



# Environment and Energy Projects in the Baltic Sea Region

# Making a difference



To preserve, protect and improve the environment, in particular in and around the Baltic Sea, and to support sustainable development.

From Sida's letter of appropriation







#### Environment

Lars Eklund, Head of the Division for Environment and Energy at Sida East outlines what lies ahead for 2003-2004.

#### Gatchina

If you want to learn how to keep a city nice and clean then take a trip to Gatchina, 40km south of St Petersburg.

### St Petersburg

In the spring of 2003, construction work began on the South West Wastewater Treatment Plant in St Petersburg. Sida has been actively involved for several years.

#### Vorkuta

Who would possibly want to go to the Siberian mining town of Vorkuta? Sida's Victoria Gyllerup did and liked what she saw despite the fact that it was snowing in June.

### 12 Gender

In Novgorod gender issues are finally introduced in environment and energy projects. One thing to be learned is that not all customers have the same needs.

Building strong Authorities

The Swedish Environmental Protection Agency (SEPA) plays an important role in preparing EU candidate countries in environmental management.

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Along the Daugava River, cooperation is in progress between several nations and interest groups in how to make best use of this precious resource.

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Toxic waste has been dumped into dams outside St Petersburg for 30 years, but a new treatment project is now underway

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Swedish support to treatment plants since the early 1990s. What was spent during 2002.



Sida's environmental and energy work in the Baltic States will reach its peak during the next two years at the same time as activities in northeast Russia are on the increase.

# "We are shifting our attention eastward"



FOR THE DIVISION for Environment and Energy (EME) at Sida East, 2002 was a particularly intensive year. We, or rather our cooperation partners, completed around 25 consultancy and contracting assignments. This is an all-time record and is largely due to the fact that projects that have been at the planning stage for several years now are beginning to bear fruit. Financial packages have been signed and decisions have been made.

The Baltic States and Poland were given the go ahead during the year to become members of the EU in 2004 (if the people vote for it). This signifies an end to Sida's involvement with these countries and a phasing out of activities. Paradoxically, our activities in the Baltic will reach a peak during the phasing out period because the projects that have been at the planning stage for several years will now be implemented. We and our cooperation partners realise that this is the last chance for Sida to finance projects in these countries so our level of support will increase during the next two years as activities draw to a close.

The phasing out of future EU member countries allows us to focus on Russia, to some extent Ukraine, and to a lesser extent Belarus. We are already involved in the largest environmental projects in northeast Russia: the wastewater treatment plants in St Petersburg and Kaliningrad. Signing of the financial agreement for the Southwest Wastewater Treatment Plant in St Petersburg was an exceptionally long and complicated process and political involvement was required from the highest level to enable us to continue with the project. It is a new type of project for Russia involving new constellations and players and doubt arose as to whether Russian legislation supported this type of agreement.

Sida played a large part in initiating and planning the project and has contributed with 8 per-

cent  $_{\rm (MSEK\ 120)}$  of the total financing in St Petersburg and  $_{25}$  percent  $_{\rm (MSEK\ 120)}$  in Kaliningrad, which provides a considerable return in the shape of environmental improvements and business opportunities for Swedish companies. It is also gratifying that Swedish and Finnish companies have been given a greater part in implementing the projects. As with all our activities, we regard the restructuring of municipal companies and institutions as being decisive for our participation and for ensuring a sustainable future investment.

On top of our contribution to the wastewater sector we have been able to increase our involvement within the energy sector. This mainly concerns the district heating projects in Kaliningrad, Murmansk and Archangelsk, which fall within the framework of The Northern Dimension Environmental Partnership (NDEP) set up by The World Bank, EBRD, NIB, EIB, the Russian government and the EU to finance and implement large environmental projects in northwest Russia.

As well as supporting large investment projects, more than a quarter of our budget goes towards environmental cooperation between authorities in Sweden and our partner countries. We have come to realise that it is more difficult to create partnerships with authorities in Russia and Ukraine than in the Baltic States and Poland, but this part of our operation will continue to be important to us as we direct our attention eastward.

MORE INFORMATION about this and other issues is contained in this Annual Report for 2003. We hope it will contribute to improving relations between us and all others involved in cooperation partnerships in the Baltic Sea region.

LARS EKLUND

Vars Echlund

Head of the Division for Environment and Energy (EME) at Sida East

Gatchina, some 40 kilometres south of St Petersburg, is a leading town in the environmental field. Thanks to innovative thinking and external impulses, including Swedish support, Gatchina was recently voted Russia's best kept town.

# Gatchina – Russia's number one green city



WITH THE AID of Sweden, Gatchina is in the process of reorganising its energy system. By increasing fees and installing modern equipment, the cost of heating, which previously consumed over half the town's budget, now only accounts for 17 percent. "By lowering costs in the energy sector we have been able to concentrate more on the social sector," says the Mayor of Gatchina, Stanislav Bogdanov.

GATCHINA IS THE FIRST Russian town to install modern Swedish district heating pip-

ing, which uses the latest technology to minimise leakages and reduce costs. With Swedish assistance, local district heating plants are being installed in Gatchina that will adapt heating in the apartments to prevailing conditions. Thirty thousand people, a third of the town's inhabitants, now receive their hot water and heating via Swedish district heating stations.

Sida has helped to restructure Gatchina's municipal energy company and introduced a new way of thinking in the process. Based on experience gained from Gatchina's twin town of Eskiltu-

na in Sweden, Swedish consultants and technology have inspired an economically viable energy system. The company now has no problem making regular payments.

PUBLIC SUBSIDIES FOR heating have come to an end in Russia. Consumers must now pay for their consumption but it is difficult for those in power to raise the fees because people suffer and protest as a result. Gatchina's district heating company is now being restructured based on the Swedish model. It can bear its own costs and charge for its improved services.

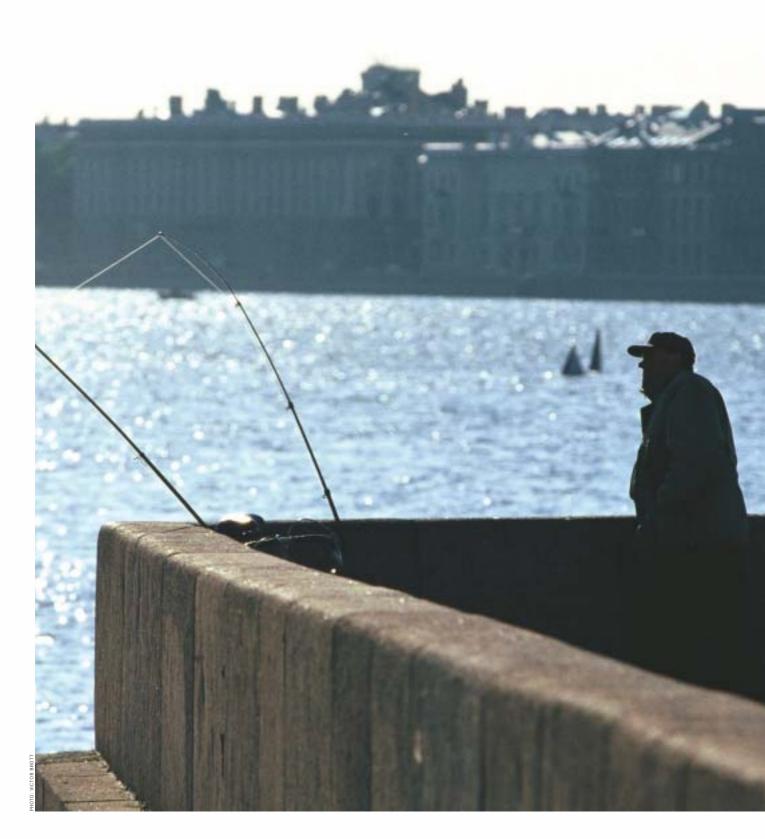
"The projects that have been implemented in Gatchina with Swedish support have been very successful," commented Leonid Tjernysjov, deputy minister for building and municipal services in Russia, at a seminar.

