

ONE  
PLANET



OURS!

Sustainability for the 22<sup>nd</sup> Century



UNITED STATES  
BOTANIC GARDEN

[www.usbg.gov](http://www.usbg.gov)



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MAY 24 – OCTOBER 13, 2008



UNITED STATES  
BOTANIC GARDEN



May 24, 2008

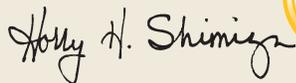
*One Planet—Ours* is a celebration of the individuals and organizations, here and around the globe, who are taking steps to achieve more sustainable societies. We hope the exhibition will be a forum for learning, discussion, and growth as we all consider our actions at this crucial juncture of present and future.

Big changes start with small steps—individuals, families, businesses, and governments can all make a difference in improving our planet's potential to provide for generations to come.

Our present use of resources is not sustainable. Paving, pollution, erosion, and other consequences of human actions have reduced the ability of the planet to support living organisms, ourselves included. Agriculture and technology cannot indefinitely offset these losses, and we cannot replace lost biodiversity. Since we are shaping the destiny of our children and grandchildren, it is time to begin to do it wisely, with the 22nd century as our horizon.

We thank the exhibitors for their hard work, passion, and willingness to join in our effort. We invite our visitors to do their part. Earth is our garden—let's tend it with care.

Holly H. Shimizu



Executive Director



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# One Planet— Yours and Mine

The 22nd century begins in 92 years. Between now and then, three more generations of Americans will be born. Among the estimated 10 billion humans inheriting the planet will be your children, grandchildren, and great-grandchildren.

What will they find?

What will they need?

What will surround their lives?

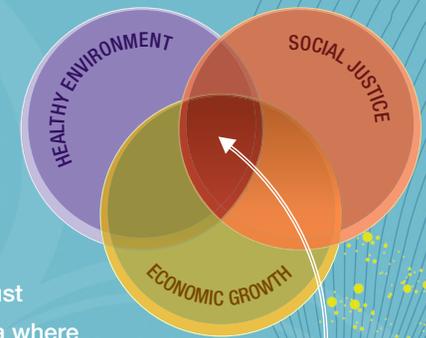
The decisions we make today will answer these questions. The way we choose to live, eat, commute, work, play, garden, and shop has consequences. What shall we demand of ourselves and of each other?

## What is Sustainability?

Sustainable societies are those that embrace institutions, infrastructure, lifestyles, and practices—environmental, economic, and social—that meet the needs of the present generation without compromising the ability of future generations to meet their own needs. *-Brundtland Commission, U.N. Commission on Sustainable Development*

Throughout all human societies, for health, fairness, and economic growth to be accommodated, all humankind must compromise. We need to move to an era where each of us takes responsibility for our collective demands on energy, resources, food, and space.

THE THREE COMPONENTS  
OF SUSTAINABLE DEVELOPMENT



SUSTAINABLE  
SOCIETY

# Visit each of our exhibits!

## In & Around Conservatory

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| 1 EPA GreenScapes                        | 13 Residential Wind Power, Skystream®         |
| 2 National Wildlife Federation           | 14 Green Infrastructure                       |
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| 5 Longwood Gardens                       | 17 Chicago Botanic Garden                     |
| 6 Sustainable Schoolyards                | 18 IUCN Red List of Endangered Species™       |
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| 9 America's Traditions of Green Building | 40 UNEP Aerial Photos                         |
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● Cool Globe Location  
See Cool Globe map on pages 14–15.

# Earth is Our Garden

## The U.S. Botanic Garden is becoming greener!

- Conducting an audit of our energy use
- Investigating green roof and solar panel installations
- Updating our buildings to reduce energy use
- Replacing retiring vehicles with hybrids—two have been added to our fleet
- Removing invasive plants from our gardens
- Recycling containers—beverage and plant!
- Composting green waste and reusing soil from containers
- Investigating geothermal heating and cooling at our Production Facility
- Continuously improving work practices to reduce, reuse, and recycle
- Increasing our educational programming and exhibits about sustainable practices

## Partnership stories:

**Sustainable Sites Initiative** is a project of the **Lady Bird Johnson Wildflower Center**, the **American Society of Landscape Architects** and the USBG to develop a voluntary set of national standards for landscapes comparable to the LEED-standards for green buildings. See [www.sustainablesites.org](http://www.sustainablesites.org) for more information.

**Fighting Invasive Plants!** The Mid-Atlantic region is suffering from an army of invading plants. The USBG is working with **The Nature Conservancy** on an educational program and brochure aimed at engaging citizens to help save our native habitats.

The USBG is working with many organizations to **protect endangered plants**. For example, we are a repository for plants seized at our nation's borders under the CITES agreement (Convention on International Trade on Endangered Species of Fauna and Flora).

The USBG supports the Floral Report Card project of the **Chicago Botanic Garden**. The project establishes experimental gardens around the country to monitor the effects of climate change. For more information go to [www.chicagobotanic.org](http://www.chicagobotanic.org).

## Join us for Family Days!

Four Saturdays with non-stop free activities, demonstrations, and entertainment for all ages.

June 21: Pollinators!

July 19: Sustainable Lifestyles!

August 16: Thrive—Eat Locally!

September 27: Thrive—Grow Natives!



## Participants



### On and Around the Terrace:



The National Wildlife Federation's Green Garden display illustrates ways you can confront global warming, connect with nature, and protect and restore wildlife habitat. Is your backyard a healthy nurturing environment for your children and wildlife?

