Climate change threatens the well-being of the Earth and all who live on it, presenting a moral, environmental and societal crisis. This booklet is designed to introduce Catholic health care leaders to the issues surrounding climate change and to suggest action steps they can take to address this escalating, but solvable problem.
Pope Benedict XVI has brought climate change issues to the forefront of his papacy and charges all of us to help stop the degradation of the Earth.

We are people of faith and believe “the Earth is the Lord’s and all it holds.” Ps 24:1

We understand there is a substantial body of scientific evidence showing “warming of the climate is unequivocal.” Intergovernmental Panel on Climate Change, 2007

As health providers, we are concerned that “many diseases will surge as the atmosphere heats up.” Scientific American, August 2000

As providers of emergency services, we want to help mitigate injury and loss of life due to increased hurricane and typhoon intensities warmer temperatures bring. PEW Center on Global Climate Change

We can help address the problem because “as one of the largest users of energy, hospitals are major contributors to climate change.” Global Health and Safety Initiative, 2008

Why is Climate Change an Issue for Catholic Health Care?

1. Pope Benedict XVI has brought climate change issues to the forefront of his papacy and charges all of us to help stop the degradation of the Earth.
2. We are people of faith and believe “the Earth is the Lord’s and all it holds.” Ps 24:1
3. We understand there is a substantial body of scientific evidence showing “warming of the climate is unequivocal.” Intergovernmental Panel on Climate Change, 2007
4. As health providers, we are concerned that “many diseases will surge as the atmosphere heats up.” Scientific American, August 2000
5. As providers of emergency services, we want to help mitigate injury and loss of life due to increased hurricane and typhoon intensities warmer temperatures bring. PEW Center on Global Climate Change
6. We can help address the problem because “as one of the largest users of energy, hospitals are major contributors to climate change.” Global Health and Safety Initiative, 2008

What Does Our Faith Tell Us?

In their pastoral document, Renewing the Face of the Earth, the U.S. Catholic bishops wrote, “at its core, the environmental crisis is a moral challenge. It calls [on] us to examine how we use and share the good of the Earth, what we pass on to future generations and how we live in harmony with God’s creation.”

How can climate change be viewed through the prism of Catholic health care’s basic values?

DIGNITY OF THE PERSON:
We hold that all life is sacred. The warming of the Earth poses a threat to people worldwide who are at risk of losing their homes, their livelihoods, their health and even their lives.

COMMON GOOD:
The universal nature of climate change reminds us that we are all in this together. We hold the Earth in common and must act together to help our brothers, our sisters and ourselves.

STEWARDSHIP:
As a health ministry we have an obligation to care for all creation and to be good stewards of the Earth. How we treat the atmosphere not only impacts us today, but our grandchildren and their grandchildren.

Why, until very recently, have we who confess that God created this world not risen up en masse in defense of the natural world?

Elizabeth A. Johnson, CSJ, at the Leadership Conference of Women Religious (LCWR) 2008 Assembly
There is near universal consensus in the scientific community that global warming is a serious threat to the Earth and its inhabitants – including humans. There is also strong evidence that our industrial activity is a driving force for this problem. Scientists observe that carbon dioxide and other heat-trapping gases are raising the global atmospheric temperature. The heat-trapping effect of these greenhouse gases disrupts the balance of physical and biological systems, harming the environment as well as the health of people who live in it.

We in health care should be especially concerned with the projected health-related effects of climate change because we must prepare to deal with them. Increasingly extreme weather patterns and storms, a rise in the incidence of infectious diseases, and shortages of fresh water will likely cause increased injury and illness to humans.

**SEVERE WEATHER:** Changing weather patterns already are causing more severe floods, droughts and other weather events. Severe storms not only cause immediate jeopardy when they strike, but in their aftermath they can leave food shortages related to damaged crops and livestock, lack of clean water and increased spread of infectious diseases.

