At CRDF, we take great pride in bringing scientists together to work toward shared goals. In today’s world, science transcends disciplines as well as national borders. It is a globally cooperative venture that addresses the challenges of our time—from public health and the environment to economic development and strengthening science education. Through grants, technical resources and training, CRDF fosters enduring partnerships for lasting social and economic benefit.

2007 has been a year of building on our strengths in supporting international science collaboration in Eurasia and in such regions as the Middle East and North Africa. We have continued to rely on our strengths as a global science and technology organization, including our unwavering belief in our mission; our flexibility in response to changing needs; and our commitment to transparency and accountability in everything we do.

The richness and diversity of our work is evident in the projects featured in the following pages—including creating public health centers to address the epidemic of HIV/AIDS in Russia; providing support for research projects on issues of international importance; developing initiatives to promote science and education in the Middle East and North Africa; and creating partnership opportunities for U.S. investors and Eurasian technology entrepreneurs.

These stories reflect CRDF’s commitment to engage thousands of scientists and engineers in addressing today’s most critical challenges. Such cooperation transcends borders and connects the United States and other nations.
Our approach is simple—join with organizations and individuals who care deeply about major global challenges irrespective of regional differences. Indeed, our effectiveness in building sustainable partnerships with both governments and private organizations in the communities we serve was one of the highlights of a new report published in 2007 by The Henry L. Stimson Center. The report—entitled Cooperative Nonproliferation: Getting Further, Faster—concluded that CRDF programs offer the highest return on investment because of our ability to work with U.S. government agencies, other national governments, foundations and other nonprofits, universities and business enterprises.

Simply stated, the world we will live in tomorrow depends tremendously on the support given to science and scientists today. We are delighted to continue in our effort to raise awareness about the importance of engaging scientists internationally to address a range of global challenges. We will hope you will join us in creating this collage of collaboration.

John Moore
Chair, Board of Directors

Cathleen Campbell
President & CEO
Collage of Collaboration: Global Health

Partnering to Overcome Barriers

In Eurasia, HIV/AIDS has hit with a force that rivals the spread in developing nations. While the Russian Federation has dedicated substantial resources in response to the AIDS epidemic, it faces some daunting barriers, including the shortage of reliable health data. Many researchers also tend to focus on individual areas of expertise—instead of working together to produce multidisciplinary studies on complex health issues.

Fostering multidisciplinary collaborative research through public-private partnerships is turning out to be a key step in overcoming these barriers, and CRDF is continuing to be an active leader in supporting this approach in the region. In 2007 CRDF joined the Russian Federal Agency for Science and Innovation (FASI) in launching a special competition to support the development of two HIV/AIDS public health centers—located in Russia—that will transform the way multidisciplinary research is performed in that country.

The formation of both centers reflects the history of cooperation in health research between the U.S. and Russia, says Dr. Maia Rusakova, the director of Stellit, a Russian nongovernmental organization.
The Stellit and SRIHPB consortiums have a long history of collaboration, ranging from collaborative research and training projects to numerous Russian and international publications. Both centers will perform essential research to help Russia address the HIV epidemic. The methodologies developed through these centers will also be applicable to other health issues in Russia, thereby positioning Russian researchers to provide expertise to health researchers in other countries, planting the seeds for future international collaboration to serve a tremendous public need.

CRDF is working to develop activities and initiatives that promote U.S. collaboration with foreign regions such as the Middle East, North Africa, and Southeast Asia. Potential activities include lectures by U.S. scientists at universities and other technical institutions across a region to foster greater academic collaboration; technical workshops; and establishment of centers of excellence that can bring together experts from the United States with local experts to focus on regional technical challenges.

