Preserve Planet Earth

Rotary International

Cover photo: Volunteers remove trash from the seaside, a Korean Rotary club project.

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The State of Our Environment

Whether it is the air we breathe, the land we use, or the water we drink, we tend to take the resources of Planet Earth for granted. Yet, we rely on those resources for myriad aspects of our present and future well-being. Take forests, as an example. Trees supply us with wood, food, and new medicines; they deter soil erosion and the loss of ground water; they shelter birds that keep pests in check; they help to temper extremes of climate and to provide healthy air.

Just as we humans depend on planet Earth, each part of the ecosystem depends on the other. This interrelatedness is clearly evident when things go wrong. For instance, pollution of the atmosphere not only harms people's health, it also may contribute to global warming and deterioration of the planet's protective ozone layer. And, when converted to acid rain, it destroys forests and kills lakes, endangering the food chain.

Human activity has by no means been all bad for the environment. Scientific advances have led to higher crop yields, rising standards of living, better health for humans, the ability to regulate fertility, longer-lasting products, greater fuel efficiency, advances in soil-friendly farming practices and water management, and expansion of renewable energy sources such as wind and solar power.

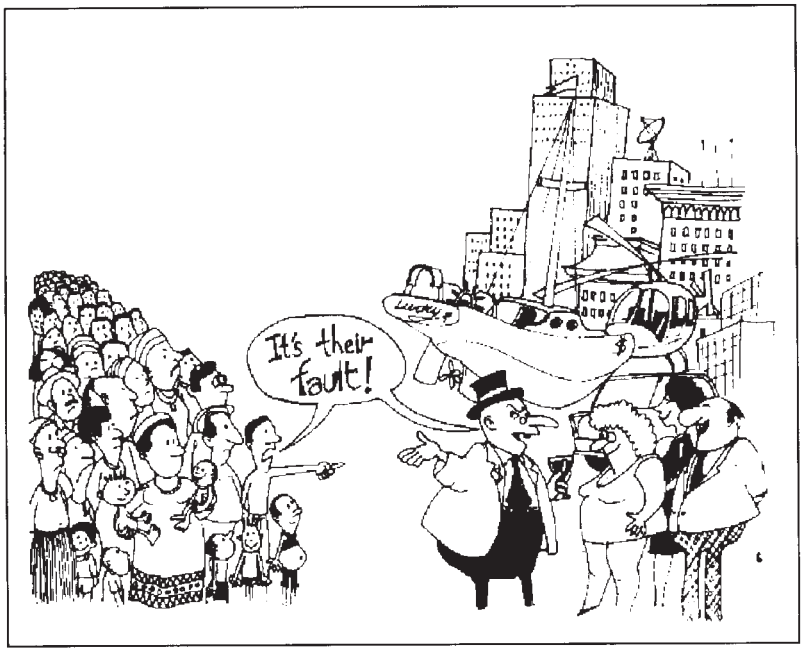
Awareness of threats to the environment has grown markedly, and so has readiness to act on those threats. Since the late 1980s, the nations of the world have signed landmark global conventions aimed at promoting sustainable development, preserving biodiversity, and halting climate change and the depletion of the ozone layer. Much needs to be done to turn documents into actions, but important steps have been taken.

Yet, despite laudable progress, what we do to undo the damage to the environment is too often "too little too late." Evidence mounts daily that human intervention is throwing the balance of nature out of whack. Judging by the pace of deforestation, urban/suburban sprawl, falling water tables, production of greenhouse gases, and other indicators, Earth's rapidly growing and consuming populations are making demands on the environment that it cannot support.

Recent findings from the United Nations, the Worldwatch Institute, and the World Wildlife Fund all sound alarm bells:

- The year 1998 was the warmest year on record, accelerating a warming trend with possible long-term consequences.
- The year 1998 was history's worst for natural disasters, with extensive loss of life and the unprecedented displacement of 300 million people worldwide.
- The Earth has lost more than 30 percent of its nonrenewable natural resources since 1970.

The Impact of Population, Consumption, and Poverty



Joseph Kariuki/UNEP, Taking Action: An Environmental Guide for You and Your Community, *the United Nations Environment Programme*

Three primary factors — population growth, spiralling consumption, and poverty and inequality — contribute to and compound environmental calamities.

- Growth of the world's population — now at 6 billion — is slowing, but it is still expected to increase substantially, reaching between 8 and 12 billion in 2050 before stabilizing. Population growth is highest in developing countries, more than offsetting declines in industrialized countries, where population growth in some instances has fallen below replacement levels. Among the already apparent consequences of growth are declines in aquifers and fish supplies.
- While population often shoulders the blame for environmental degradation, consumption, which is growing by 5 percent a year worldwide, is a major culprit. Since 1950, the peoples of the world have consumed as many goods and services as all previous generations combined. Wealthy countries consume far more resources than poor nations. A person in an industrialized nation consumes 77 times more than the average Ethiopian.
- Economic disparity between and within nations continues to widen. Natural disasters strike rich and poor alike, but the poor, with their flimsy homes, lose the most. Global food production is sufficient to feed everyone, but some 800 million people go hungry, and many poor people put marginal lands into production in a desperate attempt to feed their families. Environmental hazards threaten everyone, but the poor are exposed to them most of all.

Rotary's Preserve Planet Earth Program

Improving the environment has been central to Rotary service from the organization's earliest days. Spurred by the example of Rotary founder Paul Harris, who stopped to plant many a tree during his world travels, Rotarians have planted millions of trees, created parks large and small, and carried out recycling activities in communities all over the globe.

In 1990, Rotary International adopted the program Preserve Planet Earth. The instigator was 1990-91 RI President Paulo V.C. Costa, whose home country of Brazil hosted the first Earth Summit two years later. The program has four goals:

- ✓ **Focus attention of all Rotarians on taking action to protect and preserve the planet;**
- ✓ **Increase the number of environmental service projects undertaken by Rotary clubs;**
- ✓ **Promote awareness among Rotarians and Rotary clubs of environmental issues; and**
- ✓ **Foster the image of Rotary clubs as dedicated to Preserving Planet Earth.**

Part of the popularity of Preserve Planet Earth is the opportunity it affords for hands-on service, with easily recognizable benefits. It also allows Rotarians to get involved with other community groups and Rotary's partners in service. Rotaractors, Interactors, and Rotary Community Corps readily join their sponsoring clubs in tree-plantings and cleanup campaigns.

Appealing "greening" initiatives like these are by no means Rotarians' sole response to the planet's environmental woes. As serious environmental issues have moved to the forefront of public awareness, Rotary clubs have sometimes been the first to bring those issues to public attention. In Italy, more than two decades ago, the Rotary Club of Salò e Desenzano del Garda sponsored the first international conference on the problem of discarded packaging and solid waste.

One of the major problems that Rotary clubs and districts have addressed is the shortage of safe water and sanitation. Both the RI Board of Directors and Council on Legislation have made safe water a priority. Rotarians have helped build wells and pumps, lay pipes for water distribution, provide cisterns to catch rainwater, construct latrines, and support public health infrastructures in communities around the world.

Although environmentalists and developers are too often assumed to be at odds, Rotarians dispute that notion. Embracing the concept of sustainable development — the idea that we should use resources no faster than they can be replaced — some Rotarians have taken the lead in showing that "green" business practices can be good for the economy as well as the environment.

Since solutions to environmental problems, like the problems themselves, must extend beyond borders, a great strength of the Preserve Planet Earth program is Rotary's internationality. Saving the environment has been the goal of numerous RI conferences and International Service projects.

The efforts of Rotarians to Preserve Planet Earth are vital — but not nearly enough. This book is designed to encourage Rotarians to be aware of environmental dangers, identify solutions and resources, and gain inspiration from Rotarian responses. An overview rather than a comprehensive volume, it is intended to spark your interest and motivate you to take action.