**MOSQUITO-BORNE DISEASES:** Microorganisms carried by mosquitoes cause malaria, dengue fever, West Nile virus and other diseases. By melting glaciers in the Arctic and northern latitudes, global warming will cause sea levels to rise. Even a small rise in sea level will inundate low-lying coastal regions, increasing the areas where mosquitoes can live and breed. With warmer temperatures, mosquitoes live longer and lay eggs more frequently, compounding the problem. Floods leave puddles and droughts leave stagnant water in previously free-flowing streams, further contributing to a growing mosquito population.

**ANIMAL-CAUSING DISEASES:** Changing weather patterns are thought to increase the risk of diseases carried by birds and other animals that are “vectors” of infection. Nature operates a delicate “pest control system” that could easily be upset by climate change. A reduction in the population of animals, such as foxes, that prey upon rodents and other disease-carrying animals could increase the incidence of deadly viruses and other infections.

**WATER-BORNE DISEASES:** Unhealthy water – from increasing droughts, floods and other severe weather events – could allow a resurgence of water-borne diseases such as cholera. In addition, a lack of clean water afterward will reduce hygienic conditions, further contributing to infection and disease.
BEFORE IT IS TOO LATE,

It is necessary to make courageous decisions that reflect knowing how to re-create a strong alliance between man and the Earth. A decisive “yes” to the protection of creation is necessary, and a firm commitment to reverse those tendencies that run the risk of bringing about situations of unstoppable degradation.

POPE BENEDICT XVI
Is There Hope?

The effects of human-induced global warming appear frightening. But working together, we can have a positive impact on the looming crisis.

We, the people of Catholic health care can:

- Reduce our contribution to the problem.
- Care for those who are victims.
- Be advocates for public policies and private action that will bring solutions.

REDUCE OUR “CARBON FOOTPRINT”: Health Care Without Harm and Practice Greenhealth, two leading health care-centered environmental organizations, have identified practical ways to decrease our energy use and emissions. Decreasing both energy consumption and emissions will allow us to minimize the amount of the greenhouse gases, particularly carbon dioxide (CO₂), our facilities are responsible for releasing into the atmosphere.

Ways to reduce your facility’s carbon footprint include:

DECREASE ENERGY USAGE IN OPERATIONS: Health care organizations can assess current energy usage, develop plans for using less, and diligently track progress. Besides helping the environment, many of these ideas will also help facilities decrease utility bills. Some strategies include:

- Install compact fluorescents and light-emitting diodes (LEDs) wherever incandescent or halogen light bulbs are now used (energy saved = 75 to 90%).
- Upgrade tube fluorescents from the older T12 type to the newer, more energy-efficient T8 (energy saved = 40%).
- Upgrade at least one major piece of mechanical equipment with newer, more energy-efficient technology (refrigerator condensers, for example).
- Install on-site renewable energy sources such as solar.
- Purchase energy-efficient products such as energy-star rated computer monitors.
- Offset power by purchasing electricity that is generated renewably.
- Perform energy audits to determine actual lighting needs versus what is currently being delivered.
- Turn off or minimize lighting in empty conference rooms, cubicles, or offices.
- Give employees incentives to work together to come up with even more ways to save energy – to produce better ideas, plus foster a sense of cooperation and teamwork.

DECREASE ENERGY USE AND EMISSIONS IN DESIGN AND CONSTRUCTION OF BUILDINGS: Facilities can reduce energy use and greenhouse gas emissions during the design and construction of buildings. Besides being good for the environment, many of these ideas can improve patient and employee satisfaction.

- Maximize natural lighting and ventilation, green roofs, and other “green” design components.
- Consider environmental consequences of building placement (availability of bus routes, bike paths, rail lines, city parks, and other amenities).
- Use local and regional building materials that reduce the amount of energy required to transport materials.
- Offset emissions from building construction.
- Purchase Forest Stewardship Council (FSC) Certified lumber products. (E.g. protecting natural carbon sequestration).
- Install showers, lockers, and bike storage to encourage employees to use alternative commuting methods and increase their own health.
- Choose suppliers and contractors who are “green” (check the U.S. Green Building Council or ask the business for their “green” credentials).