In particular, we have been exploring expanded cooperation with the Middle East and North Africa region by becoming more familiar with its unique needs and challenges. For instance, we provided support for a conference entitled “Frontiers of Chemical Sciences III: Research and Education in the Middle East” between Dec. 8-12, 2007 in Istanbul, Turkey. The conference—better known as the Malta-III conference—served to identify unique opportunities for collaboration to meet challenges for economic and social development in the region, including science education, water and the environment, medicinal chemistry, materials science, nanotechnology and solar energy. Scientists from throughout the Middle East held frank and constructive discussions and defined areas where they would like to collaborate to solve regional problems.

The Malta III conference was conceived by Dr. Zafra Lerman, the head of the Institute for Science Education and Science Communication at Columbia College Chicago and the co-winner of the 2007 CRDF George Brown Award for International Science Cooperation.

In addition to bringing together a cadre of regional experts to collaborate on regional issues in the Middle East, as in the case of Malta-III, CRDF has actively participated in a range of other conferences in order to discover new opportunities that lead to future collaborations.
Collage of Collaboration: Global Health

Project Snapshot

Partnering to Overcome Barriers: A New Level of Cooperation

Much work needs to be done to fill in the knowledge gaps and help stop or reverse HIV/AIDS and related infections in the Russian Federation. According to Dr. Maia Rusakova, the director of Stellit, a research-based nongovernmental organization based in St. Petersburg, Russian researchers need to get a better understanding of the disease’s transmission among the bridge population in close contact with high-risk groups across Russia’s regions.

However, more effective research methodologies still need to be established, and that is where the Stellit-based HIV/AIDS public health center will come into play. The center will draw on the expertise of specialists from Russia and the United States in order to facilitate HIV prevention measures in the Russian Federation based on best international practices and standards.

Dr. Rusakova says that the development of a methodological strategy depends on the strong cooperation between the Russian government, NGOs like Stellit and CRDF, and academic institutions.

“For us, it’s like a next step,” says Dr. Rusakova. “While Stellit has always worked with such international organizations as WHO and UNAIDS, now is the time to put all of this experience together. CRDF’s support of the center is extremely important in taking our work to the next level.”

“...CRDF’s support of the center is extremely important in taking our work to the next level,” says Dr. Rusakova.
2007 George Brown Award

Recognizing the Value of International Cooperation

Both Dr. Zafra Lerman, head of the Institute for Science Education and Science Communications at Columbia College of Chicago, and Dr. Brian Tucker, founder and president of GeoHazards International, are pioneers of using international scientific collaboration to make the world a better place. In 2007 CRDF presented each individual with the George Brown Award for International Scientific Collaboration in recognition of their roles in fostering strong relationships between the United States and foreign counterparts.

Dr. Lerman has spent her career engaging and encouraging scientists around the globe in the pursuit of peace, cooperation and cultural understanding. She has worked to improve the quality of science education and has stimulated human rights awareness in communities of chemists worldwide. She has recently focused on connecting scientists from the Middle East to begin building the basis for serious cooperation and communication in the future—including an annual conference that brings together scientists from Israel and other Middle Eastern nations.

“Science is probably the only field that contributes to the longevity and quality of life, but it can also cut life short,” says Dr. Lerman. “We have learned from the past that scientists can contribute to solving global issues by communicating with each other.”

Dr. Tucker has worked tirelessly to reduce death and injury caused by earthquakes in the world’s most vulnerable communities—from Tajikistan to Ecuador. He is a seismologist and disaster prevention specialist working through a global network of people to share and promote civil engineering principles, and connecting local experts, engineers, scientists and government officials with their counterparts abroad.

“Accepting the George Brown Award has a personal significance to me,” says Dr. Tucker. “George Brown was the first politician I supported as a graduate student in San Diego. It’s a great personal honor to accept the award in his name and from CRDF.”

“We have learned from the past that scientists can contribute to solving global issues by communicating with each other,” says Dr. Lerman.
Science acts as a bridge between countries while providing solutions to economic, health and environmental challenges that do not observe political borders. Recognizing this, CRDF and its partner organizations in Armenia, Azerbaijan and Georgia organized the first grant competition to involve project teams with collaborators from each of the countries in the region as well as the United States.