Environmental Challenges and Opportunities

Using the Land Wisely

According to the United Nations, global food production continues to rise, but yields of grain crops are increasing more slowly than in the past. As much as a third of all croplands worldwide have lost topsoil due to poor agricultural practices. Drylands are spreading in more than 100 countries. Everywhere, forests are felled and choice lands paved over for development.

The challenge is to stop land degradation and to increase agricultural yields without depleting soil nutrients and underground water. Crop rotation and contour farming are just two of many practices that are friendly to the soil.

But solutions to infertile land may differ from region to region. For example, developed countries may need to decrease fertilizer use because it is contaminating water, while developing countries may need to increase it to achieve sufficient yields. Some areas may need to lower the amount of water used for irrigation because of salinization of the soil, while other areas lack irrigation altogether.

A major challenge is to find a way to assist rural populations, particularly in developing countries, and to stem migration to urban areas. Otherwise, warns the United Nations, urban areas may be the untenable "home" of five billion people by the year 2025.

Project ideas

- Sponsor or cosponsor a Community Service or World Community Service project to provide training and capital resources to small farmers.
- Offer a scholarship for study of organic alternatives to often-overused chemical fertilizers and toxic pesticides.
- Encourage Rotarians with soil conservation expertise to offer their skills to others through the Rotary Volunteers program.
- Urge your district to sponsor a Group Study Exchange that focuses on environmentally sound agricultural practices.
- Support the creation of urban gardens, parks, woodlands, and greenbelts.

Model projects

Encouraging agroforesty in Democratic Republic of Congo

To halt erosion and reverse malnutrition, the Rotary Club of Kisangani, Democratic Republic of Congo, with support from Belgian District 2170 and a Rotary Foundation 3-H Grant, initiated a project to develop orchards of *Treculia Africana,* a tree that produces a large, protein-rich, nut-like fruit. The project teaches farmers to alley crops between rows of the nitrogen-fixing hedges of the tree, which farmers can trim to feed their animals and make charcoal.

Civil war interrupted the project, but activity has resumed, with strong support from local residents. About 20 agroforesty sites have been seeded, hundreds of farmers have been trained, thousands of other Congolese have learned of the nutritional benefits of treculia through radio broadcasts, and interest in planting the treculia has spread to three sites in other parts of the country.

Supplying irrigation to rural cooperatives in Haiti

In 1978, a 230-member cooperative in Terrier Rouge, Haiti, purchased 50 hectares of land for farming, but with neither sufficient rain nor money to drill wells and operate pumps, the members couldn't raise crops. In the early 1990s, RI District 7910 from Central Massachusetts, USA — one of whose Rotarians had family ties to a religious order working in Terrier Rouge — offered to help.

Solar-powered irrigation helps Haitian cooperative members enjoy fertile gardens.

With gasoline then selling at US$20 per gallon, District 7910 quickly ruled out the idea of diesel-driven pumps, and the paucity of wind precluded that means of pumping water. So the district turned to solar power to generate electricity. The district realized it could only irrigate a couple hectares of land but, since the cooperative's membership had dwindled to 50, that would be enough for each family's garden.

The Rotary Club of Cap-Haitien sent an inspection team, including an agricultural expert, to Terrier Rouge and, after determining that the site was suitable, the Haitian club and the U.S. district proceeded with the project, aided by a Rotary Foundation Matching Grant. The U.S. Rotarians provided the equipment, Haitian Rotarians supplied some training, and the Canadian Embassy supplied some hand tools.

But it was the members of the cooperative who did most of the work, affirms Past District 7910 Governor Edward C. Hall. They drilled the wells, wired and mounted the solar panels, cut and cemented the PCV pipe, and constructed the cement storage basins for the irrigation water which members carry to the fields in watering cans. With donated seed, they then began growing crops.

Today, the benefits of the project extend beyond the cooperative, where members take pride in their ability to stay in their rural community, feed their families a balanced diet, and save money. Members also donate food to the local school and to needy parish members. And when drought threatened the livelihood of cattle farmers in the area one year, cooperative members diverted water to help them, free of charge.

Since 1994, several more solar irrigation systems have been installed and additional cooperatives formed, with another Matching Grant. The thriving cooperatives grow sugar cane, corn, beans, peanuts, and coconut and banana trees. In 1998, District 7910 and District 7020 (which includes Haiti) were awarded a 3-H Grant to install about 30 more solar irrigation systems in Haiti.

Taking advantage of intermediate technology

A member of the Rotary Club of Kalamazoo, Michigan, USA, Dick Roosenberg is dedicated to finding simple, low-capital technologies to increase the productivity of the world's rural populations within ecological constraints. He founded Tillers International, a nonprofit organization through which he and other craftsmen offer training in animal power, smithing, woodworking, and other skills to trainees from developing countries and to Americans seeking to assist with overseas projects.

In hands-on workshops at Tillers' farm near Kalamazoo, trainees learn to adapt old tools for different soil types and climates. For example, an Ethiopian agricultural technician got the inspiration at the farm to modify a planter, once widely used in the USA, so that it could be attached to the Ethiopian *mresha*, a simple plow pulled by a single ox. This one improvement, he believed, could increase Ethiopian farmers' yields without drastically changing their way of farm life.

Trainees at the farm also learn ways to reduce dependence on modern technology from Amish farmers in the area. Amish farmers show trainees how they rely on diesel-powered hydraulic pumps instead of the main electricity grid. For African farmers with an often unreliable source of electricity, it is a handy lesson.

Many of Tillers' training programs are conducted not in the USA but abroad, in Tanzania, Madagascar, Uganda and elsewhere. Working with the European Community, Tillers provided training for 43 mid-career agricultural extension agents in Uganda. Later, one of the graduates invited Tillers back to conduct training in using oxen as a low-cost alternative to tractors. The Tiller staff helped students at a nearby vocational school make ox yokes.

Tiller volunteers may join service projects abroad, such as a recent venture in Tanzania that helped a former Tillers' trainee establish a demonstration harvesting and irrigation system using ox power and a simple drip irrigation process ideal for porous soil. The Rotary clubs of Kalamazoo and Watertown, New York, USA, provided some assistance. Information on Tillers' activities is available on its Web site (http://www.wmich.edu/tillers/).

Starting community gardens in Canada

The Rotary Club of Langley Sunrise, in the British Columbia city of Langley, developed a community garden, aimed at participation from people of all age groups and abilities. The club provided raised, wheelchair-accessible beds as well as a long bed for people to work at while standing. On their allotted 8 foot x 8 foot plots, participants could grow whatever vegetables or flowers they liked, as long as they avoided pesticides.

Pumpkins grow in a popular Canadian Rotary club-initiated community garden.

Community enthusiasm for the project was high, in part because it provided a social outlet for some plot users who live alone. The club then formed a partnership with the township of Langley to develop another garden, three times the size of the original one, in an area with a large number of senior citizens eager to participate.

Two years later, the second plot had become so popular that a long waiting list of would-be gardeners had developed. So, with approval of the authorities, the Rotary club expanded the garden. The Rotarians also added beds for special-needs groups.

Because the garden is adjacent to a secondary school, the Rotary club invited 12th grade students to build a gazebo there, as a Vocational Service project. Perhaps as a result, the garden has not had a single incident of vandalism, club members report proudly.

Reducing and Disposing of Waste

The problem of waste disposal is twofold: people are too wasteful in their production and consumption, and they pay too little attention to proper disposal of their refuse. Whether it is household refuse, sewage, chemicals from production, pesticides and synthetic fertilizers, or radioactive residue, disposing of wastes is a problem of often nightmarish proportions.

People often rely on technology to come up with solutions to humans' wastefulness, but caution is in order. It was once predicted that computers would cut demand for paper, but electronic equipment has instead fueled demand for paper. (However, it is not communications but rather the growing packaging industry that uses the most paper.)

French Rotarians spruce up a mountain area during an environmental awareness day.