[www.nwf.org](http://www.nwf.org)



EPA's GreenScapes works to promote environmentally beneficial landscaping around the country, starting with our yards. Yards are our outdoor homes: fun, beautiful, great spaces for relaxing. By working with nature, you can have a great-looking yard that's easier to care for, cheaper to maintain, and healthier for families, pets, wildlife, and the environment.

[www.epa.gov/GreenScapes](http://www.epa.gov/GreenScapes)



AMERICAN  
HORTICULTURAL  
SOCIETY

The American Horticultural Society (AHS) is one of the oldest national member-based gardening organizations in North America. AHS's Green Garage demonstrates "green" gardening products and storage practices that you can use at home. How green is your garden?

[www.ahs.org](http://www.ahs.org)



## PHILADELPHIA ORCHARD PROJECT

The Philadelphia Orchard Project (POP) works with community groups in the city of Philadelphia to transform neglected urban spaces into vibrant community orchards filled with useful and edible plants. Neighborhood orchards also improve soil and air quality, provide shade, absorb carbon, and create beautiful community spaces.

[www.phillyorchards.org](http://www.phillyorchards.org)



Long before the word “sustainable” was applied to business practices or lifestyles, Longwood Gardens in Pennsylvania was composting or recycling the waste from its grounds, greenhouses, and conservatories. Longwood is now composting the waste from its restaurant, with the goal that “no organic material” will leave the property. How can your workplace become “greener”?

[www.longwoodgardens.org](http://www.longwoodgardens.org)



Is your neighborhood school a gathering place for the community? Does its schoolyard invite children to learn about the world around them through hands-on activities? This example of an outdoor classroom with ecological teaching tools and creative play ideas can be easily replicated with help from organizations actively working for smart growth and the greening of America.

[www.sustainableschoolyard.org](http://www.sustainableschoolyard.org)



FRESHFARM Markets operates eight farmers’ markets in Washington, DC and Maryland. These markets support local farm families, provide fresher and more nutritious produce, and reduce the energy use and pollution that comes from long-distance food transport. Do you know where your food comes from?

[www.freshfarmmarkets.org](http://www.freshfarmmarkets.org)



The USDA Council on Sustainable Development serves as the USDA interagency forum for issues relating to sustainable development. Agricultural practices and policies have a profound influence on communities and the environment. Stewardship programs and policies for our “working lands” affect the future of all citizens.

[www.usda.gov/oce/sustainable](http://www.usda.gov/oce/sustainable)



Builders Without Borders is an international network of ecological builders who advocate affordable, energy-efficient construction by utilizing locally available natural materials. This building made of bales of straw demonstrates natural, climate-appropriate, community-based construction materials.

[www.builderswithoutborders.org](http://www.builderswithoutborders.org)

## On the Grounds:



Newly available are residential-scale wind turbines, such as Mariah Power’s Windspire and Southwest Windpower’s Skystream 3.7™. They can convert energy from the wind into power for your home, business, or recreational needs. They provide quiet, clean energy and can significantly lower energy usage from your utility company.

**Southwest Windpower**  
Renewable Energy Made Simple

[www.mariahpower.com](http://www.mariahpower.com) and [www.windenergy.com](http://www.windenergy.com)  
[www.eere.energy.gov/windandhydro](http://www.eere.energy.gov/windandhydro), [www.nrel.gov](http://www.nrel.gov),  
or [www.awea.org/smallwind/](http://www.awea.org/smallwind/)



Artist Susan Pascal Beran, partnered with Mariah Power, creates wind sculptures, harmonizing people with their environment in a wondrous interplay of form and function.

[www.pascalberan.com](http://www.pascalberan.com)



The ‘rainscaping’ practices demonstrated in the Chesapeake Conservation Landscaping Council’s rain garden reduce polluted runoff, treat rain water as a resource, and help to protect our rivers and watersheds.

[www.chesapeakelandscape.org](http://www.chesapeakelandscape.org)



The PowerCube™ unit is a solar-propane hybrid using a modular “plug & play” design. It provides clean renewable power using alternative energy sources for on-grid and off-grid locations, and could replace conventional gas-powered generators in some applications.

[www.reluminati.com](http://www.reluminati.com)

## In the Conservatory:



One of our most important renewable resources is soil. Healthy soils are the foundation of our food production and ecosystems. Don’t miss *Dig It! The Secrets of Soil* at the National Museum of Natural History from July 19, 2008 – January 2, 2010.

[www.mnh.si.edu](http://www.mnh.si.edu)



Project BudBurst, launched by the Chicago Botanic Garden and its partners in 2007, provides citizens with an opportunity to experience the effects of climate change through the observation of plants.

[www.budburst.org](http://www.budburst.org)



This biofilter provided by the Furbish Company is a hydroponic “green wall” of plants that clean air by breaking down pollutants and removing volatile organic compounds from indoor environments.

[www.furbishco.com](http://www.furbishco.com)



The mission of The Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on earth by protecting the lands and waters they need. The Invasive Species Trail showcases introduced species and the damage they can cause to native plants and animals.

[www.nature.org](http://www.nature.org)



The IUCN Red List of Threatened Species™ reports on the status of plants and animals in every corner of the world. IUCN collects scientific data and works with local governments to ensure sustainable use and conservation of plants.

[www.iucn.org](http://www.iucn.org)



Botanic Gardens Conservation International (BGCI) is a global network for plant conservation and has been a major force in ensuring the survival of plants around the planet. BGCI raises awareness about the global importance of plants and the valuable role of botanic gardens in global policy.

