FAITH IN ACTION TOOL KIT • VOLUME 3

ON THE COVER

Under Darkening Skies: Eulogy for Black Mountain by Jeff Chapman-Crane

DEDICATED TO ART WILLIAMS, J.D.

Many Faiths, One Heart, Common Action

16TH Annual Festival of Faiths • November 2ND – November 7TH, 2011

Sacred Air: Breath of Life

The 2011 Festival of Faiths, *Sacred Air: Breath of Life*, is proudly dedicated to Art Williams, J.D. Art has been a tireless champion of clean air and environmental justice throughout his adult life. For 12 years, he served as Executive Director of the Louisville Metro Air Pollution Control District and implemented the Strategic Toxic Air Reduction (STAR) program. Prior to this, he held positions in the Kentucky Natural Resources and Environmental Protection Cabinet, and the City of Louisville's Consumer Protection office, while at the same time maintaining a private practice with Woodward Hobson & Fulton as an environmental attorney. Since his retirement, his commitment to air quality has become global in scope. He attended the recent United Nations climate-change conferences in Copenhagen and Cancun. Among many other activities, including horseradish farming in Shelby County, he has served as an advisor and advocate on issues related to his admirable commitment to a clean, healthy planet that nurtures all life. Art Williams has also given generously of his time and counsel as a faithful volunteer for the Festival of Faiths. We honor him at this time for his inspiring commitment, his leadership, and his unfailing integrity as an outstanding steward of sacred air.

Contents

Introduction

Welcome to the 2011 Festival of Faiths, which will explore the theme of *Sacred Air: Breath of Life*.

This Festival continues the series celebrating the elements, begun in 2009 with *Sacred Water* and followed in 2010 with *Sacred Soil*. The series will conclude in 2012 with *Sacred Fire*. These Festivals invite you to imagine a world in which the water, the soil, and the air that you breathe are acknowledged to be sacred. In this world, each act of worship by every single person is valued as a blessing to one and all alike. The world that you are imagining is complex, home to many nationalities, many languages, and many faiths; yet, the world throbs as one heart because everyone values and respects each other and is grateful for each other.

In this world, it is natural for all people to work well together because they share the goal of promoting the general welfare. This year, imagine people throughout the world combining their resources and efforts in the planting of trees, a project they have undertaken because they love trees and want to safeguard the quality of their sacred air.

The world that you have just imagined might strike you as a far cry from reality; yet, the message of the Festival of Faiths is that this imagined world is the real world, even though our society might not be mindful of it.

For the past 200 years, Westerners have been invited to imagine a secular world of physical comfort and convenience, made possible by industrialization and technology. This secular vision has distracted our attention from Nature. We see instead a reservoir of raw materials waiting to be exploited for profit and comfort. We can scarcely acknowledge any relationship to nature viewed in this way, let alone any religious rapport with its water, soil, or air.

Despite the long distraction, the Festival of Faiths bears witness to the sacredness of Creation and notes with gratification a worldwide shift in consciousness that is now beginning to force a re-examination of the values of secularism.

The question is being raised, "Are the products of industrialization worth the price that they are exacting from the living systems of the planet, among them the air that we breathe?"

At the same time, our inner natures are telling us that we are not totally satisfied by these products and long for something else. We are becoming receptive to a return to Nature; an age that binds religion with ecology is being ushered in. Roger Gottlieb sees in religion's response to environmental issues cause for its own healing as well as the planet's healing.

While many aspects of this movement are contemporary, the movement has deep roots. Kyle Kramer points to Benedictine spirituality, based on the sixth-century Rule of St. Benedict, which established such a close relationship between the life of prayer and caring for the land that the spiritual and the material could be said to merge into a single reality.

This Rule resonates with the shared wisdom of the ages. Our human origins are said to be in Nature – a garden, the soil, the sea. "Before there were any written scriptures," wrote the late Thomas Berry, "creation was our first scripture."

The texts included in this Tool Kit proclaim the sacredness of our air from a variety of perspectives. Two companion articles, written by Rabbi Stanley Miles and by Kathleen Lyons, a Christian, refer to the Scriptural foundations of Sacred Air within these religious traditions. In another view, a Tibetan Buddhist, Geshe Rapgyal, refers to sacred air as the first and most essential element in creation. Breath alone, according to him, can enable one to transform the physical body into an instrument for meditation, creating calm and peace in the process, as well as good health. Lisa Miller, a yoga expert, makes the startling claim that the exercise of breathing enables us to become co-creators of the universe. Breathing exercises are provided, not only to heighten attention upon sacred air, but also to demonstrate that the process of breathing can be a source of spiritual nourishment as well as physical health.

In an article that combines poetic with scientific insights, Margaret Carreiro makes fascinating observations on air, the life giver, reaching in its perpetual motion from infinity to infinity. Trees feature prominently in the Tool Kit because of the crucial role that they play in cleansing the air and serving as "the stewards of the environment." Sarah Gracey offers practical advice on the selection and care of trees, and Judith Egerton writes about the lovely effects that can be produced by following this advice in her report on a visit to Bernheim Forest.

Our responsibilities as human beings who live in oneness with all of sacred creation appear as distinct commitments in the Vision Statement of the Loretto Earth Network, which this year celebrates its 20th anniversary.

The words which appear in this Tool Kit also take the form of factoids, quotes, and bibliographical recommendations. These are intended as aids to all who would like to expand their knowledge of and appreciation for *Sacred Air: Breath of Life*, until that transformative moment arrives when one is swept away by the sense of the sacredness of creation, wherein but to breathe is to be blessed.

Finally, the Tool Kit contains some discussion questions to accompany the enclosed DVD, *Air: The Search for One Clean Breath*. This prize-winning film, called by one observer, "a comprehensive biography of air," was produced in 2008 by the Ventura County (CA) Air Pollution Control District.

The Festival welcomes your comments on the subject of Sacred Air. Most of all, the Festival urges you to report on insights that you have gained from discussions in which you have participated. Please submit your comments to kathleen@interfaithrelations.org or to our website, www.interfaithrelations.org.

The air of the outside world is not fresh air.
Just to break out and walk down the Boulevards
is no solution. The fresh air we need
is the clean breath of the Holy Spirit,
coming like the wind, blowing as He pleases.

— From *Confessions of a Guilty Bystander*
by Thomas Merton

CENTER FOR INTERFAITH RELATIONS (CIR)

The Center for Interfaith Relations is a nonsectarian organization dedicated to promoting and supporting interfaith understanding, cooperation and action on issues of significance to all people. Its mission is to bring together communities of faith in mutual respect for each other and to serve as a resource to them in their undertakings.

What World Religions Believe about Ecology

Baha'i

The oneness of humanity is, for Baha'is, the fundamental spiritual and social truth of this age. It implies a major restructuring of the world's educational, social, agricultural, industrial, economic, legal and political systems. Baha'is believe this restructuring will enable the emergence of a sustainable, just and prosperous world civilization that will exist on this planet for half a million years.

Bahai'is believe science and technology should help humanity to live in harmony with nature. A spiritually-based civilization in which science and religion work in harmony will preserve the ecological balance of the earth, foster stability in human population, and advance the material and the spiritual well-being of all peoples and nations.

Buddhism

Buddhism teaches that the health of the whole is inseparably linked to the health of the parts, and the health of the parts is inseparably linked to the health of the whole. This means that caring for the environment begins with caring for oneself: "When our hearts are good, the sky will be good to us," says Venerable Maha Ghosananda of Cambodia, a founding patron of the Alliance of Religions and Conservation.

The Buddha taught people to live simply and appreciate the natural cycle of life. Craving and greed only bring unhappiness, since demands for material possessions can never be satisfied and people will always demand more, thus threatening the environment. This is why the real solution to the environmental crisis begins with the individual.