The competition, known as the South Caucasus Cooperative Research Program (SCCRP), generated collaborative ties exceeding our expectations. Although CRDF was in a position to fund only two proposals, the unexpectedly strong response to the competition and the high quality of the proposals attracted suggests that this is a largely untapped avenue for regional cooperation.

More than 300 project participants—more than 100 each from Armenia, Azerbaijan and Georgia—joined in submitting 15 different proposals to the competition. The project proposals involved 35 different Southern Caucasus research institutions and requested support for more 120 young researchers and graduate students as well as for 29 U.S. collaborators. In addition, 88 of the South Caucasus project team members listed on these proposals were former weapons researchers seeking to apply their expertise to the solution of civilian research problems.

Our partner foundations—the National Foundation of Science and Advanced Technologies (NFSAT), the Georgian Research and Development Foundation (GRDF) and the Azerbaijan National Science Foundation (ANSF)—provided
invaluable support throughout the competition process. They publicized the program, provided grant-writing training, acted as trusted institutions within each science community to smooth concerns about the regional collaboration and supported project administration and oversight.

On the basis of an international peer-review, CRDF and its partner organizations allocated a total of $495,000 to the two most meritorious projects. Their decision was based in part by the potential for the projects to contribute to regional economic development.

The first project is a research collaboration between teams led by Dr. Rafik Melkonyan of Armenia, Dr. Vasif Baba-zade of Azerbaijan, Dr. Sergo Kekelia of Georgia and Dr. Jeff Doebrich of the U.S. Geological Survey. This international group undertook a modern evaluation of the gold mining potential of the South Caucasus that will support revitalization of the regional economy. The findings identified several new prospects for commercially viable mining in each country and are expected to stimulate new mineral exploration, economic development and improved methods for the disposal of mining waste.

The second project is a collaborative effort led by Dr. Vigen Goginyan of Armenia, Dr. Nariman Ismaylov of Azerbaijan, Dr. Giorgi Kvesitadze of Georgia and Dr. Tamas Torok of Lawrence Berkeley National Laboratory. The research teams have created a network of microbiology and biotechnology programs for solving crucial problems in food safety, energy and ecology. They are addressing major regional priorities such as microbial pest control, petroleum technology, microbiology and fermentation technologies for the wine industry. Their work seeks to improve efficiency in several important local industries and significantly benefit the regional economy.

Both of these projects have provided a productive way to ease tensions and contribute to peace and prosperity in the region. They have also established fruitful multinational collaborations that advance the economic and intellectual potential of science by sharing of knowledge and techniques across borders—a model that has since been replicated in the Southern Caucasus by other organizations, such as the International Association for the Promotion of Co-operation with Scientists from the New Independent States of the Former Soviet Union (INTAS).
A Bridge Between Nations: Evaluating the Gold Mining Potential in the South Caucasus

A tremendous amount of mining data was generated in the South Caucasus during the Soviet era, but little of it was shared at the time among the countries in the region, according to Dr. Jeff Doebrich, an associate program coordinator of the Mineral Resources Program of the U.S. Geological Survey. To address this issue, Dr. Doebrich collaborated with teams from Armenia, Azerbaijan and Georgia to provide a modern evaluation of the South Caucasus’s gold mining potential that will support revitalization of the regional economy. The teams involved in the collaboration were led by Dr. Rafik Melkonyan of the Institute of Geological Sciences in Armenia, Dr. Vasif Baba-zade of Baku State University in Azerbaijan and Dr. Sergo Kekelia of Janelidze Institute of Geology in Georgia.

“As a program like SCCRP grows and evolves, it will form a network of scientists who have worked either in the region or in a particular field,” Dr. Doebrich notes. “Through such a network, avenues of collaboration will form. It’s beginning to already.”

Their project was one of two selected through a competition for the South Caucasus Cooperative Research Program (SCCRP). The researchers’ findings identified several new prospects for commercially viable mining in each country and are expected to stimulate new mineral exploration, economic development and improved mining waste disposal.