[www.bgci.org](http://www.bgci.org)



In South Africa, more than 80% of the population relies on the local flora for their medicine. This exhibit portrays a traditional Zulu market, where whole plants or parts of plants are offered for sale. Most are collected from the wild. As plants disappear from overcollection, so will traditional ways of life, as well as traditional knowledge. Durban Botanic Garden is one of many worldwide working to preserve plant-people connections.

<http://www.durbanbotanicgardens.org.za/>



Green Infrastructure Community of Practice is championed by The Conservation Fund and composed of a diversity of non-profit organizations and government agencies. Their graphic panels communicate the impacts of development and conservation.

[www.greeninfrastructure.net](http://www.greeninfrastructure.net) & [www.lid-stormwater.net](http://www.lid-stormwater.net)

## In the National Garden:



Worldwide, one in six people lack a safe water supply and 40% of the world's population don't have access to improved sanitation. Water For People helps residents of developing countries improve their quality of life by supporting locally sustainable drinking water systems, sanitation facilities, and education programs.

[www.waterforpeople.org](http://www.waterforpeople.org)



Pollinators include insects, birds, bats, and other animals that are critical to maintaining our food supply and the biodiversity of our planet. The Pollinator Partnership works to reduce the impact of habitat loss, pesticides, diseases, and invasive species that cause harm to pollinators. Do you use pesticides wisely?

[www.pollinator.org](http://www.pollinator.org)



Earth Partnership for Schools embodies the University of Wisconsin-Madison Arboretum's focus on restoration by building a positive relationship between people and the land. They collaborate with teachers, students, and community to use the restoration of native habitats while fulfilling curriculum requirements. Are your children connected to nature?

[www.uwarboretum.org/aps](http://www.uwarboretum.org/aps)



Lady Bird Johnson Wildflower Center works to uphold the former first lady's visionary environmental legacy through education, landscape restoration projects, conservation, and research. Are you using native plants in your landscape? Learn more about the benefits of gardening sustainably with plants that are a part of your local ecosystem.

[www.wildflower.org](http://www.wildflower.org), [www.sustainablesites.org](http://www.sustainablesites.org)



The City of Seattle developed the Seattle Green Factor to encourage ecologically sustainable development. In setting a high ecological target and providing developers, planners and architects a toolbox of options, Seattle has become the first U.S. city to adopt an approach to the permitting process.

[www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor)



One of the many ways the U.S. Environmental Protection Agency (EPA) leads the nation's environmental efforts is through its Office of Wetlands, Oceans, and Watersheds, and its promotion of green infrastructure as an environmentally preferable approach to stormwater management.

[www.EPA.gov/owow/greenroofs](http://www.EPA.gov/owow/greenroofs)



The Green Wall Group of Green Roofs for Healthy Cities promotes the use of green walls to reduce urban heat and stormwater runoff, improve air quality and energy efficiency, and control noise in urban environments. Could a green wall improve your home or business?

[www.greenroofs.org](http://www.greenroofs.org)



The Alliance for Community Trees (ACT) is a national nonprofit dedicated to improving the livability of cities through greening communities and improving the tree canopy. With affiliates across the country, the Alliance for Community Trees works with volunteers to improve local environment, economy and health by planting and caring for millions of trees. Locate an ACT affiliate near you or learn how to start one at

[www.actrees.org](http://www.actrees.org)



Casey Trees is a nonprofit community-based organization working to improve and care for the tree canopy of the nation's capital. We work with the city of Washington DC and involve neighborhoods in the inventory, restoration, enhancement, and protection of Washington, DC's urban forest.

[www.caseytrees.org](http://www.caseytrees.org)



The United Nations Environment Programme (UNEP), through its Regional Office for North America, contributes to cooperation on environmental issues in North America and throughout the world. UNEP's Plant for the Planet: Billion Tree Campaign is an example of a voluntary initiative promoting environmental, economic, and social concerns.

[www.unep.org/billiontreecampaign](http://www.unep.org/billiontreecampaign)



Habitats can't be restored without seeds! Seeds of Success is coordinated through the Bureau of Land Management's Plant Conservation Alliance to support seed collection from native plant populations in the United States. Along with their contribution to research, biodiversity, and rehabilitation, these seed banks store diverse species as an insurance policy against extinction.

[www.nps.gov/plants/sos](http://www.nps.gov/plants/sos)



The U.S. Department of Energy (DOE) supports the development of renewable sources of energy, and promotes awareness of how energy use may be reduced. DOE is represented in the exhibit with a "solar home" demonstration, an interactive solar fountain and information about the Solar America Cities Initiative.

[www.doe.gov](http://www.doe.gov)

## In Bartholdi Park:



The Georgia Plant Conservation Alliance, a collaborative effort of public gardens and the state Department of Natural Resources, is successfully protecting, restoring and conserving Georgia's precious native flora through education, networking and outreach.

[www.uga.edu/gpca](http://www.uga.edu/gpca)



Regional Integrated Pest Management (IPM) Centers, that you remember as your County Extension Service, now make up nationwide system of experts that provide reliable, environmentally-sound information regarding a broad range of topic areas like turf care and correct landscape care.

[www.ipmcenters.org](http://www.ipmcenters.org) & [www.csrees.usda.gov](http://www.csrees.usda.gov)



The U.S. National Arboretum is a U.S. Department of Agriculture research and education facility and a living museum dedicated to serving the public and improving the environment. *Power Plants*, a new exhibit at the Arboretum, features 21 sources of biofuel and invites you to learn more about gasoline alternatives.