Energy savings in Gatchina is now in the region of 20 percent and is expected to improve when the heating plants are fine-tuned. This is the most extensive modernisation programme of its kind in Russia.

Sida has recently started a cooperation with the town of Gatchina in the field of water and waste water. The aim is to improve the water quality and reduce the pollution of the water.







St Petersburg is the largest remaining source of untreated wastewater discharged into the Baltic Sea.

Around 30 percent of the town's wastewater is discharged without treatment.

# A treat for St Petersburg

IT IS EARLY MORNING in St Petersburg. The River Neva glistens in the sunlight. A man has just put down his fishing rod not far from the Peter-Paul Fortress. At times like this St Petersburg is one of the most beautiful cities in the world – on the surface. Only 70 percent of the wastewater is treated, the rest runs straight out into the river, in many cases right in the centre of town. Every day 300,000 cubic metres of untreated wastewater is discharged into the river and out into the Baltic Sea.

In the late 1980s, work began on building a third large treatment plant but had to be abandoned in 1995 due to lack of money. The partly completed plant was left to ruin, but work has now begun again.

A NEW TREATMENT PLANT is to be built and jointly operated by Nordic companies and the water company in St Petersburg. The project is the first within the framework of the Northern Dimension Environmental Partnership, an environmental programme initiated by Eu, the Russian Federation and international financial bodies. Sida is one of the initiators to the project and is contributing with SEK 1000 million.

"This is an unusual assignment for us because we are committing ourselves for twelve years, which is a very long time. But we have faith in the types of partnership we are now getting," says Björn Larsson, senior vice president at the NGC building company.

Sida has contributed to reducing discharges from seventeen Hot Spots (places where polluting discharges are particularly high) around the Baltic Sea. Solving the last great discharge problem – St Petersburg – has therefore high priority in Sweden. But to achieve a long-term sustainable solution, the municipal Water Company Vodokanal in St Petersburg has to be restructured and modernised. This entails reducing consumption and making the company more customer- and market-orientated.

"We have cooperated with Sida on a great number of projects over the years. I hope the Southwest Treatment Plant won't be our last. There are many areas in which Sweden and Swedish expertise have been of great benefit to us. Something new and rewarding happens every day," says Felix Karmazinov, managing director of Vodokanal.

THE MUNICIPAL DISTRICT OF Sestroretsk with its 75,000 inhabitants is situated on the outskirts of St Petersburg. Here, on the border between town and countryside, many people still live in small, picturesque wooden houses. There are also quite a few cottages, and during the summer months the population increases tenfold, which naturally leads to increased water consumption.

Support from Sida for Water Demand Management (to reduce water consumption) has made the operation more efficient and customer-

# "Consumption is still at 300 litres of water per person a day, which is much higher than in Sweden"









From the top: Aleksei Kapatsin would gladly pay double water rate for cleaner water.
Liza Ozmak and Zhenya Kravtsov have analysed water samples in chemistry.

orientated. Investments are also planned for Sestroretsk where the cleansing basins are to be renovated and a new sludge treatment plant built.

"This is a great opportunity to improve environmental awareness. Consumption is still at 300 litres of water per person a day, which is much higher than in Sweden. We're now working actively to reduce consumption with support from Sweden. If we're successful, the treatment plant might not have to be extended later on to the extent we originally planned, which means we save a lot of money," explains Tatiana Fedjonina, in charge of Vodokanal in Sestroretsk.

Aleksei Kapatsin, with his daughter on his arm, is waiting for the bus. He lives in a block of flats just behind the centre in Sestroretsk.

"There is often dirt and rust in the water, but I'm not sure if that's due to the pipes in our block being bad or not. It would be nice to know more about what they do with the water here and how it is treated," he says.

Water rates are included in the rent and amount to around 40 roubles  $({\rm I.3~USD})$  a month.

"It's not so much and I would gladly pay double if it meant cleaner water," says Aleksei.

He is not the only one who thinks that way. Despite St Petersburg residents becoming financially worse off in recent years, people are still prepared to pay extra for the environment. A deeper commitment is bubbling to the surface.

THE PLACE IS SWARMING with children. The school is embedded in leafy foliage between the blocks of flats in the middle of the estate. School number sixteen has a thousand pupils, from infants to upper secondary. This is one of ten schools in St Petersburg taking part in an environmental pilot project.

"Children are more environmentally aware than adults and we have had no problem at all motivating them," says Natalia Malacheva, head teacher at the school.

Liza Ozmak is thirteen and is in seventh grade. As part of the school's environmental pro-

gramme she has taken part in excursions to places around St Petersburg.

"We took water samples which we analysed in chemistry. We discovered that the water had a high ph value, which is not a good sign for many of the small organisms in the water," she says.

Another part of the project investigated water consumption. Are there any leaky taps at home? How does the family do the dishes and laundry?

"It was the first time that I began thinking about how we use water in my family and I discovered that we use a lot of water when we wash up, so yes, I've learnt quite a lot," says Zhenya Kravtsov who is fourteen.

#### FACTS ST PETERSBURG

Wastewater from St Petersburg is the largest individual discharge source to the Baltic Sea. Of the total wastewater quantity of approx. 3 Mm<sup>3</sup> a day, about a third is totally untreated (1999 figures).

At present, untreated wastewater is discharged directly from more than 300 discharge points into the River Neva, which is a drinking water source, or directly into the Gulf of Finland. To cut pollution even further, water consumption must be reduced. Sida has contributed to the restructuring and modernisation of the water services in St Petersburg since 1995. The building of the Southwest Wastewater Treatment Plant began in 1987 to complement two older treatment plants. When work now commences again it will be a completely new model for Russia. The treatment plant will be owned and run by Nordvod, a company formed by the construction companies NCC, Skanska and YIT; the Nordic environmental financing company NEFCO and Vodokanal in St Petersburg.

The total cost of the project is in the region of MEUR 210 and will be financed by loans from NIB, EBRD, Swedfund, Finnfund, EIB; donations from Sweden, Finland and the EU Tacis programme; share equity from the partners in Nordvod and a contribution from Vodokanal. Sida's share will amount to no more than SEK 120 million including follow-up and monitoring costs. Work commenced in March 2003 and the treatment plant should be ready for use some time during 2005.

The aim is to treat wastewater from 700,0000 people to a standard that complies with HELCOM's recommendations.

## To Vorkuta and Back

THE KOMI INTERAVIA FLIGHT breaks through the arctic cloud and we are surrounded by miles and miles of bare landscape. Suddenly, an unlikely human settlement appears, literally emerging out of nowhere. Our destination is covered for the day in a glowing red and yellow light offering a definite doomsday feeling. When getting off the plane, a light snowfall greets us. It is freezing cold. It is mid June in the Russian city of Vorkuta.

Admittedly, it was not without a fair amount of anxiety, I had agreed to purchase a one-way ticket to Vorkuta. A quick search for travel information on the internet yielded nothing but discouragements; "A candidate for the title of least friendly place on earth", "Please, do not send me to Vorkuta", "This is as bleak and cruel a place as you'll find anywhere on earth". Adding to that the historical accounts of one of the worst labour camps in the Soviet Union Gulag System from which very few people managed to escape alive, did not help to ease my worries.

VORKUTA, A CITY OF 180,000 inhabitants, lies north of the Arctic Circle at the foot of the Ural Mountains. In this far-away place, Sida is financing a study of how the water and wastewater infrastructure of the city can be upgraded in order to mitigate environmental threats to the Barents Sea. This project has been identified as one of the priorities under the Northern Dimension Environmental Partnership, which is an international initiative to support environmental improvements in Russia. The purpose of my visit was not to explore the outer reaches of Europe but the opportunity to get better acquainted with the project site and the cooperation partners.