Maximize natural lighting and ventilation, green roofs, and other “green” design components.
rethink food service: The industrialized food system we have come to depend on relies on massive amounts of petroleum-based resources in the form of fertilizers, pesticides, herbicides, and fuel for growing, processing, and transportation.

Strategies to minimize greenhouse gases through food service include:
- Partnering with local organic farmers to compost vegetable food waste thereby creating a “green” alternative to inorganic fertilizer. This fosters community involvement and reduces the amount of trash.
- Eliminating bottled water and urging the use of tap water.
- Planting an onsite organic demonstration garden in conjunction with a local gardening club or community gardening initiative, and making it available to patients and visitors for education and reflection.

Taking even some of these actions can have added benefit to food service operations and the facility as a whole. In addition, these initiatives provide opportunities to work with the local media, not only to bring attention to the positive actions a facility is taking, but also to act as a role model and educate the community about ways everyone can help.

Reduce long-distance transportation of food by purchasing local and seasonal foods whenever possible.

reduce transportation emissions: In some areas of the country, transportation is the second largest source of greenhouse gas emissions. Motor vehicles typically burn gasoline and diesel fuels. For every gallon of gasoline burned, 20 pounds of CO₂ is released into the atmosphere. Transportation emissions also are known carcinogens and can cause respiratory disease.

Strategies for reducing transportation emissions include:
- Replacing ambulances, cars, vans, and service trucks with fuel-efficient, hybrid, or alternate fuel vehicles.
- Supporting carpooling, telecommuting, and mass-transit by employees.
- Choosing suppliers and contractors who employ alternative-fuel vehicles.
- Utilizing local manufacturers and suppliers when possible to reduce shipping distances, and thus energy used.
- Developing a policy for preferring products (including electronic devices) that weigh less, use less packaging, and are more compact.
- Offering employees partially-subsidized public transportation passes as part of their benefits package.

Reduce waste: Reducing waste means that less waste has to be transported to disposal sites, and decreases potentially toxic waste incinerator and landfill emissions.

Strategies for reducing waste include:
- Recycling all materials that can be recycled - including electronics - and using recycled products whenever possible.
- Capturing and recycling anesthetic gases. Most operating room gases are allowed to escape into the atmosphere during use, causing a serious problem because many are extremely potent greenhouse gases that contribute to global warming.
- Disposing of unused medical supplies by donating and re-purposing them rather than throwing them in the trash.
- Buying in bulk and purchasing products that either do not have packaging or that use recyclable packaging.
- Reusing or diverting waste produced in demolition or construction.

Reduce long-distance transportation of food by purchasing local and seasonal foods whenever possible.

IN SOME AREA OF THE COUNTRY, TRANSPORTATION IS THE SECOND LARGEST SOURCE OF GREENHOUSE GAS EMISSIONS.
global climate change is not about economic theory or political platforms, nor about partisan advantage or interest group pressures. It is about the future of God’s creation and the one human family. It is about protecting both ‘the human environment’ and the natural environment.
The Business Case for Action

Health care organizations who are working to alleviate the negative impact of climate change are also building community support and creating cost savings.

- **Energy Cost Savings:** Most energy efficiency or renewable energy strategies, while sometimes requiring upfront investment, eventually are economical winners for health care organizations. They greatly save on heating, cooling, and electrical costs over the long term and can be an effective buffer against future high energy prices. Many cost savings efficiencies are low or no cost to implement, and some even qualify for rebates or financial assistance.

- **Beauty in “Green Design”:** Health care facility building strategies to reduce energy use and emissions have produced some very beautiful physical building designs - attractive to patients, visitors, employees, and the local community.

- **Cost Savings of “Buying Green”:** Purchasing local products decreases both transportation emissions and transportation costs. Products with less packaging take less space and therefore more items can be transported in a single trip.

- **Economic Sustainability:** Buying locally contributes to the economic vitality of the community and fosters community interest, involvement, and good will.

- **Health Benefits:** Using less meat and more local and seasonal produce can result in less food cost, better taste, and healthier patients and employees.

