

PROFILES IN POSITIVE CHANGE

# Nizhnii Tagil, Russia



INSTITUTE *for*  
SUSTAINABLE  
COMMUNITIES

*The mission of the Institute for Sustainable Communities (ISC) is to help communities around the world address environmental, economic, and social challenges to build a better future shaped and shared by all.*

**Cover:**

**Top:** *ISC's involvement in Nizhnii Tagil, Russia—a city of about 440,000 on the eastern slopes of the Ural Mountains—spans 1993-2001.*

**Middle:** *A city resident with one of the new trash collection vehicles purchased as a result of ISC's solid waste management project.*

**Bottom:** *Community leaders work together in trainings and planning meetings to realize a better future for their city.*

# A Polluted City, a Partnership, and a New Culture of Problem-Solving

Dear Reader,

Shortly after the end of the Soviet regime, when we began working together in this central Russian city, the Nizhnii Tagil Environment Project faced very visible challenges. As you will see, this manufacturing and metal-producing center lives with giant batteries of smokestacks that pour fumes into the sky night and day. Nizhnii Tagil—an historic city with much culture, and truly wonderful people—is one of the most heavily polluted cities on our planet.

When representatives from the U.S. Environmental Protection Agency (USAID) and the Institute for Sustainable Communities (ISC) began visiting Nizhnii Tagil to put this project together in 1992, we also saw less obvious challenges. After decades of centralized rule, Nizhnii Tagil had no tradition or experience of involving the public and citizen organizations in assessing environmental risk and solving pollution problems, as we proposed to do. Also, this city had long been closed to foreigners—so, understandably, many here were skeptical of the Americans' motives.

We also had limited resources and the city had even fewer resources to build on what we could do. We at ISC had completed community-based projects in Eastern Europe, helping to build local democracy through environmental problem-solving—but we had never faced such large and complex challenges. Could the proposed partnership make a difference in Nizhnii Tagil?

Today, after the five-year project has concluded and has led to a pair of follow-on initiatives, we can point to impacts that are real, inspiring, and we believe, a potential model for similar communities around the world. While the smokestacks are still operating, there is a new awareness and sense of priority for curbing pollution and improving the environment among city officials, industry leaders, and the general public. Our project made major reductions in the airborne pollutant—fine dust from the refining of iron ore—that was found to be the most hazardous to public health. Today the city's air is considerably cleaner and less dangerous—especially to children. Our work together also had a major impact on the city's safe disposal of solid waste.

In every stage of our work together, we employed an open, collaborative, multi-sector process that the city now commonly uses in tackling its environmental priorities. With our partners, we developed a new, hands-on curriculum for environmental education that is now taught in all local high schools—and that has students working with scientists and local industries on low-cost, practical means of detecting and curbing pollution. Overall, our project brought new information and expertise to hundreds of local leaders, activists, teachers, scientists, and others, using a “train-the-trainers” approach that focused on real local problems to be solved.

Perhaps even more important as a long-term impact, the Nizhnii Tagil Environment Project involved the public and citizen organizations at

every stage of decisionmaking. Today, citizens and nongovernmental organizations (NGOs) are routinely respected and offered a “place at the table” for local problem-solving. Also, by building the capacity of NGOs, this project had a major impact on building and strengthening a local NGO sector that has grown from almost nothing to more than 200 organizations today.

The people of Nizhnii Tagil continue to find new ways of solving their pollution problems. As they do so, citizens, NGOs, local industries, and city leaders are building on a new ethic of collaboration and openness that I believe our project did much to introduce to this city and its region.

I believe that our project and the lessons we learned can be a model for many others. To offer our experience to you is the real purpose of this report. I hope you will find it interesting, candid, and useful.

I want especially to thank our partners and donors—in particular the U.S. Agency for International Development, USEPA, the City of Nizhnii Tagil, the Sverdlovsk Oblast Environmental Committee, and Clean Home—for working so closely and fruitfully with us over these years. If you would like to learn more about ISC's work, or about the Nizhnii Tagil project, please contact us! There is so much more we can share.

*George Hamilton*  
President



# The Nizhnii Tagil Environment Project

The ancient and forested Ural Mountains run north to south, separating the European and Asian sides of the Russian Federation. Midway down the Urals, east of the slopes about 30 kilometers into Asia, is Nizhnii Tagil.

A community of nearly half a million people with almost 300 years of ore-mining and metal-working history, Nizhnii Tagil has a city center where a large pond, created when the Tagil River was dammed for hydropower in the 18th century, is bordered by some graceful 19th century buildings. Here also are the Old Works, a dense, ochre-colored complex of antique blast furnaces and smithing shops now being turned into an industrial museum. Above the Old Works rises *Lis'ya gora*—Fox Hill—a grassy knob topped by an old watchtower that overlooks the industrial city of today.

In 1994, American Barbara Felitti made the short climb up Fox Hill. At the top, she was startled and worried by what she saw.

The city's broad crowd of Soviet-era apartment buildings was, and still is, surrounded on the north, east, and south by massive heavy industry. Nizhnii Tagil's modern ore-processing, iron and steel-producing,

*Their aim was to work with a broad spectrum of Russian governmental, business, and nongovernmental organizations, to build detailed understanding and public awareness about the most imminent dangers that pollution in Nizhnii Tagil posed to public health. Russian and American project partners would then work together to develop and put in place a range of low-cost, effective, practical strategies aimed at easing the most urgent dangers.*



**In early 1994, Nizhnii Tagil Mayor Nikolai Didenko (center) and Deputy Mayor Nikolai Petrov (left) meet with George Hamilton of ISC; Angelina Savina, chair of the city's environmental protection committee; and Bill Freeman of USEPA, to sign the project work plan.**

chemical, and heavy-equipment plants date to the 1930s and especially to the war years, when the USSR moved its European factories lock, stock, and workforce to the heartland to escape Hitler's armies. Developed steadily in the 1960s and 70s under the national policy of boosting production at almost any cost, Nizhnii

Tagil now has some 4,700 sources of air pollution. Tall smokestacks, fat boilers, and bulging blast furnaces pump out smoke and other emissions in black, gray, red, yellow, and orange.

By the final Soviet years, Nizhnii Tagil had become a national symbol of pollution, the butt of Moscow jokes. Some cancer rates here were the nation's highest,

children's health among its worst. Local people called their home the city of the multi-colored sky.

"When I went up that hill," Barbara Felitti recalls, "I thought, how in the world are we ever going to make a difference here?"

## NEW COLLABORATION, NEW CONCEPT

A staff member at an American non-governmental organization (NGO) called the Institute for Sustainable Communities, Felitti was among the first modern foreigners to set foot in this city. Because it has some defense production, Nizhnii Tagil was a closed city to foreigners until the Soviet Union gave way to the Russian Federation and other independent states in 1991.

By the early 1990s, when this project began, ISC had already completed two similar community-action projects in smaller cities in Bulgaria and Hungary. Those projects employed environmental priority setting and

problem solving in a community-wide effort that helped build local democracy, public engagement, and civil society. ISC had also developed a model environmental education program with educators in Hungary, and had conducted an environmental training program in Romania, the Czech Republic, Bulgaria, and Poland. ISC saw much usefulness in its community-based approach, which centers on building a lead partnership with a local NGO and developing collaboration that brings together local government, NGOs, industries, environmental specialists, educators, and citizens.

The project in Nizhnii Tagil was to be much the same, but on a larger scale. The U.S. Environmental Protection Agency (USEPA) invited ISC to participate; the two U.S. organizations, one federal and the other nongovernmental, would each coordinate key components of the five-year project. Their aim was to work with a broad spectrum of Russian governmental, business, and nongovernmental organizations, to build detailed understanding and public awareness about the most imminent dangers that pollution in Nizhnii Tagil posed to public health. Russian and American project partners would then work together to develop and put in place a range of low-cost, effective, and practical strategies aimed at easing the most urgent dangers.