Christianity

Christianity recognizes a tension between humanity's responsibility to care for God's creation and the human tendency to rebel against God. The main Christian churches have in the past decades re-examined their teachings and practice in the light of the environmental crisis.

Pope Benedict XVI stated in his first homily as pontiff that "the earth's treasures have been made to serve the powers of exploitation and destruction" and called on Catholics to be better stewards of God's creation. At a Vatican conference devoted to climate change, Pope Benedict announced that global citizens have to "focus on the needs of sustainable development."

The Ecumenical Patriarchate, the highest officials of the Eastern Orthodox Church, taught in 1990 that humanity ought to perceive the natural order as a sign and sacrament of God, and that to respect nature is to recognize that all creatures and objects have a unique place in God's creation.

The Protestant Churches, speaking through the World Council of Churches in 1990, committed themselves to conserve and work for the integrity of creation, both for its inherent value to God and in order that justice may be achieved and sustained.

Christians increasingly recognize the need to repent for what harm has been done to creation. In the words of the Orthodox Patriarchate, "The challenge to all Christians is to discover anew the truth that God's love and liberation is for all creation, not just humanity, and to seek new ways of living that restore balance and hope of life to the endangered planet."

Hinduism

All living beings are sacred because they are parts of God and should be treated with respect and compassion. This is because the soul can be reincarnated into any form of life. Most Hindus are vegetarian because of this belief in the sanctity of life. Even trees, rivers, and mountains are believed to have souls, and should be honored and cared for.

Hinduism stresses that true happiness comes from within, not from outer possessions. This means that the search for material possessions and the consumption of materials should not be allowed to dominate life. Life's main purpose is to discover the spiritual nature and experience the peace and fulfillment it brings. The efforts to exploit the things of this world are considered by Hindu teachers to be a distraction from this central purpose of life.

Indigenous Ways

The icon used to symbolize Indigenous ways is a Lakota symbol consisting of a circle with an internal cross that points in four directions. This symbol was chosen because it can be said to embody the Indigenous Circle of Faiths, which include all who follow traditional beliefs that have endured among First Peoples since time immemorial. Among these are beliefs in the sacredness of earth, sky, wind, and sea and in the kinship of all creatures – animal, vegetable, and mineral. Noting this cultural sharing by no means overlooks the diversity of the thousands of small societies that are included within the Indigenous Circle of Faiths, each with its own language, homeland, and mythology. Intimate relations among all creatures that make up the landscape are an inevitable result of the generally perceived kinship of all creatures, but the form that this takes necessarily varies from one region to another, as the landscape itself differs. An example of this regional influence is reflected in a Creation Narrative of the Dine/Navajo, which claims that "Wind existed first, as a person, and when the Earth began its existence Wind took care of it." Wind continues to be care-giving, bringing refreshing breezes at dawn and in the evening. "Wind exists beautifully," according to the Narrative, its presence felt as that of a person who safeguards life in the homeland. Indigenous Ways derive from timeless traditional beliefs, handed down through tribal mythologies.

(cf. John Grim, http://fore.research.yale.edu/religion/indigenous/index.html)

Islam

Khalifa – trusteeship Muslims believe that Allah created humans to be guardians of His creation. In other words, nature does not belong to us to do with as we wish, but is entrusted by Allah to our safe-keeping. "The world is green and beautiful, and Allah has appointed you His guardian over it," taught the prophet Muhammad.

Tawheed – unity The central concept of Islam is tawheed, or unity. Allah is unity, and His unity is reflected in the unity of humanity and nature. We must therefore maintain the integrity of the Earth, its flora and fauna, its wildlife and environment. Our responsibility is to keep balance and harmony in Allah's creation.

Akrah – accountability Islam teaches that we will one day be judged by Allah for how we have discharged our responsibilities following the guidance of Islam. Have we been good trustees, and have we kept nature in harmony? There will be a day of reckoning.

Avoid waste – It is said in the Qur'an that Allah invites us to enjoy the fruits of the earth, but to avoid excess leading to waste, "for Allah does not love wasters."

Shariah – All these principles have been translated into practical directions for how to live, embodied in the Shariah, the laws of Islam. For example, Shariah law protects animals from cruelty, conserves forests, and limits the growth of cities.

Jainism

According to the Tattvartha Sutra there are 8.4 million species of living things – each of which is part of the cycle of birth, life, death, and rebirth, and is therefore precious.

This central teaching of Jainism was made famous in recent times by Mahatma Gandhi, who was greatly influenced by Jain ideas. He made "ahimsa" the guiding principle of his struggle for social freedom and equality. Ahimsa means more than not hurting others; it means not intending to cause harm, physical, mental or spiritual, to any part of nature. In the words of Mahavira: "You are that which you wish to harm."

An important Jain principle is not to waste the gifts of nature, and even to reduce one's needs as far as possible. As Gandhi said, "There is enough in this world for human needs, but not for human wants."

Judaism (compiled by Professor Nahum Rakover, a rabbinic researcher and professor emeritus at Bar-Ilan University)

The Jewish attitude to nature is based on the belief that the universe is the work of the Creator. Love of God includes love of all His creations: the inanimate, plants, animals and humans. Nature in all its beauty is created for us, and our connection to nature restores us to our original state of happiness and joy.

Jewish teachings prohibit the destruction of anything from which humans may benefit. This applies to animals, plants, and even inanimate objects. Sages compared the death of a tree to the departure of man's soul from his body: "When people cut down the wood of a tree that yields fruit, its cry goes from one end of the world to the other, and the sound is inaudible... When the soul departs from the body, the cry goes forth from one end of the world to the other, and the sound is inaudible."

Shintoism

Shinto tradition acknowledges a deep debt to the blessing of nature and the spiritual power which brings about life, fertility, and prosperity. This life-giving power was called Musubi (divine power of growth) and is perceived in all the workings of nature. Since the Japanese people felt the divine within nature, they came to hold the ideal of a life that was in harmony with and united with nature. Mountain peaks, deep valleys, and the wide ocean were viewed as dwellings for the divine, and other natural objects, such as evergreen trees and huge rocks,w were considered to be symbols of divine spirits.

Along city avenues and in the valleys formed by busy urban streets, wherever the Japanese people make their lives, one will always find a luxuriant green of trees. The grove is a ritual space for the worship of the deities, and as such is a part of nature which has been preserved by the Japanese people since ancient times.

Sikhism (Based on the Sikh text of the Windsor Statements, 1995)

Sikhs teach that humans create their surroundings as a reflection of their inner state, and hence the increasing barrenness of the earth reflects a spiritual emptiness within humans. The solution according to Sikhism can be found in prayer and the spirit of humility before the divine will of God.

The history of the Gurus is full of stories of their love for animals, birds, trees, vegetation, rivers, mountains and sky. A simple life free from conspicuous waste is the Sikh ideal – a life that stresses mastery over the self rather than mastery over nature.

Taoism

Four main principles of Taoism guide the relationship between humanity and nature:

1. Follow the Earth The Dao De Jing says: "Humanity follows the Earth, the Earth follows Heaven, Heaven follows the Dao, and the Dao follows what is natural." Daoists therefore obey the Earth.

2. Harmony with nature In Taoism, everything is composed of two opposite forces known as Yin and Yang. The two forces are in constant struggle within everything. When they reach harmony, the energy of life is created. Someone who understands this point will not exploit nature, but will treat it well and learn from it.

3. Too much success If the pursuit of development runs counter to the harmony and balance of nature, even if it is of great immediate interest and profit, people should restrain themselves from it.

