

From Co-operation in Central and Eastern Europe to European Union Partnership



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and Eastern Europe
to European Union Partnership



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From co-operation in Central and Eastern Europe to European Union partnership

Finland's co-operation in the Baltic Sea region began during the major political realignment of the early 1990s. Environmental protection rapidly became a central theme of the co-operation programme. International financing helped to assist water protection and other environmental projects seeking to reduce pollution in Estonia, Latvia, Lithuania and Poland.

Environmental protection has been a matter of increasing concern in northwest Russia and especially St Petersburg in recent years. A prime example of this is the St Petersburg southwestern wastewater treatment plant: a very substantial environmental investment for the Baltic Sea that Finland played no small part in bringing about.

A new realignment has now occurred. The European Union has now enlarged to encompass most of northern Europe, effectively transforming the Baltic Sea into an inland sea of the Community. Work to protect the Baltic Sea is continuing. The state of this unique watercourse is a matter of public concern, and we are pleased to note that private financing has also been obtained for protection measures and research. Increased oil transportation and discharges of harmful substances and agricultural effluent to the Baltic Sea will continue to require systematic measures and international co-operation.

The role of co-operation in Central and Eastern Europe is changing. However, future co-operation in environmental protection and environmental threat control will continue to be important because of transboundary impacts. As the Russian economy grows this co-operation will be based on an equitable partnership.

The Northern Dimension Environmental Partnership Support Fund (NDEP) brings together a wide range of financiers to assist local authority environmental protection investments in northwest Russia. Innovative financing arrangements are required particularly to promote environmental projects in small and medium-sized communities and to ensure sustainable development.

One major challenge for Finland is to limit greenhouse gas emissions to the level imposed by the



Kyoto Protocol to the United Nations Framework Convention on Climate Change. The Finnish government has decided that Finland will purchase emission reduction units corresponding to ten million tonnes of carbon dioxide under the Kyoto mechanisms over the period 2008–2012. Russia and other transition economy countries will be important host countries for implementing these mechanisms. The co-operation in Central and Eastern Europe pursued by the Finnish Ministry of the Environment since the early 1990s now provides a firm foundation for this challenging and even more important mechanism collaboration in the same geographical region.

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Minister of the Environment*



The photographs on the cover and illustrating the main articles of this report are from a Finnish-Estonian-Russian photography competition arranged in 2005 on the theme of People and Nature in the Gulf of Finland.

Photo by: Jana Budkovskaja

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From Central and Eastern Europe to financing of environmental co-operation

In 1991 the Finnish Ministry of the Environment launched a programme of co-operation in Central and Eastern Europe seeking to promote environmental protection partnerships with the countries of Finland's neighbouring Baltic Sea region. In 2005 the operating parameters for this work changed due to enlargement of the European Union. Only northwest Russia now remains as a traditional region of co-operation in Central and Eastern Europe.

The policies of the Finnish Ministry of the Environment on co-operation in Central and Eastern Europe were accordingly revised in 2005. The aim is to reduce environmental pollution impacts on Finland and to combat environmental threats. The principal fields of co-operation are now pollution reduction in the Baltic Sea, improved oil spill management capacity on open seas and particularly the Gulf of Finland, enhanced control of hazardous substances, sustainable forestry and nature conservation, and strengthened environmental management in north-west Russia.

The geographical focus of this work is now St Petersburg, the Leningrad Region and the Republic of Karelia. The Barents and Northern Dimension regions are also potential zones for environmental co-operation. The strategy for co-operation with Russia extends to the year 2010.

In 2005 the Finnish government agreed on the division between its various ministries of



administrative responsibilities for the Kyoto mechanisms. The Ministry of the Environment is responsible for Joint Implementation and for emissions trading between governments. The associated functions have been allocated to the unit in charge of environmental projects in Finland's neighbouring regions. Besides environmental project co-operation with Russia and implementation of the Kyoto mechanisms, this unit is responsible for harmonising the functions of European Union structural funds in Finland's environmental administration.

This new and challenging field of work offers good opportunities for Finnish businesses and other involved parties to promote a diversity of environmental protection measures both in northern Europe and in more distant locations.

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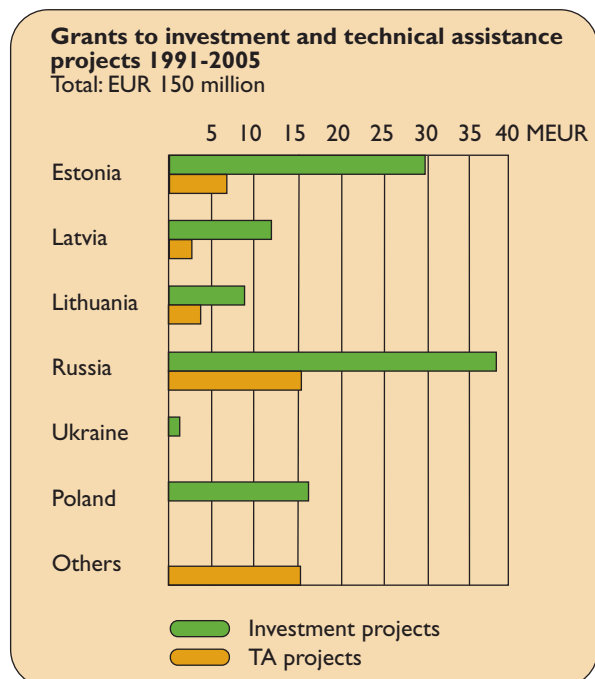




Photo by: Andrei Zadorozhnyi

Kyoto Protocol project mechanisms

The Kyoto Protocol to the United Nations Framework Convention on Climate Change and the European Union burden-sharing agreement require Finland to reduce its greenhouse gas emissions. Under the Kyoto Protocol, the industrialised countries must cut their emissions of six greenhouse gases by a total of 5.2 per cent of the 1990 emissions level. Finland has agreed on a zero level.