Our host, the Vice Mayor, promises an unforgettable 24 hours in his town. After having tasted plenty of the local specialities; reindeer and vodka, we head out in the white night of Vorkuta. Walking down the dreary main road in full daylight at one o' clock in the morning towards the best night club in town feels like the definite highlight of the trip. But more is still to come.

After a few hours' sleep, we are offered a tour



"It is freezing cold. It is mid June in the Russian city of Vorkuta."

of the town. It is indeed a most unusual sightseeing trip to drive along the Vorkuta Ring Road, connecting what were once thirteen surrounding mining towns. Against the background of the tundra, the industrial steel skeletons and the abandoned settlements look frightening, as do the many graveyards that cover the ground next to them. You cannot but feel sorry for our guide who has to find positive ways of presenting the scenery to us.

IN A PLACE WHERE THE temperature regularly drops to -400, where the sun is gone for half of the year and the summer lasts only a week or two, you would think that the inhabitants would all be looking for tickets out. Instead everybody we meet, express an enormous pride over their hometown and the special Vorkuta atmosphere, where people really care for each other. In fact we are told that many people who are given the chance to resettle elsewhere often return to Vorkuta. The city does have a unique feeling to it and on the long train ride back across the tundra (there was no flight back) I not only have with me a miner's helmet but also a sense of amazement at the endurance of man to the hardships of nature.

VICTORIA GYLLERUP programme officer at Sida

Gender issues have been neglected for far too long in environmental and energy projects in Eastern Europe but things are changing. It is no longer enough to just pay lip service to gender equality.

# Gender statistics helps improve situation for all

ACCORDING TO KARIN LITHELL, environmental and energy programme officer at Sida East, their aim is for all consultants to be made aware of gender equality issues and for projects to contribute to improving gender equality. At present it is never specified how a project can affect both women and men.

"It is assumed that it has a positive effect on everybody but it is never really investigated properly," she says.

Recently Karin took the initiative to arrange a seminar on gender equality for environment and energy consultants. One person who took the bait was Tord Holmgren who works for the Nordic Investment Bank (NIB). He had noticed that single women are most often affected by the increased cost of heating and hot water and wanted to learn more.

THE SIDA SEMINAR taught him to look upon gender roles more systematically, but there were too few examples from Eastern Europe and he feels he is still fumbling in the dark: "I'm a skilled engineer but I don't know much about gender equality and I certainly couldn't have a discussion on the issue," he admits. "We need professional help to be able to give the Russians something to think about when they smile scornfully at us."

He talks about the tough attitudes from both women and men in Russia: "The fact women also react negatively depends on their notion of gender equality. They think we want them to cut their hair short and dress in trousers, which is their distorted image of feminists in the West."

VIRGINIJA LANGBAKK is a Swedish consultant who works at Af International on gender equality within major technical projects. She originates from Lithuania, which gives her a unique insight into gender equality in Eastern Europe.

"You shouldn't believe everything is negative with regard to gender equality in Eastern Europe," she says. "There are positive things about the Russian system that you should also be aware of. If you come with a Swedish view you will be met by opposition immediately."

She says some Russian laws appear to discriminate against women but they discriminate against men as well: "Women are not allowed to do jobs that entail physical exertion. Operating modern machines does not entail physical exertion but when I tell them Swedish women do these jobs they simply don't believe me."

Women are also protected for the first three years after giving birth, they are not even allowed to work overtime, says Virginija: "In reality this means that men are not considered to have an important part to play in the life of their children for the first three years!"

THE SIDA FINANCED environmental project in Novgorod where Virginija is a consultant has clear directives on gender equality. People have been given the task of ensuring that gender equality permeates throughout the project. Virginija has driven through gender statistics, which she feels is the basis of good gender equality work.

"When I took up the issue of gender statistics among customers, for instance how many single



All people do not have the same needs. It is important to know who is behind statistic figures – men or women.

women there were, they said that all customers were treated equally. But I maintained that customers do not all have the same needs. When I asked who normally complained about the temperature in the apartments they laughed and said it was the women because it is in women's nature to complain. But when I pointed out that it could have something to do with the fact that

women are unemployed or at home during the day for a variety of reasons they began to understand the point of gender statistics."

But Virginija is far from satisfied: "In the Novgorod project they have allotted 20 days in three years to gender equality, which shows they have considered the issue but are not actually investing in it," she says.



Environment is one of the areas within the EU with extensive joint policies.

It is therefore vital for the Baltic States to strengthen their environmental authorities in their preparation for EU membership.

# Good environment needs strong authorities

EXPANDING THE EU is a priority issue for Sweden. EU membership will put great demands on changes in the joining countries' administration. Assisting the Baltic countries to adopt and implement EU directives facilitates their entry into the union.

Cooperation with public authorities accounts for more than a quarter (2002, regular funds) of Sida's support within the areas of environment and energy. Half of this money is managed by The Swedish Environmental Protection Agency (SEPA), who not organise their own projects but function as an umbrella organisation for initiatives implemented by other authorities.

SEPA'S Eastern European programme focuses on three main areas: helping candidate countries adopt Eu directives, transboundary watercourses and environmental initiatives in northwest Russia. Certain projects also coincide with Agenda 21 in the Baltic Sea region.

SEPA's cooperation with northwest Russia mainly focuses on environmental information, education, water pollution control, nature conservation and environmental protection. Special model projects help spread knowledge and experience throughout the region. Certain initiatives are in cooperation with the whole of northwest Russia or with the federal Russian authorities. The Russian environmental authorities and organisations must strive to improve cooperation.

"As a central environmental agency we not only possess a great deal of expertise we also have close contact with other authorities. Key areas are in the building up of institutions and the transfer of knowledge," says Zofia Tucinska, in charge of SEPA's work in Eastern and Central Europe.

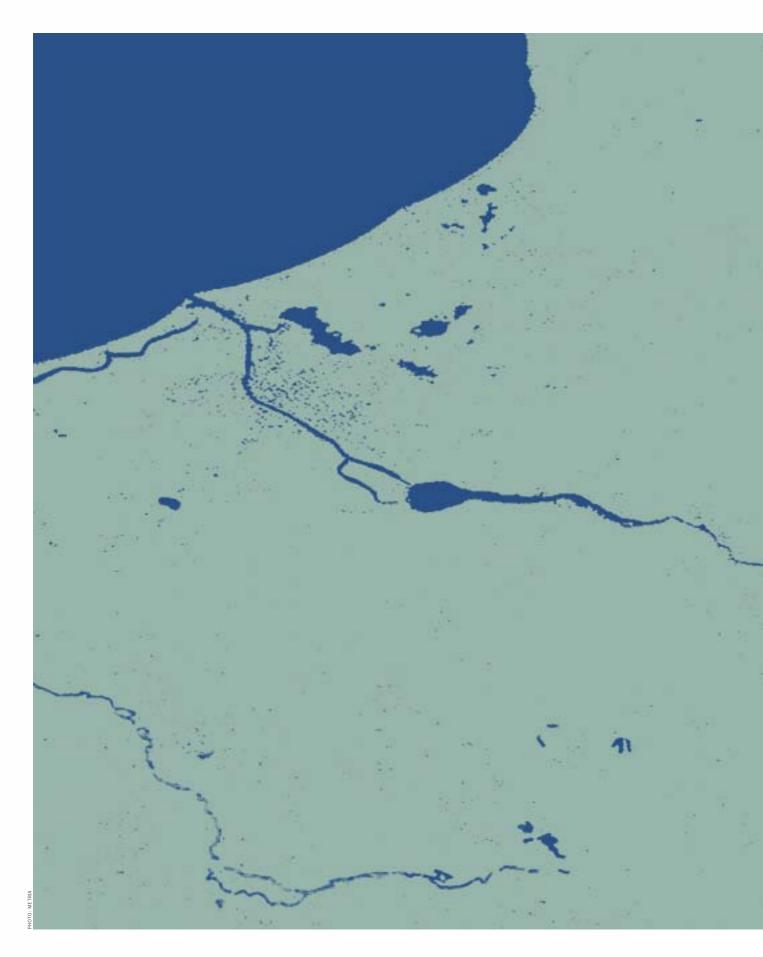
One important part of the work is to support the Baltic States in their efforts to strengthen their environmental administration. Several projects aim at strengthening the countries' environmental legislation and to ensure that laws that do exist are actually applied.