4. Affluence in bio-diversity Taoism has a unique sense of value in that it judges affluence by the number of different species. This view encourages both government and people to take good care of nature, and is a special contribution by Taoism to the conservation of nature.

Zoroastrianism

Zoroastrianism claims to be the world's oldest revealed religion and also the world's first proponent of ecology, through caring for the elements and the earth. The Zoroastrian faith enjoins the caring of the physical world not merely to seek spiritual salvation. Human beings are seen as the natural motivators or overseers of the Seven Creations (sky, water, earth, plant, animal, human and fire). As the only conscious creation, it is humanity's ultimate task to care for the universe.

From ARC (Alliance of Religions and Conservation) http://www.arcworld.org/faiths.htm
Except where noted, definitions come from the Alliance of Religions and Conservation.

AIR & Spirit

Inhale, and God approaches you.
Hold the inhalation, and God remains with you.
Exhale, and you approach God.
Hold the exhalation, and surrender to God.

— Krishnamacharya, Indian Yoga teacher, healer and scholar.

Between Infinities

By Margaret M. Carreiro

Infinity. Perhaps the concept of The Infinite developed as our ancestors gazed skyward at the seemingly limitless expanse of earth's atmosphere, interrupted only by buoyant clouds and celestial bodies traversing the distant, unknowable void.

The air's substance cannot be seen with the eye, but is observed as the wind that ripples water and leaf, or felt as it stings the skin and dislodges trees when angered. The air's substance cannot be seen, but each intake of breath is proof of its indispensable life-giving property.

It is only this atmosphere, this thin protective membrane of invisible gas enveloping our world that separates Life from Chaos, that keeps our living green and blue planet from becoming a barren gray moonscape of cratered and pulverized rock.

Our atmosphere makes possible the life-giving potential of sunlight, water and soil. Kept close to the earth's surface by gravity, its gases shield life from the sun's harmful rays and keep our planet warm. Its mobility, as the earth spins, disperses the sun's energy as heat and water vapor in air currents that bring both the unpredictability of weather and the reliability of climate needed to sow and reap crops and to sustain earth's vast migrations on hoof and wing. Its simple gases provide not only the molecular building blocks of life, but also the chemical capacity for wresting energy from complex molecules to sustain it.

The interconnectedness and interdependency of all species is exemplified by the reciprocal exchanges of atmospheric carbon dioxide and oxygen between plants and animals.

Plants manufacture themselves from the simplest of raw materials—water and minerals from the soil, and carbon dioxide from the air. Plants channel the energy from sunlight to split water into its atomic components: oxygen, which returns to our atmosphere, and energy-rich hydrogen that plants combine with carbon dioxide and minerals to produce a bewildering array of complex molecules.

All these diverse biological molecules contain a single constant—a skeleton of carbon atoms derived from the atmosphere's reservoir of carbon dioxide. It is these molecules

that nourish people, and the animals and microbes that thrive alongside us.

With each intake of our breath, the oxygen created by plants races from lung to capillary to cell where it enters into reactions that combust and split these carbon-containing molecules, releasing energy to grow, to think, to dance. And with every exhaled breath, the unneeded residue of those reactions, carbon dioxide, returns to the atmosphere to nourish grass and tree alike.

So, too, are society's engines powered by the combustion of carbon-rich molecules formed by plants that once grew tall in prehistoric swamps and by the smallest of single-celled creatures that once floated on ancient seas.

Our inventions recapture the energy of yesterdays' suns through a chemical communion between carbon and oxygen, and so fuel our well-being. Ironically, they also compromise it by contaminating the air that sustains our cellular and spiritual vitality. Unperceiving, we alter the balance of grand gaseous cycles that affect our planet's climate. We tinker with the infinitely small and only now begin to comprehend that our atmosphere is not an infinite expanse, forever ready to absorb the gaseous residue of economies without exacting payment.

But we are creatures who hope, who question, who change. We can open our eyes to the proven wisdom that abounds on our miraculous planet and has sustained Life so robustly for so long, and learn from it new ways to sustain thriving civilizations, ones where each breath of our sacred air inspires us to make a joyful noise with word, with song, with pipe that echoes across mountains, across seas, and skyward to the heavens and The Infinite.

Margaret Carreiro is an associate professor at the University of Louisville Department of Biology.

Then God said, "Let us make man in our image, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth and over all the creatures that move along the ground.

— Genesis 1:26

Sacred Air: A Christian View

By Kathleen Lyons

For the Christian, the air is considered sacred because it comes from God, as does all of creation. As such, it is a means of God's ongoing revelation to us. The revelation that we associate most closely with the air is that of the Holy Spirit.

Just after His resurrection, Jesus explicitly gave the gift of the Holy Spirit to His apostles when He breathed upon them. Fifty days later, on the feast of Pentecost, the Holy Spirit appeared to the apostles and their friends in the form of tongues of fire, ushered in by a great wind. The New Testament association of the Spirit with the air, the wind, or breath continues a well-established practice of the Hebrew Scripture. There, the Spirit of the Lord might signal His creative power, the might of Samson, or the prophetic gifts of Ezekial or Jeremiah.

The association of the Holy Spirit with the air carries an important theological message. Air is perhaps the most accessible and universal of all God's gifts, breathed by all people alike. In this, it is an apt metaphor for the Spirit, Whose message is, above all else, a call to unity. This message was received by Thomas Merton in a transformative moment that occurred at a busy intersection in downtown Louisville. Suddenly, passersby were magnificently illuminated, their faces "shining like the sun." Merton's heart was taken completely by surprise as he glimpsed the dazzling light of the Spirit through the faces of ordinary people surrounding him.

One can imagine Jesus having a similar vision of humanity, for whom He gave His life. To the Christian, the cross recalls Jesus' ultimate gift of Self, but it signals even more than that. The cross is a clear demonstration that Jesus was not to remain with us forever as a man among men and women. Rather, He promised to send the Spirit, to enable us to see each other as He sees us – radiating the divine love in which we were born and are sustained. Through the Spirit, Jesus abides within our world and within us as well.

The mystery of the cross demands the language of paradox, because it challenges us to see at once the revelation of divine love through the crucified but also the beatified body of Jesus. To meet such a challenge, we need to look to art, which is at home in the language of paradox.

Fortunately, Festival participants have access to a remarkable piece of art which answers this need, created by the late sculptor Frederick Hart. The piece has been on loan to the Cathedral of the Assumption, through the generosity of its owner, Mark Fischer, formerly of Louisville but now of Park City, Utah.

The sculpture is entitled *The Cross of the Millennium*. It is roughly 32 inches tall, 24 inches wide, and 7 inches in depth. It is constructed of clear acrylic resin, a twentieth century material with optical properties of crystal: the ability to reflect, refract, and absorb light. Embodied within the cross is the figure of Jesus, fashioned in such a way to suggest both the crucifixion and the resurrection. Moreover, the cross is beautifully faceted so as to replicate the star of Bethlehem, joining in a single artistic vision the birth, death, and resurrection of Jesus. We are able to take in this complex vision as though it appeared in thin air because of the transparency of the artist's material.

Hart's Cross of the Millennium is a stunning example of God's ongoing revelation through the means of sacred air. It renders visible the invisible reality of Jesus' presence, ever on the cross, signifying His compassion and gloriously evoking the hope that is fulfilled through the promise of the Holy Spirit, present to all, as the air itself.

All great art has a capacity for revelation, and Frederick Hart's cross is a remarkable example of this. It is no wonder that Pope John Paul II said of Frederick Hart, "You have created a profound theological statement of our day."

Kathleen Lyons, PhD., is Professor Emerita at Bellarmine University and Festival of Faiths Coordinator.

The Cross of the Millenium. Reprinted with permission.

Sacred Air: A Jewish View

By Rabbi Stanley R. Miles, D. D.