Dr. Doebrich says that CRDF and its partner organizations—the National Foundation of Science and Advanced Technologies (NFSAT), the Georgian Research and Development Foundation (GRDF) and the Azerbaijan National Science Foundation (ANSF)—are playing a key role in the development of the Southern Caucasus by providing not only funding but avenues for collaboration between the region’s scientists and their counterparts in the United States. He views the SCCRP as important because it awards grants on a competitive basis and helps to connect regional scientists to the international scientific community.

“As a program like SCCRP grows and evolves, it will form a network of scientists who have worked either in the region or in a particular field,” Dr. Doebrich notes. “Through such a network, avenues of collaboration will form. It’s beginning to already.”
Right Place, Right Time for Partnerships

In the Middle East and North Africa region, interest in science and technology partnerships is growing. Governments in the region are realizing the importance of investment in science and technology education, research and development and technology transfer to the future of their economies and are taking steps toward that end. Our staff has identified a clear interest in cooperative projects with U.S. scientists, digital science libraries, supporting research and innovation in higher education and institution building. The time spent in the Middle East has confirmed that the time is right for CRDF to continue to expand its role in the region.

Our staff spends a great deal of time on the ground in the Middle East and North Africa (MENA) region to build relationships with various organizations and learn about developments in the areas of higher education and science and technology. In 2007 CRDF received a grant from the National Institute of Child Health and Human Development (NICHD), a branch of the National Institutes of Health (NIH), to conduct a workshop on research to support national newborn screening initiatives in the MENA region. The workshop, held in Cairo, Egypt, is being followed by a competition for small grants to support development proposals for regional research centers that would support the same objective. CRDF was also asked by the government of Oman’s Scientific Research Center to assist in identifying U.S. experts to participate in reviewing its draft national scientific research strategy. CRDF’s director of Middle East operations and programs, Cindi Warren Mentz, traveled to Muscat in October 2007 along with a team of four U.S. experts from industry and academia.

CRDF President and CEO Cathy Campbell and Mentz were also invited to join renowned expatriate Arab scientists and other experts at the QFirst 2007 conference, which took place Dec. 10-12 in Doha, Qatar. Conference participants exchanged ideas about the future of science in the Arab world and developed common endeavors with research centers in Education City, which hosts U.S. universities on its campus on the outskirts of Doha. The conference was organized by the Qatar Foundation for Education, Science and Community Development.

We are presently responding to expressions of interest from several organizations, developing specific proposals for new programs, and evaluating options for regional support such as increasing staff resources in the region or engaging other local support.
Teaming Up to Prevent Disease

The international community must work together to help prevent the threat of infectious disease, whether natural or manmade. Through the Biological Threat Reduction Program run by the U.S. Department of Defense’s Defense Threat Reduction Agency, CRDF is playing a crucial role in bringing together scientists from U.S. and Eurasia for research projects designed to achieve this end and to help prevent the proliferation of biological weapons and related scientific expertise from Eurasia to terrorists or other countries.

These projects teamed U.S. researchers with their counterparts in Kazakhstan and Uzbekistan to study especially dangerous pathogens that are also of public health interest in Eurasia—including anthrax and plague—and to develop medical countermeasures to diseases that could become biological weapons threats. CRDF provided crucial project management services to facilitate these collaborations and ensure their success.

In Kazakhstan, researchers from the Kazakh Scientific Center for Quarantine and Zoonotic Diseases worked with U.S. researchers to apply Geographic Information Systems (GIS) techniques to predict and prevent the occurrence of anthrax. New, modern genetic techniques were also introduced to identify and diagnose anthrax.

In Uzbekistan, two projects took place. In one project involving the Center for Prophylaxis and Quarantine of Most Hazardous Infections in Tashkent, researchers performed field monitoring of anthrax, tularemia and plague using GIS and advanced diagnostic techniques and analyzed the results in
the field and laboratory. In the second project involving the Institute of Virology in Tashkent, a viral diagnostic center was established. U.S. and Uzbek researchers also performed field monitoring and introduced modern genetic techniques to identify and diagnose arboviruses, which are a large group of viruses that are spread mainly by blood-sucking insects. Among the diseases associated with this family of viruses are encephalitis and yellow and dengue fever.