[www.usna.usda.gov](http://www.usna.usda.gov)



Phipps Conservatory and Botanical Gardens in Pittsburgh claims to be one of the 'greenest' gardens in American with a LEED®-certified Visitor Center and passive solar glasshouse, local and organic foods in the café, and sustainable fair trade items in the gift shop.

[www.phipps.conservatory.org](http://www.phipps.conservatory.org)



For 10 years, the Missouri Botanical Garden has collected plastic pots and trays on site from gardeners and nurseries and recycled them into lumber, benches, and compost bins. Do you have a local recycler for your nursery pots?

[www.mobot.org](http://www.mobot.org)



Since its founding in 1899, the American Society of Landscape Architects has had a tradition of stewardship that continues through the work of members, committees, the Sustainable Sites Initiative, and management of its operations using sustainable practices.

[www.asla.org](http://www.asla.org) , [www.sustainablesites.org](http://www.sustainablesites.org)

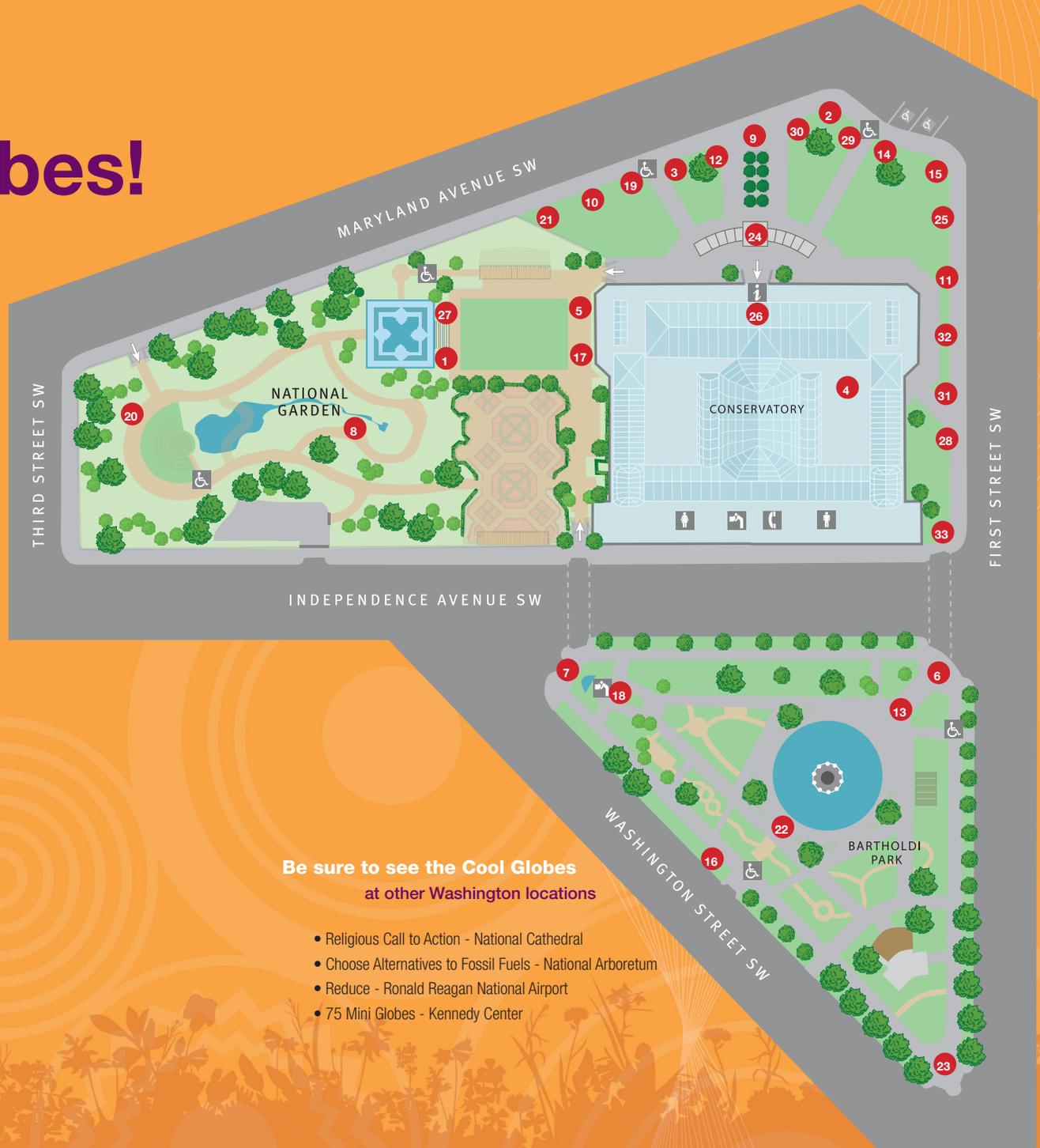


Water is among the most abundant substances on Earth's surface and is vital to human life and culture. It is also a precious and limited resource. The American Museum of Natural History's exhibit explores how this precious resource sustains life on Earth and affects the way we live.