The joint reduction obligation of the European Union for greenhouse gases is eight per cent, which is divided into country-specific obligations according to a burden-sharing agreement. Between 2008 and 2012 Finland must stabilise its greenhouse gas emissions at the 1990 level of approximately 71.5 million equivalent tonnes of carbon dioxide (tCO₂ eq.).

Although emission trends in Finland stayed more or less in line with the target level during the 1990s, they have increased during the current decade. Finnish greenhouse gas emissions in 2004 were some 82 million tonnes of carbon dioxide.

A national energy and climate strategy guides development

In November 2005 the Finnish government approved a report entitled "Guidelines for medium-term energy and climate policy – a national strategy for implementing the Kyoto Protocol". This report includes specifications of the role of Kyoto mechanisms such as Joint Implementation, Clean Development Mechanism and emissions trading in achieving Finland's emission reduction obligations under the Kyoto Protocol.

The strategy proposes that Finland should procure a total of ten million tonnes in emission reduction units under the Kyoto mechanisms over the period from 2008 to 2012. This would correspond to ten million tonnes of carbon dioxide.

The Finnish State is seeking to use the Kyoto mechanisms to promote cost-effective achievement of the Kyoto emission reduction obligations. Projects must be worthwhile from the point of view of environmental protection and must support development of the host country. The definition of these projects stresses both their technical and financial feasibility.

The Ministry of the Environment is responsible for developing and realising Joint Implementation projects, the Ministry for Foreign Affairs is in charge of Clean Development Mechanism projects and the Ministry of Trade and Industry has a co-ordinating role in applying the Kyoto mechanisms. The Ministry of the Environment is also responsible for

emissions trading between governments. Enterprises can also benefit from the mechanisms in areas such as European Union emissions trading.

Kyoto Protocol Project Mechanisms

Joint Implementation projects (JI)

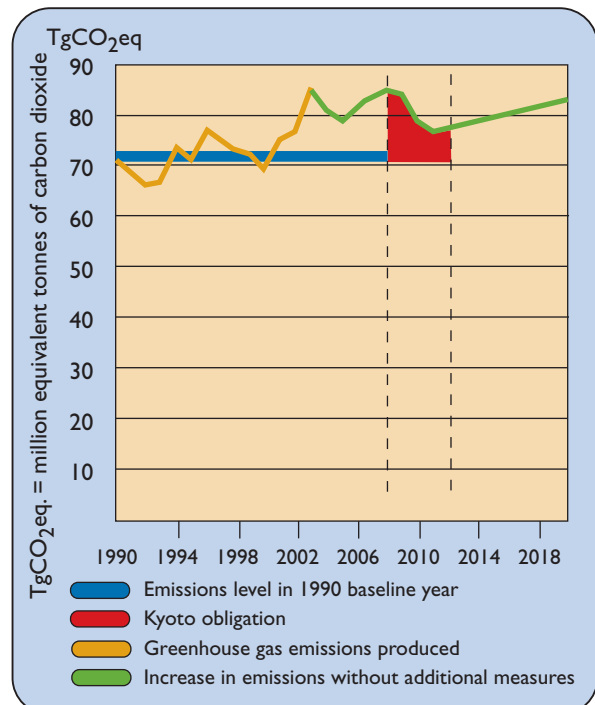
- undertaken in industrialised countries, chiefly in Eastern Europe
- responsibility of the Ministry of the Environment

Clean Development Mechanism (CDM)

- undertaken in developing countries
- responsibility of the Ministry for Foreign Affairs

Emissions Trading (ET)

- emissions trading between governments is the responsibility of the Ministry of the Environment



The red area represents the need to reduce greenhouse gas emissions between 2008 and 2012. The Kyoto mechanisms cover an annual average of 2.4 million tonnes. Of this, 0.4 million tonnes will be achieved through the CDM-JI pilot programme and the State is prepared to procure the remainder in accordance with energy and climate strategy policies.

(Source: Fourth National Communication of Finland under the United Nations Framework Convention on Climate Change)



Photo by: Mihail Maslennikov



Photo by: Markku Nurmi



Joint Implementation pilot projects with Estonia

Back in 1999 Finland launched a CDM-JI pilot programme to test the Kyoto Protocol project mechanisms under the direction of the Ministry for Foreign Affairs. This programme sought to develop administrative procedures for preparing and implementing projects involving the mechanisms of Joint Implementation and Clean Development. The test programme includes four Joint Implementation projects under way in Estonia.

The Joint Implementation projects of the pilot programme in Estonia involve cost-effective emission reduction investments, the results of which are then purchased by Finland. The funds paid for these purchases are partly used to cover Estonian investments.

The Joint Implementation projects yielded emission reduction units amounting to some 630,000 tonnes of carbon dioxide for Finland. The price per emission reduction unit was less than 6 euros.

The experiences gained in the pilot programme for the Clean Development Mechanism and Joint Implementation suggest that the Kyoto Protocol project mechanisms provide opportunities for procuring emission reductions in a cost-effective manner while promoting sustainable development. The cost of the emission reduction units obtained through the projects was low in comparison with the cost of emission reduction measures in Finland and the prices of European Union emission allowances.

Bioenergy and wind power

The Joint Implementation projects of the pilot programme were initiated between Finland and Estonia

over the period from 2001 to 2005. Planning and implementation of all projects endeavoured to forecast future JI requirements, even though the detailed international regulations governing Joint Implementation will be settled only in the medium term.

