

By helping to protect
our natural world,
we **support** all of our
areas of focus





**And take action
to create positive,
lasting change
across the globe,
in our communities,
and in ourselves.**

ON THE COVER: Rechea Delancy, member of the Rotaract Club of East Nassau. Rotarians and Rotaractors plant mangrove trees at Bonefish Pond National Park in Nassau as part of a project organized by the Rotary Club of East Nassau, New Providence, Bahamas, and the Bahamas National Trust. Restoring the mangrove ecosystem will help protect the coast against hurricanes.

Foreword

Rotarians are working hard to improve the lives of people all over the world by creating positive, lasting change in their communities and beyond. We are continuously striving to increase our impact by attracting new members and creating new opportunities to engage for the benefit of all. As such, we are pleased to introduce this World Environment Day handbook created by the Environmental Sustainability Rotarian Action Group, with input from UN Environment.

The state of the environment underpins, and has the power to impact, all six areas of focus. A vital component to humanity's well-being, we increasingly need to recognise the environment's elemental role in creating truly sustainable and lasting change. The opportunity to collaborate with UN Environment – the United Nations agency that serves as the global authority on the environment – is well-timed for those who want to make a difference at the local level. We hope to see Rotarians worldwide connect and implement many of the suggestions in this handbook. Our collective efforts will result in greater global impact. By helping to protect our natural world, we support all of our areas of focus – and take action to create positive, lasting change – across the globe, in our communities, and in ourselves.

Barry Rassin, president,
Rotary International, 2018-2019

Mark Daniel Maloney, president,
Rotary International, 2019-2020



Barry Rassin, president,
Rotary International, 2018-2019



Mark Daniel Maloney, president,
Rotary International, 2019-2020



World
Environment
Day
5 June

About this handbook

This handbook has been created by the Environmental Sustainability Rotarian Action Group (ESRAG) with input from UN Environment. Its purpose is to educate and inspire Rotarians around the world to take action for the environment, and to bring attention to the important role the environment plays in Rotary's six areas of focus. The handbook includes a selection of 11 green themes for activities that Rotary clubs can do for World Environment Day on 5 June or make a commitment to commence an activity in the future.

Students from Brown Bear Daycare visit the community garden in Harvard, Illinois, USA, throughout the year to learn about garden-related topics and help out. The Rotary Club of Harvard used a community garden project to alleviate hunger in the community. Nearly 10,000 pounds of fresh vegetables are grown from May to October and distributed to low-income families through the local food pantry. Residents and youth groups are also educated on the health benefits of including fresh produce in their daily diet.



What is World Environment Day?

World Environment Day takes place every year on 5 June. It is the United Nations' flagship day for promoting worldwide awareness and action for the environment. Over the years, it has grown to be one of the largest global platforms for public outreach and is celebrated by millions of people in more than 100 countries.

It is the "people's day" for doing something positive for the environment. This year, the theme for World Environment Day is Air Pollution. Millions of people will participate in activities around the world to take action to improve the quality of the air we breathe.

The day is celebrated in countless ways, with everything from beach clean-ups to tree planting. It is a great opportunity to contribute as part of civic society.

Why is this Handbook Important?

All six of Rotary's areas of focus are closely linked to the environment.

PROMOTING PEACE: The connections between the environment and peace are many and complex.¹ Good management of ecosystems can lead to cooperative, resilient communities. Poor management of the environment undermines both natural and social systems. The resulting scarcities and competition for water and other natural resources can lead to increased insecurity, climate-induced migration, and refugees.

FIGHTING DISEASE: A healthy environment tends to lead to healthier people.² Investing in environmental sustainability can promote our well-being. The degradation of the environment — the air we breathe, the food we eat, the water we drink, and the ecosystems that sustain us — is responsible for an estimated 1 in 4 deaths across the globe.³

PROVIDING CLEAN WATER AND SANITATION:

Too many people in the world still lack access to safe drinking water, sanitation, and hygiene — basic elements of health and dignity.⁴ Effective management and protection of the environment is critical for successful water and sanitation programmes and can reduce risks to water supplies due to flooding, pollution, improperly managed sanitation, extreme precipitation events, and over extraction.

SAVING MOTHERS AND CHILDREN: Approximately 1.7 million children under five die each year from lower respiratory infections and diarrheal diseases.⁵ Cleaning up the environment reduces preventable and premature deaths, improves the health of the children who survive, benefits their mothers, and improves the well-being of the entire family.

SUPPORTING EDUCATION: Nature education creates better stewards of the air, land, water, and wildlife, which is critical for the sustainability of everyone's health. Young minds in well-nourished and healthy bodies are better able to benefit from education and literacy.

GROWING LOCAL ECONOMIES: Prudent environmental practices support industry, agriculture, and services to meet both current and future needs of a community. Tapping alternative energy sources to reduce energy poverty and support local economies is essential for progress in all of the other areas of focus. For example, strategic microfinancing enables a community to install and use a solar-powered grid. Communities and their economies flourish when the air and water are clean, and nourishing food promotes health and well-being.



Constance Gibson, of the Rotary Club of East Nassau. Rotarians and Rotaractors clean a community center run by the Bahamas AIDS Foundation in Nassau. The Rotary Club of East Nassau organized the project.

1 <https://www.unenvironment.org/explore-topics/disasters-conflicts/what-we-do/recovery/natural-resources-and-peacebuilding>

2 <https://www.unenvironment.org/news-and-stories/story/healthy-environment-healthy-people>

3 <https://www.who.int/features/factfiles/environmental-disease-burden/en/>

4 <http://www.unwater.org/water-facts/water-sanitation-and-hygiene/>

5 <https://www.who.int/features/factfiles/environmental-disease-burden/en/>

Who is this handbook for and how can we use it?

This handbook is a guide for Rotary clubs to take action for the environment. Ultimately, there is no single, simple solution to our environmental challenges; this handbook aims to provide inspiration, ideas, and guidance on where to start, as well as links to additional resources and contact details for experts who can help.

