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FEATURE STORY

The local waterworks in St. Petersburg attracts over 200,000 visitors per year. **Pages 10-13**

Local anchoring

ACCORDING TO an old Finnish saying, pouring water into a well is a waste of time and effort. Irrespective of foreign funding, it is the local effort and commitment that determine whether an environmental project rests on a sustainable foundation. When NEFCO commenced its operation in the Baltic countries and Russia in the 1990s, financing provided from outside these countries accounted for a very high percentage of total costs. Today, our local partners and customers provide the bulk of project financing, a sign of local engagement and sustainability in many of the schemes NEFCO has been funding in Russia, Ukraine and Belarus.

LOCAL ANCHORING MAY also mean that the people living in the area must be willing to accept higher rates for drinking water, for example. Taxpayers need to feel that they are getting value for money. Moreover, increased water tariffs may simply be necessary to make it possible for the local water utility to contribute its share of the required financing.

BUT THE QUESTION is how to convince taxpayers that the revenues are wisely spent. We visited the Youth Environmental Centre and museum of St. Petersburg Vodokanal, the local waterworks, which attracts around 200,000 visitors per year. About two-thirds of them are children and young people. The Youth Environmental Centre provides specific information on the ecosystem and the impact of eutrophication and discharges on our common inland sea – the Baltic – as well as information on the city’s water supply and sewer systems. These activities are financed by St. Petersburg Vodokanal in an attempt to generate goodwill and understanding for the investments required to upgrade wastewater treatment and improve the quality of potable water.

WE WILL ALSO pay a visit to a waterworks in Sosnoviy Bor, which recently completed a project in collaboration with NEFCO, NDEP and the Finnish Ministry of the Environment. The local success stories and examples serve as launch pads for new investments. Green growth requires pioneers and innovations. The new Secretary General of the Nordic Council of Ministers addresses this theme in his column on page 9. Green investments are often lucrative. This is suggested by Fund Manager Anders Lund’s column that discusses returns on the investments made in energy-efficiency projects in Ukraine.

MORE OFTEN THAN not, local drive is pivotal to the success of a project. If you flip through this newsletter, you will get to know some of these drivers and sources of inspiration.



MIKAEL SJÖVALL
Communications
Manager
NEFCO

“Local drive is pivotal to the success of a project”

Fair winds for Ukraine

■ NEFCO has signed a loan agreement with the Danish company FairWind A/S to finance wind energy production in Ukraine. FairWind A/S specializes in the erection, installation and maintenance of Siemens and Vestas wind generators.

The company has experience from the Ukrainian energy market, and has been involved in the installation of 30 wind generators in Botievo, approximately 800 kilometres east of Kyiv.

Vestas and FairWind plan to install some 30 wind generators in Ukraine this year, and the scheme will be financed by NEFCO, the Danish Investment Fund for Developing Countries (IFU) and FairWind. The cost of the project is expected to be EUR 1.2 million, and NEFCO will finance its part from the corporation’s Investment Fund.

The wind farm will replace fossil power production at other Ukrainian power plants, and contribute to the reduction of carbon dioxide emissions. The current Ukrainian grid emission factor is 0.8 tonnes of carbon dioxide per megawatt hour (MWh).

Ukraine has set an ambitious goal to increase the share of energy generated from renewable sources to 20% by 2020. This will further reduce emissions of climate change gases, and bolster the country’s sustainable energy sector.



Installation of Vestas wind mills in Ukraine.

FairWind



Patrik Rastenberger

Sida allocates funds for Ukrainian energy saving projects

■ THE SWEDISH International Development Agency (Sida) has, through the Embassy of Sweden, allocated SEK 40 million to NEFCO to facilitate municipal energy saving investments in Ukraine.

THE ALLOCATED FUNDS will be channelled through the DemoUkrainaDH programme, which is jointly managed by NEFCO and the Ukrainian Ministry for Regional Development, Construction, Housing and Municipal Economy.

DEMOUKRAINADH BEGAN OPERATIONS in January last year, and has so far initiated ten demonstration projects in the country, which will be jointly financed by Sida, concerned municipalities and NEFCO through loan financing. The current allocation from Sida will be used for projects in cities with a minimum of 100,000 inhabitants. The broad environmental objective of the investment programme is to reduce energy consumption by at least 30 per cent, and realise some financial savings for the participating municipalities.

THE DEMOUKRAINADH PROGRAMME is also keen on financing modernisation of boilers and the replacement of outdated district heating pipes with new pre-insulated ones as well as technically shifting from the so called “four-pipe” to the “two-pipe” systems to optimise energy efficiency. Another key feature of the programme is to give priority to technical applications with the potential to simultaneously generate heat and electricity or utilise renewable energy sources such as wood chips or pellets.

“WE WARMLY WELCOME Sida’s decision to expand its support. The DemoUkrainaDH programme has been well received by its potential beneficiaries, and has already received more than 30 funding applications from which ten have been approved for further processing”, says NEFCO’s Senior Adviser, Johan Willert.