Procedures for JI operations were created in early small-scale projects in Tamsalu and Kadrina. Under the projects, district heating plants in Tamsalu, Kadrina and Paide were converted to run on biofuel instead of oil shale. Biofuel boilers of 2.5 megawatts were supplied to Tamsalu and Kadrina and an 8 megawatt boiler was supplied to Paide from Finland.

The largest project of the pilot programme is the construction of a wind farm at Pakri. An 18.4 megawatt wind farm was completed at Paldiski in summer 2005. By replacing the use of oil shale in electricity generation, it reduces Estonian greenhouse gas emissions by some 50,000 tonnes per year. Through the project Finland will purchase emission reductions amounting to approximately half a million tonnes by the year 2012. The deal is worth about EUR 2.5 million.

Finnder procurement programme seeks emission reductions

Finland has launched its new Finnder procurement programme under the Kyoto mechanisms. This programme seeks to procure emission reduction units corresponding to a total of ten million tonnes of carbon dioxide over the period 2008–2012. Purchasing agreements will be concluded for emission reductions achieved through CDM and JI projects in Central and Eastern Europe and in developing countries. The new programme will also continue supervising the practical aspects of projects that were identified during the pilot programme. In addition to bilateral projects, Finland may procure emission reduction units through funds and through emissions trading between governments.

Further details of Finland's JI and CDM projects and the new procurement programme are available from the Finnish Environment Institute, which provides Kyoto mechanism support services for administering the procurement programme at the Ministry of the Environment, the Ministry of Trade and Industry and the Ministry for Foreign Affairs.

Finnish Environment Institute Kyoto mechanism support services

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Photo by: Aleksandr Astafev



Photos by: Tero Pajukallio



Work continues to reduce pollution of the Baltic Sea

The St Petersburg water and sewerage utility is seeking to achieve the standard of wastewater treatment recommended by the Baltic Marine Environment Protection Commission (HELCOM) by the year 2015. Owing to a lack of main sewers, about 15 per cent of St Petersburg's untreated wastewater is still discharged into the River Neva and the Gulf of Finland.

The St Petersburg water and sewerage utility is responsible for water management on behalf of 4.7 million city residents. With the recent opening of the new southwestern plant, the city now has three major wastewater treatment plants. The combined capacity of these plants would suffice to treat all of the city's wastewater if it could only be supplied to the plants.

It is in the interests of all Baltic Sea coastal States that the people of St Petersburg maintain their current priority of investing in wastewater treatment.

Stretching the consumer's ability to pay

The next major investment is a main sewer in the north of the city. Estimates suggest that nearly EUR 500 million will be needed to construct this connection and provide sewerage facilities for direct discharges. The existing wastewater treatment plants should also be modernised. Together with Swedish authorities, the Finnish Ministry of the Environment co-financed a study that was completed in 2006 as part of the preparations for these improvements.

The northern sewer main should link the existing wastewater treatment plants to the last areas in the city that lack sewerage connections. Construction of an underground sewer actually began back in 1987, but lack of funds has resulted in very slow progress on this project. If financing can be arranged, then the first parallel sewer tunnels could be in service by as early as 2008.

The major investments of St Petersburg water management will largely be financed from water supply charges. Local consumers will not be able to pay for all of the necessary investments in the short term, however, and projects will have to be prioritised. Wastewater management projects aside, further investment is also required for improving the quality of St Petersburg drinking water.

St Petersburg tests chemical phosphorus removal

The Finnish Ministry of the Environment is subsidising trials of chemical phosphorus removal at three small wastewater treatment plants and one medium-sized facility in St Petersburg. The Clean Sea project also seeks to use chemical phosphorus removal in St Petersburg as a method of reducing eutrophication of the Baltic Sea. This project involves close collaboration between the St Petersburg water utility Vodokanal, the City of St Petersburg and a private Finnish foundation.

Chemical coagulation of phosphorus is an effective cleaning method that is technically straightforward and cost-effective. One problem with this approach, however, is that the treatment plant must meet the recurrent cost of coagulation chemicals. The process also gives rise to a great deal of sludge.

The findings and conclusions of the study will serve to guide future work to reduce pollution of the Gulf of Finland.

St Petersburg wastewater treatment plant completed

The huge construction project on the St Petersburg southwestern wastewater treatment plant was discontinued in the 1980s, but has now been completed and the new plant came on stream in autumn 2005. This is the most significant environmental initiative to be taken in the Baltic Sea area in recent years on a single site, and has enabled a substantial reduction in pollution of the Gulf of Finland.

The new southwestern wastewater treatment plant processes wastewater from 700,000 St Petersburg residents and cuts the city's discharges of untreated sewage to the Gulf of Finland by about one third. This represents an annual reduction in nutrient discharges of approximately 2,200 tonnes of nitrogen and 360 tonnes of phosphorus. The total organic load has fallen by some 16,600 tonnes per year.

The construction project cost about EUR 200 million. EUR 126 million of this comprised actual treatment plant construction costs and the remainder covered the costs of building the sludge incineration plant and intake sewers. The financing was a combination of international loans, grant aid, venture capital and local investment. Finland provided EUR 10 million in grant aid to the project.

The wastewater treatment plant was constructed by SWTP Construction Oy, a Finnish joint venture of three building contractors. The project was implemented through a public-private partnership: the developer was the project company LCC Nordvod, which was established in Russia by the St Petersburg water and sewerage utility Vodokanal,

the contractor consortium and the Nordic Environment Finance Corporation (NEFCO). Established by the same owners, Ekovod will be responsible for operating the plant over the next 12 years, which is the repayment period for the investment loans.