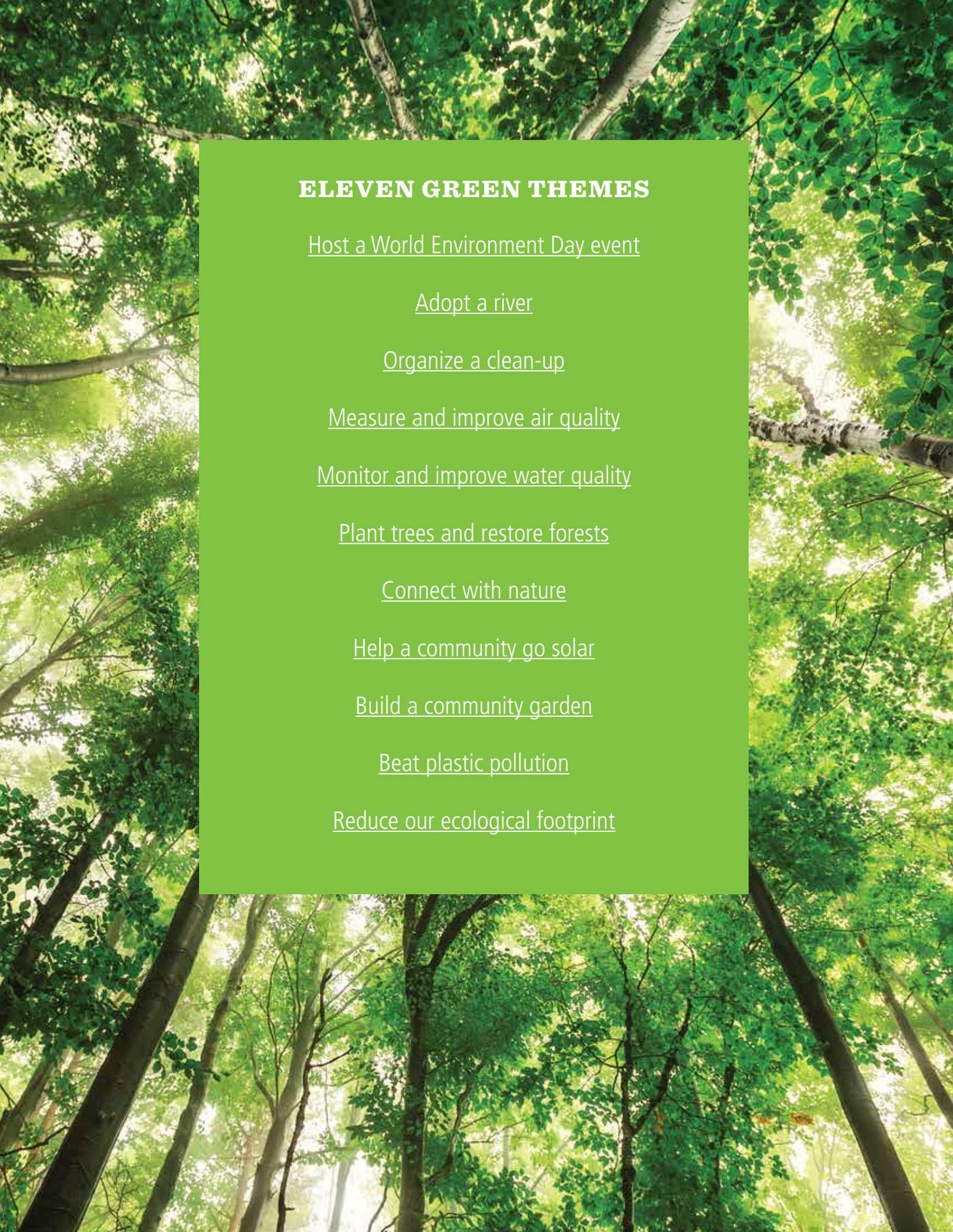
Sampson Appiah (left), local water and sanitation committee organizer, helps Abena Boatemaa (center) and Diana Asieduwaa fetch water from a well serving the community at Nkwantanan in the Amenfi Central District, Western Region of Ghana. Rotarians from 35 clubs across the country, in partnership with USAID and the national and local agencies of the government of Ghana, and with the support of Rotary District 6380 (Michigan, USA, and Ontario, Canada), are working with local communities to improve sustainable access to clean water and sanitation services, foster the adoption of hygiene behavior, strengthen community management systems, and influence decision makers for prioritized financing of local water and sanitation services.

How to prepare for a Rotary project

Preparation for even a single-day event may, and often will, take many months. Here are six basic steps to keep in mind:

1. Find something you are passionate about that is within the scope of your Rotary club.
2. Engage the community you want to help.
3. Seek approval and support from your Rotary club.
4. Consider involving other organizations or additional Rotary clubs.
5. Communicate with your team and partners during the planning and implementing of your project.
6. Share your celebration of World Environment Day and your positive actions with your community through the media ([see Appendix: Press release template](#)).





ELEVEN GREEN THEMES

[Host a World Environment Day event](#)

[Adopt a river](#)

[Organize a clean-up](#)

[Measure and improve air quality](#)

[Monitor and improve water quality](#)

[Plant trees and restore forests](#)

[Connect with nature](#)

[Help a community go solar](#)

[Build a community garden](#)

[Beat plastic pollution](#)

[Reduce our ecological footprint](#)

Host a World Environment Day event

World Environment Day, recognized on June 5 each year, is the United Nations' principal event for encouraging awareness and action for the protection of nature. First celebrated in 1974, the day has grown to become a global platform for public outreach and engagement, with millions of people participating in activities in more than 150 countries.