NEFCO participates in G8 study on results based finance

■ An international Study Group of experts was convened in late 2012 by G8 – a forum for the world’s eight wealthiest nations – to address so called Pay for Performance Mechanisms for financing methane abatement. Methane is the second largest driver of climate change after carbon dioxide, and as a short lived climate pollutant has a significant near term effect.

The Group has produced a report which concludes that paying for methane emission reductions would deliver a “quick win” as a climate finance pilot, achieving significant amounts of cost effective greenhouse gas savings from existing or stalled projects. The identified results based instruments, which pay for outcomes on delivery such as diversion of waste or energy access for the poor, should be further utilised by development banks.

It was also concluded that such approaches can also be utilised to finance Nationally Appropriate Mitigation Actions (NAMAs) such as the one being developed in the waste sector in Peru by NEFCO and the Nordic Council of Ministers.

Loan for fuel efficient transport in Ukraine

■ NEFCO and the Swedish paint maker Eskaro Group AB have signed a loan agreement to finance the modernization of the latter’s vehicle fleet in Ukraine and Belarus. As part of the modernization process, Eskaro’s outdated vans will be replaced with fuel efficient ones to promote efficiency and decrease environmentally harmful emissions.

Besides using fuel efficient vans, the vehicle modernization scheme will also reduce emissions indirectly by reducing the number of delivery trips. Financially, the Eskaro subsidiaries are expected to save approximately EUR 68,000 annually as a result of lower maintenance costs, reduced deliveries and less demand for transport services from third party providers.

The vehicle efficiency measures are expected to reduce emissions of carbon dioxide, volatile organic compounds, nitrogen oxides and carbon monoxide.

Sweden allocates funds to Arctic climate projects

■ **THE SWEDISH** Government has allocated additional funds to NEFCO's and Sweden's joint trust fund on mitigation of short lived climate forcers (SLCF). The SLCF-Fund was established in 2010 by the Swedish Environmental Protection Agency and NEFCO.

THE TRUST FUND, which is administered by NEFCO, gives priority to projects identified by the Arctic Council's Steering Group on SLCF. The fund currently has access to SEK 2, 550,000 for environmental projects in the Russian Arctic.

THE MAIN AIM of the Fund is to finance Russian projects that reduce SLCF-emissions, namely black carbon, which is a potent climate-forcing aerosol that remains in the atmosphere

for only a few days or weeks. Black carbon is a component of soot and is a product of the incomplete combustion of fuels such as oil, diesel, coals, wood, crop waste and other biomass.

THE ARCTIC COUNCIL has stated that black carbon and other short lived climate forcers, including methane and tropospheric ozone, may pose a particular threat to the Arctic, and that reducing these forcers has the potential to slow the rate of ice melting in the Arctic in the near-term.

"**WE ARE VERY** pleased with the extended Swedish support, which will enable us to finance a range of environmental projects in the Russian Arctic", said Special Adviser Husamuddin Ahmadzai at NEFCO.



Svenof Karlsson

Norway provides funds for Barents region environmental clean up

■ **THE NORWEGIAN** government has allocated NOK 3 million to NEFCO's Barents Hot Spots Facility (BHSF), which provides grants for the clean-up of the so-called environmental hot spots in the Russian Barents region.

IDENTIFIED BY NEFCO and the Arctic Monitoring and Assessment Programme (AMAP) in 2003, these hot spots include places and sites where there are, for instance, contaminated

soils or emissions of toxic compounds or insufficient management of solid waste or wastewater.

REMEDIAL ACTION IS being taken on some of the 42 sites identified as hot spots, with most of them being monitored, assessed or rectified, but so far only three have received a clean bill of health. BHSF is administered by NEFCO on behalf of the governments of Denmark, Finland, Iceland, Norway and Sweden.

E5P meeting in Helsinki

■ On April 30th NEFCO hosted the E5P's Steering Group meeting in Helsinki. E5P stands for the Eastern Europe Energy Efficiency and Environment Partnership Fund.

NEFCO presented six district heating projects to be implemented in Ukraine. In Donetsk, NEFCO, together with the EBRD and anticipated E5P support, will finance a typical rehabilitation and reform effort aimed at increased energy efficiency and transformation of the set-up into a system in which the consumers can decide for themselves how much heat they need and pay only for the heat consumed. The total project cost is valued at approximately EUR 27 million.

In Kyiv, USAID and the city have prepared the ground for the introduction of energy performance contracting to reduce the costs of the city's energy use. NEFCO is ready to provide EUR 5 million in loan financing, combined with an E5P grant and financial support from the city administration, totalling over EUR 9 million.

In Zhytomyr, NEFCO will provide a loan of EUR 3 million for energy efficiency measures in 20 municipally owned buildings, primarily day-care centres, schools and hospitals. In Severodonetsk in the Eastern part of Ukraine, NEFCO plans to provide a loan of EUR 4 million for measures similar to those planned for Donetsk. In Lugansk, energy efficiency will be improved in public buildings with the help of a loan from NEFCO totalling EUR 4 million. In parallel, EBRD will finance rehabilitation of the municipal district heating system.