Pollution of the Gulf of Finland in the 2000s and reductions to be achieved by the St Petersburg southwestern wastewater treatment plant

	total phosphorus t/a	total nitrogen t/a
Russia	5 850	97 100
Finland	440	13 900
Estonia	530	15 700
Total	6 820	126 700

Source: HELCOM

Estimated pollution control impact to the Gulf of Finland

t/a	-360	-2 200
%	-5.3	-1.7

Source: SWPT

Photos by: Tero Pajukallio



Diversified environmental programme brings results in St Petersburg

The co-operation programme of the City of St Petersburg environmental committee and the Finnish Ministry of the Environment for the period 2004–2007 seeks to strengthen environmental management, improve the standard of environmental protection and increase environmental awareness in the city. The progress of city twinning activities will play an important role in this process.

Environmental work is taking place on a broad front in the major metropolis of St Petersburg. Residents have to contend with daily problems of traffic congestion and air quality, ineffective solid waste management and the loss of green areas. The quality of drinking water gives more cause for action than sewage treatment or the state of watercourses.

The St Petersburg environmental committee is responsible for public education and information, and is also actively involved with businesses, organisations and schools.

Exchange visits provide new perspectives

A co-operation project between the cities of Turku and St Petersburg has been comparing environmental monitoring practices at industrial plants. Supervisors from St Petersburg have learned about the work of their Finnish counterparts during inspections in Turku, and Finnish inspectors have made corresponding visits to industrial installations in St Petersburg. These exchange visits provide new perspectives for both parties, giving them an opportunity to compare practices and to propose changes in working methods and ideas for improving operations.

The principal focus of the practices involved in issuing Finnish environmental permits and conducting supervision is on preventing harmful emissions. In Russia, by contrast, emission limits are often more severe, but they are also more easily exceeded. In St Petersburg the environment centre

“green line” listens to complaints from the public and responds to questions regarding the environment. This telephone service receives over a thousand calls a year that require some action on the part of environmental supervisors.

Improved public information on air quality

Air quality has become one of the most important issues facing St Petersburg. The people of the city are keen to improve the provision of public information on air quality, as this is an area in which the public most urgently require reliable guidance. St Petersburg is currently engaged in a project to improve air quality monitoring, which has involved studying the air quality systems in St Petersburg and Helsinki, developing a monitoring network, finding locations for measuring stations and comparing modelling procedures.

With the support of the Finnish Ministry of the Environment, the Green Pack environmental education project was completed in St Petersburg in spring 2006, providing materials for teachers and schools, and developing innovative teaching methods.

Objectives of the Finland–St Petersburg co-operation programme:

- to reinforce environmental management in St Petersburg
- to improve management and control of hazardous waste
- to support city twinning for environmental co-operation
- to increase environmental awareness





Photo by: Elina Saukkonen

Northern Dimension environmental co-operation

The Northern Dimension promotes collaboration between the European Union and its northern neighbours Russia, Norway and Iceland on the basis of equitable partnership. Environmental protection is an important theme for the Northern Dimension. Increasing attention is now being paid to co-operation with northwest Russia and to work in the Baltic Sea region and Arctic zones.

The Northern Dimension is a 1997 Finnish initiative for developing European Union external relations and regional co-operation in the regions bordering the northern frontiers of the European Union. The current action programme (2004–2006) is now coming to an end and negotiations on the future content of Northern Dimension policy are currently under way between the European Union and its partner countries: Russia, Norway and Iceland. The aim is to prepare, by the end of 2006, a new political declaration and framework document to serve as the basis for future co-operation. The new documents will specify the objectives and co-operation structures of the Northern Dimension. Cross-border co-operation and partnerships between organisations in northern regions will play a vital role in achieving the goals of the Northern Dimension.

An environmental dialogue between the European Union and Russia is beginning as part of the work to establish a Common Economic Space (CES). Within its own geographical boundaries the Northern Dimension is implementing the specified objectives of environmental dialogue.

Northern Dimension co-operation is financed through the Northern Dimension Environmental Partnership Support Fund (NDEP). Other efforts to support this work include using external relations

financing within the enlarged European Union, particularly in the form of the new European Neighbourhood and Partnership Instrument.

Finland's environmental administration will continue to co-operate in the medium term with northwest Russia to protect the Baltic Sea. Several long-term environmental protection programmes are under way. The main aim of this work is to reduce discharges from this region that affect the Finnish environment and the state of the Gulf of Finland and the Baltic Sea. This co-operation is based on the Baltic Sea protection programme of the Baltic Marine Environment Protection Commission (HELCOM) and on a Baltic Sea programme approved by the Finnish government.

The principal objectives of Northern Dimension environmental co-operation have included:

- reducing polluting discharges
- strengthening co-operation measures to combat and adapt to climate change
- promoting protection of biodiversity
- improving environmental legislation and administration
- increasing the emphasis assigned to environmental questions when developing economic co-operation
- giving particular attention to safety in navigation and especially in oil transportation

Photo by: Lehtikuva





Photo by: Viktor Kirsanov

Environmental Partnership Fund promotes co-operation

The Northern Dimension Environmental Partnership Support Fund (NDEP) was established in 2001 to promote projects involving the environment, energy conservation and the treatment of nuclear waste in northwest Russia and the Kaliningrad Region. From Finland's point of view the Fund is an important initiative for environmental protection in northwest Russia, establishing a channel for environmental sector investment subsidies from various financiers, and especially from the European Union and Russia.

The work of the Northern Dimension Environmental Partnership Support Fund (NDEP) falls under two headings: the environment and nuclear safety. One third of its available assets of EUR 225 million is allocated to environmental projects and the remainder is earmarked for the nuclear safety sector. The Fund focuses particularly on projects seeking to reduce cross-border environmental impacts within the territory of the Northern Dimension. Its nuclear waste reprocessing projects are mainly on the Kola Peninsula.