World Environment Day in 2019 is focused on reducing air pollution, which contributes to the premature deaths of about 7 million people each year. In at least 155 countries, a healthy environment is recognized as a constitutional right, yet nine out of ten people worldwide are exposed to air pollutants at levels that exceed those considered safe by the World Health Organization. Air pollution doesn't just impact health and economic growth — many of the pollutants also cause global warming.

Fulfilling the right to breathe clean air goes along with achieving the [UN Sustainable Development Goals](#), including healthy lives for all, sustainable cities, universal access to clean energy, and effective action to address climate change.

We encourage Rotarians and clubs to join the UN Environment-led campaign. Here are some ideas.

Actions

- a. Visit worldenvironmentday.global to learn more about what clubs and individuals can do to celebrate World Environment Day — and how they can be part of the campaign on social media.
- b. Choose a project. While each World Environment Day has an advocacy theme, it is also a day of environmental celebration. UN Environment encourages clubs to select from the broad range of activities in this handbook to find an idea for a project.

- c. Be sure to [register your event](#) on the World Environment Day website so that UN Environment can showcase it to the world. You might like to announce a project that your club is either already doing or plans to start.
- d. Join the global movement around World Environment Day by posting a story or video on social media to let the world know what you're doing. Be sure to use the hashtags [#WorldEnvironmentDay](#) and [#BeatAirPollution](#). Tell your local media outlets, too.

Contact e-mail and link

Email UN Environment: unenvironment-info@un.org

Visit World Environment Day Page: worldenvironmentday.global



Rotarians volunteer at North Branch Channel Sculpture Garden in Evanston. Four Rotarians traveled across the U.S. on the Rollin' With Rotary tour to bring attention to local and international needs. Along the way, they performed random acts of kindness, highlighted Rotary projects and youth activities, and carried out large-scale community service projects. The tour made a stop at Rotary International World Headquarters to promote peace through street meditation, volunteer locally, and dance with community members in Evanston, Illinois, USA.

Adopt a River

Almost all Rotary clubs will have a local river or other waterway. Rivers are universal lifelines to societies and civilizations. Rivers carry runoff from their watersheds and provide links between land-based activities, inland wetland and lakes, and coastal and marine environments. These ecosystems and their plant and animal communities provide numerous products and services that benefit society, both directly and indirectly. They supply fresh water for drinking and environmental needs and help to sustain the global hydrological, carbon, and nutrient cycles. These ecosystems, however, are under serious threat from population growth and urbanization, increased economic activity, intensification and expansion of agriculture, climate change, and pollution.

Although water pollution is serious and worsening in many countries, there are great opportunities for reducing pollution and restoring rivers. UN Environment's comprehensive Framework for Freshwater Ecosystem Management consists of steps and guidelines for protecting freshwater ecosystems and maintaining their natural balance.

Members of Dutch Rotary and Rotaract clubs partner with Plastic Whale to remove plastic from the canals in Amsterdam, Netherlands. Plastic Whale is a social enterprise that removes plastic from waterways worldwide and creates usable objects from plastic waste.



Examples

- Cleaning the Rivers of the World, a project of the Rotary Club of Ukiah South (District 5130, USA), provides support, leadership and fellowship for Rotarians and the projects they inspire to clean our rivers locally and globally.
- Multiple rotary clubs in Kenya, District 9212, are working with UN Environment's freshwater team to adopt stretches of polluted and degraded rivers with the goal of cleaning them and restoring their ecology.

Many watersheds have waterkeepers or riverkeepers, who allow groups to adopt a section of a waterway. Rotary clubs can join these adoption projects through the following actions:

Actions

1. Identify a local stretch of a waterway (river, creek, or tributary) to adopt.
2. Identify sources of pollution through water quality monitoring or an "audit" during a clean-up.
3. Work with local authorities or environmental groups to prevent further pollution.
4. Create an alliance of businesses and other organisations in your community to help support clean-ups and restoration.
5. Conduct riverbank restoration and beautification, including planting trees and grass.
6. Promote community monitoring and surveillance of the river water resources.
7. Conduct awareness and education campaigns to help protect the waterway.
8. Promote protection and restoration of riparian habitats for fish, birds, and other animal species.

Contact e-mail and link

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Visit UN Environment Page: unenvironment.org/explore-topics/water

Organize a clean-up



World Environment Day has inspired thousands of clean-ups, the most popular activity, around the world every year. The power of a clean-up initiative is enormous. Clean-ups bring people together, create a common goal, and provide visible, immediate results. Clean-ups are also powerful tools to raise awareness. People are inspired to become more conscious consumers once they see first-hand where a single-use item is tossed.

Rivers, forests, beaches, parks, and schoolyards all offer numerous clean-up possibilities. Clean-ups not only make an area safer and more attractive, but they also highlight the magnitude of the waste problem. Clean-ups inspire us to demand better management of the entire lifecycle of what we consume.

Examples

- Many cities and towns have “adopt a road” programs. These generally require clean-ups about four times per year over an assigned stretch of road. Adopting a road or bus stop is easy to set up with your local department for roads and transportation. They typically provide all the equipment, gloves, pickers, and bright safety jackets, and coordinate the collection of bagged garbage.
- Partner with groups who focus on beautification or support outdoor recreation sites to organise a clean-up day. Many groups such as Keep Australia Beautiful and Clean Up Australia have well-organised clean-up events.

Sampson Appiah, local water and sanitation committee organizer, mobilizes members of the community to clean their community at Nkwantanan, before they can benefit from water and sanitation improvements. Nkwantanan, Amenfi Central District, Western Region of Ghana. Rotarians from 35 clubs across the country, in partnership with USAID and the national and local agencies of the government of Ghana, and with the support of Rotary District 6380 (Michigan, USA, and Ontario, Canada), are working with local communities to improve sustainable access to clean water and sanitation services, foster the adoption of hygiene behavior, strengthen community management systems, and influence decision makers for prioritized financing of local water and sanitation services.