- **Educational Opportunities:** “Going Green” is also an opportunity for education and good will. Remember to publicize “green” efforts, and post educational information throughout the facility (brochures, leaflets, posters, plaques, kiosks, “green” tours).

Help is Available

There are an increasing number of resources available to help health care facilities monitor and reduce their energy usage. EPA’s ENERGY STAR for Healthcare Program offers tools to help reduce energy use, including EPA’s Portfolio Manager for benchmarking energy use, case studies, and best practices.

- Practice Greenhealth has an Energy Impact Calculator that can translate an individual hospital’s electricity purchase into direct public health impacts and related financial and societal costs. (See resource section).

- A new health care clean energy auction has been launched by Practice Greenhealth that allows hospitals and hospital systems to participate in on-line auctions to buy their electricity in a competitive manner, and purchase a larger percentage of renewable energy.

- Local utilities may offer energy audits, rebates and assistance for “green” projects.

- Local, state or federal governments may offer assistance in the form of tax credits, tax incentives or rebates for “going green.”

The universal nature of climate change reminds us that we are all in this together. We hold the Earth in common and must act together to help our brothers, our sisters and ourselves.
As Catholic health care looks for opportunities to address climate change, it is important to give special attention to how climate change will affect persons who are poor and vulnerable.

The encyclical by Pope Benedict XVI, Dues Caritas Est, defines care for the poor as a religious duty. This is reflected in a core value of Catholic health care: putting a priority on the needs of persons at the margins of society, including the poor and voiceless.

People who are poor live in homes most at risk of the consequences of climate change. They may lack air conditioning, placing them at risk of hyperthermia or even death during heat waves, or they may live in areas that are made unproductive because of climate change. They may be unable to afford the escalating energy costs and new fees imposed to mitigate climate change, leaving those in colder regions vulnerable. Therefore, Catholic health care leaders should advocate for public policies to deal with climate change, and the healing ministry should join other Catholic organizations in being advocates for people who are poor and vulnerable persons be a central issue.

Advocacy Efforts

All should insist that resources be set aside to help those who are unable to bear the burdens of climate change. Resources should be dedicated to helping low-income communities in this country and in poorer nations.

All should advocate that climate change and global poverty be addressed together. Advocacy efforts on behalf of those who are poor can include:

- **FINANCIAL RELIEF:** A significant proportion of funds generated from cap-and-trade programs or carbon taxes should be used to help the poor in our country and around the world to address the costs of climate change.

- **CLIMATE CHANGE TECHNOLOGY:** Appropriate technologies for dealing with climate change could be made available to low-income countries. For example, advocate for a global, collaborative effort to assist installing and/or expanding renewable energy systems to foster independence, self-reliance, and a higher standard of living.

- **EDUCATION:** Before developing countries fall into the same destructive patterns as industrialized nations, advocacy efforts can focus on sharing knowledge in an effort to help others choose more sustainable development.

Advocacy efforts for reducing greenhouse gas emissions can include:

- **INCENTIVES:** Incentives for behavior that leads to responsible activities can be more effective than regulation. For instance, environmental labeling of products can help consumers to make purchase decisions on the basis of energy use information.

- **POLICIES:** Collectively, Catholic health care should advocate for governments to implement policies that will lead to reducing energy use and greenhouse gas emissions. Continuing or expanding incentive programs for installing on-site renewable energy (solar, wind) is one example. Two other approaches being discussed and debated are:
  - “Cap and trade” where polluters are given allowances for a “lot” of pollution and need to sell off the percentage that is above the cap.
  - “Cap and auction” where polluters pay for all their pollution.

Advocacy Efforts on behalf of people who are poor and voiceless.

Catholic health care facilities can join other Catholic organizations in being advocates for people who are poor and voiceless.

“BUT THE GREATEST OF THESE IS CHARITY”

The First Epistle of Paul to the Corinthians xiii.11

Faith, hope and charity should drive Catholic health care’s advocacy agenda.
On climate change,

IT IS NOW TIME TO ACT,

with clear purpose, creativity, care and compassion,
especially for our sisters and brothers who will
suffer the most from past neglect and, if we turn
our back, our future indifference.