Such collaboration provides lasting, sustainable benefits for all regions involved. Each research project provided the Eurasian scientists with much-needed training in laboratory diagnostics and GIS methods, which helped improve the biosafety and biosecurity of laboratory space. The Eurasian scientists have published in peer-reviewed journals and presented their research results at international scientific conferences, thereby becoming better integrated into the international scientific community. Regional educational centers for public health—to transfer knowledge and skills gained during projects—are also being developed.

U.S. scientists, in turn, learned more about the genetic makeup of dangerous pathogens, particularly strains of the diseases found in Central Asia. They also gained a deeper understanding of where such diseases exist naturally and whether preventive measures are effective.
Collage of Collaboration: Infectious Disease Surveillance

Project Snapshot

Teaming Up to Prevent Disease: Anthrax Research in Kazakhstan

The M. Aikimbayev Kazakh Scientific Center for Quarantine and Zoonotic Diseases monitors anthrax throughout Kazakhstan, but has lacked the modern techniques necessary to effectively track the disease. It has received assistance through a project supported by the U.S. Department of Defense (DoD) Cooperative Threat Reduction program that is implemented by the Defense Threat Reduction Agency (DTRA) through CRDF. In the project, researchers from the center worked with U.S. researchers to apply Geographic Information Systems (GIS) and new, modern genetic techniques to predict and prevent the occurrence of anthrax.

According to Dr. Alim Aikimbayev, a senior researcher with the center, GIS methods enabled the team to quickly characterize the geographic distribution of B. anthracis strains throughout Kazakhstan. A national collection of strains and electronic database were created, enabling the identification of territories most susceptible to anthrax outbreaks—information that will be used to develop preventive measures.

New, modern genetic techniques were also introduced to identify and diagnose the majority of anthrax strains found in Kazakhstan.

The U.S.-Kazakh team participated in joint field sampling and lab work. Through their collaboration, American researchers from Louisiana State University and Northern Arizona University became familiar with anthrax epidemiology in Kazakhstan, as well as the future steps necessary for preventive maintenance. In particular, they examined data on the role played by insects in transferring anthrax, which has been used
to study the mechanism behind the large outbreaks of anthrax among deer in the U.S. They also trained their Kazakh counterparts and co-published papers and presented at international scientific conferences.

DoD, DTRA and CRDF played key roles in making this project possible. According to Dr. Aikimbayev, DoD provided the necessary financing for the researchers to attend international training workshops and scientific conferences as well as the equipment necessary for their work.

“All participants of the project are grateful to DTRA for their support. It created the potential for us to continue our research,” says Dr. Aikimbayev. “We’re also very grateful to CRDF for their assistance and management of the project.”

CRDF engages our nation’s lawmakers and agencies in support of initiatives that address U.S. priorities and global issues, including energy, education and threat reduction. As part of our 2007 educational outreach to legislators, we hosted two briefings on Capitol Hill—one held in February that highlighted our experience in advancing national security goals and the importance of engaging scientists internationally and another held in June to convey the importance of international scientific engagements as a tool for advancing diplomacy, economic development and competitiveness.

During the June 2007 briefing, Dr. Norman P. Neureiter, Director, Center for Science, Technology & Security Policy, American Association for the Advancement of Science, and a former science and technology advisor to the Secretary of State, explained why science and technology are important tools for U.S. diplomacy and also underfunded. Dr. Neureiter also called for a movement within Congress to establish adequate funds to turn science and technology into a major element of “soft” diplomacy.
Collage of Collaboration: Innovation and Entrepreneurship

Joining Together for Prosperity: The Eurasian Innovation and Investment Forum

In Northern Virginia’s fast-paced business environment, exposure to fresh ideas and innovation is an investment in continued growth and makes good business sense. The Eurasian Innovation & Investment Forum—held March 27-28, 2007 in Tysons Corner, Virginia—introduced new international technologies to area businesses with the expertise and resources to commercialize them. Organized by CRDF, the Northern Virginia Technology Council (NVTC) and the Russian Foundation for Assistance to Small Innovative Enterprises (FASIE), the Forum showcased information, energy and security technologies from 12 of the leading R&D firms in Eurasia.