In Judaism, humanity carries two responsibilities. First, we are *Shomrei Adamah*, guardians of the earth. This responsibility is far from new. According to our tradition it dates back to a legend woven around the creation story in Genesis.

God said to Adam: "Look at my works, how beautiful and praiseworthy they are! Everything that I created I created for you. Take care that you do not destroy and damage my world, for if you damage it, there is no one to repair it after you!"

How much this warning resonates when we think about the very air we breathe! This is the "breath of life," such as God breathes into us. In Hebrew, three words for soul— *ruach*, *nefesh* and *neshama*—*relate* to the air we breathe and reflect being created *b'tzelem Elohim*, in the image of God. Like the soul and breath, air is invisible; yet, without it we are doomed.

I began this article stating that, according to Judaism, humanity carries two responsibilities. The second one is *Tikkun Olam*, repairing the world. The Talmud, that great collection of Jewish law and lore, regulates a variety of air pollution for both health reasons (*Tamid 29b*) and to reduce the soot on the beautiful glowing limestone of Jerusalem.

Maimonides, a great rabbi and physician who lived almost 1000 years ago, wrote of this issue in his Treatise on Asthma: "Concern for clean air is the foremost rule in preserving one's health." How his words speak to us still!

When God created humanity and gave us free will, God gave us power to act as surrogates of our Creator. Are we worthy of this responsibility?

Rabbi Stanley Miles is the rabbi at Temple Shalom in Louisville, Ky.

A Tibetan Buddhist Reflection on Sacred Air

By Anne Walter and Tobby Spalding with translation assistance by Tashi Klein

Tibetan Buddhist tradition holds that the world was formed by the deeds of all sentient beings—humans and animals of all kinds. The first element formed was the "Sphere of Wind" or the atmosphere. In this container, the "Sphere of Water" was formed, followed by the "Sphere of Fire" and finally the "Sphere of Earth."

All living beings, no matter how small, depend on the four elements of Wind, Water, Fire and Earth for survival. Creation cannot support life if it is missing any one of the elements, but Wind is the most essential.

Through the burning of incense inside and smoke pujas (prayer ritual) outside, the deity of Wind is honored. These rituals, performed with deep reverence, are intended to show respect for nature and to cleanse impurities. The wonderful aromas rise to the heavens feeding and honoring the nonphysical beings who serve as the guardians and protectors of the element.

Prayer flags are a visible reminder of the importance of air. The most common image found on many Tibetan prayer flags is that of the Wind Horse, a symbol that asks the wind to swiftly carry the benefits of all prayers around the world and into all realms.

Tibetan Buddhism also recognizes that air is crucial for meditation, an essential part of Tibetan Buddhist practice. By focusing on our breath in meditation, we calm the mind.

Proper exhalation and inhalation deepen one's ability to meditate, create a sense of well-being and beneficial peace, while also improving one's health. Air is surely sacred since, when channeled properly through meditation, it provides a vehicle into our inner world. For Tibetan Buddhists, the care of Sacred Air is crucial to all life.

From an interview with Geshe Kalsang Rapgyal, Director of the Drepung Gomang Institute of Louisville.

For breath is life,
and if you breathe well
you will live long on earth.

— Sanskrit Proverb

Benedictine Spirituality and Creation Care

By Kyle T. Kramer

For 1500 years, communities of Benedictine monks or sisters have guided their common life by the Rule of St. Benedict, written by the order's founder in the early part of the sixth century.

Benedictine spirituality has shaped the lives of many outside the monastery or cloister walls, as well, including the current pope. In an age of ecological distress, Benedictines and their Rule offer much wisdom to humankind as we rethink how we relate to and care for creation.

Stability

Benedictines make a vow of stability: they commit their lives to one particular community in one particular place. This "vocation of location" might seem provincial in comparison to the modern American ideal of mobility and cosmopolitanism, but it enables Benedictines to practice responsible stewardship of creation.

When you live in a place long enough, you pay attention to the place itself and the people, plants, and animals that inhabit it. This attention leads to knowledge of a place's gifts and limits. Such intimate knowledge engenders personal investment, affection and love. Knowledge combined with love is the most solid foundation for real environmental responsibility.

Stability also means that Benedictines are able to make long-term commitments necessary for ecological stewardship. Few of our global environmental issues can be solved quickly. Healing degraded land takes generations, and even green technologies, such as solar panels or green building techniques, have long-term economic paybacks. Because Benedictines think in terms of centuries, they are acutely aware of their responsibility to future generations and able to invest the time and capital to ensure the continued life of their community, as well as the planet. In a fast-paced, novelty-worshiping modern world, patience and long-term commitments are a radical stance, since "radical," translated literally, means "rooted."

Prayer and Work

St. Benedict recommended moderation, especially the balance between work (usually manual work) and prayer.

This balance implies that the material world in which we work is just as important as the spiritual world; the two worlds are actually one.

While work can be prayer and vice versa, the active life of work must be balanced by the contemplative life of prayer. We must work, for without an effort to change our ways, we will lay waste to our planet. And yet we must also pray, for if we fail to cultivate prayerful contemplation, our work of ecological stewardship can easily devolve into burnout, anger and despair.

Hospitality

St. Benedict recommended that his monks welcome all guests as Christ. Hospitality extends far beyond simply providing a warm bed and a good meal to friends and strangers alike; it is also an ecological virtue. For hospitality is about making a home in which all, especially the poor and disadvantaged, are welcome. If the Earth is the one home we all share, we must make it hospitable and habitable for all creatures, now and for future generations.

Poverty

When Benedictines take a vow of poverty, this does not imply that they will go around destitute and in rags. Benedictine poverty means common ownership, in which all of the monastery's property is shared among its members. This points to an important ecological truth: the Earth is a common good, which we received from past generations and must pass on (in good shape, hopefully) to future generations.

Poverty doesn't mean privation, but it does mean a check on individualistic consumerism. Especially for citizens of developed nations, ecological responsibility requires sacrificing some goods, services, and conveniences for the sake of a simpler life with a smaller environmental footprint.

Learning from Benedictines

One need not take religious vows or even subscribe to Christian faith in order to learn valuable ecological lessons from Benedictines. The vows, virtues and truths that have guided Benedictine communities through 1500 tumultuous years of history can also help guide the entire human community through the difficult, but ultimately rewarding, choices we must make to safeguard the air, water, soil, and life of our shared planet.

Kyle T. Kramer directs graduate lay ministry programs at Saint Meinrad Archabbey, a Benedictine monastery and school of theology in southern Indiana. He also runs an organic farm. His most recent book is A Time to Plant: Life Lessons in Work, Prayer, and Dirt *(Ave Maria Press, 2010).*

Repentance, Communion and Resistance: Can they Save the Planet?

By Roger S. Gottlieb

In facing the environmental crisis, our religious traditions face questions about their own spiritual validity and moral worth. This crisis asks us to save the world, but at the same time to save ourselves.

Religion's responsibility to save the planet begins with repentance, a fundamental turning away from our past limitations and towards a new public and personal direction for religious life. Instead of starting off by telling others what they should do and believe, we must admit that our ethical visions have been narrow and humanly self-interested. We need to ask how we could have been so mistaken and self-deceived in order to make the necessary changes in our own traditions and to avoid temptation to moral arrogance as we preach to and act within the world.

Only after repentance can we move to communion. This is our (re)discovery that creation is a community of spiritual subjects. Such recognition involves seeing ourselves not just as Americans or Greeks or South Africans, Democrats or Republicans, Jews or Christians or Muslims, but as living creatures who think, feel, and hope with our bodies as well as our minds and souls. In an ecological age, spirituality of any kind requires an awareness of our selves as part of a way of Life.