Of the EUR 12 million that Finland has invested in the Fund, EUR 10 million will be allocated to projects under the environmental heading. Finland aims to implement projects that reduce pollution particularly in the Baltic Sea region. There are currently 16 environmental projects at the implementation or planning stage. The total investment in these projects is expected to reach some EUR 2 billion.

The first project to be completed with support from the Fund was the southwestern wastewater treatment plant in St Petersburg. The Fund provided EUR 5.8 million of the total project investment of EUR 200 million. Other projects of particular importance for protecting the Gulf of Finland are a northern main sewer to help eliminate direct discharges of wastewater from St Petersburg, a water management programme for the Leningrad Region, a water management project for the city of Novgorod and an environmental programme for industry in the area of Lake Ladoga. It is estimated that these projects will reduce phosphorus discharges to the Gulf of Finland by 24 per cent.

NDEP financiers

- Russia
- The European Commission
- Finland, Sweden, Denmark, Norway, the Netherlands, Belgium, Germany, France, the United Kingdom, Canada
- The European Bank for Reconstruction and Development (EBRD), the Nordic Investment Bank (NIB), the European Investment Bank (EIB) and the World Bank (WB)

NDEP environmental projects as of November 2005

Project	Total investment, MEUR
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Approved projects

St Petersburg southwestern wastewater treatment plant	200
St Petersburg flood barrier	492
St Petersburg northern sludge incineration plant	90
Municipal solid waste management in the Leningrad Region	23
Municipal water management in the Republic of Komi	32
District heating in the city of Kaliningrad	22
Municipal water management in Archangel	25
District heating in the city of Murmansk	30
Water management in the city of Kaliningrad	114
Total	1028

Projects under preparation

- Improvement of municipal utilities in the city of Novgorod
- Solid waste management in the Kaliningrad Region
- St Petersburg main sewer
- St Petersburg district heating
- Environmental investments in the Lake Ladoga area
- Municipal water management in Vologda

Collecting old pesticides

There are huge quantities of outdated pesticides in abandoned and derelict Russian stores. The windborne transmission of chemicals into Arctic regions and their spread with river floodwaters for thousands of kilometres as far as the Arctic Ocean are a particular problem. Fires at points of storage also pose a significant risk of spreading hazardous compounds over a wide area.

It is estimated that there are half a million tonnes of outdated pesticide in the world, of which 25,000 tonnes are in Russia. Some of the outdated chemicals in northern Russia are envirottoxins that degrade very slowly, spread over wide areas, accumulate in organisms and are capable of causing serious health problems, even in small concentrations.

Even though the quantities involved are small, efforts have been made to prevent their escape to the environment through a project under the Arctic Council Action Plan (ACAP). The primary target

territories of this work are the Barents and Siberian Regions of Russia. Finland is also currently engaged in a bilateral project to destroy outdated pesticides in the Russian Republic of Karelia.

Under the project, 974 tonnes of outdated pesticide have been registered so far in Russia, of which 627 tonnes have been repackaged and stored pending final disposal. There is no reprocessing plant in Russia employing environmentally acceptable technology. The project is encouraging the Russians to construct a high temperature incineration plant.

Karelian businesses establish environmental management systems

A training project has been implemented in the Russian Republic of Karelia with a view to introducing the ISO 14001 environmental standard at three enterprises. Achievement of this objective involved a thorough reform of production plant management systems and involvement of the entire staff in the retraining process.

The enterprises that took part in the environmental management system training project were the Petrozavodsk machine-tool manufacturing works, the Kostamuksha iron pellet plant and the Lahdenpohja plywood factory. The Kostamuksha iron pellet plant was the largest employer of the three, with over 8,000 employees at the start of the project. The Petrozavodsk machine-tool manufacturing works had a staff of more than 3,500 and the Lahdenpohja plywood factory employed more than 600 people.

Substantial changes had to be made in the management systems of all three plants in order to attain the required environmental standard, and it was essential that management and key personnel were committed to the project. The system also requires all employees to recognise the principal environmental impacts of the enterprise and to be aware of their individual ability to promote environmental protection.

The training was organised in seminars lasting a few days and practical implementation was guided by Finnish and local consultants. The management teams of the enterprises monitored implementation of the project and any enterprise-specific reforms that were necessary.

During the training process the enterprises learned to recognise various environmental problems and to seek solutions to them. For example, more than 500 environmental issues were identified at the Kostamuksha iron pellet plant. Special projects were set up to tackle the 31 most significant issues on this list.

The Kostamuksha iron pellet plant and the Lahdenpohja plywood factory also implemented an ISO 9000 quality system in the course of the project.

Quality standards for monitoring the state of the northern environment

Reliable information produced by environmental laboratories is helping us to gain an increasingly precise and comprehensive picture of the state of the environment in northern regions. It also serves the needs of international environmental monitoring programmes and promotes the objectives of protecting the northern environment and guaranteeing sustainable development.

The long-sustained collaboration between the Lapland Regional Environment Centre and laboratories in the Murmansk Region to improve the standard of quality control was extended to include Archangel and, as of 2004, the whole of the Russian Republic of Komi, where the Environment Centre serves as an invited expert. The outcome of this collaboration has been an improvement in the reliability of basic analytical findings and an increase in environmental analytical information.

Training, exchanges and fieldwork

Controlling quality and improving analysis at environmental laboratories are continuous processes that are necessary for effective environmental monitoring and research. Improving comparability requires closely networked collaboration that benefits from a thorough understanding of environmental monitoring and research institute laboratories.