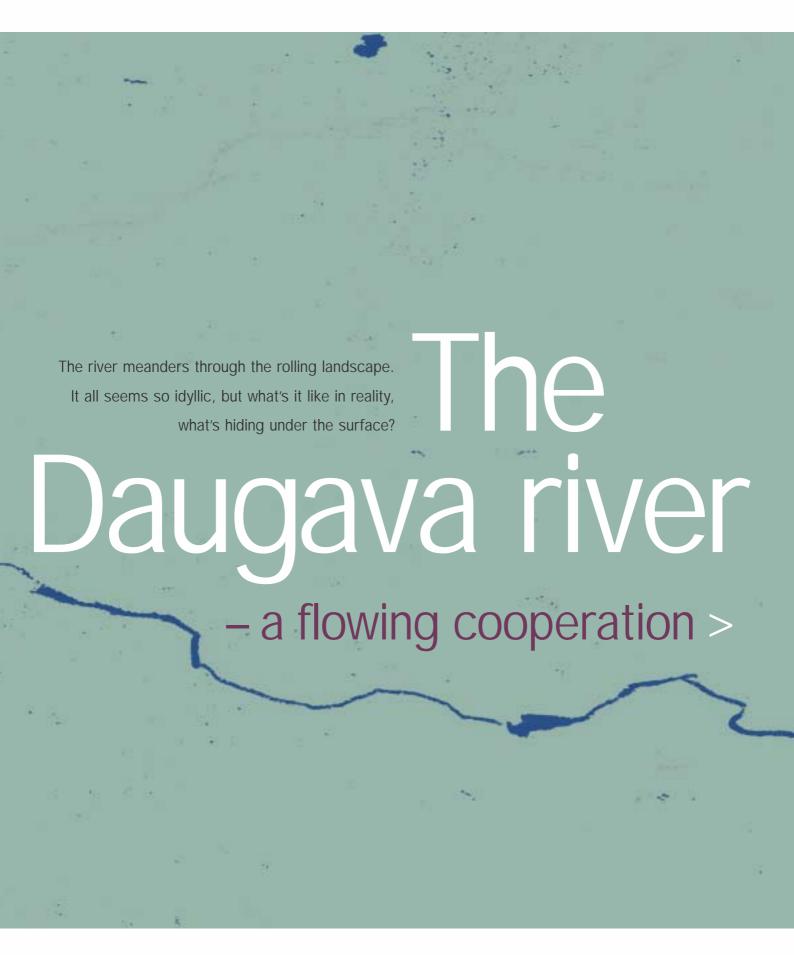
Chemicals is one area in which Sweden has a long-term commitment. The Swedish National Chemicals Inspectorate enjoys extensive joint cooperation with its Baltic equivalents. There are also other types of initiatives. One example is the study of species and biotopes in the bird and wetlands in order to determine which areas to protect.

SEPA's environmental work is widespread and extensive.

# FACTS THE SWEDISH ENVIRONMENTAL PROTECTION AGENCY MAINLY COOPERATES WITH:

- The Swedish National Chemicals Inspectorate. Initiative to adopt EU chemical legislation in the candidate countries.
- County administrative boards in Norrbotten, Västerbotten, Värmland, Kalmar and Blekinge. Water pollution control and nature conservation planning.
- Regional forestry boards in Östra Götaland and Värmland-Örebro. Key biotope inventory and nature conservation within the private forestry industry in the Baltic States.
- The environmental sciences and political science departments at Umeā University.
   Training of young Russian environmental administrators.
- Environmental engineering department at Luleå University of Technology.
   Cooperation surrounding the Kola River Environmental Programme (KREP).







THE THOUSAND KILOMETRE long Daugava River begins its journey deep in the heart of Belarus. After passing through Daugavpils in Latvia, it continues through several small towns before reaching Riga and eventually draining into the Baltic Sea.

The draining basin is the area from which water flows into a river or a lake. Basins are often larger than we imagine and pollutants can flow out into a river a long way from their source. The Daugava River basin is divided between Belarus, Russia and Latvia. In Latvia, the Daugava basin covers a third of the country's area.

Environmental protection for rivers was given low priority during the Soviet era. The heavy industry and the large effluent discharges from the towns made the Daugava River increasingly more polluted. Many companies have now closed down but there are still oil refineries and large chemical industries along the Belarus part of the river.

#### FACTS THE THREE RIVERS

The transboundary rivers and lakes initiative east of the Baltic Sea contributes to:

- Developing bilateral and trilateral agreements for the respective basins.
- Joint river basin management plans.
- · Setting up joint water commissions.
- Improvement in the countries' coordination of environmental monitoring and management of environmental information.
- The countries adopting an integrated approach to water planning within the joint basin.
- · Increasing sustainability between neighbouring countries.

The programme is directed at three large transboundary areas:

- The Peipus lake (shared by Russia and Estonia).
- The Daugava/Zapadnaya-Dvina rivers (shared by Russia, Belarus and Latvia).
- The Nemunas river (shared by Russia, Belarus and Lithuania).

The areas together make up around 15 percent of the Baltic Sea basin. The three rivers are responsible for an equal share of the total amount of nitrogen entering the Baltic Sea by river.

"There's several reasons for us being involved in the transboundary cooperation around the Daugava River," says Zofia Tucinska, in charge of cooperation with Eastern European countries at The Swedish Environment Protection Agency (SEPA).

"One of the most important reasons is that the river runs into the Baltic Sea where it contributes to eutrophication and pollution. Transboundary cooperation is also important if we are to fully benefit from all our other initiatives. It is very uncertain how long-term and effective the initiatives will be in Latvia if you can't reach agreement with Russia and Belarus," she continues.

THE TRANSBOUNDARY initiative surrounding the Daugava and other rivers is mainly about persuading people to cooperate, in order to increase stability between neighbouring countries, pass on knowledge and support the process of change. When accidents occur that cause industrial discharge it is important for the countries to have joint routines and exchange information, but it is not always easy when different players make different demands on how the water resources should be utilised. A recipe for success is when the parties have confidence in each other.

SEPA has supported work on transboundary watercourses since 1997. Sweden has no direct interest in the Daugava River as a resource so SEPA has been able to take a neutral stance. The transboundary river initiative is also politically important because in the future it will be an area where the EU borders on Russia and Belarus.

"For Belarus the initiative has become a forum where the country's experts can meet colleagues from other countries and discuss vital issues. At SEPA we also see the project as a way of developing bilateral initiatives with Belarus in the long term," concludes Zofia Tucinska.

Say radioactivity and many people think of Chernobyl and other nuclear power stations. But for most people in the Baltic States the radiation they are exposed to in hospitals is a far greater threat to their health than nuclear power.

Lower radiation level means safer healthcare



sweden was one of the first countries after the fall of the Soviet Union to provide support to the Eastern European countries to improve their radiation protection. Today The National Swedish Institute of Radiation Protection (SSI) is working to spread this knowledge further and to develop technical cooperation primarily with the Baltic States. The initiative adresses issues such as radiation from hospital equipment, authorities upgrading, handling of radioactive waste and natural radiation. A remnant from the old Soviet system is the ineffective organisation at hospitals, very often they have a standardised collection of equipment that does not correspond to the needs of the hospital.

"In Russia and the Baltic States the equipment is not just bad but is often old as well," says Sten Grapengiesser, project coordinator for the radiology cooperation at ssi."

It not only exposes people to unnecessary levels of radiation, it also provides very bad images that are almost impossible to interpret. One area where the risk for high dosages is especially great is the radiation treatment of cancer patients.