Waste management — cutting down on waste production, recycling wastes, and ridding the planet safely of toxic wastes — is a formidable challenge facing communities around the world. It begins with the individual who, instead of displaying indifference or blaming others, instigates a revolution in the consuming habits of our throwaway society, beginning at home, at work, and in the community.

Project ideas

- "Adopt" a roadside or river and organize periodic cleanups.
- Organize a community program to sort and collect glass, paper products and other recyclable items.
- Plan and publicize a location where community residents can drop off paint containers, aerosol propellants, solvents, batteries, used motor oil, and other hazardous wastes and arrange for their safe disposal.
- Arrange a tour of a business or industry — ideally, a Rotarian-owned one — that has implemented environmentally sound extraction or production processes, recyclable product designs, and/or new waste disposal methods.
- Give an award to a local business that has implemented ecologically sound business practices.

Model projects

Fighting dangerous waste-dumping in Brazil

In the late 1990s, the Rotary Club of Holambra, Brazil, launched a campaign to combat environmental degradation in Holambra, a five-year-old municipality that until then had no environmental controls in place. Industrial waste was being dumped into the spring that provided the city's drinking water, and developers were clearing trees along the banks of the main stream without restriction.

Working with the University of São Paulo, the mayor's office and a state agency, the Holambra club created an environmental board. It did not take long to produce results. Police halted the dumping of pollutants and the destruction of land, and legal action was taken against the polluter. New trees were planted. Schools now teach environmental responsibility to students in ecology classes.

Converting wastes into biofertilizers in India

The Interact Club of P.K.N. Girls' School in Thirumangalam, Tamil Nadu, India, carried out a demonstration project to show local residents the usefulness of composting biodegradable household wastes. After digging an "aerobic" pit, club members arranged in it vegetable waste, leaves, paper waste and sawdust, topping the pile with seeds of edible mushrooms, and covering it with mud.

A month later, after stirring the mix and allowing it to completely decay, the Interactors extracted from their 30 kilograms of waste nearly 28 kilograms of biofertilizers. Farmers and gardeners used the fertilizer successfully and appreciated the demonstration of the simple conversion process.

Recycling wastes in Cyprus

The Rotary Club of Famagusta, Cyprus, designed a recycling program for the community of Dherynia. Under the program, a family throws paper, plastic, glass and aluminum waste materials in a 40-liter waterproof bag. Once the bag is full, the family dumps its contents into a bin outside any one of the town's three supermarkets. Then, the bag can be reused.

Recycling bins in Cyprus, purchased as a Rotary club-initiated project, await refuse.

A professional recycling firm, which pays a fee to Dherynia, keeps the collection areas clean and periodically hauls away the recyclables to its sorting facility, where it processes and then markets the materials.

The Famagusta Rotarians raised US$1,000 to pay for one of the bins, and the Dherynia municipality picked up the bill for the two other bins. The club designed and distributed information pamphlets about the recycling program and produced stickers for the recycling and garbage pails.

The recycling program is only one of a number of ecological activities of the Famagusta club. Through radio and television messages, pamphlets, sketch books for children, press conferences and lectures, members have actively promoted awareness of the environment on the island. The results have ranged from the adoption of recycling programs by local hotels and other businesses to the planting of 2,500 trees in the Rotary club's own nursery.

Turning trash into cash in the U.K.

When Steve Gilks, of the Rotary Club of Normanton, England, surveyed the rubbish littering the countryside, he realized its potential for raising money for charity. He invested in equipment for sorting and baling aluminum cans, and a friend mounted the equipment on a trailer, producing the first mobile recycling center. With the aid of volunteers, Gilks established a network of collecting points, created a limited company to raise funds for charity, and secured assistance from the the British government's Environmental Action Fund.

Within a decade, 11 Rotary clubs and scores of communities had become involved in the project, which recycles tens of thousands of cans collected throughout Yorkshire and Humberside. The Gilks Charitable Trust, which receives all the profits from Cash from Trash Ltd., has donated more than £30,000 to charities, including £7,000 to support Rotary projects.

Ensuring Safe Water and Sanitation

A Matching Grant supports the construction of a water system in Uganda.

Global water consumption is rising by 2-3 percent every year. Meanwhile, the supply of fresh water remains relatively constant. Without changes in water management, one-third of the world's people will likely suffer from chronic water shortages in 30 years, according to United Nations agencies.

While water is still relatively plentiful, much of it is not potable. The World Health Organization blames contaminated water for 80 percent of all diseases and more than a third of all deaths in developing countries. An estimated 1.4 billion people lack access to safe water, and more than double that number have no access to adequate sanitation.

The challenge is twofold: to reduce wasteful water consumption in order to ensure availability of this resource for all and to provide clean water and sanitation to those whose very lives depend on it. Water management must be closely integrated with land management since the degradation of aquifer systems not only reduces water availability but also reduces the fertility of soil.

Project ideas

- Assist poor communities to finance simple water and sanitation systems — and test the safety of the water.
- Help to organize a Rotary Community Corps — and provide members with ongoing training — so that the wells that are dug and the water pumps that are installed will be properly maintained.
- Support community health training that addresses the interrelatedness of safe water, sanitation, and health.
- Test local water sources for contaminants and pollutants and report the results to local authorities and the media.
- Arrange a cleanup day along a river, lake, or ocean shore in your community.

Model projects

Expanding a water supply in India

In Madras, India, temple cisterns that provided drinking water for thousands of years became so clogged that sea water from the Bay of Bengal contaminated the water table. With help from Canadian Rotarians, the Rotary Club of Madras restored four cisterns, providing fresh water to some 200,000 low-income people. Madras Rotarians provided hands-on assistance for the project, which required repairing, cleaning, and desilting the cisterns, and removing impermeable soil to allow rainwater to slowly raise the water table.

Funds for the project and for research into increasing the minimal water supply available to Madras residents came from Canadian District 7070, the Canadian Rotary Committee for International Development, Canada's Agency for International Development, and a Rotary Foundation Matching Grant.

Increasing health and sanitation in Ecuador

Working with other nonprofit agencies and using a Rotary Foundation 3-H Grant, Ecuadoran and U.S. Rotarians created a health infrastructure in 56 Ecuadoran villages that dramatically improved community health.

Ecuadoreans line up for water from their new, fresh drinking water supply.

The Rotary Club of Salinas, Ecuador, and the Rotary clubs of Roseburg, Greater Albany, Sweet Home, and Lebanon, in Oregon, USA, helped to form public health committees throughout the Salinas area, which received training in the maintenance of safe water supplies, latrine construction, solid waste disposal and vermin control.

Within four years, almost 168 village community health workshops had been held, 2,000 latrines had been constructed, 12 community water systems had been completed, and home water storage tanks serving more than 38,000 people were being disinfected twice weekly. As a result of the public health effort, cholera was eradicated in the Salinas area, even as it was rising elsewhere in Ecuador, and cases of severe diarrheal illness there dropped by 20 percent.

Improving a canal system in Thailand

Three major streams and five tributary canals flow through the city of Nakhon into the gulf of Thailand. These streams and canals become flooded during the rainy season and wastewater fails to flow during the dry season, posing health problems in both instances for nearby communities. In response, the Rotary clubs of Taipei Fu-Jung, Taiwan, and Nakhonsri-Veerathai, Thailand, contributed US$7,840, and, with a Rotary Foundation Matching Grant, were able to provide US$15,680 to clean up the canals and encourage residents to maintain them.

The initial clearing and cleaning operation involved removing solid wastes and aquatic plants that had hindered the smooth flow of water from the canals, as well as clearing away sediment that had accumulated along different stretches of the canals.

Thai Rotarians later started a campaign, "Healthy Canals for a Healthy City," which encouraged the people living along those canals to prevent future flooding by keeping them clean and beautiful. Cleanup weeks were held for each of the five canals, with various activities involving citizens, public officials, schools and other civic groups. Residents were also taken on tours, where they learned about the natural history of these canals and how to protect them.

Residents ultimately formed several "support groups" of their own in which they set goals and planned initiatives that will enable them to be self-sufficient in the future care of their canals.