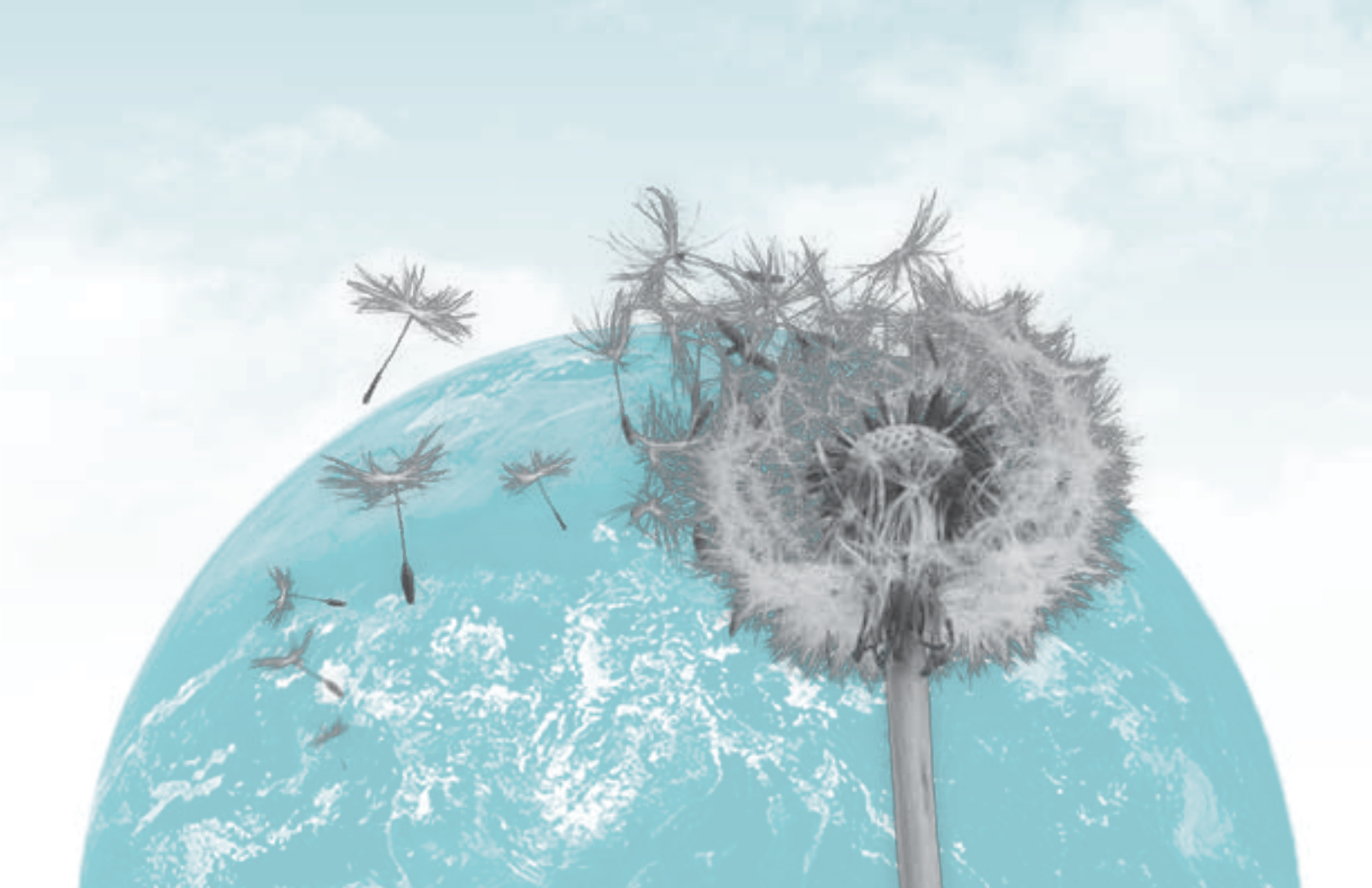
By celebrating our connections to the rest of the great Mystery that is our universe, we discover new religious insights and foster deep personal change. Through spiritual communions, we are called to political engagement in the great social movements of environmentalism and ecojustice.

In our engagement, we can be disciples of spiritual social activists, like Gandhi and Dr. Martin Luther King, Aung San Suu Kyi and Cesar Chavez, bringing distinct religious virtues of non-violence, humility, and compassion to the defining struggle of our time.

Since we are social beings whose everyday actions connect us to the world in myriad ways, our spiritual lives now require public resistance to the machineries of death and destruction. Through resistance, seeking to protect and preserve Life, we will find new and vital paths to God and Spiritual Truth.

Roger S. Gottlieb is a Professor of Philosophy at Worcester Polytechnic Institute.

Notes



AIR & Science

The Earth is under threat.
It cannot cope with all that we demand of it.
It is losing its balance and we humans are causing this to happen.

— From Harmony: A New Way of Looking at Our World, by Prince Charles

Facts about Air and the Earth's Atmosphere

By Margaret Carreiro

Have you thanked a cyanobacterium today?

The mixture of gases in the atmosphere has taken more than 4.5 billion years to evolve. Early earth's atmosphere consisted of water vapor, carbon dioxide, sulfur dioxide, carbon monoxide, sulfur, chlorine, nitrogen, hydrogen, ammonia and methane. Today's very different atmosphere is mostly nitrogen (78%) and oxygen (21%). Argon, carbon dioxide and very small amounts of hydrogen, ozone, methane, carbon monoxide, helium, neon, krypton and xenon combined comprise the remaining 1% of our atmosphere. Earth's earliest atmosphere contained little to no oxygen. Today's high atmospheric concentration of oxygen was achieved about 400 million years ago and is maintained by the oxygenic photosynthesis conducted by plants, algae and cyanobacteria.

Without this high concentration of oxygen in our lower atmosphere, complex animals and ecological food chains would not have evolved, and the protective ozone layer in the stratosphere would not have formed.

The earth's atmosphere is thin!

Most of it (75%) is in the troposphere, which is only about 7 miles high. Compare this to the diameter of the earth, which is about 7,900 miles! Our atmosphere is roughly the same thickness as a sheet of plastic wrap that would surround a basketball-sized earth, or the same thickness as the film of water that clings to a basketball after being dunked in a bucket of water.

If Earth had no atmosphere and we relied upon the sun's energy alone, Earth would be a frigid place with a mean global temperature of about 0°F. The greenhouse gases (water, carbon dioxide, methane, nitrous oxide) in our atmosphere absorb the heat reflected from earth and headed to outer space and re-radiate some of this escaping heat back down to earth. This greenhouse effect warms the earth to a comfortable average of 59°F.

The rise of carbon dioxide and the breakdown of the ozone

In 1750, around the start of the Industrial Revolution, the concentration of atmospheric carbon dioxide, an important

FACT: The current level of carbon dioxide (CO_2) in the atmosphere — at record levels of about 394 parts per million — continues to increase by about 2 ppm each year.

greenhouse gas, was about 279 parts per million (ppm).

In 1958, when long-term measurements of atmospheric carbon dioxide began at Mauna Loa Observatory run by NOAA, it was 315 ppm. By 1988, the carbon dioxide concentration had climbed to 351 ppm and by April 2011, it was 393 ppm, the highest level in 420,000 years.

Atmospheric carbon dioxide concentration has been increasing every year over the last decade because the amount of CO2 released from fossil fuel burning is increasing.

In 1958, there were 2.46 trillion tons of CO2 in the atmosphere; in 1988, the level grew to 2.75 trillion tons and today it is nearly 3.1 trillion tons of CO2 . If these trends continue, the Intergovernmental Panel on Climate Change states that there is a 90-95% likelihood that earth's average surface temperature will increase by 2.5 to 10°F in the next 100 years.