The challenges that Nizhnii Tagil posed, however, were much larger than ISC had faced so far. City officials and local industries had very limited resources to spend on environmental problems that were severe, widespread, and extremely complex.



***Nizhnii Tagil's high rate of children's asthma is linked to its very poor air quality. While the larger project focused on reducing the sources of air pollution, the Environmental Fund supported a health clinic's purchase of better equipment and medicine to treat children more effectively.***

At the same time, many of these leaders were suspicious of the motives of the Americans, and uninterested in ready-made "solutions" from outside. Still, they wanted to make a difference, and knew their city's problems were severe. On that basis, leaders here began to meet with the American visitors.

Along with officials from USEPA, ISC began visiting Nizhnii Tagil in 1993. Within a year, ISC, USEPA, the city administration, and regional and national environmental authorities had developed and signed onto a work plan calling for a partnership project.

Guided by multi-sector advisory groups and always working to inform and involve the public, the Nizhnii Tagil Environment Project would

assess the leading risks to public health, set priorities, and carry out a number of low-cost measures against the pollution sources that were among those found to be most hazardous to public health.

The project would also provide trainings, equipment, and funding to participants and others. It would help build local organizations. It would engage NGOs and the public in decisionmaking with city officials, specialists, and industrial leaders. And—at least as important for the future—it would join with teachers and academics to develop environmental-education curricula and teaching methods for the city's schools.

For ISC, the underlying concept was sustainability, the notion that a community's economic, ecological,

and societal issues could all be improved together, so that all would strengthen over time. Even in the U.S., sustainability was a fairly new concept. To the Russians in Nizhnii Tagil—even to its environmental specialists, who brought quite a bit of knowledge and expertise to the new project—the word could not, at first, even be translated.

#### **“WHERE IS YOUR BEST CHANCE?”**

But the greatest challenge for ISC and USEPA was the city’s daunting pollution and public-health troubles. Local air pollution added up to one ton of emissions per citizen per year. A recent study of 81 Russian cities had ranked Nizhnii Tagil first in carcinogenic diseases, third in respiratory diseases, and ninth in skin diseases. Fifty-eight percent of local children had some type of respiratory disorder.

“The other communities that ISC had worked in did not have such severe health problems,” recalled Barbara Felitti, who in 1994 was about to begin serving as ISC’s Nizhnii Tagil project manager. “Here, you could see stacks and smoke from almost every place in the city. Some neighborhoods were living literally next door to the plants.”

U.S. funding for the project, provided by U.S. Agency for International Development through USEPA, totaled \$5.5 million.

“This is a town that would require maybe billions of dollars to solve all its environmental problems,” said Bill Freeman, New Independent States project manager at USEPA. “With our \$5.5 million, we didn’t entertain any

illusions. You have to make choices, and figure out where is your best chance.”

#### **“LET’S SEE WHAT WE CAN DO”**

As the project began, most Russians involved were skeptical about its goals, about its focus on collaboration, risk assessment, and public involvement—and about whether the Americans were really there to help.

“On the one hand, people were curious: Okay, the Americans came here. What do they want?” recalled Lubov Faintel, an English teacher who translated early discussions and then became a staff member at Clean Home, the NGO that developed as ISC’s lead project partner.

“There was not enough trust,” she added—“even between people here.”

Not only had the representatives from local government, industry, education, and regulatory agencies never before worked with Americans—generally they had never worked with, or even met, one another. As everywhere in the former USSR, decisions here had long been made by a few top people, following dictates from the far off central government.

“In 70 years of Soviet times, we never negotiated directly with people,” said Alexander Gryadov, the city’s chief architect. “We always acted as if we knew better what people’s needs were. And nobody was satisfied—neither us nor the people.”

“We opposed the old regime very much; but we didn’t know how to build our future life,” said Sergei

*The project would also provide trainings, equipment, and funding to participants and others. It would help build local organizations. It would engage NGOs and the public in decision making with city officials, specialists, and industrial leaders. And—at least as important for the future—it would join with teachers and academics to develop environmental education curricula and teaching methods for the city’s schools.*

***Based on the recommendations of the Priority-Setting Committee, project funding was matched by the ore-processing facility to install these dust cyclones where sintered ore is loaded into railroad cars, creating plumes of fine-particulate pollution. The cyclones reduced dust released into the air by 300 percent, significantly improving air quality in the workplace and near-by residential areas.***



Khreibtikov, who welcomed the first U.S. delegation here as a City Council member in 1993.

Yet the challenges mounted. The project plan called for citizen groups to play a key role—yet Nizhnii Tagil had almost no active citizen groups, environmental or otherwise. Also, the Russian economy was struggling hugely to make the transition to a market system. The largest local industries would, during most of the project, be in a depression that drained them of any funds or energy for environmental change, which also preoccupied the local citizenry.

Yet despite all these challenges, recalled Vera Baklanova, the sole

citizen activist who attended the first group meeting on the proposed project in 1993, the first Russians involved “said, very tentatively, ‘Let’s see what we can do together.’”

#### **POSITIVE IMPACTS STILL CONTINUE**

Fast-forward to 2001. Eight years after that first group meeting, seven years after the Nizhnii Tagil Environment Project was launched, what has been accomplished?

The project officially concluded in 1999—but its impacts are still spreading, in the city and beyond. To briefly describe the most notable results:

- Surprising most specialists, the risk-assessment process identified the city’s most dangerous airborne pollutant as particulate matter—fine dust from ore-processing and metal works. At the local mining company, a “cyclone” system has been installed to pull in emissions from the loading of concentrated ore into railway cars. The new system is expected to collect some 200 tons of the fine dust that used to infiltrate neighboring homes, schools, shops, and lungs. Public-health officials predict the system will prevent up to 28 of the 265 estimated annual deaths once caused by this pollutant. The mining company also used a project grant to revegetate, with American help, a very large, desolate dumping site for its waste. The onetime “moonscape” now prevents about 150 tons of fine dust from blowing up and over the city during each year’s hot, dry months.
- For perhaps the first time in Russia, the project introduced health-risk assessment, a process that in this case combined air pollution dispersion models with current medical knowledge and data on emissions and public health to predict the risks of various pollutants. In this way the project’s Priority-Setting Committee singled out the most cost-effective targets for action. “This created a great deal of interest in Moscow,” said Pavel Zhilin, chief environmental regulator for the region, whose office and Clean Home used a project grant to publish booklets describing the risk-assessment process to others in Russia.



- As a result of the first industrial audit, coordinated by USEPA at a medical-instrument plant in the center city, both the company and the environment benefited from a newly installed recycling process for wastewater from nickel plating. Later, funded by grants awarded through the competitive program that replaced the audits, the same firm developed two successful new products: a new water filter, certified for purity and provided to six city hospitals, and water-purifying drinking fountains that the city is planning to install in all city schools.
- A USEPA-coordinated effort to improve the city's drinking water supply carried out a comprehensive review of Nizhnii Tagil's water storage, treatment, and delivery systems, with recommendations for improvement. Through follow-up efforts, also led by USEPA, one major water treatment plant was provided with laboratory testing and surface-water monitoring equipment; a management program was also developed, and a new disinfection system installed, at one of two major city reservoirs.
- After the city's largest industries declined to go ahead with pollution audits and follow-on improvements, the project partners decided instead to stimulate and fund environmental-improvement projects through a city-wide competitive grants program—a new process in Nizhnii Tagil. Through open public competitions, the

*The project officially concluded in 1999—but its impacts are still spreading, in the city and beyond.*

newly created Environmental Fund awarded 12 grants, most of them \$20,000 or less, for low-cost project proposals. Overall, the grantmaking process had three key impacts: it

stimulated a large number of diverse, innovative, and successful project ideas; it demonstrated a new, open, and transparent process for awarding funds to achieve the most cost-effective results; and it put initiative, control, and ownership of projects in the hands of industrial managers and city officials—largely the same people who had resisted the audit approach as an effort to impose outside solutions.