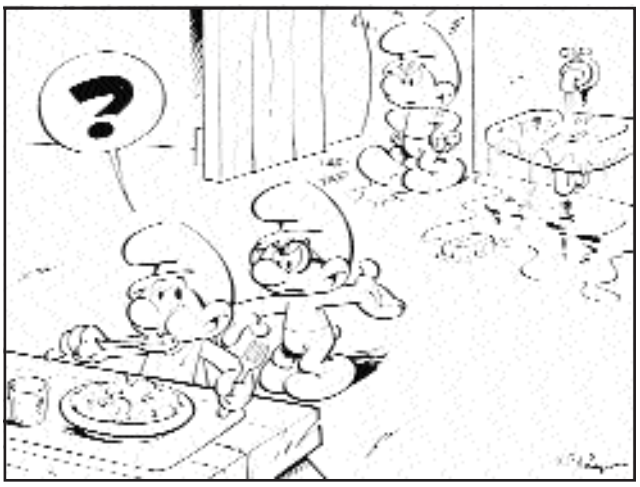
Educating about water pollution in Australia

The Melbourne, Australia, water authority and area Rotary clubs developed a partnership to promote a program called "Drains to the Bay." Designed to help young children learn about the stormwater drainage system and the impact on it of pollutants, the program involved stencilling anti-pollution messages on drainage entry pit covers or on nearby footpaths as well as distributing a school education kit. More than 50 Rotary clubs contacted more than 100 schools, which agreed to use a 10-minute animated video and a 50-page teacher's guide to activities.

The educational program has been credited with changed attitudes and behavior in relation to the stormwater pathway, not only among the students in grades 3 to 6, but among their families and the larger community.

Promoting water conservation in Europe

A project initiated by Rotarians in Belgium and Luxembourg uses the popular Smurf cartoon characters to promote water conservation among schoolchildren.



Smurfs chide their friend for wasting water, on this page from a children's coloring book.

"Use water sensibly; stop wasting it," is the message carried by 44,000 packets that were distributed by Rotarians to primary schools, with the blessing of government education ministries. Each packet includes guidelines for teachers, stories which students are invited to complete about threats to water in the land of the Smurfs, coloring pages for 6- to 12-year-olds, and colorful classroom posters.

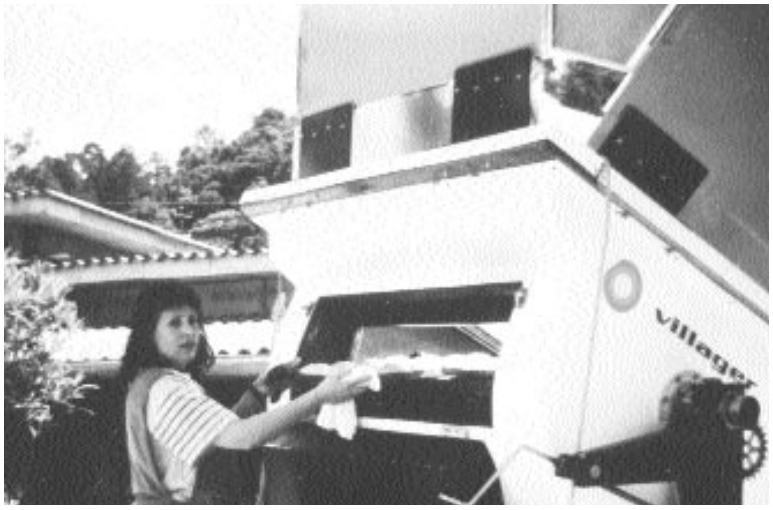
The polished project was a joint effort of the Preserve Planet Earth Commission of RI Districts 1620, 1630, and 2170; the IMPS studio which produces the Smurf cartoons; and "Smurf the World," the charitable foundation started by Peyo, creator of the Smurfs.

Two members of the Rotary Club of Sint-Pieters Leeuw, Belgium — current and former education ministry inspectors — wrote the stories for the packets. Rotary clubs raised US$50,000 to print and distribute the packets, and Smurf the World contributed US$7,000.

"Cleaning the environment is within our reach," Past District 2170 Governor Jan L. Dujardin said when the project was unveiled. "Conserving it is the task of future generations. The sooner a child is sensitized to environmental preservation, the more likely he or she will become a responsible adult in this regard."

Clearing the Air

Global energy use is increasing more than 2 percent a year, most of it from nonrenewable fossil fuels used in automobiles and trucks, industries, and home furnaces and stoves. One obvious result is air pollution and its effects on health. Less visible, but even more troubling is the threat to the ozone layer which filters dangerous radiation from the sun and enables life to exist on earth. A third danger — and still a point of contention — is that increases in greenhouse gas emissions are raising temperatures and will ultimately change our climate, with major impact on crops and water levels, not to mention the very existence of some island nations.



A bakery worker in Honduras removes bread from a solar oven, which villagers also use to boil their drinking water.

A different kind of pollution is prevalent in many developing countries. There, the World Bank estimates that 400 to 700 million women and children are exposed to severe air pollution, mainly from cooking fires. The energy source is often renewable but it is certainly not clean.

The challenges facing environmentalists are to reduce energy consumption, particularly of nonrenewable, polluting fossil fuels, while promoting alternative sources of energy. Galvanized into action by disturbing environmental warnings, the nations of the world cut their manufacture, trade, and use of ozone-depleting gases — mainly chlorofluorocarbons — by 70 percent in one decade, proof that dramatic changes are possible. But use of these gases — once ever-present in refrigerants, solvents, aerosol propellants, cleaning agents and the like — has not disappeared.

Project ideas

- Help provide solar cookers (ovens) and solar irrigation systems to communities that can benefit from them.
- Promote the use of public transportation and ride-sharing.
- Encourage improved monitoring and tightening of air quality standards.
- Provide education, to and through your club or district, on sustainable energy policies.
- Reward employees for identifying ecologically sound, feasible changes to current work practices and products.

Model projects

Using solar energy to cook food

In Kenya, wood fires account for more than 80 percent of the country's energy use. Such fires not only strip the land of trees, they also cause acute respiratory diseases for the women

who tend the fires in poorly ventilated huts, and for their children. The solution for both problems may be solar energy.

A U.S. Rotary Volunteer went from village to village in Kenya demonstrating the effectiveness of solar cookers. He explained both the cookers' health advantages and the time saving if families didn't have to gather wood. Convinced of the cookers' utility, the Rotary Club of Nairobi East spearheaded a project to build inexpensive solar cookers and train villagers in their use. Clubs in the USA, Japan, and Taiwan, with a Rotary Foundation Matching Grant, supported the project, which had the additional goal of generating employment.

The simple solar cooker technology has caught on in countries worldwide, many of which face the same environmental challenges as Kenya. Matching Grants have helped fund solar cooker projects in Costa Rica, Egypt, Ghana, Haiti, Honduras, India, Jamaica, Nicaragua, Sri Lanka, and Zambia.

In Honduras, after the country was pummeled by Hurricane Mitch, its Rotary-donated solar cookers were put to use as sun-powered water purifiers, helping Hondurans deal with the severe shortage of fresh drinking water. As part of a massive relief effort supported by Rotarians worldwide, U.S. Rotarians sent additional solar cookers to the flooded country.

Making pedal power possible

In an initiative modeled after programs in Amsterdam, Netherlands, and Portland, Oregon, USA, Rotarians in Fresno, California, USA, are offering residents free use of bicycles as an alternative mode of public transportation.

Rotarians in Fresno, California, supply brightly colored bicycles to residents for use free of charge.

Through the "Yellow Bike" program, the Rotarians provide bicycles for use throughout the greater Fresno area. Residents pick up and drop off the bright yellow two-wheelers at designated racks or they collect them from city buses with bike racks.

The program is targeted at residents who lack cars and cannot afford bus or taxi fares. Through the Yellow Bike telephone line, Rotarians make sure that unemployed individuals have the bikes they may need to get to job interviews.