WORK HAS BEEN in progress since 2001 and today ss1 has a very good relationship with the radiation protection authorities in the Baltic States. The quality assurance work carried out by ss1 is an important instrument in adapting the countries' radiation protection to comply with EU directives. One method has been to bring together Swedish radiology experts within healthcare with decision-makers, particularly politicians, within healthcare in the Baltic States.

"Step by step we have achieved a better influx of high level decision-makers. More people are beginning to see how important the work is," continues Sten Grapengiesser.

The initiative has led to a twin contact being established between hospitals in Sweden and the Baltic States. One example is the hospital in the Lithuanian town of Kaunas and its twin hospital in the southern Swedish town of Malmö. The idea is for the initiative to develop into a network that can contribute to the long-term building up of expertise, even when the development assistance funded project has come to an end.



With the support of the Swedish University of Agricultural Sciences (SLU) and Swedish agriculturists, farmers in the Baltic States are now able to increase their income without damaging the environment. The project leads to improved farming methods at the same time as environmental monitoring is extended and legislation is adapted to comply with EU directives.

# Baltic farmers learn sustainable farming

FARMING IN THE BALTIC STATES has undergone dramatic changes during the past ten years. The countries previously supplied St Petersburg and Moscow with agricultural produce but following independence the old Soviet market collapsed and production fell by half but is now starting to pick up again.

There are also great differences between the farms. As in Sweden, the Baltic States have large modern farms with satellite-operated tractors. There are also small farms that operate at Swedish 1950s level where horses are often used as beasts of burden.

"It was in this situation that SLU with financing support from Sida first began teaching sustainable and environmental farming," says Staffan Lund who is coordinating the project at SLU. "There was otherwise a risk that the farmers would begin using their increased income for buying artificial fertilizer, which would increase the amount of hazardous pollutants."

AN IMPORTANT UNDERLYING FACTOR for the Swedish support to sustainable farming in the Baltic States is the reduction in the amount of nutrients discharged into the Baltic Sea. Contact between Swedish and Baltic farmers has been very intensive and has enabled Baltic farmers to study Swedish farming methods. Ecological farming is also taught.

One of the most important parts of the project is to teach Baltic farmers the effective use of farmyard manure as an integral part of modern sustainable farming. Demonstration farms show how farmyard manure is stored without polluting the ground and surface water and how it is then used in crop growing.

"The collective farms of the Soviet period didn't use farmyard manure," says Staffan Lund.

Artificial fertilizer was more or less free and manure was regarded as a waste product. It was just piled into heaps and nutrients ran out into the watercourses and affected the groundwater and with it drinking water and eventually the Baltic Sea.

"It has taken time to change the farmers' attitude to manure," continues Staffan Lund. "The connection between economy and production has been too weak. But through demonstration farms, where farmers learn from other farmers, we have been able to show the advantages."

Manure storage is one of the environmental demands made by the  ${\scriptstyle {\rm EU}}$  on the Baltic States.

The initiative has also led to a new project funded by The Global Environmental Fund to help Baltic farmers finance the investments required for new environmental farming methods. In the Soviet Union energy was for political reasons regarded as cheap and nobody considered saving. Now the economy is in a crisis and to save energy is a way to improve the finances.

In Kiev a programme supported by Sida is reducing the energy consumption in public buildings.

# Kids roam freely when Kiev saves energy

"THIS IS JERRY-BUILT," says manager Natalya Samoylova at Nursery School 560 in Kiev, Ukraine. "The windows are too big and not properly sealed and we can't open two doors because they would just fall apart. The roof is flat and leaky and because we have no insulation or attic all our heat goes straight up and out.

"Those of us who still work here must be crazy," she adds. "Nursery schools and primary schools haven't received a penny for the last ten years."

She talks enthusiastically about the children and the staff who still continue despite the fact their salary is only a third of the Ukrainian average.

This particular nursery school also looks after children outside of school hours. Some children, mostly those with single mothers, arrive early on Monday morning and are not fetched until Friday evening. Human warmth levels are high but the indoor temperature leaves a lot to be desired.

#### FACTS DISTRICT HEATING

District heating systems help reduce carbon dioxide emissions by utilising energy resources that would otherwise be lost, but district heating systems in the former Soviet Union are often of very poor quality with substandard systems and excessive heat loss. Under planned economy heating was more or less free of charge. Today people have to pay for the cost of their heating, which makes district heating an expensive item for many families in Russia, Ukraine and the Baltic States. This reason alone makes it vital to improve and modernise existing district heating systems.

#### The project can be divided into four main groups:

- Feasibility studies. Aims at identifying the overall investment programme for the entire district heating system. This is often carried out in cooperation with other financiers.
- Investment loan. If the proposed investment programme is later implemented then Sida would have helped to support implementation.
- Demonstration project. Demonstrates Swedish products within the district heating sector.
- Indirect projects that concern the district heating sector: e.g. Energy efficiency projects for buildings.

"LAST WINTER, the indoor temperature barely reached 13 degrees in some rooms," she says.

But now Nursery School 560 is one of the first ten buildings to be included in the energy inventory, part of a Sida-financed project to save energy in the Ukrainian capital. Swedish energy and financial management consultants train Ukrainian technicians. Bo Björk from the HIFAB firm of consultants thinks it is fantastic to be able to work with Ukrainians on the project.

"They are well educated and motivated. It is a tragedy that these people worked for so long without being able to learn from the expertise available outside the Soviet Bloc."

Sida insists that the energy saving project must prioritise social areas such as nursery schools, schools and hospitals. A total of 1,300 buildings in Kiev will be inventoried and rebuilt as a part of the energy saving measures.









Sida has insisted that the energy saving project in Kiev must prioritise social areas such as nursery schools, primary schools and hospitals.



Leakages from landfills in the Baltic States constitute a threat to drinking water, the climate and the Baltic Sea. But the work on a new landfill which meets EU requirements is now underway.

# Landfill leakages stopped

Refuse separation starts as soon as a truck empties its load at the Skede landfill outside the Latvian city of Liepaja.

Around Liepaja there are thirty landfills where waste is dumped. But now, the work on a new landfill which meets EU requirement is under way. At the landfill in skede, near Liepaja in Latvia, activity increases as soon as a waste collection truck empties its load. Refuse separators – people living on the absolute fringes of society – gather around the rubbish and quickly sort out the things that can be reused or sold, but this is the only sorting of waste that takes place. At sites like these the waste is mixed in an enormous mess, which results in toxic water leaking into the groundwater and probably into the Baltic Sea which is only a kilometre away from the landfill.

The landfill in Skede is one of thirty such sites around Liepaja, the third largest city in Latvia with 120,000 inhabitants, which discharge great amounts of environmentally hazardous substances into the ground, air and water. Last year

however work started on creating a single environmental landfill for the whole region. Sida is one of the financiers and Swedish environmental companies have an important role to play in the project.

Existing landfills will be secured to stop them leaking toxic water and greenhouse gases and then covered and closed. Inserting pipes into the landfills will provide biogas to convert into electricity.

The new landfill will be built in Grobina, an area that up to ten years ago was used by the Soviet army for rocket ramps aimed at Sweden. It is far from watercourses and houses and the ground consists of a thick layer of clay that will prevent water leakages. The landfill will meet all

# Sida helps Lviv clean up effluents

AN AGREEMENT was signed in 2002 between Sida and Ukraine on a water and wastewater project in the city of Lviv in the west of Ukraine. It is the first development cooperation project in Ukraine in the water and wastewater sector, and one of the largest in Eastern Europe. Sida's contribution is a grant of SEK 48 million.

Lviv, with almost one million inhabitants, is the only Ukraine city identified as a hot spot by HELCOM. The project will result in considerable reductions in discharges of pollutants. The water and wastewater system in Lviv is in an advanced state of disrepair and there is a great risk for the system collapsing.