Work to improve collaboration and the quality of operations has included seminars and laboratory audits, joint fieldwork, and opportunities for Russian laboratory staff and chemists to work in Finnish environmental laboratories. The general programme of co-operation in Central and Eastern Europe has enabled tried and tested working methods from Finland to be adapted for use by partners in other countries.

Special challenges of the northern environment

Long distances and transportation of samples cause particular difficulties for environmental research work in northerly regions. The reliability of laboratory findings can be improved by chemical fixation of samples in the field followed by refrigerated storage and transportation.

The main challenge of the northern environment is its sensitive and vulnerable ecosystem. Food chains are short and various envirottoxins can easily make their way, for example, from the soil into animals and human beings.

Persistent organic pollutants (known as POP compounds) and new chemicals such as brominated fire retardants and endosulphane pesticides can even be transmitted into Arctic regions from very distant sources. Perhaps the most dramatic impacts on the northern environment may be caused by temperature increases associated with climate change.

Photos by: Eira Kuikka





Photo by: Olga Kuznetsova

Photos by: V.N. Mamontov, A.N. Tretiakov, A.N. Tretiakov



Nature conservation networks form in Russia

Nature conservation co-operation between the Finnish Ministry of the Environment and neighbouring regions of Russia is largely based on the 1997 sustainable forestry and biodiversity development programme for northwest Russia. The nature conservation sections of this programme are currently focusing on assessing the network of conservation areas and on improving activities.

One important long-term achievement of nature conservation co-operation between Finland and Russia has been the establishment of several new conservation areas near the border between these two countries and in other nearby regions, and improved protection of endangered species. The nature conservation aspects of the development programme are co-ordinated by the Finnish Environment Administration and the sustainable forestry aspects are the responsibility of the Ministry of Agriculture and Forestry. An evaluation has been conducted, indicating that the content and outcome of the nature conservation aspects of the project have been largely consistent with expectations.

Inventories are the basis of conservation work

Some fifteen biodiversity conservation projects were implemented in the 2003–2004 period in six administrative regions of northwest Russia: the Republic of Karelia, Archangel, Murmansk, Vologda and Leningrad regions and the city of St Petersburg. The scientific inventory of nature sites, preparation of protection plans and improved habitat classification have been important projects alongside compilation of regional Red Books.

Red Books are legally binding documents in Russia setting out the scientific justification for protecting certain rare and endangered species or habitats. The Finnish–Russian nature conservation working group has proposed the idea of a Fennoscandian green belt of conservation areas on both sides of the international border.

Tools and development work

The third programme period lasting until 2010 is focusing on conducting an assessment of the deficiencies and coverage of the conservation area network in six regions of northwest Russia. The aim of this work is to create tools for land-use planning, a database of site information and cartographical materials for use by public authorities, scientific establishments and other parties.

Improving the work of conservation areas is an important part of future co-operation. Example sites will be used to gain an understanding of the principal administrative and functional problems of nature reserves and to improve conditions for their operation. Russian nature reserve staff will be familiarised and trained in the functional and administrative skills required for conservation area management in Finland.

In addition to bilateral activities, future efforts will focus on increasing international co-operation in exchanging knowledge and experience and in preparing and implementing projects. The development programme is an active participant in the International Contact Forum on Habitat Conservation in the Barents Region (HCF), which coordinates multilateral nature conservation in the Nordic countries and the Russian Barents Region.

The aims of nature conservation co-operation:

- to promote the establishment of new conservation areas
- to improve the network of conservation areas
- to support nature conservation research in northwest Russia
- to improve conditions in the regions for serving the needs of nature tourism, environmental education and training



Photo by: Mihail Triboi

Photos by: Tero Pajukallio



European Union membership of the Baltic States brings changes to co-operation in Central and Eastern Europe

Since 1990 the Ministry of the Environment has provided some EUR 63 million in subsidies for environmental protection investment and technical assistance projects in the Baltic States as part of Finland's programme of co-operation in Central and Eastern Europe. The primary aim of this work has been to reduce discharges to the Gulf of Finland and the Baltic Sea from Finland's neighbouring regions.

The original basis for environmental co-operation between Finland and the Baltic States was the 1992 Baltic Sea protection programme of the Baltic Marine Environment Protection Commission (HELCOM). In recent years the work of the Finnish Ministry of the Environment has been guided by the Finnish government's Baltic Sea Protection Programme and by the standards required by European Union environmental legislation.

The aims of the Baltic Sea programme include reducing eutrophication, improving the state of the Baltic environment and watercourses, and reducing the risks and problems associated with transportation of oil and chemicals and with hazardous substances. The programme specifies more than thirty ways of achieving these objectives and requires action in Finland and its neighbouring regions over the next 10–15 years.

Focusing on urgent problems

The scope of environmental protection co-operation was agreed with the environment ministries of Estonia, Latvia and Lithuania over a period of 15 years. The initial focus was on solving the most urgent environmental problems. These were mostly problems of wastewater treatment in larger urban areas and the environmental problems associated with oil shale production at Narva in Estonia.

The wastewater treatment plant projects, typically involving broad international co-operation in financing and implementation, were particularly fruitful. Strong local commitment in the Baltic States was also an important success factor. The enterprises and utilities involved in planning and implementation played an important role in project co-operation.

Technical assistance and educational sector programmes implemented between 1990 and 2005 established valuable liaison networks between specialists in Finland and the Baltic States. The main objective in recent years was to reinforce environmental administration in the Baltic States for the purpose of implementing Community Law.

Project co-operation between Finland and Estonia has also sought to improve oil spill management capacities and an Estonian sea lane management vessel is currently being converted into a multipurpose vessel for combating oil spills. Training has also been provided and joint oil spill management exercises have been conducted with the Estonians and Russians in the Gulf of Finland.