Bicycles are donated to the Rotary club by individuals, organizations and the Fresno Police Department. Bikes are stored at the Salvation Army warehouse until they can be moved to a nearby state prison, where inmates repair and paint them and convert them to a single gear. The program began with 50 bicycles. About 20 bikes are added to the community supply each month.

Do any bikes get stolen? "Some," says a program representative, "but since the bikes are given by the community to the community, we don't regard those that aren't returned as

'stolen.'" Because the Rotarians are eager to get the bikes to those that need them most, they provide some — painted a little differently — as permanent gifts.

Testing vehicles for pollution

As their automobile traffic rises rapidly, less-developed nations are often poorly equipped to test for high levels of air pollution. Rotary clubs sometimes can and do fill that role.

In India, the Rotary Club of Kalpetta in Kerala initiated vehicle emissions monitoring, with the help of regional authorities. More than 50 percent of the cars tested had dirtier engines than advisable and their drivers were alerted to take remedial measures. The club advertised its Check Pollution Campaign, which continued for some time on a biweekly basis, through car stickers and other notices.

In the Indian city of Jamshedpur, the Interact Club of Loyola School offered to help with an auto emissions check. Interactors did much of the legwork — keeping track of vehicle registration numbers, collecting meter readings, and regulating traffic during the checks. Mechanics were on hand to work promptly on polluting vehicles. More than 2,000 motorists took advantage of the opportunity to provide a cleaner environment.

Going green profitably in the USA

Rotarians in Colorado, USA, believe that Preserving Planet Earth can be good for business as well as the environment. The Preserve Planet Earth Committee of District 5450 designed a project to work with Rotary club members to show them how to improve business profitability while reducing negative environmental impacts.

The Rotarians set out to demonstrate to business people that they can improve their bottom lines via energy-saving measures, recycling, improved materials processing, efficient purchasing, and the use of cost-assessment computer software. These ecologists knew what they were talking about. Among the examples they put forward were a Colorado printing firm that saved 10 percent in materials costs, a plastics products manufacturer that cut its utility bills by 50 percent, and a pharmaceutical firm that saved US$50,000 a year in energy costs.

In the late 1990s, the district Preserve Planet Earth Committee and the Colorado Sustainability Project applied for and received a US$45,000 Sustainability Challenge Grant from the U.S. Environmental Protection Agency (EPA) to conduct workshops to demonstrate their philosophy. Matching support for the project was pledged by a number of Colorado businesses.

According to Norris Hermsmeyer of the Rotary Club of Boulder, who chairs the district Preserve Planet Earth Committee, the grant was one of only 45 awarded to a field of nearly 1,000 applicants from around the nation, and that speaks well of Rotary. "The EPA is recognizing the classification system of Rotary as a good opportunity to have this type of discussion," he said. "They're looking at our project as a model for other Rotary districts to adopt."

Meanwhile, the Boulder club has found a better way to market a longstanding product of its own, a well-researched community recycling resource guide known as the "Green Pages." At US$5 a copy, the old guide wasn't reaching a wide-enough audience. So the club teamed up with a newspaper, the *Boulder Daily Camera*, and the Boulder Energy Conservation Center to create a recycling guide that now reaches 53,000 households. With advertising defraying the costs, the guide is distributed free to newspaper subscribers once a year, generally around Earth Day in April.

Preserving Biodiversity and Habitats

Earth has more than 100 million species, but they are vanishing fast. Scientists estimate that between 150 and 200 species of life become extinct every 24 hours. Some 34 percent of all fish species are at risk, because of pollution and overfishing, with major long-term implications for world hunger. The world's natural forest cover declined by about 10 percent from 1970 to 1995, an area equivalent in size to England and Wales, contributing to pollution and robbing future generations of irreplacable sources of medicines.

A tree-planting campaign gets under way in a Nigerian community.

Preserving biodiversity requires a halt to the many practices that threaten species, including the large-scale clearing and burning of forests, destruction of coral reefs, overharvesting of plants and animals, the discharge of inadequately treated wastes, and settlement on wetlands. It also entails a close examination of the effects of urbanization, tourism, industrial development, coastal developments, the damming of rivers, and certain fishing and farming methods.

Project ideas

- Plant trees and shrubs that are appropriate to the soil and climate.
- Create refuges for endangered species.
- Help create sound public policies governing land and water use, development, and habitat preservation.
- Encourage participants in Rotary exchange programs to practice "ecotourism" — minimizing the impact of travel on the environment.
- Support educational programs that emphasize the integrity and interdependence of the ecosystem.

Model projects

Reforesting in the Philippines

The rain forests of the Philippines are being deforested at an alarming rate. Illegal logging, slash-and-burn farming, and natural disasters claim an estimated 700,000 hectares of forest each year. The country's forest cover fell from almost 11 million hectares in 1981, to less than 3 million hectares in a seven-year period in the 1980s. The result is the loss of about 1 billion cubic meters of soil each year. A flash flood that raced down deforested mountains in 1991 killed or washed out to sea some 8,000 people.

At the time of the disaster, Buddy Gerona, past president of the Rotary Club of Metro Iligan on the island of Mindanao in the south of the Philippines, was in correspondence with David Nabbs, past governor of District 9460 in Western Australia, Australia, whom he had met during a 1989 Group Study Exchange between districts 9460 and 3870.

Motivated by the urgency of the problem as relayed by Nabbs, the Rotary Club of South Bunbury, Western Australia, secured a Carl P. Miller Discovery Grant to investigate a reforestation project, and out of this developed an application for a 3-H Grant from The Rotary Foundation.

The Rotary clubs of Iligan and Metro Iligan in the Philippines and the South Bunbury club became co-sponsors of a 3-H Grant in the amount of US$100,800 from The Rotary Foundation for a reforestation project on Mount Agad-Agad and Mt. Rognogon on Mindanao. The project trains local people in nursery and reforestation techniques so that an area of the former rain forest can be converted into a national park to serve as a model for the country.

The local Rotarians administer funds, select and house trainees, select the sites, and procure supplies. The Australian Rotarians monitor the project's progress, assist with reports, and provide technical advice.

Saving endangered species in Africa

More than 100 individuals have been named by Rotary districts as "Preserve Planet Earth Scholars," a special designation created by the Rotary International Board of Directors and the Trustees of The Rotary Foundation to encourage ecological studies. One of them was U.S. Scholar Daniel Felton, who studied biology and environmental science in the mid-1990s at the University of Mauritius in that African island nation in the Indian ocean.

While studying in Mauritius, Felton volunteered with the Mauritius Wildlife Appeal Fund and helped set up a program to educate the community on endangered endemic species by visiting local schools. Later, he travelled to Djibouti, Ethiopia, Kenya, Uganda, and Democratic Republic of Congo, promoting participation in local environmental and wildlife organizations at every opportunity.

Constructing forest trails

On a cool September weekend, more than three dozen young people boarded a U.S. Forest Service barge for Kalispell Island in Priest Lake, Idaho, USA. Their mission: to construct a three-and-a-half-mile trail around the island. After setting up camp, the enthusiastic group spent two days defining a trail by raking leaves, clearing brush, and removing logs. Later, the trail would be graded and leveled.

The group comprised members of the Interact Club of Kellogg, Idaho, USA, and the Interact Club of Castlegar, British Columbia, Canada, plus a Youth Exchange student from India. John Linch, of the Rotary Club of Newport, Washington / Priest River, Idaho, a retired forester who helped facilitate the project, said he hoped that the Interactors' exposure to the pristine area would give them a greater respect for nature.

This International Service project was not the first for the two Interact clubs. A year earlier, they had helped build a section of the Chipmunk Rapids National Recreation Trail, in a section of the Panhandle National Forest near Priest Lake. A total of 30 Castlegar Interactors and 18 Kellogg Interactors participated in that project, together with exchange students from Finland, France, Denmark, Argentina, Mexico, and Slovakia.