[www.amnh.org](http://www.amnh.org)

# Visit each of the Cool Globes!

- 1 Green Communication
- 2 Responsible Manufacturing
- 3 Drive Smart
- 4 Listen to our Children
- 5 Unplugged Fun
- 6 Change Your Light Bulbs
- 7 Unite To Solve Problems
- 8 Conserve Water
- 9 Use Your Imagination
- 10 Share a Ride
- 11 Stop Unsolicited Mail
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- 15 Student Eco-Movement
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- 24 Be Inspired
- 25 Communicate
- 26 Sustainable Farming
- 27 Future Solar
- 28 Learn From Ecology
- 29 Hydropower
- 30 Neutralize Your Carbon Footprint
- 31 Cool Urban Roofs
- 32 Gift of Clean Air
- 33 A Plant Based Diet



**Be sure to see the Cool Globes  
at other Washington locations**

- Religious Call to Action - National Cathedral
- Choose Alternatives to Fossil Fuels - National Arboretum
- Reduce - Ronald Reagan National Airport
- 75 Mini Globes - Kennedy Center

# Cool Globes

## Hot Ideas for a Cooler Planet

The “Cool Globe” sculptures that appear throughout this exhibition underscore the global nature of human impact on climate, resources, and ecosystems. Cool Globes is an innovative ongoing project that uses public art to inspire action. Designed by local, national, and international artists, individuals, schools, and organizations, no two globes are alike.

Each globe depicts positive actions that reduce human impact on earth's fragile environment. See them all and find the one that motivates you to live more sustainably.

Cool Globes is a non-profit organization that highlights environmental concerns. For more information about the Cool Globes project visit [www.coolglobes.com](http://www.coolglobes.com).



### 1. Green Communication: Sharka Glet

If the 32 million Americans who could telecommute worked from home just once per week, over 1 billion pounds of carbon pollutants would be saved each year. A grid of latitudes and longitudes cover Sharka Glet's painted globe. The “old” grid displays forms of communication and transportation from years past; the “new” grid illustrates modern means of connecting with each other. With various representations of green technology connected to each other via the Internet, the globe's top half teems with vitality, suggesting that strong communications about the environment lead to a happy, healthy planet.



### 2. Responsible Manufacturing: Karen Ami

Sustainability is a top priority as corporations focus not only on products manufactured, but on the manufacturing process as well. Responsible manufacturing incorporates increasing energy efficiency, eliminating waste, recycling of materials, and lowering carbon emissions in factories. Corporations are proving there is “green” in being green—among Fortune 100 companies, 60% adopted sustainable practices. Environmentally conscious manufacturers are developing products that can be more easily recycled at the end of their useful life-cycle, aiming to avoid landfill waste. Karen Ami's design features smokestacks blossoming and spewing nature, hopefully creating a balance between modern industrialization and mother earth.



### 3. Drive Smart: Ian Ray

Altering driving habits can decrease the amount of carbon dioxide that cars produce. “Piggybacking” errands reduces the number of miles driven, and by lightening up on the gas pedal and brakes, cars can achieve up to 35 percent better gas mileage. These small changes can seriously affect the amount of carbon emissions clogging our air supply. Using graffiti-style art, Ian Ray brings these issues to the younger generation's attention. A number of hand-drawn panels feature people incorporating the “drive smart” ideas and helping shrink their environmental footprint. Ray used basic concepts to illustrate the idea that citizens of all ages can contribute to the environmental cause on an individual level without joining an organized movement.



#### 4. Listen to our Children: Emily Abrams and Michelle Korte Leccia

Twelve-year-old Emily Abrams wanted her globe to illustrate that global solutions to warming are so simple, even children can lead the charge. Via email, Emily enlisted the help of children from 24 countries on 6 continents! Children around the world spoke out! On the globe, the oceans are covered with art submitted by school children from Tortuguero, Costa Rica. Their art, painted on handmade paper from banana leaves, depicts the solution “protect the rainforest.” Emily enlisted siblings David, Katie, and Jacob, as well as professional artist Michelle Korte Leccia, to help collage the globe.



#### 5. Unplugged Fun: Francis W. Parker School students and faculty

Americans use more than \$5 billion worth of electricity annually to power televisions. Greenhouse gases are created by energy that runs the household television, DVD player, and game console for an average of eight hours a day! In the creation of this globe, students at Chicago’s Francis W. Parker School were asked to draw suggestions for non-electric, environmentally friendly play. Children between the ages of 4 and 18 responded with drawings and words that resulted in a variety of images representing different forms of play and games, aiming to inspire others to turn off the tube.



#### 6. Change Your Light Bulbs: Derric Clemmons

Compact fluorescent lights (CFLs) use about one quarter of the energy of incandescent bulbs and last 10 times longer. If every American household switched one light bulb to a CFL, it would save enough power to light 2.5 million homes for an entire year. To highlight the distinction between energy-saving and energy-draining bulbs, Derric Clemmons presents both in his globe. Cooling and warming colors of light flow like waves from the CFL bulb, while blackened, coal-burning strands of soot stream from the incandescent bulb.



#### 7. Unite To Solve Problems: Michelle Maynerick

United by a passion for the fight against global warming and a love of art, 13 Cool Globes committee members pooled their resources to sponsor this globe. The Cool Globes project is proof-positive that a little collaboration goes a long way. A true community effort, Cool Globes sprang to life thanks to the alliance of countless individuals and organizations. Michelle Maynerick stenciled individual portraits around her bright yellow and orange world to indicate that what is overwhelming for one is rendered possible simply by individuals uniting together. The globe’s single phrase spells out this perspective: “The well-being of mankind, its peace and security, are unattainable unless and until its UNITY is firmly established.”



#### 8. Conserve Water: Mirjana Ugrinov

The average American family uses 350 gallons of water every day. Power plants emitting greenhouse gases go to work every time someone turns on the tap, using electricity to extract, transport, purify, and distribute water. To illustrate the importance of water conservation, Mirjana Ugrinov installed a variety of nickel-plated, brass water-saving faucets and handles around her globe. While the fixtures function as decorative elements, their real purpose is to make the viewer think of their own simple ways to conserve, like choosing narrow nozzles. Ugrinov clustered handles over regions that use the most hot and purified water to convey that every drop counts.