JOHN L. CARR, EXECUTIVE DIRECTOR, UNITED STATES CONFERENCE OF CATHOLIC BISHOPS: JUSTICE, PEACE AND HUMAN DEVELOPMENT
Conclusion

Health care facilities can become part of the solution to the negative effects of climate change by measuring their energy use and emissions, identifying actions to reduce usage, and monitoring progress. They also can start to ready themselves for the health consequences of climate change through disaster preparedness, plans for controlling new and returning infections, and developing clinical expertise for problems that have been predicted. Taking a new approach to facility operations can have very positive effects in cost savings, increased community involvement, and higher patient and employee satisfaction.

Catholic health care facilities can also join other Catholic organizations in being advocates for people who are poor and voiceless.

RESOURCES FOR HEALTH CARE ORGANIZATIONS

<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic Coalition on Climate Change</td>
<td><a href="http://www.catholicsonclimatechange.org/index.html">www.catholicsonclimatechange.org/index.html</a></td>
</tr>
<tr>
<td>Health Care Without Harm</td>
<td><a href="http://www.noharm.org">www.noharm.org</a></td>
</tr>
<tr>
<td>Practice Greenhealth</td>
<td>cms.h2e-online.org</td>
</tr>
<tr>
<td>Intergovernmental Panel on Climate Change EPA ENERGY STAR for Healthcare</td>
<td><a href="http://www.energystar.gov/indexcfm?c=healthcare.bus_healthcare">www.energystar.gov/indexcfm?c=healthcare.bus_healthcare</a></td>
</tr>
<tr>
<td>CleanMed</td>
<td><a href="http://www.cleanmed.org">www.cleanmed.org</a></td>
</tr>
<tr>
<td>U. S. Green Building Council</td>
<td><a href="http://www.usgbc.org">www.usgbc.org</a></td>
</tr>
<tr>
<td>Forest Stewardship Council</td>
<td><a href="http://www.fscus.org">www.fscus.org</a></td>
</tr>
<tr>
<td>EPA Waste Reduction Model</td>
<td><a href="http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html">www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html</a></td>
</tr>
<tr>
<td>Global Health and Safety Initiative</td>
<td><a href="http://www.globalhealthsafety.org">www.globalhealthsafety.org</a></td>
</tr>
<tr>
<td>Healthy Building Network</td>
<td><a href="http://www.healthybuilding.net">www.healthybuilding.net</a></td>
</tr>
<tr>
<td>Physicians for Social Responsibility (PSR)</td>
<td><a href="http://www.psr.org">www.psr.org</a></td>
</tr>
<tr>
<td>Project C.U.R.E.</td>
<td><a href="http://www.projectcare.org">www.projectcare.org</a></td>
</tr>
<tr>
<td>Energy Star</td>
<td><a href="http://www.energystar.gov">www.energystar.gov</a></td>
</tr>
<tr>
<td>For the most up to date resources, go to <a href="http://www.chausa.org">www.chausa.org</a> and click on “Climate Change” under “Our Work.”</td>
<td></td>
</tr>
</tbody>
</table>

FOR THE MOST UP TO DATE RESOURCES, GO TO WWW.CHAUSA.ORG AND CLICK ON “CLIMATE CHANGE” UNDER “OUR WORK.”

For the most up to date resources, go to www.chausa.org and click on “Climate Change” under “Our Work.”

STEPS YOU CAN TAKE TODAY, THIS WEEK OR THIS MONTH:

- Offer shuttle service to public transportation.
- Turn down thermostats slightly in the cold months.
- Encourage biking to work by offering lockers and showers.
- Purchase only ENERGY STAR compliant computers.
- Turn off computers not in use.
- Replace incandescent, halogen, and older fluorescent fixtures.
- Plant a garden.
- Install motion sensor light switches in offices.
- Initiate a recycling program; reuse or donate whenever possible.