Actions

1. Organize a community clean-up day (or even set a community clean-up day every month). Steps:
 - a. Identify a particularly polluted area that you want to prioritize for a clean-up.
 - b. Set a date.
 - c. Invite work colleagues, your family, partners, neighboring organizations, and suppliers to help.
 - d. Talk to local companies and media to raise awareness about the clean-up.
 - e. When collecting trash, analyse the types of trash collected and their sources through an audit (apps like Litterati or Clean Swell can help with this. Mentioning Rotary directs to ESRAG.) Dispose of this waste appropriately.
 - f. Host plogging events, where people go jogging and pick up the litter they find on the way.
 - g. Donate and install litter collection bins in your community, especially in littering hot spots such as public parks.
2. Create an alliance of businesses and other organisations in your community to support and act on clean-ups.

Contact e-mail and links

E-mail ESRAG: Salvador Rico salvador.rotary@gmail.com

Visit Web Pages: worldenvironmentday.global/en/get-involved/lets-clean

<https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/cleanswell/>

<https://www.litterati.org>

Measure and improve air quality

Air pollution contributes to more than 7 million deaths a year through strokes, heart attacks, emphysema, and various cancers.¹ Tiny, nearly invisible particles of pollution penetrate deeply into our lungs and bloodstream. Research has linked air pollution with autism and reduced brain power in both adults and children.

Short-lived climate pollutants, which persist in the atmosphere for as little as a few days or as long as a few decades, are correlated with both health issues and near-term warming of the planet. The good news is that reducing air pollution can immediately improve air quality.

Air pollutants include black carbon, ground-level ozone, and methane. Black carbon is produced most often by diesel engines, burning trash, and cooking or heating stoves that burn coal, kerosene, or biomass (organic matter such as wood or animal waste). Ground-level ozone forms when emissions from industry, traffic, waste and energy production interact in the presence of sunlight. Methane comes from agriculture, primarily rice paddies and livestock production, as well as emissions from sewage plants and solid waste landfills, and oil and gas production.



Air pollution contributes to more than 7 million deaths a year. Air pollutants include black carbon, produced most often by diesel engines, burning trash and cooking stoves.

Examples

- Planning communities for people, not cars and trucks, can play a powerful role in limiting air pollution. Walking, biking, or using transit reduces emissions from vehicles powered by fossil fuels. Trees clean the air and produce many other benefits. We can support solutions that lessen emissions and dramatically reduce air pollution over time. Besides reducing air pollution, we can also find ways to limit our exposure to it.
- Rotary clubs, particularly a number in the United Kingdom, are using carbon counters to estimate their carbon footprint and then taking action to offset that footprint by funding tree planting and other carbon sequestration projects.
- Rotary clubs in India are installing biogas units that break down cattle dung and capture methane for cooking, replacing the need for wood-fired stoves. E.g. [Nareshwadi Learning Centre](#).
- Rotary clubs are supplying solar cookers and more efficient wood-fired stoves and using solar units to provide lighting instead of kerosene lamps or candles.
- The Environmental Protection Agency in the United States has programmes for community monitoring of air quality, which are great opportunities for Rotary clubs.

Actions

1. Promote carbon sequestration through tree planting.
2. Donate or install air quality monitoring devices or buy handheld air quality meters to test air in your local community.
3. Talk to media, host live interviews, or post online about what you find to raise awareness about the presence of air pollution in your community.
4. Promote car-free days in your community.
5. Walk, bike, or take the bus instead of driving.
6. Consider eating mostly vegetables instead of meat.

Contact e-mail and links

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Visit Web Pages: breathelife2030.org

cfpub.epa.gov/ncer/abstracts/index.cfm/fuseaction/recipient.display/rfa_id/587

<http://www.footprintcalculator.org>

¹ <https://www.who.int/news-room/detail/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action>

Monitor and improve water quality

Approximately 80% of the world's wastewater, polluted with pathogens, industrial effluent, or chemicals, is discharged untreated into waterways.¹ UN Environment estimates that severe pollution and pathogens affect up to one-third of river stretches in Latin America, Asia, and Africa.² Plastic pollution, and less obvious pollutants such as pharmaceuticals, also increasingly put our world's waterways at risk, but the extent and impact of their presence in fresh water are largely unknown.

In addition to health risks, the nature and quantity of pollutants in fresh water makes it less suitable for home, agricultural, and industrial use. Water pollution also damages the habitat and quality of life for fish and other wildlife.

Projects to monitor the quality of water in a local stream, river, lake, or even from the tap provide an understanding of the scope and intensity of water pollution. In addition, water quality data supports science and sound decision-making around initiatives to protect and restore freshwater ecosystems.

Examples

- The Rotary Club of Toledo, Ohio, USA, motivated by the toxic algal bloom in Lake Erie, organized a [one-day Lake Erie Watershed Crisis Conference](#) with diverse stakeholders to develop strategies aimed at reducing nutrient run-off.
- The Rotary Club of Waterville, Ohio, USA, in collaboration with Bowling Green State University and others, organized a multi-club team of citizen water-quality data gatherers, who were assisted by mobile phone apps.
- Events that include monitoring of air quality and waterways can be arranged as single-day events.
- Rotary clubs often partner with local governments and waste management companies to organize household hazardous waste collection days, which help keep toxic chemicals out of the municipal waste stream, dump sites, and waterways.



Members of the Rotary Club of Waterville, Ohio, USA, draw water samples from a stream leading into the Maumee River in Bowling Green, Ohio. Rotary clubs in Ohio and Canada near Lake Erie are addressing water contamination by testing water, sharing results, and collaborating with residents and community leaders to advocate for improved water quality.

