Member States, news releases, speeches and different themes like air quality, climate changes and biodiversity.

HELCOM**www.helcom.fi/**

The governing body of the Convention on the Protection of the Marine Environment in the Baltic Sea Area is the Helsinki Commission, HELCOM. The website describes current events, projects, conventions, etc.

UNEP/GRID-Arendal**www.grida.no/**

The United Nation Environment Programme. Regional environmental information including maps and graphics of the Arctic, the Nordic, the Baltic and the Central and Eastern Europe. City environment reports and state of the environment reports is available electronically.

The Regional Environmental Center for Central and Eastern Europe**www.rec.org/**

REC assists in solving environmental problems in Central and Eastern Europe. The centre encourages co-operation among NGOs, governments and businesses, supports free

exchange of information and promotes public participation in environmental decision-making. The website describes projects and calls for tender. It gives national environmental descriptions and up-dated environmental news.

PHARE**www.europa.eu.int/comm/enlargement/pas/phare**

PHARE is currently the main channel for the European Union's financial and technical co-operation with the countries of the Central and Eastern Europe. The Programme focuses on preparing the candidate countries for EU membership by concentrating its support on two priorities in the adoption of the *acquis communautaire*: Institution building and investment support. The homepages gives detailed information.

ISPA**www.inforegio.cec.eu.int/wbpro/ispa/ispa_en.htm**

ISPA is one of the EU financial instruments to assist the candidate countries in their preparations for accession. The instrument is especially targeted towards transport and environment. The site contains the official texts relevant for ISPA and a more detailed overview of how the ISPA works.

SAPARD**www.europa.eu.int/comm/agriculture/external/enlarge/index_en.htm**

SAPARD is the special pre-accession assistance for agriculture and rural development. The homepage contains links to official documents concerning SAPARD, general information on the enlargement and questions and answers on the EU and the enlargement.



LIST OG WEBSITES

Baltic Agenda 21

www.ee/baltic21/

Baltic Agenda 21 promotes sustainable development in the Baltic Sea Region, encompassing economic, social and environmental aspects. The website provides information about the goals, the commitments, the achievements and the people.

EBRD

www.ebrd.org

The European Bank for reconstruction and development fosters the transition towards open market-oriented economies and promotes private and entrepreneurial initiative in the Central and Eastern Europe and the Commonwealth of Independent States, the CIS.

World Bank

www.worldbank.org

The World Bank works in more than 100 developing economies, bringing a mix of finance and ideas to improve living standards and to eliminate the worst forms of poverty. The website describes the general assistance strategies and the regional initiatives.

FURTHER INFORMATION ON THE DANISH ENVIRONMENTAL ASSISTANCE TO EASTERN EUROPE:

DANCEE releases successively various types of publications on the Danish environmental aid to Eastern Europe. Each type has its own colour.

DANCEE STRATEGY

"Danish Strategy for Environmental Assistance to Eastern Europe 2001-2006"
Describes DANCEE's general strategy up to year 2006. Danish and English. For free.

ANNUAL REPORT

Contains a description of all projects launched and initiatives taken in connection with the Danish environmental assistance to Eastern Europe for the actual year.
For free.

COUNTRY PROGRAMME

DANCEE's strategy and priorities in the individual recipient countries are described. Country programmes are planned in co-operation with the recipient country. English and the recipient country's language. For free.

COUNTRY BOOK

The country book describes the Danish environmental aid in each recipient country. It contains among others, description of the aid's progress and the environmental effects. It reviews typical projects within the different field sectors. English and recipient country's language. For free.

COUNTRY PAMPHLET

A brief and popular version of the country book which, with focus on concrete projects, explains the Danish environmental aid to the recipient country. English and recipient country's language. For free.

TECHNICAL REPORT

Technically orientated report dealing with subjects of specific importance to the environmental aid, e.g. wastewater treatment or control instruments. Danish and English.

PROJECT PAMPHLET

Describes a specific environmental project and is released typically in connection with the opening of the project. English and recipient country's language. For free.

The publications are available at:
Milljøbutikken (The Danish Ministry of the Environment outlet)
Læderstræde 1-3
1201 Kbh K
Tel.: 33 95 40 00
Fax: 33 92 76 90
DANCEE on the Internet: www.mst.dk/dancee

Denmark is one of the biggest bilateral donor of environmental assistance to Lithuania. In this book the environmental co-operation between the two countries is described from the beginning and up to the year 2001. The book gives an overview of the policy, character, priorities, environmental effects, future perspectives etc. of the co-operation. It also presents a range of implemented projects within the areas: Air, water, waste, biodiversity, cleaner technology and institutional strengthening.

DANCEE PUBLICATIONS:

COUNTRY BOOK

DANCEE STRATEGY

ANNUAL REPORT

COUNTRY PROGRAMME

COUNTRY PAMPHLET

THEMATIC REPORT

PROJECT PAMPHLET

DANCEE

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Ministry of the Environment