The Eurasian science entrepreneurs featured at the Forum were representative of hundreds CRDF has assisted over the past decade: they started out with potentially commercializable ideas and products but lacked a comprehensive understanding of the necessities of success in the highly competitive U.S. market. CRDF gave emerging entrepreneurs the skills and confidence they needed by providing market validation reports, business consultations, assistance with creating a strong business plan and presentation training. CRDF also organized business meetings on their behalf with potential U.S. partners.

Conversely, the Forum offered American companies and government organizations access to untapped technologies from leading Eurasian companies, institutes and universities.

The Forum included networking opportunities, panel presentations and keynote speeches from both entrepreneurs with a first-hand perspective on the Eurasian innovation climate and from technology policy makers from the U.S. and...
Building a Bridge of Understanding

In 2007 CRDF generated new opportunities—in Eurasia, the Middle East and Southeast Asia—to harness the power of international science collaboration for lasting social and economic benefit. Our work in 2007 sought to build a bridge of understanding between the U.S. and these regions in the hopes of generating greater cooperation for the future of international science and technology.

Our work in nonproliferation—supported by the State Department-funded BioIndustry Initiative and the Biosecurity Engagement Program—allowed us to expand our geographic horizons, including work with colleagues in the Middle East and Southeast Asia, as well as work in areas beyond our traditional expertise, such as biosafety, business planning and bioindustry production engineering.

In Iraq, a powerful solution towards closing the gap between Iraqi scientists and the international scientific community now exists: the Iraqi Virtual Science Library (IVSL), a project administered by CRDF in partnership with several U.S. government agencies and Iraqi ministries, companies and nongovernmental organizations. IVSL is a Web-based Internet portal that provides Iraqi universities and research institutes with access to an outstanding collection of science, engineering and computer science journals as well as technical information and educational resources. Through its initial success, CRDF has received additional funding, and the initiative is now called Research and Education Portal for Iraq (REPI); it will be available to all Iraqi universities by the end of 2008. This project is a cooperative effort between CRDF and the U.S. Departments of State and Energy, with initial support from the U.S. Department of Defense, Sun Microsystems and the National Academies of Science. The Defense Technical Information Center (DTIC), a repository of scientific and technical documents for the U.S. Department of Defense, built and continues to host the IVSL site.
Collage of Collaboration: Innovation and Entrepreneurship

Project Snapshot

Joining Together for Prosperity: Connecting Gravitonus to U.S. Investors

Russian technology company Gravitonus developed a cutting-edge project that helps the disabled control their PCs with a wireless, iPod©-like sensor that fits in the mouth. Now it is establishing a presence in the United States, thanks to a grant from CRDF.

In March 2007, CRDF sponsored a presentation of the company’s business plan at the Eurasian Innovation & Investment Forum. CRDF and the Mason Enterprise Center at George Mason University also provided Gravitonus with market validation research, business consultation and assistance with creating a strong business plan and presentation.

Company president and founder Dr. Alex Kosik, a spinal cord surgeon in Russia, wanted to persuade potential American investors to help him produce the Alternative Computer Control System (ACCS)—a special assistance device that is placed in a person’s mouth and controlled by the tongue and biting action. This device enables handicapped users to fully operate a computer as effectively as non-disabled users. According to Kosik, ACCS is the key to independence and active life for the handicapped—it is more comfortable, accurate, faster and less expensive than similar systems already on the market. It has been successfully tested on patients and is ready to be introduced to the United States.