The project is being implemented in cooperation with the World Bank and the planning stage has taken a long time. One of the conditions laid down by the World Bank is for the State of Ukraine to stand as guarantor, which has been very difficult to achieve political consensus for in Ukraine. The World Bank finally presented an ultimatum. There would be no more projects in Ukraine if the state did not stand as guarantor. It is now hoped that the project serves as a model for similar initiatives in the country.



#### FACTS LVIV

Lviv is on the list of so-called "hot spots", i.e. places that discharge environmentally hazardous effluents into the Baltic Sea and is listed on the action programme of the Helsinki Commission (HELCOM). Lviv is the fourteenth hot spot around the Baltic Sea in which Sida is involved.

EU requirements for waste management. A workforce of twenty-six will ensure that the waste that arrives at the landfill is sorted and stored in a suitable manner.

Latvia is working actively to meet  $_{\rm EU}$  requirements for modern waste management. New legislation has been introduced in a relatively short space of time. Of the country's  $_{500}$  landfill sites, only ten will remain in operation when the strategy has been implemented by the year  $_{2010}$ .

THE NEWLY ESTABLISHED municipal waste company in Liepaja receives support from Swedish waste management specialists to develop its capacity. To ensure that environmental improvements are sustainable, the objective is for the

municipal waste company to cover its own costs and be run in a modern, open and cost-effective manner.

#### **FACTS** WASTE PROJECTS

Sida is part-financing several waste projects in the Baltic region. The contribution of Swedish municipalities, consultants and contractors is of great importance to these projects. The basic idea is to recycle as much as possible and for the remaining waste to be used as raw material for the production of energy.

The installations are carefully studied by the Swedish consultant Carl Lindberg (left) and the representative of the Swedish company, IVT, Lars-Göran Appelberg .





With a new heat pump, the Polish town of Okonek is saving energy but keeping the heat up in the apartments.

The tenants in Okonek praise the new heating system: "We have had no problems yet" two of them say.





The heat pump received acclaim when Sida's first DemoEast project in Poland underwent its final inspection.

# Swedish ground heat demonstrated in Poland

THE NEW HEAT PUMP fetches heat from 100 metres underground in the town of Okonek, without polluting any part of nature. Outside, the sooty chimney from the scrapped coal-fired plant bears witness to the fact that Poland has now taken a step towards modern environmental energy technology.

"We have had no problems at all since the heat pump was installed in October," say some of the tenants who live in the apartments on the housing estate. The consultant sent by Sida to carry out the final inspection agrees:

"It was minus 20°C a few weeks ago and the system coped really well. This proves it is reliable." he observes.

The apartment blocks in Okonek are owned by the military and its representative Marek Mikolajcyk is relieved that coal is no longer used as main fuel:

"Coal is not good. In Poland we are cutting down on its use more and more in order to protect the environment. Coal is also labour-intensive making it more expensive and we have to pay an environmental tax," he explains.

Marek Mikolajcyk calculates that the cost of energy has been reduced by two thirds. The tenants will soon notice the price difference when metres are installed in each apartment. They will then have to pay for what they consume, at present they pay a standard fee.

GROUND HEAT IS an energy efficient way of heating houses that is increasingly popular in Sweden and the rest of Europe. The drawback is the relatively expensive installation costs; it takes about six years before the investment pays off.

"Support from Sida helped the military make this decision," says Lars-Göran Appelberg from IVIT, the Swedish company that supplied the equipment. "The alternative was a gas boiler from Germany that was cheaper to install but more costly to run. We have now received a new order from the Polish military, who we hope will become a large and important customer for us."

#### FACTS DEMOEAST

The DemoEast programme was started by Sida two years ago to assist Swedish companies involved in modern environmental technology to make contact with the former Eastern European States around the Baltic Sea.

# Swedish district heating at work in Lithuania

IN 2002 Kaunas Energy Company received a grant of SEK 10 Million for rehabilitating its district heating system. The Sida grant originated from the Swedish government's Baltic Billion Fund, and was to be used to demonstrate how modern Swedish district heating technology could contribute to increasing efficiency and improving the economy in Kaunas.

Kaunas decided to use the grant for frequency controlled pumps to reduce electricity consumption; boiler plant automatisation for better performance and lower operation costs; for demonstrating how district heating can work more efficiently for consumers by introducing modern individual heat substations into around 50 buildings.

All the equipment was procured by tendering in Sweden, as one of the aims of the project was to demonstrate the capability of Swedish firms. All in all the project represents a cut of Swedish technology which has helped Kaunas Energy in



Lithuanian district heating plant

its transformation into a modern market-oriented service company focusing on efficiency and the needs of its customers.

In December 2002, when all the main installations had been completed, Kaunas presented its achievements at a well-attended seminar organised in cooperation with the Swedish suppliers' association, Sweheat.

# Sida's support for district heating helps reduce CO<sup>2</sup> emissions

INVESTING IN district heating in Eastern Europe not only helps to reduce carbon dioxide emissions – it is also profitable. This came to light in a recent study of the effects of some areas of Sida East's environmental work. The study, carried out by Fjärvärmebyrån AB (The FVB Group), covers five Baltic cities in which Sida has contributed towards developing the heating systems: Tartu in Estonia, Jelgava, Riga and Daugavpils in Latvia and Vilnius in Lithuania. The reduction in carbon dioxide emissions in these towns is expected to amount to 1.3 million tonnes a year when the proposed measures have been implemented.

Sida has financed somewhere in the region of 30 projects for the restoration of Eastern European district heating systems. This includes studies, investment loans, demonstration projects and other contributions that indirectly affect the district heating sector (energy management for buildings etc.). The projects are often planned and implemented in partnership with development banks such as The World Bank and EBRD.

Using energy more efficiently reduces the use of the fossil fuels that cause the large emissions of carbon dioxide, the gas that contributes most to the global greenhouse effect.

In addition such projects are often very profitable for Eastern European municipalities because it enables them to reduce their total energy costs, even with the investment loan repayments taken into account.

Many industrialised countries are now connecting their development aid to tradable emissions rights. According to the Kyoto Protocol, two countries can agree on a project (so-called joint implementation) where the host country tenders the project and the other country stands for the investments. This gives them the right to include the reduction in their national accounts.

Together with the Swedish State Energy Authority (STEM), Sida is for example now helping Lithuania to compile a national strategy for joint implementation.

Sida and Prime Minister Göran Persson have played a leading part in ensuring that the wastewater treatment project in Kaliningrad, a town with a population of around 450,000, can get underway.

# Sweden helps to clean up Kaliningrad's wastewater



KALININGRAD IS THE second largest source of discharge into the Baltic Sea to be dealt with after St Petersburg. Sida has been involved in the project since the mid 1990s and has the support of the political leadership in Sweden and Prime Minister Göran Persson in particular.

At several summit meetings Persson has urged Russian leaders to prioritise the project.

"The project is a good example of the excellent cooperation between Sida and government offices," says Lars Eklund, head of the Division for Environment and Energy at Sida East. "Sida has managed the work at project level while the political leadership, in this case at the highest level, has lobbied the recipient country. Göran Persson's personal commitment has been a decisive factor at the meetings, particularly those with President Putin."

The wastewater from Kaliningrad's  $_{45}$ 0,000 inhabitants and its many industries is discharged practically untreated into the Gulf of Kaliningrad and subsequently into the Baltic Sea. The treatment plant is so old that the wastewater runs

straight through it and the sewer system is in such bad condition that people have fallen into it where leaks have flushed away the ground under the street.

SIDA HAS FOCUSED ON support that is beneficial to the Baltic Sea environment and for which local financing has been difficult to obtain. Financed by Sida, the Nordic Investment Bank (NIB) and the Russian Federal Government, the new treatment plant will use both mechanical and biological treatment methods. The local authorities in Kaliningrad are more concerned with the near catastrophic state of the drinking water, which comes from the polluted river and constitutes a health hazard. Acute water shortage also arises when the west wind drives salt water into the River Pregel. The town is therefore in the process of digging wells and installing pipelines to utilise the groundwater instead.