Patrik Rastenberger

Clockwise: Anders Lund (EBRD), Magnus Rystedt (NEFCO) and Philip Mikos (EU).



MEGABANK

Support for fuel efficient farming in Ukraine

■ NEFCO and the Ukrainian company, AGRO-KARTEL LLC, have signed a loan agreement to finance an agricultural project aimed at promoting the use of subsoil tillage technology.

NEFCO will provide funding for the purchase of equipment such as tractors, seed drills, a disk harrow and a fertilizer spreader to modernize production. The corporation will finance the subsoil tillage project from its Facility for Cleaner Production.

AGRO-KARTEL LLC is one of the leading agricultural companies in Northern Ukraine, and specializes in the production and sales of commodities such as grain and cereals. The introduction of new machinery is expected to reduce the consumption of diesel fuel by some 37.6 tonnes annually. This will in turn reduce the emissions of carbon and sulphur dioxides as well as nitrogen oxides and dust. The financial benefits from reduced fuel consumption, maintenance and fertilizer costs will be substantial, and AGRO-KARTEL LLC will save approximately EUR 113,000 per annum as a result of the project.

NEFCO and MEGABANK join forces

■ NEFCO and Ukraine's MEGABANK have agreed to set up a fund to finance energy efficiency ventures from Ukraine's agricultural sector. NEFCO's Board of Directors has approved a EUR 5 million investment package for the new initiative.

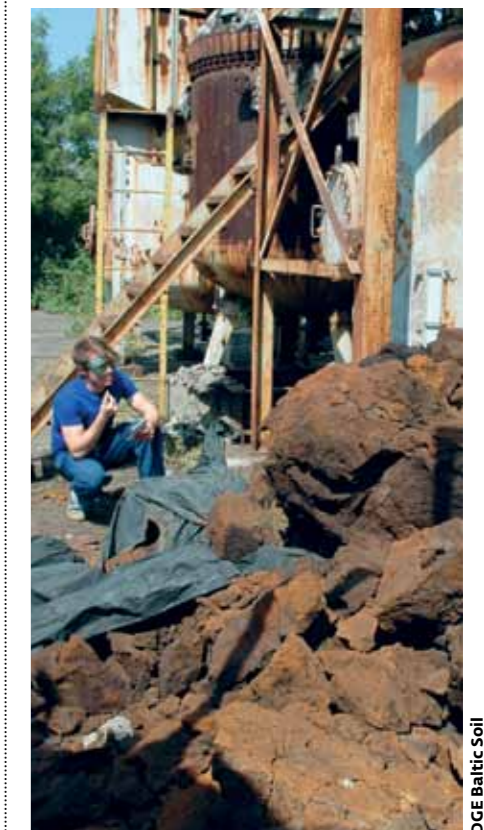
PJSC "MEGABANK" has been in operation since 1990, and its main shareholders include the European Bank for Reconstruction and Development (EBRD), the German state bank (KfW) and the International Finance Corporation (IFC). MEGABANK cooperates with a variety of international financial institutions, and is currently implementing 17 long-term programmes valued at UAH 1,422 million.

NEFCO increases decontamination support

■ NEFCO has increased the Corporation's share capital in the Danish-Lithuanian company DGE Baltic Soil and Environment, which specializes in engineering and environmental consulting.

Established in the Lithuanian capital Vilnius in 2005, DGE Baltic Soil and Environment has, among other activities, examined and treated contaminated soil and groundwater at pesticide waste storage sites in Lithuania. Apart from that, the company, which has some 100 employees in Denmark, Sweden and Lithuania, has also done environmental assessments for NEFCO in Russia and Belarus.

The capital injection, which will enable DGE Baltic Soil and Environment to expand its operations to neighbouring Latvia and establish an office in Riga, will increase NEFCO's stake to 36 per cent of the company's share capital. The company's main priority in Latvia will be to examine and assess contaminated soil and groundwater at industrial facilities and other sites, which could pollute the Baltic Sea.



DGE Baltic Soil

Assessment of obsolete pesticides.



Fishermen on the landing pier opposite the wastewater treatment plant in Sosnoviy Bor.

The clear waters and the rippled sand of the berm at the Lipovskii beach outside Sosnoviy Bor look really attractive. The city's Head of Administration Vasily S. Vorob'yov takes off his shoes and socks and strolls along the shoreline. As we are visiting the beach in May, it is virtually deserted except for a couple of joggers. But in a couple of weeks' time the dunes will be packed with holiday-making locals keen to wind down, relax and enjoy the marine milieu. And this year they can look forward to cleaner waters to swim in.

Photos: Patrik Rastenberger

Cleaner water for Sosnoviy Bor

RECENTLY, Vodokanal Sosnoviy Bor, the local waterworks, completed a project to upgrade three pumping stations and introduce chemical phosphorous removal. The modernised treatment plant was inaugurated in April. The company is responsible for the water supply and wastewater treatment for a population of around 70,000, which also means that the company needs to maintain a 90-km network of sewer pipes in the municipality. Thanks to this project completed in April the company will be able to reduce emissions of eutrophication phosphorus by around 22 tonnes per year.