The chance to leave a positive stamp on the environment and build international friendships is a winning combination. After each project, the Interactors vow to do it again.

Preventing forest fires in Indonesia

Aggravated by drought, forest fires spread out of control in Indonesia in the late 1990s, and acrid smoke hovered over the chain of islands for months and months, an environmental catastrophe.

Rotarians pitched in to help battle the fires, providing ground information to the national crisis command post and helping identify solutions in which Rotary could assist. In cooperation with the Environment Ministry and a group of environmentally minded businesses, Indonesian RI District 3400 produced a video on the causes and effects of forest fires and how to prevent them in the future. The video is to be used in schools throughout Indonesia.

Giving refugees a stake in resource management

In 1996, Rotary International presented its Rotary Award for World Understanding to Sadako Ogata, United Nations High Commissioner for Refugees (UNHCR). She earmarked the US$100,000 from The Rotary Foundation accompanying the award to be used to raise awareness among refugee children of the impact upon the environment of large-scale forced population movements.

"Educating refugee children will help us address the considerable deforestation, soil degradation, water depletion and contaminations which are caused by the presence of large refugee camps in many places, particularly in Africa," Mrs. Ogata said in an address to the Calgary Convention, where she received the award. "Rwanda refugees in Ngara, Tanzania, for example, cut 9,000 trees every day just for cooking purposes."

With the Rotary money, the Office of the UNHCR was able to implement an environmental education program for refugee children in four countries: Senegal, Benin, Kenya, and Tanzania. The program is carried out by an interagency program of the U.S. government known as GLOBE (Global Learning and Observations to Benefit the Environment).

Operating in 80-plus countries, GLOBE enables students to do scientific tests and exchange data through the Internet (http://www.globe.gov). In Benin, for example, students carry out tests and collect data to determine if desertification and global warming are taking place. They also note the effect, on crops and hunger, of severe fluctuations in the weather.

Because the program requires trained teachers, scientific equipment and computers, schools in refugee communities rarely can take part in GLOBE. But the RI-assisted program is making it possible for many of these children to have an education that will help them become stewards of their environment.

Filipino children amid the mangroves they are planting in an effort to restore a coastal habitat for fish.

Taking Action: Creating Environmentally Friendly Communities

In the quest for sustainability, it is our actions in our communities that will be most effective in Preserving Planet Earth. In our communities, we define the kind of society we want to live in, we determine the changes we will be willing to make in order to achieve that society, and we set examples which may inspire others.

Japanese Rotaractors help with the cleanup after an oil spill in the Sea of Japan.

In our communities, too, we find natural allies for projects. Without the collaboration of the sectors of society affected by a project, it will likely fail. Not to be overlooked is the participation of women, who often do the lion's share of agricultural work (water-gathering, cooking, and disposing of household wastes) but may have little to say about the development of projects.

The preceding pages show the great variety of Rotary projects. Although, for purposes of organization and illustration, this book isolates water, air, land, and so on, our ecosystem is, naturally, closely integrated. For that reason, many clubs focus their environmental efforts on comprehensive educational activities. And with an eye to the long term, they frequently put their energies into educating the young.

The many Rotary educational projects worldwide include the production of environmental-awareness videos for students in Brazil, sponsorship of a weeklong EnvironSchool for high-school students in New Zealand, sponsorship of school cleanup competitions in Egypt, and support for an environmental and cultural education center in a rural Masai area in southern Kenya, among other activities.

Whatever approach you and your club or district adopt, there are certain useful points to keep in mind as you develop projects:

1. **Decide on the key issues, since you cannot solve all problems at the same time.**

   But tackling one issue successfully often leads a club to take on new challenges. And it prompts other Rotary clubs to act. To replace coral reefs destroyed by dynamiting for fish, some Rotary clubs in the Philippines have strung together tires to create artificial reefs. The Rotary Club of Cebu went on to plant mangroves as a habitat for fish and other trees to stem erosion. Rotarian scuba divers in the Manila area installed buoys to warn boaters not to drop or drag their anchors near reefs.

2. **Make sure that the community understands the benefits of the project.**

   In some cases, that is easy. In Lebanon, when the Rotary Club of Zgharta-Zawié wanted to protect a cedar forest, the nearby community was enthusiastic, because the local tourism industry depends on the health of the thousand-year-old trees. At other times, it requires

ingenuity. In the Philippines, the Rotary Club of Lucena wanted to convince parents of schoolchildren that planting trees was more profitable than cutting them. Through a "Trees for Tuition Fees" project, the club assured parents of scholarship money for their youth ten years later, in return for their tree-planting "investment."

3. Set goals — measurable, achievable, challenging, and community-shared.

Raising funds for a worthy project is an obvious way. In the late 1980s, Swedish schoolchildren, encouraged by their teachers, began raising funds to "purchase" a small part of a rain forest at Monteverde, Costa Rica, and plant trees there. In the years since, the "Children's Eternal Rain Forest" project has grown and now has participation from 37 countries. Managed by the Monteverde Conservation Agency with strong involvement of the local women's association, the site has become a popular destination for researchers, students, and thoughtful tourists. Rotarians in U.S. district 7890 contributed US$5,000 to the project. Now, they are working to preserve and reforest another Costa Rican rain forest reserve, La Marta.

4. Determine the people and technical resources available to solve the issues.

The Rotary Club of Arcata, California, USA, wanted to supply a water system to a village in Vietnam where women were walking several miles daily to get water, but it couldn't do it from afar. Assisting the club, the U.S.-based East Meets West Foundation, which has staff in Vietnam, not only designed a system which serves more than 4,000 villagers, it also supervised its construction, which was done by the villagers themselves.

5. Collaborate with rather than duplicate the efforts of other organizations.

To increase the meager water supply of villagers in the Pacific nation of Vanuatu, four New Zealand Rotary clubs — Kaitaia, Kaikohe, Waipapa and Bay of Islands — joined forces with the Save Water Save Lives organization, Vanuatu villagers and public authorities, and an aid organization. Together, they were able to construct substantial rainwater catchment systems atop four concrete-floored buildings that double as community crafts centers.

6. Involve Rotary's own partners in service.

When Omura Bay, in the Nagasaki region of Japan, became polluted by oily wastewater, everyone was concerned, but it was the Interact Club of Koyo High School that decided to do something about it. Working with the municipal government's environmental unit, the Interactors collected 20 liters of oil from the bay. From the oil, they made 35 kilograms of soap, which they sold at their school's bazaar, creating thereby a strong public awareness of the need for environmental preservation.

7. Sell a course of action to your club or district or its relevant committee.

When Craig Wilson, of the Rotary Club of Phoenix, Arizona, USA, first heard that hydrogen — a clean, renewable energy source — could replace polluting fuels like gasoline, he was skeptical. Now a believer, he is spreading that message — through his club's 50-member Pollution Free Planet Committee. The committee maintains a Web site (http://www.rotary100,org/pollute/Mainpfpage.htm) on hydrogen's benefits, and its work has the support of all three RI district governors in Arizona.

8. Agree on steps to take, a timeline, responsibilities, and evaluation tools.

Detailed planning was crucial for the massive Rotary Greenway Project conducted during the 1998 RI Convention in Indianapolis, Indiana, USA. On one day, more than 3,000 Rotarians from 100 countries and 200 local volunteers planted 700 trees and almost 12,000

flowers and other ground cover along 50 city blocks. The nearly US$500,000 project involved months of close coordination among Rotarians, businesses, nonprofit organizations, and the city. Well-executed, the beautification project garnered praise from participants and two awards from civic organizations.

9. Be realistic in your expectations.

When Canadian Bruce Anderson spent a semester teaching civil engineering at the University of the West Indies in Trinidad, using a Rotary Grant for University Teachers, he gained fresh insights into hindrances to implementing environmental measures. Working in the poor region, he said, "I developed a new appreciation of the conflicts between providing for social well-being on one hand, and environmental protection on the other." He also quickly became aware that there is far more to a project than simply designing a safe drinking water system or a reliable treatment method for wastewater — political, management and other issues intrude. By bringing such issues into the classroom for discussion, Anderson said, his teaching became relevant.