#### 9. Use Your Imagination: Mr. Imagination

It’s a simple fact: buying items that contain recycled materials helps conserve natural resources and energy. Consumers can buy carpeting made from plastic soda bottles, tile constructed from recycled glass, and even apparel made from reclaimed fibers. Using recycled materials has long been an integral part of Mr. Imagination’s work. His globe was created from flattened bottle caps cut into various shapes and strategically placed on cities around the world. The oceans’ shiny surfaces allow spectators to see their reflection, a visual reminder that each person must do their part to recycle and save this beautiful, unique planet.



**10. Share a Ride: Cheryl Steiger**

Commuting Americans have enough extra room in their 140 million cars to give all of Western Europe a ride. If every car carried just one more passenger on its daily commute, 32 million gallons of gasoline and 600 million pounds of carbon dioxide would be saved each day. The internet and directories or bulletin boards at work are good places to find nearby people to share a carpool. Cheryl Steiger's globe displays the concentration of cars relative to each continent's population, and explores how different models of cars compare to one another. With an emphasis on the simple measures that individuals can take, Steiger sends the message that drivers can make a positive impact by getting the most out of their vehicle's seating capacity in the daily commute.



**11. Stop Unsolicited Mail: Ellen Gradman**

Over 100 million trees are cut down and over 28 billion gallons of water consumed to produce one year's worth of junk mail. Reducing the amount of junk mail that one household receives will save energy, natural resources, and landfill space. To bring home the concept of the sheer overabundance of mail that Americans receive each year, Ellen Gradman covered her globe with 100 pounds of junk mail that she collected from 36 families in a single week. The globe's strong visual impact is distinguished by the unique texture of the globe's "trashy" surface, and the stenciled numbers reveal how quickly junk mail accumulates.



**12. Drive a Fuel-Efficient Car: Vincent Gretch**

Every little bit makes a difference! Buying a car that gets 25 miles to the gallon rather than 20 will eliminate 17 tons of carbon dioxide from the earth's atmosphere each year. New technologies, like hybrid cars, take fuel efficiency to an even higher level, and that technology is constantly improving. Artist Vincent Gretch covered the continents with beautiful renderings of hybrid flowers, while the remainder of the globe is painted black, in stark contrast.



**13. Sustainable Building Design: NHDKMP Architects, LTD in collaboration with Wangler & Company**

Today, many architects and developers are trying to lessen environmental impact through sustainable building design, the growing practice of designing ecologically sensitive structures that do not deplete natural resources through their construction or use. By using recycled or renewable materials, water-saving devices, and alternative energy sources, sustainable structures promote healthy occupant environments and save utility costs. Layers of environmentally friendly building materials project from this globe, emphasizing the effectiveness of using green products in construction. This cube-shaped world speaks to the builder's responsibility to protect both the health of a building's inhabitants and the building's global environment.



**14. Run, Walk, and Roll: Bob Anderson**

Legs are the best transportation system around. Each mile spent in a car produces nearly a pound of global warming pollutants, so "legging it" makes a huge difference. In this exciting and colorful work, Bob Anderson encourages individuals to use their muscle power instead of motor power. The active figures inhabiting his globe exude a festive spirit that is contagious; by choosing to walk, run, bike, and rollerblade, they are participating in exercise that is both conscientious and fun.



**15. Student Eco-Movement: Thaddeus Tazioli**

Youth activists are rallying to eliminate schools' carbon emissions and to influence legislators to change energy policy. For example, groups on nearly 600 American and Canadian campuses have joined the Campus Climate Challenge, aimed at bringing sustainable energy to their schools. Thaddeus Tazioli's vibrant globe embodies the positive impact that environmental advocacy groups can have. Generation Y student activists from around the world are portrayed in a digital collage of images and text that show the power of this generation to make a difference, both locally and nationally.



### 16. Composting: Bill Friedman

Banana peels, coffee grounds, and grass clippings may not seem like globewarming culprits, but how this waste is treated makes a difference. Composting, nature's way of recycling and turning organic garbage into a natural garden fertilizer, is a perfect solution. The live worms in this globe's container are turning food waste and shredded newspaper into a rich soil nutrient. Bill Friedman incorporates natural processes into his work to show concern about the treatment of organic waste and its effects. Just like the worms living in the worm bin surrounding this globe, composting will help turn a great deal of waste into rich, valuable soil.



### 17. Green Your Home: Luz Maria Castillo

One house can be responsible for producing twice as much greenhouse gas as a car. Performing a home energy audit to target lost energy is a good place to start reducing these emissions. Based on the results, people can improve heating and cooling efficiency with caulking, weather stripping, and extra insulation. Luz Maria Castillo detailed the process of greening the home by dividing her globe into colorful rooms that each show a solution to global warming. Castillo expresses the many different approaches through various techniques like manipulating the proportions of objects to emphasize their importance. Influenced by the Mexican bingo game, Loteria, Castillo's globe implies that we are gambling with the earth.



### 18. Green Roofs Save Energy: Deborah Adams Doering

Green roofs are not only attractive; they also add usable green space and reduce heating and cooling needs by moderating temperatures on the roof, inside the building, and in surrounding areas. To create this globe's "mini green roof," Deborah Adams Doering worked with progressive techniques including specially designed "coir" trays made of coconut, which are fully biodegradable. Beyond the visible depiction, Doering pays added homage to green roofs by choosing eco-friendly paints, which, as with green roofs, mean fewer toxins and fumes being released into the atmosphere.



