Awash in cocktail of deadly pollution RUSSIA " History and technology combine to threaten health of St. Petersburg citizens

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St. Petersburg, Russia -- BY JOHN GRAY Moscow Bureau St. Petersburg, Russia EVERY time you turn on the water tap in Russia's most elegant city, you get a flavour of the quality of government in the days of the Soviet Union.

The water itself is always smelly and sometimes brown. Most of the children of St. Petersburg suffer from skin allergies as a result of it, and most foreigners who drink it fall sick.

The cause is an explosively poisonous cocktail of things that should not be in drinking water - mercury, cadmium, nickel, lead, nitrates, phosphorous, radioactive sediment and human sewage.

It all seems surprising when you consider that St. Petersburg draws its water from Lake Ladoga, one of the largest freshwater lakes in the world.

Vladimir Guschim of the St. Petersburg Green Party smiles ruefully: "There was a time when the Smirnoffs used to boast that they made their vodka from the waters of Lake Ladoga."

But that was long ago, before the rulers of the Soviet Union assumed that of course the waste from the engines of industry and war would be dumped into Lake Ladoga and into the Neva River, which flows the 74 kilometres from the lake through St. Petersburg and into the Gulf of Finland.

Environmental groups such as the Greens have been permitted to operate only recently, and nobody encouraged environmental awareness in a society whose leaders were never troubled by doubts about their own wisdom.

But a sign of the state of things came in 1989 when Soviet authorities closed the pulp-and-paper plant that for 50 years had been pumping untreated waste into a small lake that drained into Lake Ladoga. Even they thought it had become dangerous.

"It was so polluted that it had become a biological reactor," Mr. Guschim says. "A test of the water in the lake showed that it was worse than the waste itself."

Soviet authorities caught the spirit of the times and removed just a bit of the secrecy that had blanketed Soviet society. St. Petersburg's problems, it transpired, were also nuclear.

Until a few years ago, everyone in St. Petersburg worried about the aftermath of the 1986 Chernobyl nuclear disaster. The radioactive cloud from Chernobyl had drifted northward, and fallout was particularly severe.

What people here then discovered was that, unknowingly, they had been living with their own nuclear disaster since long before Chernobyl. As well as a garbage pit, the majestic Lake Ladoga had been used for nuclear testing.

Mr. Guschim smiles patiently and shrugs again. The ministry of defence, it seems, had taken virtually no precautions and told nobody about the tests.

They were first conducted on two islands in the lake, to gauge the effect of radiation from nuclear weapons on animals. Then they became more intricate, testing the effect of radiation on animals aboard five naval vessels that were anchored nearby.

At some point in time - apparently after the death of Soviet dictator Joseph Stalin in 1953 - the tests on the islands and the ships were stopped. The five ships that had been exposed to radiation were scuttled.

In the more than 30 years since the testing ended, nobody has been allowed near the islands. One of the five ships was raised three years ago and then scuttled again elsewhere.

The giant lake was a perfect spot to test nuclear submarines in total security, which was the next stage of the lake's problems.

As Mr. Guschim explains it, not all of the tests on nuclear submarines were successful. Over the years, the Greens later discovered, two disabled nuclear reactors were simply dumped into the lake.

Spent nuclear rods were put into cardboard boxes and dumped there too.

Apparently to hide the nuclear dump, other waste was discarded in the same area. Later, local residents were moved out of their homes because, the authorities said, some of the new waste was toxic; they said nothing about radioactivity.

The next stage of St. Petersburg's environmental problems was quite different. It was the result not of the careless abuse of nature but of a thoughtless effort to control nature.

From the day it was founded almost three centuries ago, St. Petersburg has suffered from storms that sweep across the Gulf of Finland and on to the shores of the low-lying city. Since 1703, there have been 288 floods.

The idea was to build a massive flood-control dike. The entire bay would be protected by two huge earthen and concrete arms stretching 25 kilometres from either side of the bay to Kronstadt island in

the middle. The bay would be completely protected except for a one-kilometre gap in each of the two dikes.

It was a bold concept except, as a senior official said later, "Our hydraulic model of the area didn't model biology, only water flows. Rightly or wrongly, it didn't reflect the natural changes."

The dike stopped the storms sweeping in from the west, but it also stopped the natural flushing of the Neva. Toxic wastes from Lake Ladoga and the industries along the Neva and then St. Petersburg were trapped.

The city is now sponsoring a contest to determine what should be done about this latest environmental disaster. The rescue proposals range from the complete removal of the still uncompleted flood barrier to the reclamation of the entire bay within the barrier as a landfill park.

Elsewhere in the world, Green activists harbour dreams that public pressure works, that governments can be embarrassed into changes and even reversals of policy, that wrongs can be righted.

But Mr. Guschim is not a vision of optimism as he lists the accumulated disasters of nuclear, industrial and human waste in the once pristine Lake Ladoga and in the Neva.

Like every other city in Russia, St. Petersburg is broke. They are all in the middle of a shattering economic revolution as they try to move from communism to capitalism, and disaster never seems far away.

For the moment, there is no money to clean contaminated lakes or contaminating industries; there is no money even for a proper sewage system for St. Petersburg; environmentalists charge that only one industry in St. Petersburg has an adequate waste-treatment plant. And of course there is no money to remove a flood-control barrier that inadvertently makes everything worse.

Not surprisingly, many St. Petersburg residents use small filters on their home water taps. The Greens offered to test the 30 different filters on sale in local stores, but only four firms agreed to participate.

Of the four filters tested, only two were deemed adequate. One filter, produced by a Canadian-Russian joint venture, actually made the water worse.

For the present, as for the past, Mr. Guschim gives a helpless shrug.

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