10. Promote the project through the media.

It helps, of course, if you have built a credible reputation for environmental concerns. District 1910 (Eastern Austria, Hungary, Croatia, and Slovenia) has such a track record because of its promotion of Euroenvironment conferences and its reforestation efforts along Croatia's coastline. So when it conferred environmental awards — to an individual for energy-savings achievements and to a corporation for environmental responsibility — the press took note. Elsewhere, Rotary clubs and districts raise public awareness by organizing events or activities on Earth Day (22 April) or World Environment Day (5 June).

An ecological marathon promoted Rotary's Preserve Planet Earth program throughout the Americas.

A press release is a good tool for informing the media about your project. It should be brief (one page is best), answer all key questions (who, what, where, when, why, how) in the first couple paragraphs, be factual and organized, and state a little about your organization. Most important, it should be newsworthy and timely. The addition of good photos, showing action rather than static figures, increases the appeal. For more information, consult a helpful booklet which is revised annually, *Effective Public Relations: A Guide for Rotary Clubs* (Catalog order number 257-EN).

Rotary International Resources

Publications

Through articles and its Earth Diary column, *THE ROTARIAN* magazine regularly carries news of developments which concern or excite environmentalists. Among the topics which the magazine has featured are hopeful developments which Rotarians are involved in supporting, including the safeguarding of species, the use of "good bugs" to fight pests, and the cultivation of the "miracle" moringa tree, which may help developing countries obtain clean water. The weekly *Rotary News Basket* and the five-times-a-year *Rotary World* newspaper also carry many stories of Rotary environmental projects. Also useful are two RI fact sheets, "Preserve Planet Earth Program" (PR11) and "Rotary and Water" (PR28) that can be ordered by telephoning the Faxback number; see the RI *Catalog* for details.

Rotary Web site

Regularly updated, the Rotary Web site (http://www.rotary.org) carries information specifically on the Preserve Planet Earth program, accessible via Programs. By going on-line, you can also find the latest version of numerous Rotary International periodicals and publications, including the *World Community Service Projects Exchange,* and you can download RI and Rotary Foundation forms.

Projects Database

This database gives examples of projects in a range of areas pertaining to the Preserve Planet Earth program. Included with each listing is a description of the project and project partners, along with contact information for Rotarians looking for additional details or advice on how the project was carried out. For more information, for example on projects described in this handbook, contact the Preserve Planet Earth program coordinator at RI World Headquarters.

Interact

An international organization of service and social clubs for youth ages 14 to 18, Interact clubs are sponsored by Rotary clubs. Interactors enthusiastically carry out Community Service projects like cleanups and recycling. They also conduct projects that further international understanding and goodwill. For information, consult the *Interact Handbook* (654-EN) or your district's Interact chairperson.

Rotaract

Comprised of men and women ages 18 to 30, Rotaract clubs carry out a wide range of Community and International Service projects, often working alongside their sponsoring Rotary clubs. Rotaractors worldwide have initiated innovative environmental and sustainable-development projects. For more information, consult the *Rotaract Handbook* (562-EN) or your district's Rotaract chairperson.

Rotary Community Corps (RCC)

These self-help organizations of non-Rotarians work to develop the communities in which they live and learn valuable group skills in the process. Hundreds of rural and urban corps are sponsored by Rotary clubs worldwide. Many of them adopt environmental projects, such as reforestation, rural development, park and river cleanups, and installation of water systems. For more information, see the corps handbook (770-EN).

Rotary Volunteers

This program serves as a resource for volunteers, for Rotary-sponsored projects that need volunteer assistance, and for outside organizations which place, train, fund or equip volunteers. The semiannual *International Volunteer List* (280-EN) lists volunteers willing to serve

abroad, and the *International Site List* (279-EN) identifies Rotary projects welcoming international volunteers as well as volunteer opportunities through other organizations. For more information, see the *Rotary Volunteers Handbook* (263-EN).

World Community Service (WCS)

World Community Service occurs whenever a Rotary club in one country assists a club in another country with a service project. The *World Community Service Projects Exchange* (754-EN), a semiannual publication, describes hundreds of Rotary-sponsored projects requesting help — listed by region, size and type of project. As an example of an environmental project, a club in Argentina appealed for funds to construct a biodigester and other equipment so that an agricultural-technical school could transform organic waste into methane gas and fertilizers, thus generating its own energy and improving productivity. For more information on the WCS program and registration forms, consult the *World Community Service Handbook: A Guide to Action* (742-EN). The *Donations-in-kind Information Network Resource Guide* (725-EN) suggests ways to carry out service projects using donated goods and lists organizations which may be able to assist.

Rotary Foundation Programs

Group Study Exchange (GSE)

Generally consisting of non-Rotarian business or professional people in the developmental stage of their careers and a Rotarian team leader, GSE teams visit each other's countries for four to six weeks to study the institutions and observe the practice of their professions, while experiencing the hospitality of Rotarians. Single-focus teams have studied agricultural practices and environmental issues.

Ambassadorial Scholarships

Through this program, RI districts send approximately 1,200 students abroad every year. Those especially designated as Preserve Planet Earth Scholars have included a Turkish scholar who studied and promoted a method of glass recycling for road surface material and a South African scholar who collaborated with his U.S. professor on a book explaining how to use computer ecosystem simulations in the management of land and natural resources.

Rotary Grants for University Teachers

Blending education and volunteer service, this program allows university professors to share their expertise by teaching in less-developed countries for a period of three to ten months. Every year, Rotary districts sponsor dozens of higher education teachers — both Rotarians and non-Rotarians — for service abroad.

Discovery Grants

Discovery Grants provide up to US$3,000 in "seed money" to Rotary clubs or districts to carry out preliminary travel, planning and research for the development of international service projects. (They do not cover the costs of implementing the projects.)

Grants for Rotary Volunteers

This program funds travel and per-diem expenses for Rotarians, Rotary Foundation alumni, Rotaractors and other professionals to serve as volunteers for four weeks or more on an International Service project. To be eligible for funding, prospective volunteers must first be registered with the RI Rotary Volunteers program.

Matching Grants for International Humanitarian Projects

These grants of up to US$50,000 match Rotary club or district contributions to fund International Service projects, many focusing on clean water, sanitation, reforestation and other environmental initiatives. Ordinarily, grants cannot be used to erect buildings, but the Foundation has made an exception for construction of low-cost shelters for very poor families.

Helping Grants

These grants support international service projects in countries with no Rotary clubs or where no Rotary club can significantly assist a project. Helping Grants have assisted the installation of water systems in Cuba and Vietnam, for example. Helping Grants of up to US$15,000 match one dollar for every two contributed by the sponsoring club or district.

Health, Hunger and Humanity (3-H) Grants

3-H Grants support long-term, large-scale self-help projects that aim to improve health, alleviate hunger, and enhance human development. Clean water supplies are one of three priorities for these highly competitive grants of US$100,000 to $500,000, which are awarded by Rotary Foundation Trustees twice a year.

New Opportunities Grants

Through this program, districts may use up to US$10,000 of their District Designated Funds to design service projects which do not meet all the established criteria of the Foundation's existing grants programs but have merit nonetheless.

For further information on these programs, contact your club or district Rotary Foundation chairperson or refer to publications listed in the RI *Catalog* (019-EN) which is mailed to every Rotary club.

Other Resources

Following is a brief list of environmentally minded international organizations with which Rotary clubs have worked. Many more exist in communities worldwide. You are encouraged to contact them, perhaps inviting a representative to give a presentation on the state of the environment in your community. (Note: Information was accurate at the time of publication.) Finding collaborative opportunities will allow you to pool resources and magnify the impact of your project.