### 19. Wind Farms: Lisa Fedich

Wind is an increasingly valuable source of renewable energy. In fact, experts believe that the United States could ultimately harvest 20 percent of its electricity from wind power. Lisa Fedich teamed up with hospitalized children from Snow City Arts to depict how using wind and solar power can dramatically reduce our carbon emissions. Painted as a blustery day for the world, the globe contains excerpts of children's poetry reflecting their interpretation of the power of wind. Whimsical pinwheels spin around the globe, inspiring viewers of all ages to dream big when it comes to wind.



### 20. Plant Trees: Kate Tully

Urban forests are the plants and trees that beautify and protect a city, provide shade, remove pollution, and reduce traffic noise. Kate Tully presents one of the most basic solutions to global warming available: planting trees. Tully covered her globe with four different types of trees, overlapping the regions of the world from which they originate, and identified with a nameplate. Continents peek out from beneath each tree, painted with an orange glow to symbolize the overheated Earth. The trees, conversely, are tinted with cooler colors to represent their cooling effect.



### 21. Eco Heroes: Andrea Harris

Heroes in the environmental movement help heal the earth. This globe focuses on strategic successes that have linked humanitarian efforts and specific carbon exchange projects around the world. Portraits of citizens who have contributed to the environment and relief-form paintings of forests pop up in locations on the globe where they have made a difference. Andrea Harris illustrates how humans play a large role in keeping existing forests intact and planting new trees, ultimately helping clean the air by returning pure oxygen.



**22. Reduce, Reuse Recycle: Mitch Levin**

Over the last 35 years, the amount of trash each person generates has almost doubled from 2.7 to 4.4 pounds every day. Product packaging accounts for one third of the trash we generate, so choosing products with reusable or readily recyclable packaging—or buying in bulk—will result in a much lower trash yield. Sustainable designer and artist Yair Engel spends a lot of time thinking about the amount of “stuff” there is in the world. Using waste products like plastic shampoo bottles, used toys, and product packaging from Israel to achieve a highly three-dimensional effect, Engel’s colorful and thought provoking globe issues an important message: stop over-consumption of material goods.



**23. Landfill Gas Energy: Joi Leo Wagenberg**

When garbage is left to decompose in landfills, it emits a potent methane gas that greatly contributes to global warming. The Landfill Methane Outreach Program encourages the use of technologies that harness landfill gas for energy. Since the program began in 1994, methane reductions from landfills have been equivalent to eliminating the emissions of 15 million vehicles each year. Lush greens and blues, symbolizing a healthy Earth, stand in stark contrast to the scraps of garbage that encircle the bottom half of this globe. The two halves evoke a shockingly realistic picture of the effects of degradation and pollution—like that from methane gas—on the earth. Joi Leo Wagenberg developed this design to express the necessity for creating a positive cycle of recycling waste into usable resources.



**24. Be Inspired: Hoerr Schaudt Landscape Architects Tracy Taylor, Lisa Gregg, Jennifer Simokaitis, Jeaneane Quinn**

Get in touch with the earth by growing fruits, vegetables, herbs, and flowers. Instead of buying produce that has been packaged and shipped, enjoy homegrown fruits and vegetables—fresh from the garden to the table. More than 2,000 colorful seed packets envelop this globe as it rises like a flower from a terracotta style pot filled with live plants. Gardens absorb carbon dioxide, reduce the amount of energy from the sun that is retained by paved surfaces, and slow rainwater flow into storm-water sewer systems. The artists



demonstrate that planting a garden need not be a huge endeavor. Even a small pot or container garden can make an impact.

**25. Communicate: Vance Williams**

Global warming must become part of this culture’s consciousness. Black lines of communication spread between countries and across continents, covering Vance Williams’ globe with patterns similar to those of an airline’s flight paths. Encircling the center of the globe are photographs of people with statements about how individuals can get involved. Fluorescent megaphones appear across the continents, enabling all of us to spread the word.



**26. Sustainable Farming: Kari Kaplan**

Farmers can reduce greenhouse gas emissions by using crop rotation and improved irrigation and by driving tractors fueled with biodiesel. Farming without tilling reduces carbon emissions from diesel heavy equipment, and other natural practices, like grazing animals in pastures and using organic, indigenous seeds, can also benefit the environment. Kari Kaplan’s globe is covered with a colorful patchwork of organic products that occur naturally on each continent, including coffee beans, blue and yellow corn, parsley, lentils, mung beans, paprika, melon seeds, and barley.



**27. Future Solar: William Conger and Sarah McDonald**

Large scale solar power plants are currently being constructed, and other developing technologies include holographic films that concentrate sunlight onto solar cells, solar hydrogen fuel cells, and hybrid solar-wind power systems. Colorful wavy shapes symbolize the solar energy at Earth’s surface on William Conger and Sarah McDonald’s globe. Nine white circles represent the concept of dedicating small zones across the world to solar panels. In reality, these panels would take up less than one-tenth of one percent of the earth’s surface but would collect enough sunlight—even at the current 15 percent efficiency—to meet all world energy needs to the year 2030.



**28. Learn From Ecology:** Stockyard Institute and Hyde Park Art Center

A delicate balance of soil conditions, lighting, temperature, water, and air are needed to make Earth's ecosystem thrive. These elements also make up the earth's biosphere, a surprisingly thin surface layer that extends from 11,000 meters below sea level to 15,000 meters above, where all living matter exists. The artists demonstrate this delicate environment with a globe that, filled with real plants, is itself a living ecological laboratory. The Stockyard Institute is an artist collective that works with residents in Chicago's Austin neighborhood. As a result of this community orientation and collaboration, the group chose a terrarium for their globe to convey their holistic view of the effects of global warming.