The Baltic Sea: a continuing common concern

Although the accession of the Baltic States to the European Union signified the end of Finnish Ministry of the Environment project co-operation with these countries, the authorities of Finland and the Baltic States nevertheless continue to have common concerns that they must jointly pursue. One of the most important of these objectives is to improve the marine environment of the Baltic Sea.

Depending on weather conditions, annual blooms of toxic algae may be anticipated in the Gulf of Finland due to eutrophication. The increased use of this watercourse for transportation of oil and chemicals continues to merit attention.

With the accession of the Baltic States and Poland the Baltic Sea has – aside from a short stretch of Russian coastline – become an inland sea of the European Union. Increasing attention is being paid to protection of sea areas within the European Union and a framework Directive on watercourses is now at the implementation stage. The European Union has also recently issued a proposal for a new Directive outlining a marine strategy for the Community.

European Union policy will ultimately establish conditions for concrete regional action to improve the state of the Baltic Sea. It is in this light that the Baltic Marine Environment Protection Commission (HELCOM) is revising its own action programme for the Baltic Sea by the year 2007. Russia will play an important role in this development.



Photo by: Jevgeni Lutsinski



Photos by: Tero Pajukallio



European Union brings new financing methods to the Baltic States

The Baltic States joined the European Union in May 2004. Community environmental legislation took effect in those countries at this time. Even though the environmental sector had already been the target of substantial investment for several years, accession to the European Union will continue to require major environmental investments and improved administration in the Baltic States. Wastewater treatment and solid waste management in smaller communities are among the areas in which further improvement is still required.

The accession of the Baltic States to the European Union affected Finland's programme of co-operation in Central and Eastern Europe by bringing project-based co-operation to an end in 2006 following a transition period. Within the European Union the Baltic States will benefit from Community financing instruments such as the cohesion and structural funds.

The assets of the cohesion funds are earmarked for investments in the environment and transport sectors. Cohesion financing in the Baltic States amounts to some EUR 1.4 billion over the period from 2004 to 2006. The structural funds are intended both for national development projects and Interreg projects implemented at the boundaries of European

Union Member States and regions.

The aim is to implement future projects located at the common borders of the European Union and Russia increasingly in partnership with the Russians. From the beginning of 2007 efforts will be made to finance this partnership through the European Neighbourhood and Partnership Instrument (ENPI). No firm decision has yet been taken on how this co-operation will develop in practice.

The Finnish Ministry of the Environment is working with the Baltic States to lobby for future use of European Union financing with optimal efficiency in the environmental sector of the Baltic States and throughout the entire Baltic Sea region, including Russian border areas.

Improved emission measurements in the Baltic States

The Finnish Ministry of the Environment began emission measurement co-operation with Latvia in 1992, extending this work to include Estonia and Lithuania a couple of years later. Community Law now requires quite new measurement standards.

Emission measurement collaboration between Finland and the Baltic States progressed on the same principle in all of the countries involved: The metering equipment requirements of the laboratories were initially investigated and then efforts were made to arrange training in the basic methodology of measuring aerial emissions. Further training courses also enabled regional laboratories to take part in the training process, which encouraged the spread of new methods within the Baltic States.

Real process situations are the most effective way to test the standard of laboratory capacities. The measurement laboratories of Latvia and Lithuania

have arranged national comparability measurements every year. Although the comparability of measurements has improved, discrepancies continue to occur due to the equipment and methods used.

The Finnish Ministry of the Environment has subsidised training in CEN standards in the Baltic States. Sustained co-operation has enhanced the skills of specialists in Estonia, Latvia and Lithuania and established a firm foundation for further improvements in emission measurement work. Finland is also engaged in similar co-operation with Russia.

40 Joint Implementation projects in Polish ecoconversion programme

A total of forty environmental projects were implemented in ecoconversion co-operation between Finland and Poland. Under the ecoconversion scheme Finland wrote off debts owed by Poland in return for environmental investments undertaken in Poland. The outcome of this co-operation included a substantial reduction in municipal wastewater discharges to the Baltic Sea, an improvement in the energy efficiency of power plants and industrial facilities, and a cut in atmospheric emissions.

The ecoconversion co-operation agreement concluded between Finland and Poland pursuant to the decision of the “Paris Club” of western creditor nations expired in 2005. Under the agreement the Polish government was discharged from its debt to Finland in return for environmental protection investments implemented in Poland. The aim of this co-operation was to reduce emissions of aerial pollutants propagating from Poland to Finland, to cut polluting discharges to the Baltic Sea and to promote energy conservation.

Finland paid a total of EUR 13.7 million in ecoconversion subsidies. Uses of these funds included the construction and renovation of wastewater treatment plants, the reconditioning of sewerage systems and the renovation of production plants in the wood processing and mining industries and in energy generation. About twenty Finnish environmental technology businesses were involved in implementing the ecoconversion projects.