Construction of the treatment plant will begin in 2004 according to plan and the plant will come into commission two to three years later. All wastewater will be treated but EU standards will not be accomplished at the first stage and will require further investment. The project is nevertheless an important step in eliminating one of the largest discharges of untreated wastewater into the Baltic Sea.



The dirty waste water from Kaliningrad runs in an open canal to the sea. The only treatment consists of a few dams where some of the water is halted for a couple of hours to let some of the effluents sink to the bottom.

#### FACTS CONTRACT TO SWEDEN

The Kaliningrad project is a financial boost for the Swedish company SWECO. Against international competition, the company has won a large consultancy contract worth in the region of SEK 40 million to bolster the local project management.

The project will be financed by loans to the water company in Kaliningrad from the European Bank for Reconstruction and Development (EBRD).

A second contract of SEK 15 million will be financed by Sida. It covers design and procurement documents and management of the construction work. It is carried out by the Swedish company VAI-VA-projekt (now a part of Sweco).

# Cleaner bathing water in Latvian holiday resort

The inhabitants of the popular Latvian holiday resort of Saulkrasti can now look forward to a cleaner bathing environment. On March 1, 2002 an agreement was signed for Swedish support for a new wastewater treatment plant in the town. The project in Saulkrasti is designed to bring the municipal wastewater system up to EU environmental and health requirement standards.

The Swedish contribution of  $s_{\rm EK}$   $_{\rm 5.6}$  million will finance the supply and installation of Swedish equipment. A Swedish company, Malmberg Water, has also been contracted. Sida previously financed the technical study that formed the basis of the decision to build a new treatment plant in Saulkrasti.



In the dams at Krasnyj Bor outside of St Petersburg toxic waste have been stored for 30 years. With support from Sida the dams will now be drained and covered

> Sida are financing emergency measures to safeguard the management of hazardous waste in the St Petersburg region.

# Thirty years of toxic waste

TODAY THERE IS NO capacity for safe management and treatment of toxic and environmentally hazardous waste from the St Petersburg region. In the new system to be introduced with assistance from Sweden, the city and the waste company will be able to exercise control over the amounts of waste, and producers of waste will have to pay to cover the cost of the operation. The project includes securing the tailing dams at Krasnyj Bor, 30 kilometres outside St Petersburg close to the Gulf of Finland. Environmentally hazardous and toxic waste has been stored here for 30 years. Most of the waste has been dumped in open dams that overflow periodically and are in danger of collapsing.

The dams are to be drained and covered and a treatment plant will be built to treat leakage water. The registration and classification of waste will also be introduced and effects on the environment measured and followed up.

Another part of the project is to help St Petersburg achieve a greater degree of control over waste disposal. The lack of inspections since the dissolution of the Soviet Union has led to several industries illegally discharging untreated oil waste, solvents, paint and varnish waste and heavy metals into the sewage system that eventually find their way into the Baltic Sea. Sida is investing SEK 9 million in the project. The funds will be used for equipment and Swedish consultants. Other Nordic countries, the European Development Bank and the EU are also participating in the project, which has a total cost of over SEK 100 million.

# Swedish contributions to environmental projects in the Baltic Sea region

Between 1989 and 2002 Sweden contributed with around  $_{\rm MSEK}$  1,500 to environmental projects in the Baltic Sea region. The following pages contain statistics of allocations during 2002 and facts about the most important wastewater treatment projects.

Swedish environmental initiatives in the Baltic Sea region began in 1989 as part of a special Poland project implemented by BITS, the development assistance agency responsible for the cooperation with Eastern Europe. 1974 saw the beginning of the HELGOM Cooperation between the Baltic States. In 1992 HELCOM adopted a programme of measures called The Joint Comprehensive Action Programme in which a number of hot spots - places with particularly bad discharge problems - were identified. The same year, the Swedish parliament allocated extra funds to support the implementation of projects in Eastern European countries in the immediate vicinity. Main responsibility for the Swedish support to implement the Action Programme was initially given to BITS but was transferred to Sida in 1995.

THE ACTION PROGRAMME mainly focuses on the discharge of wastewater from densely populated areas, the leakage of nutrients from farming along with administrative support and the transfer of knowledge to environmental authorities. The first investment support was made possible through a special resolution by the Swedish par-

liament to allocate SEK 108 million to wastewater treatment in the Baltic towns of Liepaja, Klaipeda and Hapsalu. These projects, as with some later projects, were implemented in partnership with the World Bank.

Of the countries that have been involved with environmental initiatives in the Baltic Sea region, Sweden, Finland and Denmark have formed the largest single bilateral donors, but as more donors begin to cooperate and with the EU coming in as financier, the role of bilateral support has diminished. The objective today for Swedish contributions is to have a catalytic effect on starting projects with a sustainable environmental, financial, technical and social perspective. Swedish money should be used to get a good return. Sida's 2003 budget for energy and environmental initiatives in Eastern Europe amounts to around SEK 107 million with scope for commitments of up to SEK 150 million.

TEN YEARS AFTER the Action Programme was initiated it has progressed to a level where it functions as a model for similar partnerships in other parts of the world. The Baltic Sea model was presented at the 2002 environmental summit in Johannesburg and is an integral part of the cooperation around Lake Victoria in Eastern Africa that recently got underway and also serves as a model for initiatives around the Black Sea.

## Sida: Allocations 2002

### The Baltic States

| PROJECTS:   | BUDGET<br>SEK: | LOCAL COUNTERPART/<br>IMPLEMENTING AGENCY:   | COUNTRY:             | PERIOD:   |
|---|----------------|--|----------------------|-----------|
| Jurmala Financing Agreement, Water and Wastewater                                     | 31 000 000     | Ministry of Environment/Jurmala Udens  | Latvia               | 2003–2005 |
| Procurement Support, Jurmala Water and Wastewater                                     | 264 000        | Ministry of Environmental Protection and Regional Development/Ramcomp Int.                       | Latvia               | 2002–2003 |
| Procurement Adviser Housing and Urban Development Fund                                | 1 557 400      | HUDF/ Hifab  | Lithuania            | 2002–2003 |
| Svencioneliai, Feasibility study, Water and Wastewater                                | 845 775        | Svencinys Regional Municipality / SWECO  | Lithuania            | 2002–2003 |
| Kurzeme, Feasibility study, Water and Wastewater                                      | 5 000 000      | Ministry of Environmental Protection and Regional Development/WSP International                  | Latvia               | 2002–2003 |
| Procurement support Kurzame FS  | 148 270        | Ministry of Environmental Protection and Regional Development/Ramcomp Int.                       | Latvia               | 2002      |
| Panevezys, Design and Tender Documents,<br>Water and Wastewater                       | 4 361 615      | 361 615 Panevezys water company AVP/<br>Carl Bro International                                   |                      | 2002–2004 |
| Procurement support Panevezys Design and Tender Documents                             | 87 000         | UAB "Aukstaitijos Vandenys"<br>Scanvironment   | Lithuania            | 2002      |
| Piejuras Solid Waste, Feasibility study   | 4 500 000      | Ministry of Environmental Protection and Regional Development/SWECO                              | Latvia               | 2002–2003 |
| Lithuania, Hazardous Waste, Feasibility Study   | 3 422 700      | Ministry of Environment/ÅF International   | Lithuania            | 2002–2003 |
| Procurement Support, Hazardous Waste  | 149 800        | Ministry of Environment/A.Lärkert  | Lithuania            | 2002      |
| Education in Ecotoxicology, Baltic States   | 4 500 000      | Ministry of Education Estonia, University of Latvia,<br>Vilnius University/Kemikalieinspektionen | The Baltic<br>States | 2002–2005 |
| Sustainable Forest Management, Lithuania  | 2 145 550      | Ministry of Environment/<br>National Board of Forestry Sweden                                    | Lithuania            | 2002–2004 |
| Sustainable Forest Management, Latvia   | 3 083 000      | Latvian State Forest Service/<br>National Board of Forestry Sweden                               | Latvia               | 2002–2005 |
| Cooperation through Swedish EPA with Environmental Authorities in the Baltic States   | 36 000 000     | Ministries of Environment/ The Swedish Environmental Protection Agency                           | The Baltic<br>States | 2002–2005 |
| Mazeikiai District Heating, Feasibility Study   | 2 267 882      | HUDF/ Municipality of Mazeikiai  | Lithuania            | 2002–2003 |
| Utena District Heating, Mater Plan  | 1 199 850      | Utenos Municipality/ÅF International   | Lithuania            | 2002–2003 |
| Cooperation through Swedish Radiation Institute with Radiation Authorities in Estonia | 962 000        | Estonian Radiation Protection Center/SSI   | Estonia              | 2001–2004 |
| Cooperation through Swedish Radiation Institute with Radiation Authorities in Latvia  | 1 343 000      | Radiation Safety Center/SSI  | Latvia               | 2001–2004 |
| Project Preparation in Paldiski, Maardu and Otepää,<br>Water and Wastewater           | 419 800        | Local water companies  | Estonia              | 2002      |