Along with those mentioned above, grant-funded initiatives included equipping the local railcar factory with airless paint-spraying equipment; installing new water filters and purified drinking fountains at hospitals and schools manufactured at the medical instrument plant; building a recycling center for mercury-vapor light bulbs; constructing a production facility for low-cost activated-carbon material to absorb hydrocarbons from the local coking plant's wastewater; and the design and construction of Nizhnii Tagil's first modern lined landfill (see "Big Steps in Clearing the Air").

- The Nizhnii Tagil project also created new competitions for small grants, offering up to \$1,000 apiece for community action projects (see "Faith, Hope, and Funding"). These proved so popular that the city has funded



***ISC and its Russian partners built public trust and enthusiasm for the project through several small grants competitions that supported such efforts as this clean-up and planting project in one of the city's many neglected parks.***

continuing competitions, organized by an NGO support center that itself is a project offshoot. The support center now provides technical, organizational, and fundraising training and advice, resources, and Internet access to a local NGO community that has grown from a precious few in 1994 to about 200 citizen organizations today—including about 20 environmental groups.

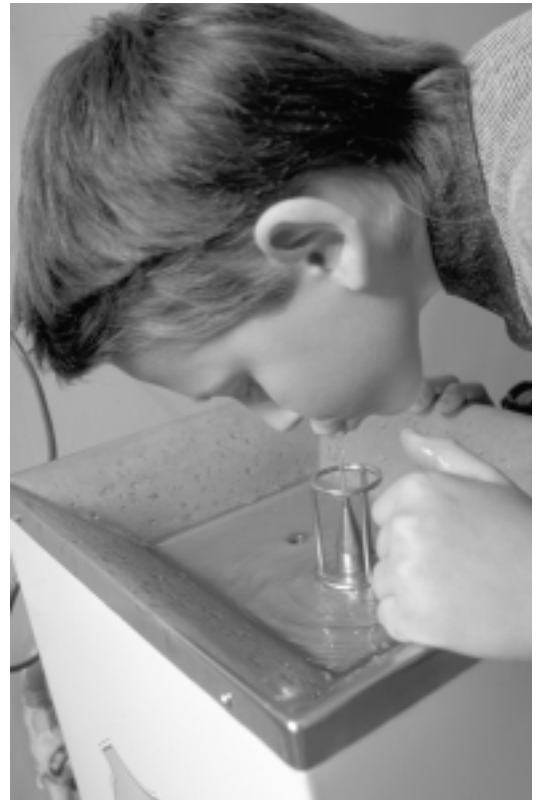
- The initial partnership project gave rise to a pair of follow-up efforts, both using the same working model with multi-sector advisory groups. The 1998-2000 Solid Waste Management Project took on a severe cause of local pollution, the widespread dumping and

burning of household trash. It made possible city construction of the new landfill, and it provided trucks and support for the first trash-collection service to a private-home district where dumping and burning had been widespread. Now, the ongoing Green Futures Project aims to create a public “greenway” linking open land along the central pond and riverbanks, much of it now neglected, and including the Old Works museum site. For both these projects, Clean Home became the lead partner, with new sources of funding and with ISC playing a support role.

- A regional Center for Environmental Training and Information, created and funded by the first project in nearby Ekaterinburg, organized and offered 19 interactive USEPA courses that brought together hundreds of elected officials, NGO members, industry representatives, environmental specialists, and citizens. The interactive courses emphasized a “train-the-trainers” approach, teaching people who would then teach their colleagues. The center also organized conferences, published information, helped create new school curricula—and became a regional center for ROLL, the Replication of Lessons Learned Project also run by ISC.
- For perhaps the first time in Russia, the environmental education component of the project brought local schoolteachers and curriculum developers together to develop and field-test an environmental curriculum for the commu-

***Through improvements to the city’s drinking water system and installation of water fountains with purifiers in city schools, children and adults alike have access to better drinking water. “The appearance of this fountain in our school helped to create healthier conditions for the children, who now get ill less often. It is a new requirement of the city’s disease prevention service to have such fountains in every school.”***

Valentina Korovina,  
Director of School #18



nity’s own schools. Building on a successful demonstration in two local schools, participants created a continuous environmental education curriculum for grades K-11—and the city mandated its use in all local schools. Students develop and test hands-on, low-cost strategies for solving local ecological problems, and so “are becoming real citizens,” said Nina Matveyeva, a biology teacher (see “Young Citizens, New Solutions”).

- Russian participants say all this work has influenced leaders of top local industries. “At first, the big companies were skeptical—but now they are interested in such projects,” said Victor Oslamenko, chief engineer of the Visokigorskii

Mining Company. “It has taught them a lesson.” Also, both city officials and businesspeople saw that well-directed, low-cost solutions can add up to major impacts. “When there is no money for global projects, you can still get some things accomplished,” said veteran activist Baklanova. NGO and city leaders continue to work together, and the city continues to address ecological challenges by gathering broad-based groups for advice and guidance. “This is the new methodology,” said Nizhnii Tagil’s current Deputy Mayor Vladimir Belov. “We have achieved the understanding that such progress can only be advanced together—so we work together.”

#### **ABOUT NIZHNII TAGIL**

Located on the eastern slopes of the Ural Mountains, Nizhnii Tagil was founded in 1722 as part of a wave of industrialization in Russia under Peter the Great. The natural landscape and resources of the area led to the city's development as a mining industrial complex. It holds the distinction of being the oldest mining center of both Russian and world metallurgy.

Until recently, most enterprises in the city were in the defense sector. For this reason, Nizhnii Tagil was “closed” to foreigners during the Soviet era. Today, mining and heavy industry still dominate the economy, including iron and steel, coke, chemicals, and plastics enterprises.

Nizhnii Tagil is one of Russia's most polluted cities. The local health service has reported that the current population of approximately 440,000 people has the highest rate of lung and stomach cancers in Russia, and the incidence of bronchial lung disease is two times higher than the national average for children.

*The initial partnership project gave rise to a pair of follow-up efforts, both using the same working model with multi-sector advisory groups. The 1998-2000 Solid Waste Management Project took on a severe cause of local pollution, the widespread dumping and burning of household trash.*

The smoke still rises, still in colors, above Nizhnii Tagil, even though many of the closest-to-ground pollution sources, especially fine dust and burning dumps, have been stilled. People still routinely discard trash, and many children are still sick. Although drinking-water quality has been improved, city leaders say water and children's health services are their current priorities, and finding funds their biggest challenge.

“The environmental situation has become better; and to a certain extent, it has stabilized,” said Angelina Savina, chair of the city's environmental protection committee. “Many people from other cities call my office, and they come—because

they want to learn about this partnership here. And the city administration is ready to share.”

“I am far from saying, ‘Hooray, we have built a civil society already!’” said Fainentel of Clean Home. “No. We are just in the process. But very important steps have been done.”

In this Russian city, Fainentel reflected, the notion of sustainability—of long-term, connected, expanding positive impacts—has indeed been translated into Russian. What's more, she added: “It has begun to be filled with meaning.”

# The Early Days: Building Trust

**T**he critical first step was taken by the city administration itself, when it agreed to work with Americans on the project,” ISC’s Barbara Felitti wrote in a 1998 journal article. “The strategy pursued was to ‘create a space at the table’ for all key groups to participate.”