"**ABOUT 80 PER** cent of all the technical equipment at the treatment plant has been replaced to a tune of RUB 224 million", says Director Anatoly S. Tselenko of Vodokanal Sosnoviy Bor.

FINANCING FOR THE project was provided by Vodokanal, the Russian Federation, Sosnoviy Bor municipality, NEFCO, the Finnish Ministry of the Environment, and the Northern Dimension Environmental Partnership NDEP. Local financiers contributed more than 70 per cent of total costs. Vodokanal was able to complete the project in less than three years after the loan agreement was signed with NEFCO in 2010.

"THANKS TO THE technical face-lift, we've also been able to cut down on electricity consumption by about 45 per cent", Anatoly Tselenko says.

THE WATERWORKS' LATEST showpiece is the modernised pumping station next to Vodokanal's head office. Following an extensive round of competitive bidding, Grundfoss and Siemens were selected, among others, to deliver technology for upgrading the existing systems. When we toured the facility at lunchtime, only three 160 kW pumps out of a total of 10 were running. The water flow follows the pace of the work day. In the morning and afternoon, the pumping station works at full capacity whereas things are less hectic around noon. Before the upgrade, the waterworks had only 6 pumps whose operation involved a lot of manual control. Now fully automated, the station is more reliable in use.



The sedimentation tanks are also in need of upgrades.



Director Anatoly Tselenko heads Vodokanal in Sosnoviy Bor.

ADDITIONALLY, THE WATERWORKS has installed a system to irradiate wastewater with ultraviolet light to destroy harmful bacteria. While the UV light looks like a regular lamp with a filament, it emits light at a different wavelength killing bacteria by breaking down the cell walls. A wavelength of 252 nanometres is effective in disinfecting and cleaning wastewater.

YET A LOT remains to be done. Sludge handling is causing a headache for the operators. While the existing process meets the requirements imposed by Russian legislation, it fails to pass the stringent criteria established by the Baltic Marine Environment Protec-

"Thanks to the technical face-lift, we've also been able to cut down on electricity consumption by about 45 per cent", Anatoly Tselenko says."

tion Commission HELCOM. Vodokanal has deposited around 45,000 tonnes of sludge near the plant. Part of it is transported to St. Petersburg for incineration, which is an unsustainable and expensive solution as long as 7,000 tonnes of sludge is generated every year. Moreover, it takes a large fleet of road tankers to keep up with the deliveries.

"WE'RE PLANNING TO initiate a new project to improve efficiency in sludge processing. Financing will be provided partly by the municipality and partly by the Russian Federation, but first we need to carry out a feasibility study before we get off the ground", says Vasily S. Vorob'yov.

THE REGIONAL ACTORS committed to cleaning up the Gulf of Finland receive the full backing from the decision



"We're planning to improve efficiency in sludge processing," says Vasily S. Vorob'yov.

makers in Sosnoviy Bor. The quick and determined management of NEFCO's project has generated positive interest in other parts of the region.

"RECENTLY WE HAD a meeting in St. Petersburg with people from other water services to discuss similar topical projects elsewhere in the Leningrad region. As we speak, the city councils of Vyborg and Tikhvin are negotiating with NEFCO on potential financing for new projects. We hope to be able to share our experiences with our colleagues and to lend a hand in the process", says Director Anatoly Tselenko.

Green growth is a common Nordic opportunity



COLUMNIST
DAGFINN
HØYBRÅTEN

Secretary General,
Nordic Council of
Ministers

The Nordic Prime Ministers met in May to discuss amongst other things future priorities for Nordic cooperation. I presented the Prime Ministers with a status report on their own green growth initiative, which is one of the main tasks for the Nordic Council of Ministers in the coming years.

AND THE TASK IS URGENT. According to the organization Cleantech Scandinavia, private investment in cleantech companies and the like has gone down by over 70% in the last two years.

THIS IS OBVIOUSLY A PROBLEM for the environment. If we do not invest in innovation we will not find more sustainable ways to manufacture, distribute and consume the goods we depend on. But it is also a problem for the Nordic countries, as the cleantech sector is a Nordic specialty in the global competition for new business opportunities.

NORDIC SYNERGIES

THE AIM OF the Nordic green growth initiative is to create Nordic synergies, just as is the case with any other common Nordic project – a lot of tasks are better solved together than individually, that is the simple *raison d'être* for the entire Nordic cooperation.

BUT WITH THE Prime Ministers' green growth initiative we try to take this simple fact a step further. We aim at a more focused and yet more holistic approach, uniting a cross sectorial approach with a pin pointed project portfolio.

THERE ARE TEN projects in the initiative, involving most of the sectors represented in the ministerial councils under the Nordic Council of Ministers. They range from projects dealing with harmonization of the electricity market or streamlining of building standards, to projects focused on bio-economy or green public procurement.

THE OVERALL AIM is twofold. On the one hand we continue the hallowed Nordic tradition of learning from each other and pulling each other forward by sharing know how and best practice – the kind of soft governance that I think we can safely credit the Nordic Council of Ministers for pioneering. On the other hand in some cases we try to establish the basis for a bigger market, a market where Nordic companies can experiment and expand, in order to better be able to tackle the European or even the global market.