Photos by: Kristiina Isokallio



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<i>Theme of publication</i>				
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<i>Abstract</i>	<p>Finland's co-operation in the Baltic Sea region began during the major political realignment of the early 1990s. Environmental protection rapidly became a central theme of the co-operation programme. Finland began its co-operation in Central and Eastern Europe in 1990 by studying sites in northwest Russia and Estonia where urgent action was needed to improve the state of the environment. Co-operation also began later with Latvia and Lithuania. A co-operation programme known as ecoconversion began with Poland in 1991.</p> <p>As a result of co-operation in Central and Eastern Europe, international financing promoted water protection and other environmental projects seeking to reduce pollution in Russia, Estonia, Latvia, Lithuania and Poland. Over the last 15 years Finland has invested a total of EUR 106.5 million in grant aid for environmental protection projects in these countries and provided technical assistance to the value of EUR 44.1 million.</p> <p>The European Union has now enlarged to encompass most of northern Europe, effectively transforming the Baltic Sea into an inland sea of the Community. At the same time more than a decade of close bilateral project co-operation with the Baltic States and Poland came to an end when these countries became members of the European Union.</p> <p>Work to protect the Baltic Sea is nevertheless continuing. Such matters as increased oil transportation and discharges of harmful substances and agricultural effluent to the Baltic Sea will continue to require systematic measures and international co-operation.</p> <p>The role of co-operation in Central and Eastern Europe is changing in the direction of equitable partnership. For example, the Northern Dimension Environmental Partnership Support Fund (NDEP) brings together a wide range of financiers to assist local authority environmental protection investments in northwest Russia.</p> <p>One major challenge for Finland is to limit greenhouse gas emissions to the level imposed by the Kyoto Protocol to the United Nations Framework Convention on Climate Change. The Finnish government has decided that Finland will purchase emission reduction units corresponding to ten million tonnes of carbon dioxide under the Kyoto mechanisms over the period from 2008 to 2012. As part of this process, Finland launched its new Finnder procurement programme in 2006. Russia and other transition economy countries will be important host countries for implementing these mechanisms.</p>			
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<i>Tiivistelmä</i>	<p>Suomen lähialueyhteistyö Itämeren alueella alkoi 1990-luvun alun poliittisessa murroksessa. Ympäristönsuojelusta tuli nopeasti yhteistyön keskeinen toiminta-alue. Suomi aloitti lähialueyhteistyön vuonna 1990 selvittämällä ympäristön tilan parantamisen kannalta kiireellisiä toimia edellyttävät kohteet Luoteis-Venäjällä ja Virossa. Yhteistyö alkoi myöhemmin myös Latvian ja Liettuan kanssa. Puolan nk. ekokonversioyhteistyö alkoi 1991.</p> <p>Lähialueyhteistyön tuloksena on kansainvälisellä rahoituksella edistetty kuormituksen vähentämiseen tähtääviä vesiensuojelu- ja muita ympäristöhankkeita Venäjällä, Virossa, Latviassa, Liettuassa ja Puolassa. Suomi on avustanut kuluneiden 15 vuoden aikana näiden maiden ympäristönsuojelun investointeja yhteensä 106,5 milj. eurolla ja antanut teknistä apua 44,1 milj. eurolla.</p> <p>Euroopan unionin laajennuttua Suomen välittömillä lähialueilla Itämerestä tuli lähes EU:n sisämeri. Samalla runsaan vuosikymmenen jatkunut tiivis kahdenvälinen hankeyhteistyö Baltian maiden ja Puolan kanssa päättyi, kun maat liittyivät unionin jäseniksi.</p> <p>Työ Itämeren hyväksi jatkuu vielä tästä eteenpäin: muun muassa lisääntyneet öljykuljetukset sekä haitallisten aineiden ja maatalouden päästöt Itämereen vaativat jatkossakin määrätietoisia toimenpiteitä ja kansainvälistä yhteistyötä.</p> <p>Lähialueyhteistyön rooli on muuttumassa tasavertaiseen kumppanuuteen perustuvaksi. Esimerkiksi Pohjoisen ulottuvuuden ympäristökumppanuusrahoitus kokoaa useat eri rahoittajat yhteen rahoittamaan kunnallisia ympäristönsuojelua edistäviä investointeja Luoteis-Venäjällä.</p> <p>Suuren haasteen Suomelle asettaa kasvihuonekaasupäästöjen rajoittaminen ilmastopöytäkirjan edellyttämälle tasolle. Valtioneuvosto on tehnyt päätöksen, jonka mukaan Suomi hankkii nk. Kioton mekanismeilla 10 miljoonan hiilidioksiditonin edestä päästövähennysyksiköitä vuosina 2008-2012. Suomi käynnisti vuonna 2006 Kioton mekanismien Finnder osto-ohjelman. Tärkeitä kohdemaita mekanismien toimeenpanossa ovat Venäjä ja muut siirtymätalousmaat.</p>				
<i>Asiasanat</i>	Ympäristöministeriön lähialueyhteistyö, toimintakertomus, ympäristöinvestoinnit, tekninen apu, Luoteis-Venäjä, Viro, Latvia, Liettua, Puola, Kioton hankemekanismit, Finnder osto-ohjelma				
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Finland's co-operation in the Baltic Sea region began in the early 1990s. Environmental protection rapidly became a central theme of the co-operation programme. Finland began its co-operation in Central and Eastern Europe in 1990 by studying sites in northwest Russia and Estonia where urgent action was needed to improve the state of the environment. Co-operation also began later with Latvia and Lithuania.

The European Union has now enlarged to encompass most of northern Europe, effectively transforming the Baltic Sea into an inland sea of the Community. At the same time more than a decade of close bilateral project co-operation with the Baltic States and Poland came to an end when these countries became members of the European Union.

Work to protect the Baltic Sea is nevertheless continuing. Systematic measures and international co-operation are still required to reduce emissions and discharges. Co-operation in Central and Eastern Europe is changing in the direction of equitable partnership.

One further major challenge for Finland is to limit greenhouse gas emissions to the level imposed by the Kyoto Protocol to the United Nations Framework Convention on Climate Change. The Finnish government has decided that Finland will purchase emission reduction units corresponding to ten million tonnes of carbon dioxide under the Kyoto mechanisms over the period from 2008 to 2012. Russia and other transition economy countries will be important target countries for implementing these mechanisms.

This report describes environmental protection co-operation in northwest Russia, the Baltic States and Poland between 2003 and 2005 and the Kyoto Protocol project mechanisms.



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