For the Russians at the new “table,” this was a big step. Decisionmaking had long been centralized at the top of city government and the big industries. This project would be guided by an eight-member Steering Committee, with four Russians and four Americans. But its central challenge fell to the Priority-Setting Committee, whose 17 Russian members represented industry, the city government, education, environmental agencies, citizen activists, and the public. The city formally provided this group with the lead role in developing Nizhnii Tagil’s environmental priorities.

The committee identified air pollution and drinking-water quality as the top environmental issues. Two public surveys and other public input strongly confirmed this. Since the USEPA was already focusing on drinking-water quality issues as part of its audit activity, the Priority-Setting Committee focused on air pollution.

“Given that the public and the scientific data seemed to agree, we made the decision to focus on air pollution,” said Barbara Felitti of ISC. Even though looking at a single medium, such as air, increased the project’s chances of achieving positive impacts, the challenge remained

highly complex: Nizhnii Tagil had more than 4,700 individual sources of pollution, emitting 141 chemicals. “Our role was to identify major air polluters in the city,” said Sergei Puntus, who chaired the Priority-Setting Committee. “We were starting from scratch.

“At the beginning, each person tried to defend, to insist on his or her decision,” he added. “But then we learned to work together. We understood that this was not only to put forward your best idea, but to come to an agreement.”

Giving decisionmaking power to such a multi-sector group—especially one that included NGO and citizen members—was “absolutely new,” said Pavel Zhilin, a Priority-Setting Committee member who directed the local office of the federal environmental committee. “The American partners believed this was the way to address the problem. Our opinion was that nonspecialists could not assess the situation correctly. But in the course of the work, things took care of themselves.

“For example,” he explained, “only specialists could calculate the concentrations of impurities in the air, and say how hazardous they were. But then, voting became a means of reaching consensus. We learned to look on nonspecialists and specialists as equal partners. We identified what was the top-priority issue, and we informed the public.”

Technically, regulators like Zhilin already had enforcement power over maximum permitted loads of toxic

*Its central challenge fell to the Priority-Setting Committee, whose 17 Russian members represented industry, the city government, education, environmental agencies, citizen activists, and the public. The city formally provided this group with the lead role in developing Nizhnii Tagil’s environmental priorities.*

substances. But in reality, bringing emissions down to those standards “was impossible,” he said. “It was not realistic to comply with them.”

Instead, the process the Priority-Setting Committee proposed to use—one so far unproven in Russia—was health risk assessment, as previously described. Again, key specialists resisted. Progress stalled. Zhilin made many presentations.

“I always began with why it was important to use this new tool,” he said. “The same substance, emitted from different sources, may pose different hazards. This allowed us to realistically respond to the situation—and to try to change it with the limited funds that we have here.”

Finally, the effort won consensus. Trainings presented by the project’s new Center for Environmental Training and Information did much to build understanding and expertise. The work went forward.

In a risk-assessment process, neither specialists nor the public can know



***Pavel Zhilin, head of the local environment committee, listens to city residents' concerns during a presentation of project results. Zhilin's work group presented a list of the city's top air pollution sources, ranked for the first time according to their influence on the health of the city's population.***

"When you see with your own eyes, this helps a lot," said Savina.

This was one of five study trips to the U.S. that ISC has organized for the Nizhnii Tagil project and the later Solid Waste and Green Futures projects. It also led to the creation of a continuing sister-city relationship between Nizhnii Tagil and Chattanooga.

In the overall process of building trust and openness, "you take it step-by-step," said Felitti of ISC. "As things begin to happen, and as people see that you do what you say—that you don't have any agenda other than completing your work plan—the feelings of skepticism go away over time."

A most important aspect of the project, added Savina, "was that all this work was done together with the public. The public's opinions were considered."

But to prove that the project could actually make a difference, it was essential to achieve a real success in reducing pollution. The first chance to do that came in mid-1995—not at the big industries on the city's rim, but within a small business right in its heart.

what the greatest risks are until the process has been completed. As the work progressed, the risk assessment found which of the 141 pollutants posed the most urgent danger to public health.

"As our meetings continued, we just tried to show each other that we can learn from each other," recalled Angelina Savina, chair of the city's environmental protection committee. "We proved this to each other. People worked together, and set priorities for how this problem could be resolved."

"We believe that even the American specialists learned from us," agreed Zhilin. "We were able to assess the environmental situation in our city."

In building trust and positive relationships, a key experience for committee members was the two-week study tour they took to the U.S. in 1996. They visited Chattanooga, Tennessee, a city that has made itself one of the world's leading examples of how a very severe pollution crisis can be

reversed. In 1969, its air contamination was so severe that Chattanooga was named the most-polluted city in the U.S. Tour participants saw photos of city streets so choked with smoky pollution that cars on local streets seemed to disappear into it.

But industries, public agencies, and citizens collaborated to clean up the air—so successfully that Chattanooga is now cited as a model case study by the U.S. President's Council on Sustainable Development. In fact, a recent report by the President's Council said the "community culture" of collaboration, begun in Chattanooga to fight pollution, has since led to progress in affordable housing, in public education, and to the preservation of public parks and creation of new "greenways."

That last achievement made a special impression on the Russian visitors, who brought home the idea of creating a new greenway in Nizhnii Tagil (see "Green Futures and the Future").

# Breakthrough: The First Success

**A**s ISC was coordinating the priority setting, USEPA was overseeing the first efforts to make actual anti-pollution improvements. Its plan was to conduct environmental audits at local factories, with U.S. specialists working alongside Russian industrial managers and environmental specialists. But leaders of the city's biggest industries were reluctant to collaborate.

In 1994, though, an audit was completed at the Nizhnii Tagil Medical Instruments Enterprise, a small maker of nickel-plated surgical instruments in the central city. In the economic downturn, orders for the firm's products were depressed. It was looking for ways to both save money and improve business.

"We did need help," said Valerii Zorin, the firm's chief officer. When the audit led to a low-cost proposal, he said, "we saw not only environmental but also economic advantages."

The idea was to install a new "rinse bath" on the nickel-plating line. There, newly plated parts were washed—and eventually, the weak solution of nickel-plating chemicals in the wash basin grew strong enough to be reused in the plating process. Before, wash water had been dumped into sewers. Recycling would conserve water, prevent pollution, and reduce by 60 percent the amount of valuable nickel that had been thrown away in the wash.

Completed in 1996, the project—conducted at a small plant, involving no defense production or issues of

secrecy—did much to build confidence in the Americans' motives and their focus on low-cost solutions, said Sergei Khrebtikov, who was then a City Council member.

"We called this a demonstration," he said. "Though we had much bigger polluters in the city, we just believed that this small plant was a good place to start."

The plant's involvement also built its business. "We were hunting for new directions," Zorin said—and as the Nizhnii Tagil project shifted from industrial audits to competitive grants (see next article), Zorin's firm won a pair of \$20,000 grants to develop and

*When the audit led to a low-cost proposal, "we saw not only environmental but also economic advantages."*

—Valerii Zorin,  
Nizhnii Tagil Medical  
Instruments Enterprise

test two new products. They were a water filter for six city hospitals, and a new type of safe-water drinking fountain, using both a water filter and ultraviolet purification, for all city schools. Both were certified for use under Russian health laws.

The filters and fountains now provide purified water to more than 10,000 people each day—including 8,000 children. The company has won city funds for installing the devices, and is marketing them more widely.

"They now make up about 8-10 percent of our whole business," Zorin said. "This is good!"