"We need to explore what green growth 'the Nordic Way' entails."

THE NEW SUPER MODEL

OVER THE LAST decade, the increased involvement of the Prime Ministers has strengthened and sharpened Nordic cooperation. First, through a joint effort at tackling globalization together on a number of designated areas in the so called globalization initiative, that led to among other things the Nordic top-level research initiative. And now, through the Prime Ministers' green growth initiative.

AND ACCORDING TO leading international media like the Economist, the Nordic model is indeed the next supermodel. We need to grab this opportunity and help each other explore what it is we do best in the Nordic region and why we do certain things better than others. This requires political will, but it also requires a lot of practical work, the kind of work taking place in the ten projects under our green growth initiative.

WE NEED TO explore what green growth "the Nordic Way" entails. And we need to keep learning from each other and pooling our resources in an increasingly competitive market place that calls for common solutions to shared challenges. Green growth is a common Nordic opportunity and I look forward to contributing to the work we have ahead to seize it.

The gurgle of water is drowned by the voices of spirited schoolchildren. The joy of life and discovery are tangible in the Youth Environmental Centre of St. Petersburg Vodokanal, the local waterworks. Each year, the Centre and the museum in its vicinity attract around 200,000 visitors. About two-thirds of them are children and young people eager to explore the mysteries of the Baltic Sea.

Photos: Patrik Rastenberger

Environmental education in St. Petersburg

WE HAVE TO engage in a dialogue with consumers about protecting the Baltic Sea. It's important for the community to understand the values we stand for and the efforts we make in order to improve the quality of both drinking water and wastewaters," says Chief Specialist Tatyana Polishchuk.

THE ENVIRONMENTAL CENTRE sorts under the Informational and Educational Centre of Vodokanal in St. Petersburg. Deputy Director Dmitry Troshenko plays a central role in managing the company's public relations with for-



"We tell children how we humans affect the natural cycle of water," says Chief Specialist Tatyana Polishchuk.

"Our mission is not only to explain how nature and the ecosystem work, but also demonstrate how a soiled beach may affect the lives of children."



The water tower has been transformed into a museum at Vodokanal St. Petersburg.



The Centre's laboratory has been designed for children.

eign financiers, journalists and political delegations – the type of contacts frequently established in St. Petersburg. At the same time as the company is transforming into a real success story in the environment sector, a steady stream of official visits is received in Vodokanal's head office on Kavalergardskaya Street. But the future is shaped by children and therefore school classes are given royal treatment at Vodokanal.

THE ENVIRONMENTAL CENTRE has initiated cooperation with over 800 schools in St. Petersburg. It includes field trips

and training modules that complement the syllabuses in natural sciences and environmental studies.

"WE TELL CHILDREN where we draw the drinking water from, what happens to it and how we purify it. We seek to give an overview of the natural cycle of water and how we humans affect it," says Chief Specialist Tatyana Polishchuk.

VODOKANAL'S ACTIVITIES CONSTITUTE what is today known as Corporate Social Responsibility (CSR). The Centre employs six teachers working with environmental education on a full-time basis. Tatyana shows us a range of highly advanced technical aids used in education: animations, digital and interactive maps, simulations of contaminated beaches and laboratories.

"OUR MISSION IS not only to explain how nature and the ecosystem work, but also demonstrate how a soiled beach may affect the lives of children. We offer them some tangible tips on what they can personally do to help save the environment," she continues.

WATER CONSUMPTION IS one of the themes that keeps cropping up in various contexts. Children get to figure out how much water is needed for a five-minute shower. They measure water streams and convert them into litres and decilitres. One of the Centre's most effective and popular teaching aids is Nevskaya Kapelka - 'The Neva Drop' - an animated water drop that delivers tips and advice in a highly entertaining way in animated films made by the Russian film company Ascreen.

"TODAY, WE'VE LEARNT how to analyse water quality," declares an inquiring nine-year-old girl. Her classmate, sporting a neatly ironed shirt, shows equal fervour: "I've learnt a lot about the natural cycle of water and how you can use shrimps to measure how clean the water is." The pupils are from class 3B from School No. 494 in the Vyborg district in St. Petersburg. There is no mistaking the enthusiasm.

WE SIT DOWN in the Centre's laboratory, which has been especially designed with children in mind. Here, they can test how water behaves when you mix soap, sand, detergent, toilet paper or paint in it. I ask Tatyana how they bal-



Above: The power of learning. The Youth Environmental Centre relies on animations and interactive maps.

Below: Deputy Director Dmitry Troshenko at the Informational and Educational Centre of Vodokanal St. Petersburg.



ance between hope and despair. For one thing, does it make sense to talk about the progressive death of the seabed to an eight or nine-year-old?

"IF WE SAY to a sick man that he's terminally ill, he won't get any better for it. But we have to give children hope and offer solutions. Of course, we must talk about eutrophication and algal blooming, but we must also tell the children what they can do to improve things," explains Polishchuk.