Actions

1. Set up water-quality monitoring networks along rivers, lakes, or aquifers.
2. Visit your local watershed or reservoir.
3. Conduct citizen science exercises to monitor the water-quality status and trends of freshwater ecosystems (such as rivers, lakes, and aquifers).
4. Train volunteers to monitor water quality and contribute to web-based tools for data management.
5. Promote safe wastewater reuse.
6. Capture and use stormwater.
7. Reuse domestic wastewater and sludge.
8. Reuse wastewater in industries.
9. Educate local communities on the effects of water pollution and solutions to mitigate it, such as limiting chemicals used in your yard or driveway.

Contact e-mail and links

E-mail ESRAG: John Lawrence, Jim Page, Jr.,
district6600@hotmail.com

Visit Web Pages: cleanwaterforliving.com/rotary.org/en/rotarians-take-dangerous-algae-bloom
web.unep.org/gemswater/gemswater/what-we-do/freshwater-quality-data

1 https://uneplive.unep.org/media/docs/assessments/unep_wwqa_report_web.pdf

2 https://wedocs.unep.org/bitstream/handle/20.500.11822/26004/SDG_Brief_004.pdf?sequence=1&isAllowed=y

Plant trees and restore forests



Members of Korean Rotary and Rotaract clubs participate in a 24-hour hunger experience project in Cheon-An, Korea. In addition to fasting, participants packaged grain for distribution to people in need and planted trees to aid in environmental conservation and improve health.

Trees and forests contribute greatly to the well-being of our societies and economies, reducing soil erosion, and maintaining oxygen flow, water cycles, and clean air. To some extent, more than 1.6 billion rural people — including indigenous people and small farmers — depend on forests. More than 90% of people living in extreme poverty depend on forests for all or part of their livelihoods.¹

The threat to global forests is alarming, with 7 million hectares (about 5 million football fields) destroyed annually.² This deforestation — together with agriculture and other land use changes — accounts for about a quarter of all global greenhouse gas emissions.³ Reducing forest loss and planting new trees creates multiple benefits for ecosystems and people, in addition to improving the climate. Urban trees help ease the “heat island” effect, offering cooling shade for homes and buildings and reducing the energy needed for air conditioning. Trees everywhere clean the air and sequester carbon.

The health of the land affects us in many ways because we depend on land for shelter, water, and agriculture. Restoration of landscapes makes our communities more resilient because it strengthens water catchments and can protect cities from natural disasters, such as coastal mangroves that are natural buffers to storms. Tree planting is essential to the restoration of habitats, watersheds, and ecosystems.

¹ <https://www.unenvironment.org/explore-topics/forests>

² <https://reliefweb.int/report/world/state-world-s-forests-2018-forest-pathways-sustainable-development>

³ <http://www.un-redd.org/forest-facts>

Examples

- **Rotary Mission Green**, D9211, in collaboration with schools, prisons, and even a brewery, is undertaking a five-year effort to grow 5 million trees a year in Uganda and Tanzania.
- Together, the Manhattan and Manhattan-Konza Rotary clubs in Kansas, USA, planted more than 200 trees in the Manhattan area in collaboration with Kansas State University.
- Single-day planting events are widely available through local public works offices. The Rotary Club of College Park, Maryland, USA, has coordinated single-day planting events with Prince George’s County Parks and Planning Commission, where several hundred c.3 metre trees were planted each day with 30-50 volunteers.
- In the 2017-18 Rotary year, Rotary clubs were invited by RI President Ian H.S. Riseley to plant 1.2 million trees. Rotarians reported planting more than 5 million trees that year.
- Over the past seven years, Rotarians and Rotaractors from District 9810 in Australia have planted 11,000 native tree seedlings on farms in central Victoria. They have also helped to restore the bank of a local creek by removing weeds and planting native grasses and tree seedlings.

Actions

1. Raise awareness about the benefits of tree planting and forest restoration.
2. Organize community drives to plant trees on land that has been degraded.
3. Identify conservation challenges in your community and find ways to address the problem.
4. Engage with policymakers on wildlife corridors and conservation.
5. Host a tree-planting event.

Contact e-mail and link

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christopher.puttock@gmail.com

Visit Web Page: rotarymissiongreen.org

<https://www.esrag.org/tree-planting-resources>

Connect with nature

Research tells us that the more people experience nature, the more they support conservation of our natural world. People tend to be happier, healthier, and more productive when the environment is a meaningful part of their lives.

When people feel connected to their natural world, they are more likely to demand and engage in sound management practices in the face of growing environmental challenges.

Alas, many city dwellers face barriers that prevent them from experiencing and caring for nature. In poor urban communities, people rarely have the means to get to green spaces. Often, parks are outside urban areas and may be expensive to get to. Without easy and affordable access to nature, people, especially children, are spending increasing amounts of time on digital devices rather than playing outside and experiencing nature firsthand.

The movement #NatureForAll builds support for nature conservation among people from all walks of life by raising awareness and facilitating experiences and connections with the natural world. UN Environment is a member, along with hundreds of other organizations. #NatureForAll has a guide for how groups can get people outside and into our beautiful natural world.

Example

- Rotary clubs in California and Kenya have partnered with the Wildlife Clubs of Kenya (WCK) and the United Nations Environment Programme (UN Environment) to promote Komba Safaris. This project, which educates students through outdoor learning, takes them to areas of wildlife importance where they are taught to value and conserve wildlife. UNEP and WCK provide teachers and students with educational materials on wildlife conservation. Rotary clubs worldwide can join in by sponsoring additional events.

Actions

1. Lead a nature hike.
2. Contribute to a citizen science platform like [iNaturalist](#) by monitoring nature or bird counts, frog counts, etc.
3. Raise awareness in schools about the importance of creating opportunities for students to experience nature. Simple changes, such as having an outdoor classroom day, where students learn outside for one day a month, will go a long way. Ask your club to sponsor an essay or art competition on environmental awareness.

4. Encourage Rotarian parents to host nature clubs for families from their community to give children of all ages the opportunity to play and explore in a natural setting.
5. Fundraise to create nature and cycling trails in your communities.
6. Create opportunities for people to engage in nature-based activities.