***The success the Medical Instruments plant in Nizhnii Tagil had in reducing waste run-off and recovering usable nickel was quickly adapted by a furniture accessories plant in Nyтва, and this medical device factory in Ekaterinberg.***

# Big Steps in Clearing the Air

**D**espite the success at the medical instruments plant—and even though the bigger companies did send influential managers and engineers to serve on project committees—several major local industries decided not to proceed with environmental audits. By now quite visible in the city and needing a new approach to achieving results, the project employed a new mechanism that was untried in Nizhnii Tagil: an open, public competition for environmental-improvement grants.

It found a number of ready entrants among local companies. Where the approach of conducting audits and proposing follow-on measures may have seemed more an outsiders' solution, the grants competition invited projects conceived and developed by local institutions and industries.

Leaders and managers within those industries were quite aware of the impacts of pollution.

"In the city, there had formed quite a number of hazardous locations," said Victor Oslamenko, chief engineer of the Visokigorskii Mining Company. "It was very prestigious to try to improve at least one of these."

Two grant rounds offered limited funding for low-cost projects promoting clean air, human health, and public awareness. In 1996 and 1997, using published criteria, the Steering Committee judged the proposals. Ten won funding, along with another two proposals related to water system improvements that complemented



***Storms of fine dust from this dried-up "tailings pond"—a 105-acre former dumping site for rock and mineral waste from ore refining—were found to be one of the worst sources of public health problems. By planting perennial grasses, more than 150 tons of dust are kept out of the air—and city residents' lungs.***

USEPA's significant efforts to improve city water systems.

The most visible impact on air pollution—both in immediate results and through a major follow-on project—came from the mining company's plan to revegetate its "tailings pond." A 40-year-old dumping ground within city limits that held more than 40 million tons of crushed rock and mineral wastes from ore refining, the pond had been closed to new dumping. Its water had drained away, leaving a flat, barren plateau 260 hectares (105 acres) in size. In summer months, winds blew up storms of fine dust, the pollutant that the Priority-Setting Committee had found was the most urgent public health problem.

"It covered the city," said environmental activist Vera Baklanova. "You couldn't go out. It was impossible to breathe. In 1996 and 1997, we had such dust storms—and that's why the idea of the revegetation of the tailings pond became popular."

Using a \$150,000 grant, and with in-kind support from the city and the mining company valued at \$322,000, Russians and Americans tested soil additives, fertilizers, and various plant covers. By 1999, they had succeeded in covering almost half the site with perennial grasses. The project now prevents the dispersal of 150 tons of airborne dust each year—and through the Replication of Lessons Learned (ROLL) Project, it has been replicated twice elsewhere in Russia.

That success led to another. Another major source of fine dust at ground level, close to people and thus more hazardous than higher-level emissions, was the mining company's loading of open railcars with "sinter," iron ore in powder form. At the 50-year-old shop, dust plumes rose into the air each time sinter was chuted into the hopper cars.

"This particulate matter was spread all over the sky—and blown all over the city," said Roman Shunin, chief engineer at the sintering plant. "It was a very difficult environmental situation. That's why we made this change."

The change was the installation, completed in 2000, of a 40-meter-long "cyclone" collection system over the loading spur. The system is a complexity of hoods, pipes, and collection cones, called the Dust Dragon—and it now collects up to 1,300 tons of dust each year, including 200 tons of fine dust. Estimates are that the system prevents up to 28 estimated annual deaths attributable to fine dust from this site.

The Dust Dragon is helping the company improve working conditions—along with its workforce, its productivity, and its product, said company chief engineer Oslamenko.

The city's larger industries have, meanwhile, also noticed.

"When these investments were made, then the major enterprises in the city understood that this was not just talk," said Irina Starkova of Clean



**Members of the environment committee, NGO representatives, and health department officials meet to discuss health risk assessment results.**

Home, speaking about all the initiatives made possible by project grants. "They understood that certain solutions could be designed and implemented. Here, the big industries now understand the importance of addressing these problems sooner than in the cities where environmental projects have not been implemented."

"Now," added Sergei Strunov, who covers local industry for the newspaper *Gornii Krai*, "it is a natural part of good management policy to think about environmental activities, and to include them into the budget.

As for the replanted pond and the Dust Dragon, Starkova added: "Not only the mining company takes great pride in this—but also the whole city."

*Where the approach of conducting audits and proposing follow-on measures may have seemed more an outsiders' solution, the grants competition invited projects conceived and developed by local institutions and industries.*



# Small Grants: Faith, Hope, and Funding

In some basement rooms near a prominent park in the central city, are the quarters of *Vera, Nadezhda, Lubov*—“Faith, Hope, Love.” This is not an environmental group, it’s a club for disabled teens and young adults. But an environmental idea the club had was among 50 projects funded by the Nizhnii Tagil project partners and by the city, through five popular “small grant” competitions offered to local clubs, cultural centers, orphanages, and other civic groups.

As a result, this basement group has made a very visible difference in Nizhnii Tagil.

Begun in 1997 with just 10 members, Vera, Nadezhda, Lubov now provides some 150 young people with a place to go, with friends and volunteer supporters, and with activities that offer enjoyment and purpose. The members like to work in nature.

The park near the club’s home offered a clear challenge. Facing Lenin Prospekt, a central avenue, the popular park has tree-lined paths and a children’s puppet theater. It was also rundown, neglected, and vandalized. In the transition period after the Soviet era, no single agency or organization was taking responsibility for the park.

“It was a very hard time, the late ‘90s,” said the club’s volunteer director, Ludmilla Gaponova. When the first small-grants competition was announced, offering awards of \$500-\$1,000, she said, “We decided to try to write a proposal. We didn’t expect to win.”

Many in the city “thought we were crazy,” she added, to try reclaiming such a damaged park with only a small group of disabled young people and volunteers.

But the club won three successive grants—and each week in the summers that followed, members, parents, and volunteers went to work. They bought and set out dustbins. They restored and painted benches. They installed and fixed up flower vases, made flowerbeds, planted flowers. They convinced the city to provide tools and assistance.

They learned to be advocates. The group polled 148 park users—and 140 said they wanted the city to maintain the park for young people. Club members let the city know. They were persistent.



***To help raise public awareness, a youth organization received a small grant for clean-up and beautification efforts that included encouraging its young members to work on the project with area pensioners.***

“We use this. This is the central park,” Gaponova explained.

“Thanks to their efforts, the city budget now plans some funds for the park—which was never done before,” said Lubov Fainentel of Clean Home.

The first five small-grant rounds were either wholly U.S. funded or were funded half by American and half by city contributions. Since then, the city has entirely funded two more grant rounds for social-service organizations, and two more for environmental projects.

Themes of small-grant competitions have included environmental education, “Stop the Trash Invasion,” and “Green Dress for the City.” Among the many funded projects have been an environmental poster contest and film festival; a new children’s newsletter, *Ekovestnik (Econews)*; and support and equipment for new NGOs.

“The small grants allowed us to involve very many people in addressing environmental issues,” said Angelina Savina, chair of the city’s environmental protection committee. “Each of them is a member of the city—and each can change the environmental situation.”

As for Faith, Hope, Love: “Now we’re forming a Park Friends Organization, a newsletter for the disabled, and a sewing production facility,” Ludmilla Gaponova says. “We have very ambitious plans!”

# Taking the Lead on Solid Waste

As the Nizhnii Tagil project drew to a close in the late 1990s, one of the major problems the city still faced—one that virtually everyone was both affected by and helped to cause—was solid waste. Almost all of the 800,000 tons of trash the city collected each year was going to open dumps that were unregulated, uncompacted, and commonly burning, creating noxious smoke.

Many residents simply discarded their garbage. “In the yards and outside the downtown, there is trash everywhere,” one resident said. “There are no places to go with your children.”