Earth's protective ozone layer is one of the gases in the stratosphere (7 to 25 miles above the earth's surface) with its highest concentration at about 15 miles above the earth's surface. This stratospheric ozone absorbs some of the sun's ultraviolet rays, protecting us from getting even more skin cancer and cataracts.

Chlorofluorocarbons (CFCs) are human-invented molecules used as refrigerants (Freon gas) and dry cleaning solvents (carbon tetrachloride) and to make Styrofoam. These molecules rose up to the stratosphere and caused the rapid breakdown of our ozone shield. Molecules released in 1980 are still destroying ozone. In fact, the ozone will continue to be depleted until the year 2020. Stratospheric ozone concentration will not return to pre-1980 levels until about 2050, and to reach 1950 levels (before the invention of CFCs) will take until about the year 2100!

A single Styrofoam cup made before 1990 required the use of enough CFC molecules to break down 100 trillion ozone molecules in our stratosphere. Today Styrofoam is made with HCFCs (Hydrochlorofluorocarbon) and HCFCs have only 1/16th the power to destroy ozone — but they still destroy ozone.

Margaret Carreiro is an associate professor at the University of Louisville Department of Biology.

FACT: The World Meterological Organization reported that 2000-2009 was the hottest decade on record, with 8 of the hottest 10 years having occurred since 2000.

The Air We Breathe

By Peter Michael Barber

We all like to go outside and "get some fresh air." Most people have fond childhood memories of walks in the woods with a relative, fishing and hunting trips, and canoeing and camping trips. These outings took place in and around trees and the fresh air they provide.

These activities involve leisure and play but also connect us with the powerful forces of nature and with life-affirming trees.

Trees mark the passage of time by enduring in one spot for decades, even centuries. They affirm life as resilient and graceful.

A person can find humility and reverence for life while standing under an ancient oak that has withstood the ravages of time. Humility, reverence, resilience and grace are qualities all cultures agree are good for humanity. People around the world also agree that clean air is good for all.

Trees are a perfect union of air, water and earth. They combine water and essential elements from the soil with air and sunlight from the sky. Trees fill the air around them with leaves, which capture light and cleanse the air. Leaves provide a surface for air pollutants to adhere to, effectively scrubbing the air as it passes through the canopy. And the light absorbed by leaves combines with water and carbon dioxide from the air we breathe to make wood.

By absorbing greenhouse gases largely responsible for climate change, the growth of trees and wood positively influence our atmosphere and is an essential element for the survival of life on earth. By planting large, long-lived trees, we can help offset climate changes caused by combustion of fossil fuels and the release of carbon dioxide.

Who has not rested in the shade of a tree during a hot day, or sought shelter under the boughs of a large shade tree during a rainstorm? Entire towns and cities can enjoy these benefits simply by planting plentiful amounts of trees.

The collective tree canopy across a city casts shade on hot concrete streets and walls, thus lowering the overall temperature of the city. Shaded homes reduce air conditioning bills. Parking lots with trees are cooler than those without.

Shade also reduces air pollution. Emissions from automobiles can react with sunlight to create ground level ozone

FACT: Carbon dioxide emissions declined slightly in 2009 at 9.28 billon metric tons, down from 9.45 billion in 2008.

and other harmful air pollutants. When there is sufficient shade, however, these pollutants do not have an opportunity to form. In addition, trees collectively capture a great deal of rainwater, thereby reducing flooding and improving stream water quality.

Cities across the nation are beginning to see trees as powerful allies in keeping communities healthy. Through urban forestry methods, municipal leaders are planting trees to maximize benefits and reduce costs. Individuals can do their part by planting trees, taking care of the trees they have, and by interacting with the natural world around us.

In the words of Theodore Roosevelt, "To exist as a nation, to prosper as a state, and to live as a people, we must have trees."

Peter Michael Barber is Partnership Coordinator with the Urban and Community Forestry, Kentucky Division of Forestry.

To learn more about the benefits of trees, visit these resources:

- http://forestry.ky.gov/Pages/default.aspx
- http://www.treelink.org/
- http://www.treebenefits.com/calculator/index.cfm
- http://www.treesaregood.org/
- http://www.arborday.org/index.cfm

FACT: In the United States, greenhouse gas emissions caused by human activities increased by 14 percent from 1990 to 2008.

Environmental Justice

By the U.S. Environmental Protection Agency

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA has this goal for all communities and persons across this nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process and has a healthy environment in which to live, learn, and work.

We can preserve our earth, protect our health and strengthen our economy all at the same time.

— Lisa Jackson, Administrator of the U.S. Environmental Protection Agency

FACT: The ocean has become more acidic over the past 20 years, and studies suggest that the ocean is substantially more acidic now than it was a few centuries ago. Rising acidity is associated with increased levels of carbon dioxide dissolved in the water.

Positive Actions For Cleaner Air

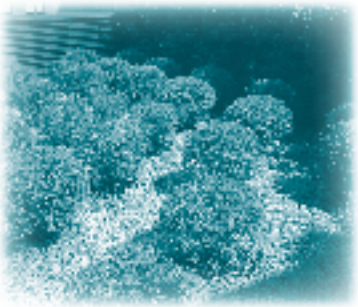
Hybrid Vehicles

On average, hybrid electric vehicles are more economical and produce fewer emissions than conventional cars. A hybrid can travel 40 to 70 miles on one gallon of gasoline, according to the U.S. Department of Energy.

Hybrid cars require less gas, thereby reducing the overall need for mining and drilling to produce more crude oil for consumption. Mining and drilling for fossil fuels have a destructive impact on the environment as seen in the 2010 Gulf of Mexico oil spill.

Rooftop Gardens

Growing trees and plants on the rooftops of buildings reduces energy consumption, lowers the temperature in the surrounding area, reduces rainwater runoff into sewers and lowers overall pollution. It even provides habitat for birds, insects and other creatures.



Several buildings in downtown Louisville are cutting energy costs by cultivating succulent sedums and native Kentucky grasses. Leading the way with rooftop gardens are 21C Museum Hotel on Main Street, The Green Building on East Market, and on Main Street, the American Life and Accident Insurance Co. on Main, designed by architect Mies van der Rohe.

Nana Lampton, chief executive of American Life and a home gardener, enlisted the help of experts from Bernheim Arboretum and Research Forest to create the rooftop garden, which includes a Kentucky cedar glade, prickly pears and blue fescue.

Since the garden was planted in September 2009, Lampton has seen significant decreases in her utility bills because the plants help cool the roof in summer and insulate the building in winter.

FACT: The average length of the growing season in the lower 48 states has increased by about two weeks since the beginning of the 20th century due to rising temperatures.

Cleaner Lawn Care

Did you know that one hour of mowing with a gas-powered lawnmower produces the same amount of smog-forming emissions as driving your car 200 miles?

Gas-powered string trimmers are even more polluting than lawn mowers. These emissions contribute significantly to ground level air pollution and are especially harmful to children and the elderly.

Switching to electric or human-powered lawn equipment will eliminate a major pollution source around your home and neighborhood.

In addition, chemicals used to fertilize plants or kill weeds can negatively impact air and water quality. Curtailing chemical use and replacing turf grass with native vegetation will save time and money.

Through its Lawn Care for Cleaner Air (LCCA) Program, Louisville Metro encourages residents to reduce harmful emissions from lawn maintenance by using air-friendly lawn equipment and adopting low maintenance landscaping techniques. Through the program, Jefferson County residents and businesses can obtain rebates on air-friendly law equipment.

For more information, go to:
www.louisvilleky.gov/APCD/lawncare/LawnCareRebates.