**29. Hydropower:** Aesop Rhim

Hydropower is created by capturing power from the movement of tides, the crashing of waves, and the channeling or damming of rivers. Hydropower is a clean, efficient source of renewable energy. Aesop Rhim designed his globe to represent hydropower made from the ocean's movement. Peaceful oceans move with the tides and create waves, quietly producing hydropower. Rhim used acrylic ink to paint the globe and snips of vinyl aluminum to portray the ocean's birds.



**30. Neutralize Your Carbon Footprint:** Cathi Schwalbe-Bouzide and Paul Bouzide

Becoming "carbon neutral" means that you balance the effect of the carbon emissions you create through your energy consumption with ways of encouraging carbon sequestration, including purchasing "offsets." Personal impact and responsibility inspired Cathi and Paul Bouzide's globe. A measure of human impact on the planet is carbon emissions, also known as the carbon footprint. This globe is covered with footprints of children and adults layered over caution stripes which represent land and water masses. Suggestions on how to reduce carbon footprints are a reminder that things can change for the better.



**31. Cool Urban Roofs:** Alice Sharie Revelski

When roofs are made of dark-colored materials, more heat is absorbed into the building and, consequently, more air conditioning is necessary to keep the inside cool. Reflective roofing materials can reduce the surface temperature of a roof by as much as 100 degrees, cooling whole cities and making attics up to 30 degrees cooler. Combining art with the practice of making scientific concepts into hands-on projects, Alice Sharie Revelski created a planet full of "cool roofs." The mosaic shapes covering the continents are made of roof shingles that reflect UV rays and make roofs energy efficient. The silver oceans dazzle the eye, showing how beautiful, and healthy, the planet will be with more cool roofs.



**32. Gift of Clean Air:** Wynne Graham, Rick Honn, Sidwell Friends School

This globe designed by students at Sidwell Friends School depicts a factory of solutions. Each small ribbon tied around the smoke is representative of one factory utilizing a new solution. The solutions are as vast and diverse as the geographic locations they span, from solar, wind and geothermal power to increasing energy efficiency and using resources more wisely. The big ribbon tied around the entire globe represents all the small solutions coming together and giving the gift of clean air and healthy environment for future generations. The globe as a whole reminds us that it is through each community doing their part that we will stop global warming.



**33. A Plant Based Diet:** Martha Jackson Jarvis

A new U.N. report says that nearly half of the water and 80 percent of the agricultural land in the United States are used to raise animals for food. Livestock production is also responsible for almost a fifth of global warming emissions – that's more greenhouse gas than is released from all of the world's transportation combined! You can make a difference with a greener diet. Avoiding meat just once per week can help. It takes far more fossil fuel energy to generate the same amount of protein from a meat source than from a plant source. Try dishes made with beans, grains, and vegetables. Choose grass-fed, free-range, organic, and locally or sustainably farmed products whenever possible.



# Big changes start with small steps



## Know your footprint!

A carbon or ecological footprint helps you understand how much impact your life has on earth systems. Go to [www.epa.gov](http://www.epa.gov) to calculate yours, and plan to reduce it in successive years by gradually shifting to sustainable practices and products.

▶ **Did U know?** At the current rate of growth, by the year 2015 it will require 1.6 earths just to sustain our the human population at its current level of consumption.



## Eat locally!

Buying local food helps local farmers and reduces energy consumption.

Visit your local farmer's market or co-op or grow your own.

▶ **Did U know?** The average food travels 1,200 to 2,500 miles from pasture to plate.



## Downshift your driving!

Each gallon of gas that we use equals 20 pounds of carbon dioxide released into the atmosphere. Take public transportation, carpool, or choose not to drive.

▶ **Did U know?** A quarter of the trips Americans take by car are within walking distance.



## Junk your junk mail!

The average American receives 41 pounds of junk mail annually. Visit [c3.newdream.org](http://c3.newdream.org) to use online forms to help get rid of junk mail and check out the C3 blog for other tips!

▶ **Did U know?** The annual U.S. production of junk mail consumes more than 100 million trees, enough to deforest four Rocky Mountain National Parks.

To learn more about changing your lifestyle, go to [www.newdream.org](http://www.newdream.org)



## Break the bottled water habit!

America's demand for bottled water requires more than 1.5 million barrels of oil annually, enough to fuel some 100,000 cars for a year. For water on the go, invest in a safe, reusable bottle.

▶ **Did U know?** 40 percent of bottled water is just tap water!



## Beat the Heat, Wash in Cold!

If every household in the U.S. makes the switch to cold water for four out of five loads, together we'll save \$6.7 BILLION per year and keep nearly 50 tons of carbon out of the atmosphere.

▶ **Did U know?** A whopping 90 percent of the energy used by a washing machine goes to just heating the water.



## Bring Your Own Bag!

Each year, an estimated more than 500 billion plastic bags are used worldwide. Take reusable bags to the grocery store whenever possible.

▶ **Did U know?** Worldwide, over one million plastic bags are used per minute.



# ONE PLANET—OURS!

Sustainability for the 22<sup>nd</sup> Century

## Make the earth your garden and take the pledge!

- I will understand and embrace the fact that I share the air, water, land, rivers, and oceans with all of earth's life forms, both human and non-human;
- I will take at least one action to assure that my grandchildren and others will experience a healthful environment, a comfortable life, and a just world;
- With these actions and others, I choose to live more sustainably.