Clean Up the World

117 Harris Street, Pyrmont, Sydney, NSW 2009 Australia; tel: (61 2) 692 0700; fax: (61 2) 692 0761; e-mail: cuw94@peg.apc.org. More than 100 countries have participated in this event the third weekend of September every year. At Clean Ups, volunteers collect trash at designated sites, such as beaches and roadsides, and properly dispose of or recycle the rubbish.

Food and Agriculture Organization (FAO)

Via delle Terme di Caracalla, 00100 Rome, Italy; tel: (39 6) 5225 3741; fax: (39 6) 5225 3961; Web: http://www.fao.org. FAO works to alleviate poverty by promoting agricultural development, improved nutrition, and access of all people to the food they need for a healthy life. FAO has helped Rotarians to improve vegetable and poultry production in Venezuela.

United Nations Development Programme (UNDP)

1 UN Plaza, Room FF942, New York, NY 10017 USA; tel: (1 212) 906 6978; fax: (1 212) 906 6336; Web: http://www.undp.org. The largest multilateral source of development grants, UNDP helps countries improve the livelihoods of the poor. UNDP's LIFE (Local Initiative Facility for Urban Environment) supports small urban improvement projects; it has its own Web site: http://magnet.undp.org/Docs/LIFE/Default.htm.

United Nations Environmental Programme (UNEP)

P.O. Box 30552, Nairobi, Kenya; tel: (254 2) 62 1234/3292; fax: (254 2) 62 3927/3692; Web: www.unep.org. Together with the UNDP and World Bank, UNEP, through its Global Environmental Facility, funds activities to reduce greenhouse gases and land degradation and protect biodiversity, international waters, and the ozone layer. UNEP can advise Rotary clubs. Yearly, UNEP names top environmentalists to its Global 500 Roll of Honour and a youth honor roll and confers the Sasakawa Environment Prize, worth US$200,000.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

7, place de Fontenoy, 75352 Paris 07, SP France; tel: 33 (0) 1 45 68 10 00; fax: 33 (0) 1 45 67 16 90; Web: http://www.unesco.org. UNESCO encourages sustainable development through promotion of solar power, water resources management, and conservation of the resources of the biosphere. For information or assistance in the planning and implementation of projects, contact UNESCO headquarters to locate its national or regional coordinator in your area.

United Nations Population Fund (UNFPA)

220 East 42nd Street, New York, NY 10017 USA; tel: (1 212) 297 5020; fax: (1 212) 557 6416; Web: http://www.unfpa.org. UNFPA assists developing countries to improve reproductive health and family planning services on the basis of individual choice, and to formulate population policies in support of efforts towards sustainable development. UNFPA has worked with Nigerian Rotary clubs to expand a maternal education and child spacing program.

United Nations Children's Fund (UNICEF)

Water, Sanitation and Environment Section, 3 UN Plaza, TA-26A, New York, NY 10017 USA; tel: (1 212) 824 6668; fax: (1 212) 824 6480; Web: http//www.unicef.org. UNICEF's Water, Sanitation and Environment Section works with other organizations to carry out projects to promote sustainable community management of water resources and overall ecosystem conservation. UNICEF has assisted Rotarian well-drilling projects in Haiti, for example.

World Bank

NGO Unit, 1818 H Street, NW, Washington, DC 20433 USA; tel: (1 202) 473 1840; fax: (1 202) 522 1669; Web: http://www.worldbank.org. The World Bank helps member countries to achieve their development goals. While the Bank seldom funds nonprofit organizations directly, its Social Fund channels resources to projects proposed by voluntary organizations and its Small Grants Program funds information and networking activities of small organizations in developing countries.

World Health Organization (WHO)

20, avenue Appia, 1211 Geneva 27, Switzerland; tel: (41 22) 791 2111; fax: (41 22) 791 0746; Web: http://www.who.org. The objective of WHO is the attainment by all peoples of the highest possible level of health. In addition to working with Rotarians worldwide on the PolioPlus program, WHO assists Rotarians with local projects.

World Wide Fund For Nature (WWF)

Avenue de Mont Blanc, CH-1196 Gland, Switzerland; tel: (41 22) 364 9111; Web: http://www.panda.org. WWF aims to preserve genetic, species and ecosystem diversity and reduce pollution and the wasteful exploitation of resources. One of the largest independent conservation organizations with a network of national organizations and associates, WWF continues to be known as World Wildlife Fund in Canada and the USA.

Useful Publications

State of the World provides in-depth information on environmental trends and suggests strategies to achieve a sustainable society. Available in 30 languages, it is published annually by the Worldwatch Institute, 1776 Massachusetts Ave., Washington, DC 20036-1904 USA; tel: (1 202) 452 1999; fax: (1 202) 296 7365; e-mail: wwpub@worldwatch.org; Web: http://www.worldwatch.org

Taking Action: An Environmental Guide For You and Your Community brings together research and actions people can take to make a difference, working together. Produced by UNEP and available on the Internet (http://www.rona.unep.org/action). Book available in English only. SMI (Distribution Services) Ltd., P.O. Box 119, Stevenage, Hertfordshire, England SG1 4TP; tel: 44 (0) 1438 748111; fax: 44 (0) 1438 748844; e-mail: Anthony@SMI Books.com

World Resources, a biennial publication, analyzes global environmental conditions and trends, with data on natural resources in 150+ countries. Published by the World Resources Institute, UNEP, UNDP, and the World Bank. World Resources Institute, 1709 New York Avenue, NW, Washington, DC 20006 USA; tel: (1 202) 638 6300; fax: (1 202) 638 0036; Web: http://www.wri.org

Earth Times, an English-language newspaper published by the nonprofit Earth Times Foundation, covers a gamut of topics, from conservation to science, population, sustainable development, and health. The Earth Times Subscription Department, 205 East 42nd Street, Suite 1316, New York, NY 10017 USA; e-mail: earthtms@worldnet.att.net.; Web: http://www.earthtimes.org

Our Planet, the United Nations Environmental Programme's bimonthly magazine, concentrates on a theme a month, from climate change to international conferences and events. Published in English, French, and Spanish. Our Planet, IWSS Ltd., PO Box 119, Stevenage, Hertfordshire, SG1 4TP, England; e-mail: banson@gn.apc.org; Web: http://www.ourplanet.com/home.html

People & the Planet, an English-language magazine, explores how people, consumption, and technologies interact with the environment. Published by UNFPA, WWF, the World Conservation Union, the International Planned Parenthood Federation and the Swedish Development Cooperation Agency. People & the Planet, 1 Woburn Walk, London, WC1H 0JJ England; tel: 44 (0) 171 383 4388; fax: 44 (0) 171 388 2398; Web: http://www.oneworld.org/patp

Tomorrow Magazine, an English-language environmental and business magazine, is produced by a Swedish publisher, which also posts corporate environment reports on its Web site. Tomorrow Publishing, Saltmätargatan 8A, SE-113 59 Stockholm, Sweden; tel: (46) 8 33 52 90; fax: (46) 8 32 93 33; e-mail: info@tomorrowpub.seinstitutes; Web: http://www.tomorrow-web.com

Additional Resources on the Internet

Best Environmental Directories	www.ulb.ac.be/ceese/meta/cds.html
Corporate Social Responsibility Site	www.streetweb.nl.csr
Earthsystems.org	www.earthsystems.org
Econet	www.igc.org/igc/econet
Electronic News Summary Magazine	www.voyagepub.com/publish
Environlink	www.envirolink.org
Gaia Forest Conservation Archives	www.forests.org
Global Environmental Options	www.geonetwork.org
Green Living Center	www.greenliving.org
Green Pages Online	www.coopamerica.org/gp
Ministries of Environment	www.unep.org/unep/ministry.htm
Planet Society (UNESCO)	planetsociety.unesco.org:8090
Sustainable Development Resources	csf.colorado.edu/casx/links.html

Rotary International
One Rotary Center
1560 Sherman Avenue
Evanston, IL 60201 USA
Web site: www.rotary.org

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