FOR MANY OF the children visiting the Centre, the Baltic Sea is very much an abstraction. About half of them have never been to the coast or bobbed on the waves of the Gulf of Finland. One reason is the intensive algal blooming that turns the sea into a blue-green

soup during the holiday season in July and August. When this happens, many families choose to swim in a nearby inland lake. Yet water quality is improving in the vicinity of St. Petersburg, albeit slowly. The inventory of seabed fauna in the eastern parts of the Gulf of Finland carried out by the Finnish Ministry of the Environment last year

showed that visibility and biodiversity have improved. One of the factors contributing to this development is more efficient cleaning of wastewaters in St. Petersburg. There is hope, after all! **N**

FOOTNOTE:

NEFCO has financed a wide range of projects implemented by St. Petersburg Vodokanal. The latest of these is a project to upgrade 10 minor plants that process the wastewaters from around 410,000 people in St. Petersburg.

Rossibalt Ltd's head office in Znamensk (formerly Welau) in the vicinity of Kaliningrad is appealing and tastefully appointed. No wonder, as the company specialises in furniture design. One must practice what one preaches. It is the stylish concepts and interior designs that Rossibalt's employees earn their living on. The company manufactures kitchen interiors complete with cabinetry, drawers, shelving, table tops, kitchen sinks and the rest. Recently, Rossibalt extended its product range to cupboards designed for use in bedrooms and living rooms.

Photos: Alexander Matveev

Redesigning the Russian kitchen in Znamensk

“WE HAVE THREE PRICE categories so that customers can combine modules and put together the kitchen interior according to their individual preferences and cash situation,” says Financial Director Zhanna Povarova.

RAW MATERIALS FOR Rossibalt's cupboards and cabinets come mostly from Germany and Poland. The actual wood-working and design is carried out at the factory where the plywood and wood panels are transformed into clean-lined, trendy cabinetry.

“AT THE MOMENT sales are briskest in Moscow. Our most expensive kitchen cabinetry is selling like hotcakes in the capital,” says Director of Commerce Irina Shaposhnikova with a wide grin.

LAST YEAR, ROSSIBALT generated a turnover of RUB 90 million. About 20 per cent of the products are sold in the Kaliningrad region while the rest of the business is generated in other parts of Russia. A total of 15 wholesalers carry Rossibalt's products for customers keen to renovate. Most customers want a kitchen in the low or medium price range. The most affordable kitchen costs RUB 20,000 while a high-end interior can set you back RUB 160,000.



Rossibalt Ltd is specialised in kitchen interiors.



The factory generates 3-4 cubic metres of timber waste per day, says Chief Power Engineer Sergey Korobov.



Rossibalt's investments in modernisation of its factory will reduce electricity consumption by approximately 20 per cent.

Currently, the most popular kitchen colours in Russia seem to be cappuccino and glossy shades of red. Company designers frequently talk to the employees to test what design and colour schemes generate the greatest interest.

“MICROWAVE OVENS HAVE not struck root in Russia in the same way as in the West. A lot of people continue to cook soups and stews with great dedication spending hour after hour in the kitchen. Healthy low-fat food is also fashionable. Whatever you make, it's certainly nicer to do your cooking in a fresh and newly renovated kitchen,” says Shaposhnikova disarmingly.

LAST YEAR, ROSSIBALT decided to replace the company's diesel-driven boilers with a single 350 kW biofuel-fired boiler. Fuel is readily available as the manufacture of cabinets and furniture generates around 3 to 4 cubic metres of timber waste per day. Previously, waste wood was dumped in the local landfill, but now unusable cabinet parts are incinerated to produce energy for heating the factory buildings. NEFCO financed the project with a loan from its Facility for Cleaner Production.

“Last year, Rossibalt decided to replace the company's diesel-driven boilers with a single 350 kW biofuel-fired boiler.”



At the moment sales are briskest in Moscow,” says Director of Commerce Irina Shaposhnikova.

“WE HAVE A silo with a capacity of around 40 cubic metres of biomass. As the system is completely automated, I don't need to spend as much time maintaining the boiler than in the past,” says Chief Power Engineer Sergey Korobov.

THE INVESTMENT IN the new boiler will help Rossibalt save RUB 1.1 million per year and the annual electricity consumption is expected to fall by around 3,200 kWh. As a result of the project, Rossibalt has been able to reduce its sulphur, nitrogen oxide, soot and carbon dioxide emissions.

AS PART OF the project, the production lines will be upgraded by installing Italian technology in order to increase output and facilitate the cutting of the wood and plywood panels needed for the cabinets and cupboards. At the same time, the factory's air cleaner and gluing machine will be replaced with new units.

“THESE INVESTMENTS WILL reduce electricity consumption by about 20 per cent, which will improve profits and cash flow,” concludes Povarova. **N**



Traditional grinding of cereals.



Lunchtime. Vice President Ash Sharma from NEFCO to the right.

NEFCO visits portfolio of projects in Andean countries

In February, NEFCO's Vice President Ash Sharma visited the Andean region of Bolivia to review projects currently underway or commencing.