### Russia and Ukraine

| PROJECTS:   | BUDGET<br>SEK: | LOCAL COUNTERPART/<br>IMPLEMENTING AGENCY:                          | COUNTRY: | PERIOD:   |
|---|----------------|---|----------|-----------|
| Novgorod Corporate Development,<br>water and wastewater, district heating, solidwaste | 8 000 000      | City Admin Novgorod/SWECO   | Russia   | 2002–2004 |
| Procurement support Novgorod Corporate Development                                    | 91 000         | City Admin Novgorod   | Russia   | 2002      |
| Energy Efficiency PPC officer   | 4 617 536      | EBRD  | Russia   | 2002-2003 |
| Gatchina, Tichvin Corporate Development, water and wastewater                         | 7 316 424      | Vodokanals in Gatchina and Tichvin/SWECO                            | Russia   | 2002–2005 |
| Appraisal Gatchina, Tichvin   | 910 000        | Paakkari et.al  | Russia   | 2002      |
| Procurement support Gatchina, Tichvin   | 265 000        | Gatchina, Tichvin Municipalities                                    | Russia   | 2002      |
| Syktyvkar, Vorkuta, Feasibility Study, water and wastewater                           | 5 000 000      | Syktyvkar Vodokanal/Hifab International                             | Russia   | 2002–2003 |
| Procurement support, Syktyvkar, Vorkuta FS  | 295 400        | Syktyvkar Vodokanal/O. Colling                                      | Russia   | 2002      |
| World Bank Municipal Water and Wastewater Project,<br>Corporate Development           | 5 262 900      | National Foundation for Housing Reform/<br>SWECO                    | Russia   | 2003–2008 |
| Kaliningrad District Heating, Feasibility Study                                       | 4 996 978      | Kalinigradteploset/Sycon International                              | Russia   | 2002-2003 |
| Procurement support Kalinigrad DH   | 407 640        | Kalinigradteploset/Carl Hillström                                   | Russia   | 2002-2003 |
| Archangelsk, district Heating, project preparation                                    | 475 000        | Local authorities/ÅF International                                  | Russia   | 2002-2004 |
| Control System Dniepr River   | 1 897 513      | State Committee of Ukraine for WM                                   | Ukraine  | 2002–2003 |
| Preparation and Procurement Support, Dniepr River                                     | 195 000        | State Committee of Ukraine for water<br>Management/U-konsult Sweden | Ukraine  | 2002      |
|   |                | National Energy Regulatory Commision/<br>Hifab International        | Ukraine  | 2002–2003 |
| Support in Legal Matters  | 694 000        | Zetterwalls   | R & U    | 2002–2003 |
| Barents Energy Working Group Homepage   | 880 000        | Barents Energy Focal Points/ Energimyndigheten                      | Russia   | 2002–2003 |
| Pre-study Agriculture Russia  | 400 000        | Sveriges Lantbruksuniversitet (SLU)                                 | Russia   | 2002–2003 |
| Procurement Support, Krasnyj Bor, hazardos waste                                      | 175 000        | A. Lärkert, P. Blomberg   | Russia   | 2002      |
| Miscellaneous:  | 1 984 713      |   |          |           |

## Special Government Funds

| PROJECTS:                            | BUDGET SEK: | LOCAL COUNTERPART/<br>IMPLEMENTING AGENCY:                            | COUNTRY:  | PERIOD:   |
|--------------------------------------|-------------|---|-----------|-----------|
| Kaunas District Heating Project      | 10 000 000  | Kaunas Energy Company   | Lithuania | 2002      |
| Procurement Support Kaunas DH        | 250 000     | Kaunas Energy Company   | Lithuania | 2002-2003 |
| Mazeikiai District Heating Project   | 4 400 000   | HUDF/ Mazeikiai District Heating company<br>Municipality of Mazeikiai | Lithuania | 2002      |
| Arkhangelsk District Heating Project | 970 000     | City of Archangelsk/ ETAB Energy                                      | Russia    | 2002–2005 |
| Pechenga Nickel trust Fund           | 32 000 000  | NIB   | Russia    | 2002–2007 |
| DemoEast (nine projects)             | 5 910 420   |   |           |           |

## Water and wastewater projects financed by Sida

| PROJECT        | INHABITANTS | PROJECT COST<br>IN TOTALT MSEK | OF WHICH SIDA<br>MSEK | REDUCTION<br>BOD | OF DISCHARGE, T<br>PHOSPHORUS | ONNES/YEAR*<br>NITROGEN | STATUS    | COUNTRY   |
|----------------|-------------|--------------------------------|-----------------------|------------------|-------------------------------|-------------------------|-----------|-----------|
| Liepāja        | 108 000     | 150                            | 49                    | 950              | 60                            | 210                     | Completed | Latvia    |
| Daugavpils     | 120 000     | 160                            | 22                    | 3 2 1 0          | 54                            | 180                     | Completed | Latvia    |
| Riga           | 800 000     | 700                            | 40                    | 4 000            | 500                           | 330                     | Completed | Latvia    |
| Klaipéda       | 204 000     | 168                            | 38                    | 2 600            | 75                            | 202                     | Completed | Lithuania |
| Kaunas         | 450 000     | 700                            | 31,5                  | 6 600            | 255                           | 250                     | Completed | Lithuania |
| Šiauliai       | 150 000     | 160                            | 31,5                  | 800              | 55                            | 250                     | Ongoing   | Lithuania |
| Haapsalu       | 15 000      | 45                             | 12                    | 284              | 14,5                          | 10                      | Completed | Estonia   |
| Narva          | 80 000      | 84                             | 17                    | 220              | 24                            | 185                     | Ongoing   | Estonia   |
| Sigulda        | 11 000      | 30                             | 5,4                   | 6,0              | 4,2                           | 18                      | Completed | Latvia    |
| Jurmala        | 60 000      | 171                            | 31                    | -                | 12                            | 35                      | Ongoing   | Latvia    |
| Saulkrasti     | 5500        | 14                             | 5,6                   | 160              | 1,6                           | 6,2                     | Ongoing   | Latvia    |
| Kaliningrad    | 420 000     | 500                            | 120                   | 9000             | 20                            | 150                     | Ongoing   | Russia    |
| St. Petersburg | 700 000     | 1800                           | 100                   | 14 000           | 365                           | 2100                    | Ongoing   | Russia    |
| Sestroretsk    | 100 000     | 130                            | 21                    | 110              | 1,4                           | 28                      | Ongoing   | Russia    |
| Lviv           | 830 000     | 350                            | 48                    | 6000             | 100                           | -                       | Ongoing   | Ukraine   |
|                |             |                                |                       |                  |                               |                         |           |           |
| In total       | 4 053 500   | 5 162                          | 572                   |                  |                               |                         |           |           |

<sup>\*</sup>All figures are based on pre-project estimates

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