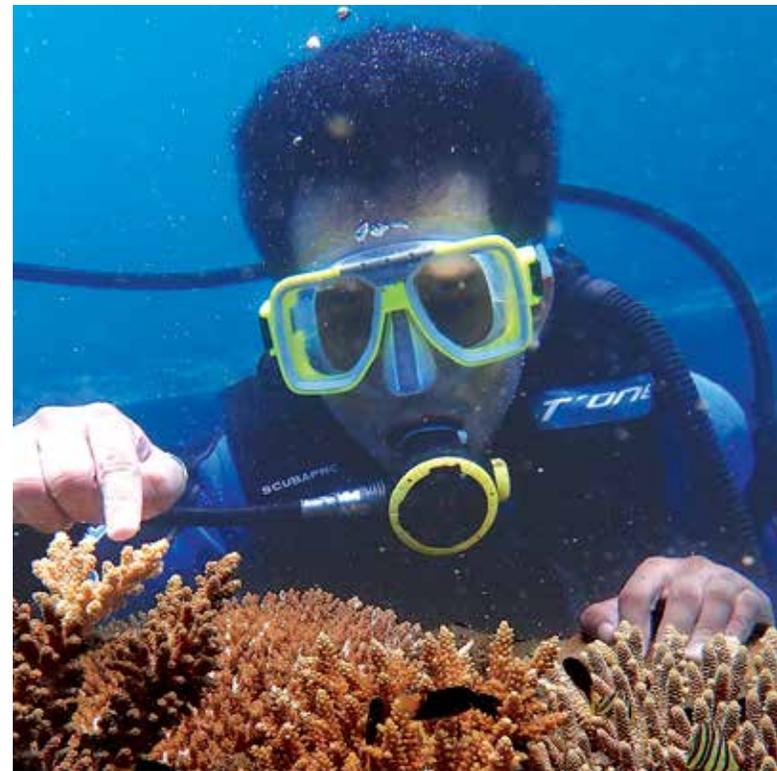
Contact e-mail and links

E-mail ESAG: Rachael Blair; Patricia Armstrong; Christopher Puttock christopher.puttock@gmail.com

Visit Web Pages: natureforall.global (This website has a Youth Voices Curriculum Sourcebook available in English, French, and Spanish.)

#NatureForAll publication, Home to Us All: How Connecting With Nature Helps Us Care for Ourselves and the Earth: <https://www.researchgate.net/publication/330980975>

wildfor.life



Rotary members partnered with local fishermen to build an artificial reef that helped save the fishing industry in Atimonan, Quezon Province, Philippines.

Help a community go solar

Although energy drives economies and sustains societies, the burning of fossil fuels is also the single biggest contributor to global warming, accounting for two thirds of man-made greenhouse gas emissions.¹ More than 1 billion people still lack access to electricity while 3 billion rely on coal, charcoal, and animal waste for cooking and heating, which emits smoke that harms our health.² We can reduce our reliance on fossil fuels while making reliable, clean, and affordable energy from the wind and sun available to everyone on the planet.

Estimates show that renewable energy will have the fastest growth in the electricity sector, increasing from 24% in 2017 to providing almost 30% of energy demand in 2023. It's forecast that during these six years, renewables will meet more than 70% of global electricity generation growth, led by solar photovoltaic and followed by wind, hydropower, and bioenergy.³

Solar power as a renewable, carbon dioxide-free energy source, has a significantly smaller environmental impact. There are many examples around the world where renewable energy is being adopted in growing numbers. In Australia, for example, more than 2 million homes (20-25% of homes) have solar panels. Hawaii will generate all its electrical power from solar, wind, and hydrothermal sources within five years.

Examples

- Rotarians can help create a movement to demand renewable energy resources in our cities. We can also promote conscious energy use and support projects that address energy poverty through renewables in developing countries.
- The Rotary Club of Bombay Central, Mumbai, Maharashtra, India, provides solar-generated electrical power for a charity hospital
- Rotarians from Durango, Colorado, USA, team with the Navajo Nation to bring solar lights to remote, off-the-grid homes on the country's largest Native American reservation.
- In 2017, the Rotary Club of Northwest Austin, Texas, USA, provided 600 families in the remote villages of Belize's Toledo District with solar lamps for their homes. The impact was immediate, resulting in years of progress in a single day.

Actions

1. Promote the use of renewable energy resources, such as solar. Support underprivileged communities by helping provide solar-powered systems for their homes.
2. Raise money to add solar panels to a local school and provide education about them and energy-use counters.
3. Develop and support programs to train women as entrepreneurs, who can install, maintain, and repair renewable energy systems. Learn more at solarsister.org.

Contact e-mail and Links

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Visit Web Pages: <https://www.iea.org/weo>
seforall.org



Jose Lucas Rodriguez Fontanez, of the Rotary Club of Yauco, Puerto Rico, installs a new water filtration system in the mountain community of Rubias, Puerto Rico. The Rotary Club of Yauco funded the installation. The system runs on solar and wind energy, providing a free source of clean drinking water that's independent of the power grid. Community leaders are trained to maintain the system by the project partner organization, Water Is Life.

1 <https://www.unenvironment.org/explore-topics/energy>

2 <https://www.unenvironment.org/explore-topics/energy>

3 <https://www.iea.org/topics/renewables/>

Build a Community Garden

Community gardens and small parcels of land can be used to supplement local food needs and restore some services of the local ecosystem. The urgency to produce enough food to satisfy the increasing global population has led to the more rapid destruction of our environment. Widespread clearing of natural vegetation, soil erosion, pollution of soil and waterways, as well as loss of native species of animals and plants all stress ecosystems. In addition, modern day cities generate vast quantities of solid waste.

Growing community gardens can help reverse some of these trends while providing fresh, locally-produced food, and building community pride and friendship.

Worm farming and composting are sustainable ways to deal with the organic waste generated by city dwellers and, as a bonus, the compost produced can be used on gardens to improve the quality and fertility of the soil.