“In the areas where people don’t have waste collection, the big problems were illegal dumps and people

burning their trash in the backyard,” said ISC Project Director Kevin McCollister of ISC. Up to a 10th of city residents live in private homes that had no collection service.

“In a city with already severe industrial pollution problems, residential trash burning was a significant additional health problem,” McCollister said.

During the first Nizhnii Tagil project, a grant of \$20,000 funded the design and permitting of a new, modern landfill. By paying all the preparation costs, the grant leveraged city construction funds and made it possible for Nizhnii Tagil to build the new landfill, which opened in 1999, 13 kilometers outside the city.

“It’s not a dump; it’s a properly

*Clean Home, ISC’s partner and the local center for the Nizhnii Tagil project, had grown into a strong NGO ready for a new challenge. Clean Home and ISC won USAID funding through the International Resources & Exchange Board (IREX) to conduct a two-year Nizhnii Tagil Solid Waste Management Project—this time with Clean Home as the lead partner.*

organized landfill,” said current Deputy Mayor Vladimir Below. “The technologies used there are the same as in the U.S. As a result, two burning and very dirty landfills have been closed.” The city hopes to close and cap the remaining old dumps by the end of 2001.

Meanwhile, Clean Home, ISC’s partner and the local center for the Nizhnii Tagil project, had grown into a strong NGO ready for a new challenge. Clean Home and ISC won USAID funding through the International Resources & Exchange Board (IREX) to conduct a two-year Nizhnii Tagil Solid Waste Management Project—this time with Clean Home as the lead partner.

Clean Home recruited a new, 20-member Advisory Board, with members from local waste utilities, environmental NGOs, the regional environmental agency, industry, higher education, students, and the media. As in the first project, many members were meeting and working



***“Thanks to Russian-American cooperation, the Tagil dump was used as a model of a more effective technology of collecting and utilizing solid household waste. As a result, starting from 2001, our Tagil dumping ground will become the one and only place of collecting and burying garbage in the city. All the other out-dated dumps will be closed.”***

Ilaya Shcherbakov  
Director of the Tagil municipal enterprise.

*The city surprised participants by asking that the project not just advise on a new solid-waste plan, but also actually write it. In early 1999, the members submitted their draft. This was the first time in city history that the administration invited and listened to public comment on a municipal plan or project before taking action.*

together for the first time.

When the Solid Waste project began in 1998, Nizhnii Tagil was in the depths of Russia's economic crisis. Many local people were not receiving their salaries; but those volunteering on the project continued working hard. They included children who helped survey city residents, and university students who mapped dumping sites.

"It's surprising that under the present difficult economic conditions, we have been able to maintain such a high number of volunteers," said Natalia Evdokimova of Clean Home. "I think this is because the waste problems literally concern everyone."

The city surprised participants by asking that the project not just advise on a new solid waste plan, but also actually write it. In early 1999, the members submitted their draft. This was the first time in city history that the administration invited and listened to public comment on a



***One of the two refuse collectors that were purchased with project funds removes trash in the private sector of Old Golyanka twice a week, and citizens are taking an active part. "I've been living here for 40 years. We managed our trash on our own: part of it we burnt and part of it my husband took away in his car, but now we don't have this problem."***

City resident Ekaterina Zhukova

municipal plan or project before taking action.

"This plan was developed from the very beginning using public opinion," said Ariadna Morocha, chair of the city Nature Protection Society. "This is a fundamentally new way of working in the city."

With the plan adopted, the project funded improvements to the new landfill and the purchase of two new collection vehicles for the private-home districts. When the trucks, which bear a U.S.-Russia "handshake" logo, began serving the homes in 2000, "they had to stop at each house—and people would bring bags and baskets of trash," said Nadezhda

Utkina of the waste utility Spetsavtozhozaystvo (SAH). "After four houses, the truck was full."

Still, the clean-up effort faces challenges, such as convincing residents to sign contracts to pay for collection services.

"People still adhere to the old stereotype—that the government is responsible for everything," said Alexander Ivanov, director of SAH.

"I do not quite agree," said his colleague Utkina. "This service gives people the opportunity to see how they can live without dumping. The district even now looks different. There is no trash along the roads."

# Young Citizens, New Solutions

In the outlying Dzerzhinsky District near the chemical plant Uralkhimplast, pollution is among the city's heaviest, and soils are infertile—but the school is not. And in a new collaboration with higher education and the chemical plant, students here are working on the soils.

From 1994-95, the district's School 41 was among two in the city that became demonstration sites for Old Sable, the Nizhnii Tagil project's environmental education component (named after the city mascot). The Russian educational system has long been rigidly centralized, but Old Sable has helped to introduce a new focus on examining and seeking practical solutions for local environmental problems.

As part of Old Sable, ISC also organized a U.S. study tour and delivered four trainings, to 45 participants, on how to create learning experiences that delve into a community's own ecological challenges, using active, hands-on discovery methods.

The curriculum that participants in Old Sable then developed for the two model high schools was successful enough that in 1996, the city mandated its use in all of Nizhnii Tagil's schools. It was then expanded into curricula for all primary, middle, and secondary levels.

Here at School 41, the energy set in motion by the project continues to expand in very



**Vladimir Smirnov, rector of the Nizhnii Tagil Teachers' Training Institute, joins a class of American children during an early study tour to the United States. "Our American partners helped us a lot in giving us training, books and programs ... so our teachers will reach a level of understanding necessary to have environmental education in schools."**

promising ways. Teams of students, supported by classroom teachers and curriculum-development specialists from the Nizhnii Tagil Pedagogical Institute, are researching practical ways to detect, measure, and combat pollution. One afternoon during the 2000-01 school year, five teams of students, each member 14-16 years old, described the work they were doing.

*"This has happened for the first time in Russia: that a school, an institute of higher education, and an industry are working closely together," said biology teacher Nina Matveyeva.*

"Our project is environmental assessment of discharged waters from the chemical plant," said student Katya Kuzevanova. "Because we need clean drinking water, we tried to see how it can be cleaned."

Using the discharged water, the team of three students tested a floating plant whose roots can remove impurities.

"We found that this plant, this flower, really removes such substances as formaldehyde, heavy metals, and even some bacteria," said Olga Shikhova. The team's efforts recently won a first prize in the city-wide science competition.

A professor from the teacher-training college has advised all the student teams—and their projects involve cooperation with the chemical plant.

"This has happened for the first time in Russia: that a school, an institute of higher education, and an industry are working closely together," said

biology teacher Nina Matveyeva. Although universities frequently work with school students on research projects in Russia, this is the first time an industry has joined in such a collaboration.

“Responsibilities are assigned among different [student] teams,” she explained. “Some identify polluted places. Some try to understand what pollution is involved. Others try to find means to reduce pollution.”

“In this district, we have created a model of this type of collaboration. I see the results; it’s very satisfying,” said Svetlana Gomzhina, a professor at the Pedagogical Institute.

Cooperating with the city and its landscaping department, students from this school and from the teachers’ college have organized “Environmental Alley”—a strip of land between School 41 and the nearby Winter Sports Palace. Students test different doses of biohumus and care for plants, trying to render the district’s infertile soil productive again. They are also working to determine the number and mix of trees, shrubs, and flowers needed per resident of the district, based on the plants’ capacities to trap dust and gas.

“A lot of people are interested in this work,” Professor Gomzhina said.

Though environmental learning is not new in the city or its schools, she added, “in the past, we just tried to get some theoretical knowledge, and we just discussed global problems—for example, the greenhouse effect.

Now we understand what our areas of action should be: the environmental situation of the city, of the street, of the neighborhood where we ourselves live.” The school’s director, Natalia Shendelyuk, also serves on the city’s Steering Committee on Environmental Education.