MOST OF THE INFORMATION FOR THIS BOOKLET CAME FROM:

- Addressing Climate Change in the Health Care Setting: Opportunities for Action
- Health Care Without Harm and Practice Greenhealth. April 2008
- We Can Make A Difference. Global Health and Safety Initiative. 2008
Examples of Catholic Health Ministry Climate Change Initiatives

PROVIDENCE HEALTH AND SERVICES in Renton, Wash., purchases only Energy Star-qualified computers. This is part of an energy efficiency program that is saving the system more than $3.4 million annually.

DULUTH CLINIC, part of SMDC Health System in Minn., purchased 77% of the wood used in construction from forests with Forest Stewardship Certification.

HOLY REDEEMER HOSPITAL AND MEDICAL CENTER, near Philadelphia, part of Holy Redeemer Health System, implemented a composting program that supplies two local farms with organic fertilizer, and they in turn supply the hospital with fresh local produce.

COVENANT HEALTH SYSTEMS, headquartered in Lexington, Mass., members are mercury free and have received Practice Greenhealth’s Making Medicine Mercury Free Award.

BAYCARE HEALTH SYSTEM, in Tampa, Fla., part of Catholic Health East (CHE), has implemented a “Reduce, Reuse and Recycle” initiative, as well as a Supply Redistribution Program. Under this program, BayCare collects, assesses and redistributes used assets that have served their purpose. Physician offices and departments identify materials, equipment, furnishings and supplies that are no longer needed. Then materials management conducts an evaluation of these items and determines the best method for redistribution. Medical supplies are redistributed to needy areas that lack basic medical care and resources.

MERCY MEDICAL CENTER in Springfield, Mass., part of Sisters of Providence Health System, has implemented several environmental projects, including: identification of biodegradable alternatives for plastic ware; donating used kitchen oil for bio-diesel use in cars; exploring Xeriscaping for the campus; using a national recycling organization for the proper disposal of batteries and participating in an ongoing campaign to continuously improve office paper recycling. Last year, their paper recycling efforts saved the equivalent of 357 trees.

CATHOLIC HEALTH SYSTEM in Buffalo, N.Y., part of CHE, has instituted the use of low energy light bulbs, as well as recycling of sharps containers and cardboard. They are also evaluating the use of cleaning products, paints and solvents. And they encourage colleagues to use their own coffee cups in the cafeteria to cut down on Styrofoam waste.

ST. JOSEPH MERCY HEALTH SYSTEM in Ann Arbor, Mich., part of Trinity Health System, has looked for low/no cost measures in gas and electrical power to address organizational behaviors that contribute to global warming including installing automatic turn-off in HVAC equipment when not in use and automatic lighting control systems adjusted to weekly use of spaces and daylight conditions.

ST. JOSEPH has also focused on water by switching to low-flow shower heads and dishwasher heads, eliminating water softeners, and installing a chemical-free water treatment.

CATHOLIC HEALTHCARE WEST was the first health system in the state to join the California Climate Action Registry. In 2007 it began to monitor and report its electrical and natural gas consumption.

ST. JOHN’S MERCY MEDICAL CENTER in St. Louis, Mo., part of Sisters of Mercy Health System, is buying hybrid vehicles.

CENTURA HEALTH of Colorado prevents tons of trash from being sent to landfills each year by donating its surplus, unused medical supplies to Project C.U.R.E. Project C.U.R.E. is a non-profit that collects, sorts, and transports these supplies to medical facilities in developing countries.

ST. JOSEPH HOSPITAL in Nashua, N.H., part of CHE, instituted a “no idling” policy to stop unnecessary vehicle idling in order to improve air quality and respiratory health for their community members.
This resource is made available through receipt of a $20,000 grant from the National Religious Partnership for the Environment (NRPE) and the Catholic Coalition on Climate Change. The grant, awarded in 2008 to the Catholic Health Association — in cooperation with Catholic Health Initiatives (CHI), Denver; Covenant Health Systems, Lexington, Mass.; and Trinity Health, Novi, Mich. — will fund a ministry-wide effort to raise awareness about global climate change.

To learn more about this initiative, please go to www.chausa.org/Pub/MainNav/ourcommitments/ClimateChangeInitiative.htm.