The company has also developed an ergonomic workstation optimized for prolonged computer usage by people with Spinal Cord Injury (SCI). It has an onboard computer that analyzes the position of the user’s body, temperature and pressure, and adjusts the seat accordingly.
Before the ACCS system can reach U.S. consumers, Gravintonus needs to set up mass production, distribution, sales and marketing operations and customer support services in the United States—and that takes money. That’s why Kosik is reaching out to U.S. investors, both angels and venture capital firms, for equity investment. The Mason Enterprise Center at George Mason University, a CRDF partner, is assisting Gravintonus in this effort.

“CRDF has given us a great opportunity,” says Kosik. “We feel that our R&D efforts are noticed. We see that CRDF cares. And it really helps us and inspires us to move forward.”
Collage of Collaboration: Project Support Services

Improving the Global Environment Through Cooperation

Environmental pollution is a worldwide concern—and for well over a decade, the U.S. Environmental Protection Agency’s (EPA) Office of International Affairs worked with CRDF’s project support services program, GAP, to implement a host of cooperative international initiatives aimed at improving the global environment on a local level.

EPA’s approach to effectively addressing environmental challenges in the Russian Arctic involves cooperation on numerous levels. For example, it is working with the multilateral Arctic Contaminants Action Program (ACAP), a working group of the intergovernmental Arctic Council, to develop a program on the environmentally safe management of obsolete and prohibited pesticides in the Russian Federation. In the program, regional administrations jointly developed programs to identify and dispose of thousands of tons of obsolete pesticides seeping into tundra soils.

In another ACAP initiative, EPA and the Arctic Council are cooperating closely with the Russian Federation to meet the requirements of the Stockholm Convention through a cleaner production program that targets a reduction of such toxic emissions as dioxins and furans—a group of chemical compounds that are unintentional byproducts of most forms of combustion and several industrial chemical processes. This project involved several pulp, paper, woodworking and metallurgical facilities in the Arkhangelsk and Murmansk regions.
with high dioxin and furan emissions. Experts visited individual facility sites to help local participants identify ways to reduce energy consumption, minimize production waste and raw material usage, and recycle byproducts to lower emissions output. A training program in best environmental practices and best available technologies to reduce pollution were also provided and makes these activities profitable for the facilities.

In addition to these initiatives EPA has worked with CRDF’s GAP services to realize its joint efforts with Norway, Russia and the United Kingdom under the Arctic Military Environmental Cooperation program to improve environmental conditions surrounding the dismantlement of nuclear submarines. While identifying and addressing toxic and hazardous waste problems, EPA and its partners are equally concerned with achieving a safe work environment that reduces workers’ exposure to hazardous substances.

By addressing major sources of Arctic pollution one discarded container, production facility or submarine dismantlement at a time, EPA, its Russian counterparts and their partners are creating a cleaner earth.

Enhancing Public Access to Science and Technology News

In April 2007 CRDF hosted a Science and Technology Journalism panel as part of “The Future of Global Media & Public Knowledge: Transformations in International Journalism and International Relations” conference held at American University. The session drew a number of international journalists from 21 nations participating in the Edward R. Murrow Program for Journalists, and featured (from left to right) Nils Bruzelius, Washington Post science editor; Brenda Wilson, National Public Radio science correspondent; and Jim Dawson, senior editor of Physics Today.

Dawson noted that convincing newspapers to cover something as hard and complex as science is very difficult to do. He and the other panelists said that changes in the media—including acquisitions and the pressure on newspapers to become profitable—have reduced the amount of science coverage. The panel also warned against the dangers of choosing balanced coverage over accuracy.