The individual choices we make as to where we source our food can collectively affect the environmental impacts of food production.

Examples

- Once established, butterfly gardens with native plants offer restorative habitat and require only a few days of maintenance in spring and autumn. An excellent example is the garden maintained at the Springhill Lake Elementary School by the Rotary Club of Greenbelt, Maryland, USA.
- Since 2014, the Rotary Club of Harvard, Illinois, USA, has supplied seeds and plants to support a community garden that provides food to the community, in conjunction with the local master gardeners program. Likewise, the Ambassadors Rotary Club (West Kansas City), Kansas, USA, has partnered with their local elementary school to improve student nutrition.
- Rotary clubs can host booths at their local farmers' markets and district conferences to create awareness about bees and other pollinators. There, they can educate the public about the importance of bees, bee-attracting gardens, and alternatives to chemical pesticides, as well as raise funds by selling honey and other bee products.



AmeriCorps Vista volunteer Jackie Beard picks surplus pears from an orchard in Yakima, Washington, USA, to be delivered to a local food bank. This activity is organized by Rotary First Harvest, a program of District 5030 that connects farmers, truckers, volunteers and food banks to feed hungry families healthy food in Washington.

Actions

1. Deepen people's understanding and appreciation for community gardens by starting your own Rotary club garden or hosting an open, sustainable garden event at a public park or school.
2. Sell seeds and plants and teach people how to plant and tend their own gardens.
3. Plant for pollinators, including birds, bats, bees, butterflies, and beetles, as these species are critical for the growth of much of the food we eat.
4. Organise a forum on how and why we should protect all pollinators that provide critical services in our food production.

Contact e-mail and links

E-mail ESRAG: Patricia Armstrong; Christopher Puttock
christopher.puttock@gmail.com

Rotarians for Bees Australia

John McCaskill, john@meccaevents.com.au Patricia Armstrong,
pat.arm@bigpond.net.au

Visit Web Pages: foodplantsolutions.org

givinggrove.org

rotary.org/en/rotary-and-garden-support-community

wfp.org/hunger/stats

Beat plastic pollution



Rotaractors and other volunteers clean the beach and plant grasses to prevent erosion at Wanda Beach in Cronulla, NSW, Australia. Rotaract Preconvention Meeting.

The benefits of plastic are undeniable. The material is cheap, lightweight, and easy to make. These qualities have led to a boom in the production of plastic over the past century. Plastic packaging helps reduce food waste by extending shelf life. However, with this boom has come a major downside: plastic pollution. It is one of the biggest environmental challenges of our time. Each year, about 8 million tonnes of plastic enters the ocean from rivers, creeks, and drains, and ends up either floating on the surface or deposited on beaches or in ocean sediment.¹ As plastic is designed to be durable, waste plastic can last a very long time in the natural environment. Plastic can harm marine life: animals, such as seals, dolphins, and sea turtles become entangled in plastic fishing lines, nets, and bags. They also ingest plastic, mistaking it for food, which kills them. In addition, recent studies show that over 90% of bottled water and even 83% of tap water contain microplastic particles² and trace amounts are increasingly detectable in our blood, stomachs, and lungs.

UN Environment has been leading the fight against marine litter through its Clean Seas campaign since 2017. It urges governments to enact plastic reduction policies, encourages industry to minimize plastic packaging and redesign products, and calls on consumers to change their throwaway habits. More than 60 countries, representing more than 60% of the world's coastline, have joined the campaign.

1 <https://www.cleanseas.org/impact/dont-let-party-time-plastic-give-our-planet-holiday-hangover>

2 <https://wedocs.unep.org/bitstream/handle/20.500.11822/25398/WED%20Messaging%20Two-Page%2027April.pdf?sequence=12&isAllowed=y>

Examples

- Each of us can make a commitment to avoid goods with unnecessary packaging, replace single-use items with reusables, and recycle as much plastic packaging as possible. In addition, we can commit to dispose our plastic waste in ways that ensure it will never enter waterways.
- With the "Say no to plastic bags" theme, 30 Rotarians of the Rotary Club of East Coast Ramnad, Tamil Nadu, India, worked with Interact students of the Krishna International School to hand out 700 reusable cotton bags in their Ramanathapuram community.
- The Cleaning the Rivers of the World programme, cleaningtheriversoftheworld.org, with Salvador Rico addresses plastic pollution along with other sources of pollution.
- Rotarians, guided by technologies developed by Ludovic Grosjean of the Rotaract Club of Melbourne City, Victoria, Australia, are using crowd-sourcing to determine where Rotarians should focus their clean-up efforts. The platform, oceancleanx.com, supports automated collection methods to stop pollution at its source.
- Plastic Free Oceans provides a simple plastics and environmental checklist for Rotary clubs to reduce their plastic waste. Sign up to become a champion for Plastic Free Oceans at plasticfreeoceans.org.

Actions

1. Organize clean-ups of plastic pollution (clean-up activities can be combined with an audit of the plastic litter collected).
2. Set up an education booth at a local shopping centre that highlights the issues of plastics and waterways, and offer tips for people to reduce their use of plastic.
3. Sell reusable coffee mugs or reusable cotton shopping bags with a simple message and your club's name and contact details.

Contact e-mail and links

E-mail ESRA: Gert-Jan van Dommelen, founder, End Plastic Soup
endplasticsoup@gmail.com

Ludovic Grosjean, founder, OceanCleanx:
ludovic@oceanxgroup.com.au

Visit Web Pages: cleaningtheriversoftheworld.org

<https://endplasticsoup.nl/?lang=en>

oceancleanx.com

worldenvironmentday.global/en/get-involved/lets-clean

Reduce our ecological footprint

Research shows that today we use three times more resources than in 1970. If our consumption patterns do not change by 2050, we will need the resources of three planet Earths to sustain us. The true cost of goods isn't always the price we pay for them — too often environmental damage isn't included in the price. When we start to recognize the true cost of the goods we consume and services we use, we can make changes to avoid unsustainable practices in our lives.