Climate adaptation in the high Andes

THE FIRST PROJECT, undertaken under the NDF funded Nordic Climate Facility, "Adapting to climate change in Andean communities depending on tropical glaciers" is carried out by Diakonia of Sweden and local Bolivian NGO, Agua Sustentable.

THE PROJECT HAS funded scientific research in six areas in Sajama National Park in the highlands of Bolivia in order to understand water dynamics, social, and economic issues, with a special emphasis on the vulnerability of women's groups. In parallel with these research activities, there were 11 demonstration projects implemented that allow the revitalization of wetlands through irrigation and improvement of water availability for household consumption.

IN THE AREA of the Sajhuaya basin at Illimani glacier, near La Paz, the completed studies allowed the preparation of a "Strategy for adaptation to climate change" presented to the academic community, civil institutions and the Government in August 2012. The Project also undertook advocacy for adaptation measures proposed in order to integrate it to the five-year planning (2012 - 2016) of the local municipality, Palca. In this area, seven pilot projects have been implemented and completed in order to improve existing irrigation systems to mitigate the risks of farming and hence local livelihoods in the predicted water scarcity scenario.

ADAPTATION CAPACITIES in communities in Bolivia were improved by merging their ancient knowledge with technology as result of their participation in research activities when exploring glacier retraction and future availability of water resources. Communities have increased their resilience through the implementation of 18 pilot water management projects for different uses. Teams of technicians, villagers and local authorities working together have produced results in terms of water efficiency as part of those adaptation plans.

THE PROJECT COMMENCED in December, and is expected to be completed in mid-2013.

Photos: Diakonia



Presentation of current cultivation methods in the Bolivian Andes.

Promoting climate resilient agriculture in Bolivia

POVERTY AND EXTREME climatic conditions in the high Andes have adversely impacted the vulnerability of food production. This situation will be increasingly difficult with the predicted climate changes leading to an accelerated melting of glaciers and limiting agricultural production. Cañahua - a highly underutilized crop species similar to quinoa - is one of the most nutritious crops existing in the region. Moreover, it is highly tolerant to the major constraints in global agriculture such as drought, soil salinity and frost - all of which are prevalent in Bolivia. A NCF funded project carried out by the University of Copenhagen and PROINPA, (the Foundation for the Promotion and Research into Andean Products) will promote cañahua production among poor Andean households,

mainly headed by women, through the introduction of varieties adapted to the new climate patterns. This will be achieved with the application of appropriate crop and land management techniques. Furthermore it will strengthen local community organizations to develop markets and generate income in the food chain.

NEFCO UNDERTOOK A visit to the research station and the field to see a community project in action. In addition, there was a meeting with the Director of the National Institute for Promotion of Innovation of Agro-fisheries and Forestry. PROINPA also has good access to local processors, packers and exporters, as well as the certification expertise required for national and export markets.

ACCORDING TO THE project team, the project outcomes will be:

- Sustainable and organic management of cañahua
- Optimisation of yield and quality
- Improved varieties of the crop
- Simple and energy friendly processing of cañahua introduced
- A diversified range of products developed
- Market analysis performed with a market for cañahua established which has the power to benefit small producers

FOOTNOTE: The Nordic Climate Facility is financed by the Nordic Development Fund (NDF) and administered by NEFCO.

The beauty of investing in energy efficiency

Making transport, industrial operations and not least municipal utilities more energy efficient will play a future key role in mitigating climate change.



COLUMNIST
ANDERS LUND

Fund Manager for
E5P at EBRD

E5P, the Eastern Europe Energy Efficiency and Environment Partnership, is active in supporting projects with clear environmental effects to reduce emissions of greenhouse gases through financing to the municipal sectors in a range of partnership countries. The E5P activities started about two years ago together with our partners with investments in Ukraine. The environmental effects of the first nine projects are impressive, with reductions in emissions of carbon dioxide of 300,000 tonnes per year.

ONE OF THE main motivating triggers for investing in energy efficiency is the price of energy, and as the energy market is increasingly moving towards an open market, we can see that the price will also be set in accordance with market principles based on demand and supply. This means that energy prices will increase in several of the former Eastern bloc countries. The energy intensity in the countries concerned is often very high compared with that of the European Union. This is due to outdated and poorly maintained district heating systems. In accordance with statistics from the IEA, Ukraine has on average three times higher energy intensity than the European Union. The situation is even worse in the municipal sector.

THE ARGUMENT FOR investing in energy efficiency is therefore compelling. The investments carried out by E5P can reduce energy consumption and generate considerable savings for the municipalities as well as lower levels of environmentally harmful emissions. It is also important to replace supply-driven energy production with demand-driven production as this will reduce the overall energy consumption in the long term.

THE PAYBACK PERIOD for Ukrainian energy efficiency projects in the private sector is normally 2-4 years, whereas the return on investment for similar projects in the municipal sector is longer due to the different decision-making procedures. The investments also have a favourable impact on the local employment situation as the installation work is normally performed by local contractors.

“The environmental effects of the first nine projects are impressive, with reductions in emissions of CO₂ by 300,000 tonnes per year.”