The teams of middle-school students were asked their thoughts about the city’s future.

“Of course, we would all like our city to become beautiful, environmentally safe,” said Vasily Kubasov, “but we understand that without industries, there would be no city. Our approaches are aimed at making these industries environmentally clean.”

“This is a big problem for our city,” added Anna Yarkova. “But if people work together, I believe we can all make some little difference. I think people can do much to improve the situation.”

“Before I began my project, I did not know what the environment is,” added Katya Kuzevanova, standing proudly to give her answer. “Now I have become aware. I will do my best to make our city just a little bit cleaner—so that my children will have just a little bit cleaner future.”



**Russian teachers learn about interactive teaching methods in environmental education as an alternative to traditional lecture approaches. Workshops were provided in cooperation with the area teacher-training institute.**

*Students test different doses of biohumus and care for plants, trying to render the district’s infertile soil productive again. They are also working to determine the number and mix of trees, shrubs, and flowers needed per resident of the district, based on the plants’ capacities to trap dust and gas.*

*“A lot of people are interested in this work,” Professor Gomzhina said.*

# “Green Futures” and the Future

**N**izhnii Tagil is more than a factory town. It has history, and it has culture. Under the old Czarist system, the city became well known for fine art by serfs whose families labored in the metalworks; and when, during World War II, the USSR moved thousands of families here from the Ukraine and St. Petersburg regions to work in the relocated factories, the new arrivals brought their music, art, and theatre. Today's city is home to some 80 professional artists, a professional theatre, a school and college of music, an art museum known throughout Russia—and some 60 rock 'n' roll bands.

As the city comes through what Russians call the “period of transition” to a more stable market economy, business here is expanding and cultural life is growing more active. Organizers of a new environmental project hope this is also the time for green spaces—and a new environmental consciousness—to begin flourishing as well.

Building on an idea they witnessed on the study tour to Chattanooga, collaborators led by Clean Home have organized a new Advisory Committee, won funding and city support, and produced a plan for “Green Futures,” a project that envisions a new greenway in the heart of the city.

“Maybe it's the right time. Every family now has accommodation and food—now we are looking for some new ways to improve the quality of life,” said Alexander Gryadov, the city's chief architect and a member of

***Nizhnii Tagil established a sister-city relationship with Chattanooga, Tennessee in 1996 and planted this oak tree along the Chattanooga greenway. Recognized as a model by the President's Council on Sustainable Development, Chattanooga's efforts inspired Nizhnii Tagil to develop its own greenway.***



the Green Futures Advisory Committee.

Along the near shore of the central pond, the city has a children's park, a promenade, some industrial-heritage exhibits, and a museum leading to the Old Works and then Fox Hill. The plan is to link these areas, improving neglected spaces between them, and develop the Old Works as an industrial park and living-history museum—then to extend the greenway along the shores of the Tagil River.

“These beautiful places and these neglected places are all mixed together,” said Natalia Evdokimova of Clean Home, which is lead partner on the project, with ISC again providing support. “The idea is to improve them into one big greenway, so people can walk there, relax, go for sports, enjoy nature, and just have fun.”

*Building on an idea they witnessed on the study tour to Chattanooga, collaborators led by Clean Home have organized a new Advisory Committee, won funding and city support, and produced a plan for “Green Futures.”*

Organizers foresee three long-term impacts. First, Green Futures will involve much planting of trees and other vegetation. “This will improve the quality of air, the quality of water, and the quality of life in general,” Evdokimova said.

Second, Green Futures can also build residents’ understanding of their city’s historical and cultural heritage.

And, third, it may help Nizhnii Tagil attract new interest, new business, and new visitors.

“I hope now that we can get allocations of funds from the industries as well as the city—and that the NGOs can be a big help,” said Gryadov.

Each year, 1,500 schoolchildren and many adults visit the environmental room at the city museum, where Galina Kotina, educator at the museum, describes the new project and shows exhibits on greenways in Chattanooga and other U.S. communities. She served on the original Nizhnii Tagil project’s Priority-Setting Committee.

“That helped me to know better the whole environmental situation in the city,” she said. “So by the time this new project was started, it was very easy for me to get involved.”

In even more ways than Green Futures, the impacts of the U.S.-Russian partnership in Nizhnii Tagil

*The impacts of the U.S.-Russian partnership in Nizhnii Tagil continue to grow. They are evident in the flourishing of local environmental education; in the new interest shown by industries in low-cost means of curbing pollution; and in the city’s creation of new groups to guide and advise its efforts on environmental investments and decisionmaking.*

continue to grow. They are evident in the flourishing of local environmental education; in the new interest shown by industries in low-cost means of curbing pollution; and in the city’s creation of new groups to guide and advise its efforts on environmental investments and decisionmaking.

“I think one of the impacts on the city was this concept of sustainable development,” said Lubov Fainentel of Clean Home. Fainentel now also directs a separate NGO support center, which has won city funds to support its work with the fast-growing community of citizen organizations.

“The city now tries to form working groups of people involving very different organizations, leaders of industries, city officials, and absolutely NGOs. This helps a lot.”

What about public awareness and civic interest? One new indicator suggests a positive trend. After Russia’s federal environmental committee lost its enforcement powers in a bureaucratic realignment, people across the nation mounted a petition drive that collected more than two million signatures to force a referendum on restoring those powers. In Nizhnii Tagil, where the local office of the environmental committee played an important role in the partnership, volunteers fanned out to

collect more than 2,400 signatures.

Even so, public awareness of how citizens can make a difference in Nizhnii Tagil still faces challenges. Many people still rely on what Russians call *bolyavar*: the expectation that government will deliver all services at no cost. Changing attitudes takes time, say civic leaders.

In general, because it aimed at long-term change, the Nizhnii Tagil Environment Project has clearly created impacts and influences that will continue to unfold over time, as this city that has been among the world’s most polluted continues to work toward a stronger, cleaner, healthier future.

“The impacts of this project don’t just relate to environmental objectives—they relate to civil society. They involved how government interacts with citizens, and this new role that the city government is learning,” said Barbara Felitti of ISC.

“This was not just a technical fix for industry,” she added. “The Nizhnii Tagil project introduced to this city a process, and a mentality, of public collaboration on solving problems.” This inclination to work together on solving problems, she said, is part of what creates stability in a society.

“Of course we understand that this is a work not just for one or two years, but for a much longer period,” reflected Angelina Savina, chair of the city’s environmental protection committee, who was a key participant in the partnership. “But I think we will be able to accomplish it.”

# Looking Back: Lessons Learned

**A**s noted throughout the preceding pages, some key lessons that Russian participants learned through the Nizhnii Tagil projects include the importance of diverse, multi-sector steering and priority-setting committees, of public participation, of specialists and non-specialists working together, and of encouraging citizen groups and NGOs to help tackle local problems.

But what about the lessons the American partners learned, in carrying out such a complex project in a heavily industrialized, heavily polluted city?

“If you get the right people, you can do this,” said Bill Freeman, New Independent States Program manager at USEPA. “To get there, we had to go through a lot of ‘underbrush’ ... There was a while when we were just trying to get the right set of people and the right set of resources.”

“Invest in developing partnerships,” said George Hamilton, president of ISC.

In the early stages, “you can’t necessarily nail down from day one exactly what you’re going to do,” said Barbara Felitti of ISC. “Part of the project is its inquiry into what issues people in the community care about, and what ways they might address those issues.”

The initial focus of any broad-based, community-centered problem-solving project, from ISC’s perspective, is to define the problems to be solved—and to develop a strong, shared



***Getting citizens, especially young people, involved in decisionmaking in Nizhnii Tagil is one of the most lasting legacies of ISC’s partnership projects there.***

vision for how your project will do its work. Critical to this vision, to ISC, is a strong focus on encouraging public participation and shared decisionmaking.