To live sustainably, we each need to reduce our ecological footprint, which is the amount of environmental resources (such as land, water, plants, animals, or clean air) required to produce the goods and services necessary to support our lifestyles. Consuming less and producing what we do use more sustainably is at the heart of the UN's Sustainable Development Goals.

There are many unsustainable processes and products that are part of our day-to-day lives, which damage our planet. Being aware of them and holding ourselves accountable for our decisions can push us to choose sustainable alternatives when they exist and create new alternatives when they don't.

Examples

- As Rotarians, we have the potential to reduce humanity's footprint significantly by inspiring and facilitating change.
- The Rotary Club of Northfield, Minnesota, USA, has focused its club's strategic plan on carbon reduction. The club developed a partnership with businesses and the local electricity supplier to increase the number and quality of electric vehicle charging stations.
- Serve meatless meals at Rotary meetings and conferences and explain how that supports environmental sustainability. Begin this action during the week of World Environment Day.

- A consortium of Rotary clubs from central Maine, in the northeastern United States, is collaborating with banks, credit unions, NGOs, fuel companies, and insulation contractors to equip homes and other buildings for winter and help reduce fuel consumption for heating. The project is being funded through carbon reduction credits.
- Rotarians have hosted drives to collect environmental waste from homes and businesses and dispose of it appropriately.

Actions

1. Raise awareness about the ecological footprint of goods and services to encourage people to choose more sustainable practices. Encourage people to Take the Ecological Footprint quiz at footprintcalculator.org.
2. Provide space and resources for businesses and people to share their experiences about sustainability to foster a culture of innovation and change.
3. Host electronic waste drives where Rotarians collect e-waste from others and dispose of it appropriately. Work with local authorities to raise awareness about sustainable waste solutions. Encourage students from local schools to visit waste education centres, material recovery facilities, and local landfills.

Contact e-mail and links

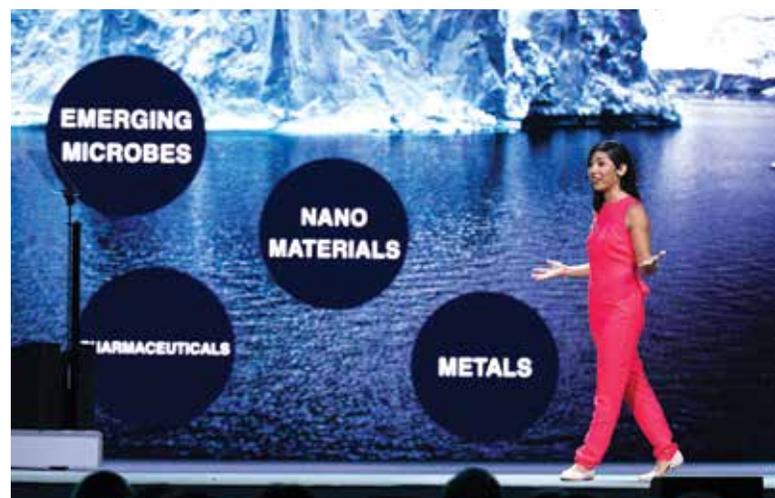
E-mail ESRA: Keith Tovey keith.tovey@esrag.org

Rick Randolph Richard.Randolph@ESRAG.org

Visit Web Pages: Footprint.wwf.org.uk/tips

Solvedifferent.eco

<http://www.footprintcalculator.org>



Former Rotary Ambassadorial Scholar and member of the Rotary e-Club of Houston, USA, Dr. Isis Mejias speaks during a general session at the 2018 Rotary Convention in Toronto, Ontario, Canada.

Appendix: Press release template

For Immediate Release

Contact: [Local Rotarian Name]
[Phone]
[Email]

Rotary Club of [Name] Takes Action for the Environment Millions Celebrate UN World Environment Day

[City, State or Province, Date and Month] Rotarians across [location] joined fellow members around the globe to protect our environment. Over [quantity] members of the Rotary Club of [Name, State or Province, Country] [and their project partners, if any] participated in [activity performed] in celebration of UN World Environment Day, an annual event that encourages worldwide awareness and action for the environment.

As a result of their service project, [list quantifiable or qualitative outcomes]. “Our club’s [project] is a great example of Service Above Self and demonstrates how Rotarians work together locally and globally,” noted [Rotarian’s name, position in club]. “It’s really rewarding to give back to our community by improving our environment knowing that we’re acting with millions of concerned citizens around the world.”

Inspiration and support for the Rotary Club of [Name]’s project came from the Environmental Sustainability Rotarian Action Group (ESRAG), which assists Rotary clubs around the world in planning, implementing, and evaluating service projects to promote environmental sustainability, awareness of climate change, and actions to reduce greenhouse gas emissions to mitigate climate disruption.

Each year, UN Environment organizes World Environment Day on 5 June. The flagship day has grown to be one of the largest global platforms for public outreach, celebrated in more than 100 countries. This year’s theme is air pollution.

UN Environment is the leading global environmental authority that sets the global environmental agenda within the United Nations system. Its mission is to provide leadership and encourage partnership, including with organizations like Rotary International, in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

The Rotary Club of [Name] meets weekly and welcomes inquiries about membership. Rotary International brings together a global network of volunteer leaders dedicated to tackling the world’s most pressing humanitarian challenges by connecting 1.2 million members of more than 35,000 Rotary clubs in more than 200 countries and geographical areas.

For more information about Rotary International, visit www.rotary.org

For more information about ESRAG, visit www.esrag.org or contact Karen D. Kendrick-Hands

kdkhands@esrag.org; +1-313-600-1670



For more information on this handbook or UN Environment, please contact:

<https://www.esrag.org/contact-us>

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