Windmill-powered Dining

The Great Escape, a Chicago-area restaurant, is powered by a 112-foot windmill that towers nearby. The Big Windy produces enough electricity to power 36 homes and saves the equivalent of 639 barrels of oil a year.

FACT: The Tennessee Valley Authority recently reached a settlement with the EPA that calls for closing 18 old coal-fired power plants.

The Environmental Defense Fund

This national nonprofit organization has more than 700,000 members dedicated to protecting the environmental rights of all people and future generations. Guided by science, the EDF works to create and advocate solutions that are nonpartisan, cost-efficient and fair.

Recent efforts include:

- Helping 600,000 farmers in China improve agricultural efficiency while reducing carbon pollution.
- Supporting clean car legislation that helped result in national limits on tailpipe pollution from cars and light trucks.
- Helping to negotiate a deal between the state of Colorado and Excel Energy that will lead to the closing of coal-fired power plants, dramatically reducing mercury, nitrous oxide and sulfur emissions.
- Helping craft proposals to clean up coal-fired plants in 31 eastern states.
- Successfully petitioning the Securities and Exchange Commission (SEC) to advise corporations of their obligation to publicly disclose global warming vulnerabilities to investors.

The world must reduce worldwide carbon dioxide emissions without delay, using all means possible to meet ambitious international global warming targets and ensure the long-term stability of the climate system.

— 2011 report released by the Pontifical Academy of Sciences at the Vatican

FACT: Mining and its support activities accounted for less than 3 percent of Kentucky's gross state product in 2009.

Understanding the Clean Air Act

Source: EPA website, www.epa.gov

Brief History

In October 1948, a thick cloud of air pollution formed above the industrial town of Donora, Pennsylvania. The cloud lingered five days, killed 20 people and caused sickness in 6,000 of the town's 14,000 people.

In 1952, more than 3,000 people died in what became known as London's "Killer Fog." The smog was so thick that buses could not run without guides walking ahead of them carrying lanterns.

Events like these alerted us to the danger of air pollution. Several federal and state laws were passed, including the original Clean Air Act of 1963, which established funding for the study and the cleanup of air pollution. But there was no comprehensive federal response to address air pollution problems until Congress passed a stronger Clean Air Act in 1970.

The Clean Air Act was signed by President Richard Nixon to foster the growth of the American economy and industry while improving human health and the environment. President Nixon recognized the significance of the Clean Air Act, saying, "I think that 1970 will be known as the year of the beginning, in which we really began to move on the problems of clean air and clean water and open spaces for the future generations of America."

That same year Congress created the Environmental Protection Agency (EPA) and gave it the primary role in carrying out the law. According to a 1997 EPA Report to Congress, the first 20 years of Clean Air Act programs, from 1970–1990, led to the prevention of:

- 205,000 premature deaths
- 672,000 cases of chronic bronchitis
- 21,000 cases of heart disease
- 843,000 asthma attacks
- 189,000 cardiovascular hospitalizations
- 10.4 million lost I.Q. points in children from lead reductions
- 18 million child respiratory illnesses

FACT: In 2007, Kentucky had the highest national death rate from lung cancer –74.6 per 100,000 compared to the national average of 50.7.

How Smog Forms

Many pollution sources, including cars, manufacturing and chemical plants, and products used in homes, release smog-forming pollutants. Winds blow the pollutants away from their sources, and the heat of the summer sun causes chemical reactions that form ground-level ozone, a principal component of smog. Hours after the smog-forming pollutants are released from their sources, smog pollutes the air, often many miles away from where the pollutants were released.

Louisville's Strategic Toxic Air Reduction (STAR) Program

The Strategic Toxic Air Reduction (STAR) Program of the Louisville Metro Air Pollution Control District is a regulatory program to reduce harmful contaminants in the air we breathe, to better protect citizens' health and enhance quality of life.

WHY DO WE NEED THIS PROGRAM?

The program was created in response to several studies that showed Louisville had unacceptably high levels of toxic chemicals in the air. **A monitoring study in 2000-01 documented high concentrations of harmful air toxins, including cancer-causing chemicals, in specific neighborhoods. A study by the U.S. Environmental Protection Agency concluded our air had the highest potential risk for adverse effects of all of the counties in the eight southeastern states.**

The threat to public health from toxic air contaminants was deemed sufficient to warrant action on the part of local government. The STAR Program is our community's response to these disturbing findings and commitment to improve our air quality.

WHAT DOES IT DO?

There are three main components to the STAR Program:

- It lists toxic air contaminants (TACs), establishes a framework for estimating risks and generally prohibits emitting TACs in a harmful amount or duration.
- It requires about 170 companies that emit the largest amounts of chemicals to determine through modeling whether they are exceeding the health risk goal for each of the targeted chemicals. It requires companies that exceed the goal to present a plan to reduce emissions and reach the goal over the next six years.
- It requires the APCD to develop a plan of action to reduce emissions from other sources with the help of interested stakeholders in the community.

For more information, go to http://www.louisvilleky.gov/APCD/STAR/

In 1990, Congress dramatically revised and expanded the Clean Air Act, providing the EPA even broader authority to implement and enforce regulations reducing air pollutant emissions. The 1990 Amendments also placed an increased emphasis on more cost-effective approaches to reduce air pollution.

From 1990 thru 2008, emissions of six common pollutants were down 41%, while gross domestic product grew 64%. Emissions of volatile organic compounds (VOC) have dropped 31%, carbon monoxide dropped 46%, and sulfur dioxide dropped 51%.

Key Results of the Clean Air Act

Cleaner cars, trucks and transportation

- Today's new cars, light trucks, and heavy-duty diesel engines are up to 95 percent cleaner than past models, and new non-road engines such as those used in construction and agriculture have 90 percent less particulate matter and nitrogen oxide emissions.

Reduction in acid rain, cleaner ecosystems

- Reducing acid rain has significantly decreased damage to water quality in lakes and streams, improved the health of ecosystems and forests, and dramatically reduced mortality rates.

Lower levels of toxic industrial air pollution, economic growth

Rules issued since 1990 are expected to reduce toxic emissions from industry by 1.7 million tons a year – many times the reductions achieved in the previous 20 years.

Reduction in skin cancer and cataracts by protecting the ozone layer

- The Clean Air Act amendments of 1990 require the EPA to develop and implement regulations for the responsible management of ozone-depleting substances in the United States to help restore the ozone layer.

Technological Innovations

- Catalysts, scrubbers, low-VOC paints, and coatings are part of a long list of technologies not known in 1970, but they are proven and widely deployed today.

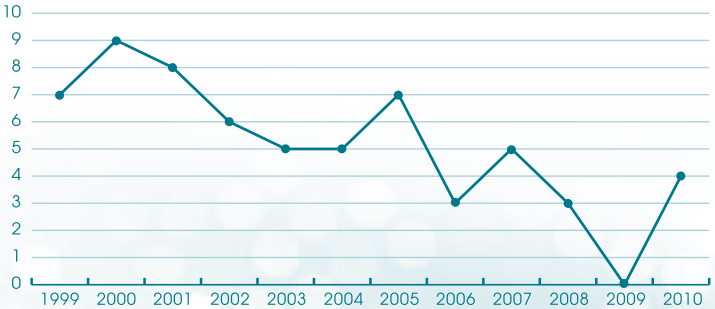
FACT: Last year, 2010, tied with 2005 as the world's warmest on record, according to data by the National Climatic Data Center. Records began in 1880.

Louisville's Air Quality

Louisville is currently in compliance with U.S. Environmental Protection Agency standards for every pollutant except particulate matter, the small particles that are emitted by coal-fired plants, construction sites, wood-burning fireplaces, industrial processes and diesel engines. Louisville ranked 10th worst among American cities for its annual amount of particulate pollution, according to the American Lung Association's *State of the Air 2011* report. Breathing in particle pollution can increase the risk of early death, heart attacks, strokes and emergency room visits for people with asthma, cardiovascular disease and diabetes.