In Nizhnii Tagil, the Priority-Setting Committee for the project was diverse in very specific ways: It included three representatives of NGOs, three from local industries, and four from government. This approach was continued throughout the project.

“In this way, you can involve broad groups of people, engaging them in setting priorities and taking action,” said Hamilton. “This builds a sense of responsibility—and of support for the tough decisions that municipal officials have to make.”

*The initial focus of any broad-based, community-centered problem-solving project, from ISC’s perspective, is to define the problems to be solved—and to develop a strong, shared vision for how your project will do its work. Critical to this vision, to ISC, is a strong focus on encouraging public participation and shared decisionmaking.*



Sometimes, he added, local officials may be hesitant to inform and involve broad segments of the public, seeing this as adding risk and uncertainty. But once they do, the public support and momentum that develops for a broadly based project pays dividends.

#### **“PEOPLE KNOW THE ISSUES”**

“It’s vital to create an environment that allows people to think, and to create the solutions that they have the capability to carry out,” said Felitti. “People in the community know what the issues are, and they know they need support. One of the most important results is to help them address and prioritize these problems.”

Having created their vision and built consensus on the problems to address, the Nizhnii Tagil partners learned to take a flexible, adaptable approach to the ways they might make a difference. After industrial leaders decided not to host environmental audits in local factories, the project offered funding for anti-pollution improvements through an open, public grants competition. This approach encouraged and rewarded local strategies and solutions.

The grantmaking also led to several rounds of competition for smaller grants, which were open to all sorts of NGOs, citizen groups, and members of the public.

“These had the effect of creating opportunities for the public to show officials that they, too, had ideas, and they were able to do things to

accomplish changes,” said Kevin McCollister of ISC.

Overall, “finding and investing in good local leadership is essential,” said Hamilton. “If there are any secrets to success in any of our projects, that is certainly one of them.”

Critical to this was building the capacity of local NGOs—often the breeding ground for citizen leaders. In Nizhnii Tagil, the partners actually helped to develop a new NGO, Clean Home, to provide a project office and local coordination. Today, Clean Home is providing training and support to the city’s NGO sector, which is now growing fast.

In building expertise and leadership within the NGO, government, education, and business sectors, ISC found it cost effective to bring in USEPA specialists and consultants for short-term trainings—and to employ a “train-the-trainers” approach, so that each training could have continuing, expanding impacts on meeting community needs.

“When you provide training and technical expertise that is relevant to solving an immediate problem, that is attractive to people,” said Hamilton. “They realize that you are trying to help them learn.”

#### **THE IMPORTANCE OF RESULTS**

“Another lesson learned is that, not surprisingly, achieving results is critical,” added Hamilton. “And achieving them through this process of getting the public involved, and building multi-stakeholder participation, means

*In building expertise and leadership within the NGO, government, education, and business sectors, ISC found it cost effective to bring in USEPA specialists and consultants for short-term trainings—and to employ a “train-the-trainers” approach, so that each training could have continuing, expanding impacts on meeting community needs.*



***Ariadna Morocha (in foreground), chair of the Nizhnii Tagil Nature Protection Society Council (a public organization) comments: “I think that the main outcome of the joint Russian-American effort is a more attentive and respectful attitude of the city administration toward the public’s concerns about environmental and nature-protection issues.”***

that not only will the results be more long-lasting, but citizens will also be spurred to act further, and to achieve more results.

“Witness the follow-on activities in Nizhnii Tagil, the Solid Waste project and the Green Futures project,” he added. “This momentum that has been created would not have developed if the city had simply taken environmental measures on its own, without anybody knowing about them.”

“Some of the results that you are working toward will be longer-

term—developing at the end of a project, or even after it concludes,” added McCollister. “It’s also important to achieve some results initially, to show that there are changes happening.”

“What’s most lasting is the capacity that gets built—but the early concrete results are important as a spark to get things going, and help mobilize people,” said Felitti.

“You need to integrate the short-term results with the long-term capacity building,” concluded Hamilton. “You can’t do one without the other.”

*“What’s most lasting is the capacity that gets built—but the early concrete results are important as a spark to get things going, and help mobilize people,” said Felitti.*

# The Nizhnii Tagil Environment Project

The components of this 1993-2001 partnership project were designed strategically, to build on one another. They also led to a pair of follow-on projects—and they brought about continuing changes in the way this city approaches environmental problems, along with increased and growing capacity in its NGO community.

**PRIMARY FUNDER:**

U.S. Agency for International Development (USAID)

Additional support from the Trust for Mutual Understanding, ISC's Special Opportunities Fund, and matching support from the Nizhnii Tagil city administration.

**PROJECT PARTNERS:**

U.S. Environmental Protection Agency (USEPA); the Institute for Sustainable Communities; the Nizhnii Tagil City Administration and the Sverdlovsk Oblast Environmental Committee; and Clean Home (nongovernmental organization in Nizhnii Tagil).

**PROJECT GOALS:**

- **Build capacity in local environmental institutions**, both public and nongovernmental, to address and improve local environmental problems.
- **Improve environmental quality**, thereby reducing risks to public health, through practical, affordable measures.
- **Promote public participation** by all sectors of the community, in civic affairs and democratic decisionmaking.

- **Build models of cooperation** to develop sustained, productive relationships among local government, industry, and NGOs.
- **Encourage open access** to information about environmental issues, and replication of project successes in other communities.

**STEERING COMMITTEE MEMBERS:**

City Administration, Oblast Environmental Committee, State Committee on Environmental Protection, Tagilecoprom (an NGO), USAID, and USEPA.

**PROJECT COMPONENTS (WITH LEAD IMPLEMENTATION PARTNERS):**

- Project Coordination (ISC, with Clean Home)
- Environmental Planning and Priority Setting (ISC)
- Environmental Improvements (USEPA)
- Environmental Strengthening (ISC)
- Institutional Strengthening (USEPA)

- Center for Environmental Training and Information (ISC)

**PRIMARY PARTNER ORGANIZATIONS FOR COMPONENT ACTIVITIES:**

Clean Home, Center for Environmental Training and Information, City Ecology Committee, Interraion Environmental Committee, Sanitary Epidemiological Service, VodoKanal, Medical Instrument Enterprise, and Nizhnii Tagil Pedagogical Institute.

**FOLLOW-ON PROJECTS:**

**Nizhnii Tagil Solid Waste Management Project**, 1998-99: coordinated by Clean Home (lead partner) and ISC

**Green Futures**, 2000, continuing. Clean Home is lead partner.

Both Solid Waste and Green Futures projects are guided by multi-sector, city-wide advisory boards, as was the original Nizhnii Tagil Environment Project.





INSTITUTE *for*  
SUSTAINABLE  
COMMUNITIES

**HOME OFFICE**

*Institute for Sustainable Communities*  
56 College Street  
Montpelier, Vermont 05602-3115 USA  
Phone 802-229-2900  
Fax 802-229-2919  
E-mail [isc@iscvt.org](mailto:isc@iscvt.org)  
Web [www.iscvt.org](http://www.iscvt.org)

**RUSSIA**

*Institute for Sustainable Communities*  
Box 85, PO 117312  
Moscow, Russia  
Phone 7-502-937-5002  
Fax 7-502-937-5003  
E-mail [isc@iscmoscow.glasnet.ru](mailto:isc@iscmoscow.glasnet.ru)  
Web [www.iscmoscow.ru](http://www.iscmoscow.ru)

*ISC also has offices in Bulgaria and  
Macedonia. Please check the ISC website  
for contact information.*