IN UKRAINE, E5P has approved 18 projects with good environmental impacts. NEFCO is one of the most active partners in the country and has succeeded in implementing several important projects. In order to speed up implementation, regulatory reforms at local as well as state levels are crucial. There is clearly a need to define price-setting mechanisms to ensure secure, transparent and long-term planning by municipalities and financial institutions.

E5P WILL NOW expand its activities to other countries in the Eastern Partnership area including Armenia, Azerbaijan, Georgia and Moldova. The enlargement will bring about more project activity and new investments in energy efficiency. NEFCO has also made a decision to expand its area of operation to Moldova, and the Corporation is currently negotiating a framework agreement with the Moldovan authorities. This is a highly welcome initiative for the environment as well as E5P. **N**

The Eastern Europe Energy Efficiency and Environment Partnership – E5P – is a EUR 90 million multi-donor fund managed by the EBRD designed to promote energy efficiency investments in Ukraine and other Eastern Partnership countries. Contributors to E5P are the European Union, Sweden, Ukraine, the United States, Denmark, Norway, Finland, Poland, Estonia, Iceland, Latvia and Lithuania.

Broader geographic mandate for NEFCO

■ **NEFCO HAS** decided to expand its area of operation to Moldova. This will pave the way for new environmental projects in the country.

“**WE ARE PRIMARILY** interested in identifying energy efficiency projects with environmental benefits, says NEFCO’s Managing Director Magnus Rystedt.

THE BULK OF NEFCO’s current investments are located in Russia, which remains the Corporation’s most important market area. NEFCO’s presence in Ukraine also remains strong. About 17% of NEFCO’s investment portfolio is currently rooted in Ukraine. On top of this, NEFCO purchases emission reduction units from Clean Development Mechanism-projects across the world.

NEFCO’S ENLARGED GEOGRAPHIC mandate is in line with the attempts of the Eastern Europe Energy Efficiency and Environment Partnership (E5P) to broaden its geographic scope to other countries in South-Eastern Europe and Caucasus. E5P has operated in Ukraine since 2011. The E5P donates funding for environmental projects to supplement lending by international financial institutions.

NEFCO records healthy environmental results for 2012

■ **NEFCO’S FINANCIAL** accounts for 2012, which were approved by the Board of Directors in March, show healthy environmental results, and indicate expanding geographical frontiers for the Corporation’s business operations.

ACCORDING TO NEFCO’S environmental status report, climate investments in 2012 reduced carbon dioxide emissions by some 3.6 million tonnes - a figure corresponding to the amount of carbon dioxide emitted by 11.7 million persons travelling by airplane, back and forth, from Helsinki to Paris.

A TOTAL OF 65 new projects were approved and administered by NEFCO during the period, and the value of all funds managed by the corporation was EUR 549 million. After reserving EUR 1.5 million for the Nordic Environment Development Fund, which finances cleaner production technologies and energy saving projects in Eastern Europe, NEFCO’s financial accounts for 2012 indicate a surplus of EUR 27,000.

“**LAST YEAR NEFCO** received a record number of project inquiries, which is a clear indication of the strong demand for our services”, says the Corporation’s Managing Director, Magnus Rystedt.

THE PRINTED VERSION of NEFCO’s Annual Review can be ordered by e-mail at info@nefco.fi. The electronic version is available at www.nefco.org/newsroom/annual_reports



Watch our latest video on YouTube™

■ **NEFCO HAS** published a new video clip, which has been posted on the Corporation’s YouTube account. The video shows what NEFCO is doing in the Ukrainian city of Zhytomyr to promote energy efficiency investments. The video can be viewed from www.youtube.com/NEFCOFinland.

This is NEFCO

The Nordic Environment Finance Corporation, NEFCO, is an international financial institution established in 1990 by the Nordic countries – Denmark, Iceland, Norway, Sweden and Finland. Its primary objective is to finance cost-efficient environmental projects in its neighbouring areas in Eastern Europe. NEFCO provides financing for projects which aim at reducing environmentally harmful emissions and discharges.

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EDITORS

Mikael Sjövall,
Editor-in-chief, Communications Manager
Vitaly Artyushchenko,
Chief Investment Adviser
Ulf Bojö, Senior Investment Manager
Vladimir Morozov, Consultant
Ash Sharma, Vice President
Thor Thorsteinsson, Investment Manager
Johan Willert, Senior Adviser
Torben Vindeløv, Executive Vice President

COLUMNISTS

Dagfinn Høybråten
Anders Lund

LAYOUT

Hans Andersson/LemonWorks

TRANSLATIONS AND PROOF READING

Aazet Oy, Percy Mashaire

PRINTED BY

Oy Lönnberg Ab

PUBLISHER

Nordic Environment Finance Corporation, NEFCO
Postal address: P.O. Box 249,
FIN-00171 Helsinki, Finland
Visiting address: Fabianinkatu -
Fabiansgatan 34
Telephone: +358 (0)10 618 003
Fax: +358 9 630 976
E-mail: info@nefco.fi
Internet: www.nefco.org
twitter.com/NefcoNordic

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Maize field in Ukraine. Photo: MEGABANK



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