“It’s better to chose what’s fair and accurate as opposed to some set formula of fairness,” says Dawson, who drew parallels to heavily one-sided public debates. “Seeking perspective from an opposing view, just for the sake of balance may skew readers’ perceptions of accuracy...particularly if those views come from less than reputable sources.”
“Every place where we have to move money, CRDF works out a mechanism,” says Dyer. “It gets the funding in and gets it to the right places. CRDF understands what on-the-ground work means.”
Exploring Potential New Avenues of Cooperation

Science—particularly in the form of international partnerships—has the potential to play a pivotal role in engaging the Democratic People’s Republic of Korea (DPRK) with the United States, if and when conditions allow. In support of this goal, a consortium was established in May 2007 to explore possible future collaborative science activities between the U.S. and the DPRK. This consortium is currently comprised of four organizations, including: CRDF, the American Association for the Advancement of Science (AAAS), Syracuse University and The Korea Society. Collectively, the consortium members have decades of extensive experience in successfully establishing and advancing international scientific collaborations, including with the DPRK.

In May 2007, prior to the formation of the consortium, approximately 50 U.S. participants, including representatives from nine U.S. universities, took part in a workshop held at CRDF. They discussed shared experiences and the potential successes and challenges regarding scientific collaboration with the DPRK. The workshop—funded by the Richard Lounsbery Foundation—demonstrated a strong interest by a number of U.S. universities to work towards collaboration with DPRK academics in a variety of key areas of scientific exchange, including agriculture, information technology, health and environmental conservation.

in the Chukotka Region most affected by the contamination to develop a program for addressing short-term needs and a long-term environmental vision for the area.

The team focuses on assessing, training, inventory and developing a strategy for final disposal of materials. Recognizing the need for more accurate information on contamination levels, experts interviewed individual households to identify contaminated sites and create a map of drum sites containing toxic materials. Experts also trained local village representatives in the identification and safe handling of toxic waste.

“We cannot solve every problem in Russia, but we’re teaching the Russians how to address the problem by developing together with them model demonstration projects that are both replicable and sustainable,” says Barnes, a U.S. representative to ACAP.

“Every place where we have to move money, CRDF works out a mechanism,” says Dyer, the former chair of ACAP. “It gets the funding in and gets it to the right places. CRDF understands what on-the-ground means.”
CRDF is committed to working in countries where international science and technology cooperation can have a critical impact. Our international offices and partners throughout Eurasia, Middle East, North Africa and South Asia facilitate our programs and services in more than 30 countries.
2007 Grant Expenditures

Total Spent: $6,878,927

All statistics are accurate as of December 31, 2007.
## Statement of activities for the year ended December 31, 2007

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<td>955,647</td>
<td>-</td>
<td>955,647</td>
</tr>
<tr>
<td>Grant Assistance Program (GAP)</td>
<td>1,691,719</td>
<td>-</td>
<td>1,691,719</td>
</tr>
<tr>
<td><strong>Total Program Expenses</strong></td>
<td>19,912,916</td>
<td>-</td>
<td>19,912,916</td>
</tr>
<tr>
<td>Management Expenses</td>
<td>4,765,293</td>
<td>-</td>
<td>4,765,293</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>24,678,209</td>
<td>-</td>
<td>24,678,209</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Change In Net Assets</strong></td>
<td>1,962,268</td>
<td>(5,464,983)</td>
<td>(3,502,714)</td>
</tr>
<tr>
<td><strong>Net Assets At Beginning of Year</strong></td>
<td>10,103,560</td>
<td>32,966,451</td>
<td>43,070,011</td>
</tr>
<tr>
<td><strong>Net Assets At End of Year</strong></td>
<td>$ 12,065,828</td>
<td>$ 27,501,468</td>
<td>$ 39,567,297</td>
</tr>
</tbody>
</table>

*The information presented here is drawn from the 2007 audited financial statements of CRDF, which were prepared by McGladrey & Pullen, LLP in accordance with generally accepted principles and presented to the CRDF Board of Directors at its June 2008 meeting.*
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CRDF would also like to gratefully acknowledge each of the U.S. Embassies in the countries in which we work for their continued support. CRDF would also like to thank the many individual scientists and engineers who volunteer their time and expertise for our merit-based review programs to ensure the quality of the work that CRDF supports.