The chart below shows the number of days in each year that Louisville has been out of compliance on particulate matter:

Number of Months Particulate Matter Exceeded EPA Standard, Louisville Metro, 2000 to 2010



The good news is that Louisville has had a great deal of success over the past 20 years cleaning up its air through local initiatives, cleaner burning engines and the STAR program (see page 32). Louisville's air is healthier now than it has been in any of our lifetimes. However, there is much left to do. As more scientific studies are completed, it becomes apparent that air pollution has harmful health effects at lower and lower levels. In response, EPA has lowered or is planning to lower the national ambient air quality standards to make them more stringent and Louisville is likely to fall out of compliance again on several pollutants, including ozone.

Most pollutants result, directly or indirectly, from incomplete combustion of fossil fuels such as gasoline and coal. We all can be part of the solution by following some of the positive actions on pages 28-30.

Ways to Reduce Air Pollution

We make choices everyday that can help reduce air pollution. Below are a few ideas that you can take to help clean our air.

At Home

- Conserve energy — turn off appliances and lights when you leave the room.
- Recycle paper, plastic, glass bottles, cardboard, and aluminum cans. (This conserves energy and reduces production emissions.)
- Keep woodstoves and fireplaces well maintained. Consider replacing old wood stoves with EPA-certified models. Visit www.epa.gov/woodstoves.
- Plant deciduous trees in locations around your home to provide shade in the summer, but to allow light in the winter.
- Buy green electricity produced by low-or even zero-pollution facilities.
- Connect your outdoor lights to a timer or use solar lighting.
- Wash clothes with warm or cold water instead of hot.
- Lower the thermostat on your water heater to 120°F.
- Use low-VOC or water-based paints, stains, finishes, and paint strippers.
- Test your home for radon, a dangerous, radioactive gas that is odorless and tasteless. If the test shows elevated levels of radon, the problem can be fixed cost effectively. Visit www.epa.gov/radon.
- Choose not to smoke in your home, especially if you have children. If you or visitors must smoke, smoke outside. Visit www.epa.gov/smokefree.

Buy Smart

- Buy ENERGY STAR products, including energy efficient lighting and appliances. For more information, visit www.energystar.gov or call 1-888-STAR-YES.
- Choose efficient, low-polluting models of vehicles. Visit www.epa.gov/greenvehicles.
- Choose products that have less packaging and are reusable.
- Shop with a canvas bag instead of using paper and plastic bags.
- Buy rechargeable batteries for devices used frequently.

FACT: The Earth's average temperature in 2010, as in 2005, was 58.12 degrees, which is 1.12 degrees above the 20th-century average of 57 degrees.

Drive Wise

Plan trips to save gasoline and reduce air pollution.

- Keep tires properly inflated and aligned.
- In the summertime, fill gas tank during cooler evening hours to cut down on evaporation. Avoid spilling gas and don't "top off" the tank. Replace gas tank cap tightly.
- Avoid waiting in long drive-thru lines. Park and go in.
- When possible, use public transportation, walk, or ride a bike.
- Get regular engine tune ups and car maintenance checks (especially for the spark plugs).
- Use an energy-conserving (EC) grade motor oil.
- Ask your employer to consider flexible work schedules or telecommuting.
- Report smoking vehicles to your local air agency.
- Join a carpool or vanpool to get to work.

For Your Health

- Check daily air quality forecasts, which tell how clean or polluted your air is. Visit www.airnow.gov.
- Remove indoor asthma triggers from your home and avoid outdoor triggers to control your asthma. Visit www.epa.gov/asthma.
- Minimize sun exposure. Wear sun block and UV protection sunglasses. To find out about current forecasts of UV where you live, go to www.epa.gov/sunwise/uvindex.html.

Over increasingly large areas of the United States spring now comes unheralded by the return of birds, and the early mornings are strangely silent where once they were filled with the beauty of bird song.

— From Silent Spring (1962) by Rachel Carson

FACT: Black lung disease kills about 1,500 miners annually. Between 1996 and 2005, 856 Kentucky miners died of black lung disease – the 4th highest of all states.

AIR & Trees

Whoever plants a tree and looks after it with care,
until it matures and becomes productive,
will be rewarded in the hereafter.

— The Prophet Mohammad

Selection and Planting of Trees

By Sarah Gracey, Kentucky Division of Forestry

One of the questions I am asked most often is: What tree should I plant? The follow-up question is: How do I properly plant my new tree? To start with, there is no silver bullet or magic recommendation when it comes to selecting a tree species. What works at a friend's home several counties over won't necessarily work in your own yard. Also, popular species sold in nurseries are driven by consumer demand. Don't be afraid to do your own research on tree species. There are hundreds out there and tracking down a new tree for your yard can be part of the fun.

As you plan out your landscape project, remember that diversity is key in any tree planting. A rule of thumb is to never have more than 30% of a tree population from one tree family, no more than 20% from one genus and no more than 10% from a single species. This is a good rule to follow whether looking at a city's street tree population or a single yard.

The first thing to consider when selecting a tree is the site. A key consideration of the site is soil type, which is difficult to alter. Your local extension agency can test your soil for mineral deficiencies and pH for a nominal fee. Soil drainage is another consideration, and examples of tests that homeowners should do can be found with a simple internet search.

Next, think about the growing space limitations that your site may have. Are there overhead utility lines, or below-ground elements such as utilities and septic fields to consider? Tree roots don't grow straight down; most are found in the top eighteen inches of soil growing out up to twice the height of the tree. Finally, when considering the site, think about the sun exposure (full, partial or shade) on your site. Tree species vary greatly in their requirements for light. Selecting a tree properly matched for the site is the best way to start towards successful establishment.

Once you have an idea of your site's elements, you can start investigating tree species. The very first characteristic to consider is the species' maximum height and spread. This is important not only for factors such as overhead utility lines, but also for determining how the tree roots will grow beneath the ground. If you are limited by a small space, be sure to select a small tree species.

FACT: Research indicates that planting trees as windbreaks could reduce winter heating costs 10-15 percent and cut summer cooling costs 20-50 percent due to shade and evapotranspiration, the process by which trees give off water from their leaves in the form of gas.

When thinking about the tree's spread, take into account such things as existing buildings, other trees, sidewalks and any future construction plans.

Next, think about a tree's form. A tree's form should dictate where it can be placed in the landscape. For instance, a vase-shaped tree with few lower limbs would be a good choice next to a sidewalk while a pyramidal tree needs lots of room to grow due to its dominant lower limb structure. The sun, soil and moisture requirements of the tree species are important to know. If these factors are not taken into consideration, no amount of after-planting tree care will make up for selecting the wrong tree for your site.

We've talked about how to make sure that the tree will be able to establish itself on your site, but it is also important to consider what you expect from your new tree. Stop and think about what the tree will look like in all four seasons. Knowing if the tree is deciduous or coniferous is a basic consideration, but there are more detailed factors to think about. Sometimes, species characteristics can be undesirable and may lead to a reconsideration of tree species, or location for the tree. For instance, sweetgum is a beautiful native tree with several outstanding characteristics. However, because of its spiny fruit, you might consider planting it at the back edge of your yard, away from heavily trafficked areas, so the fruit won't be a nuisance. Alternatively, you could consider a cultivated variety of sweetgum that does not produce fruit, or if space is a limiting factor, select a columnar variety of sweetgum. It is important to think of basic factors such as flowers, fruit, bark and leaf characteristics to ensure that you select a tree that you will be happy with.

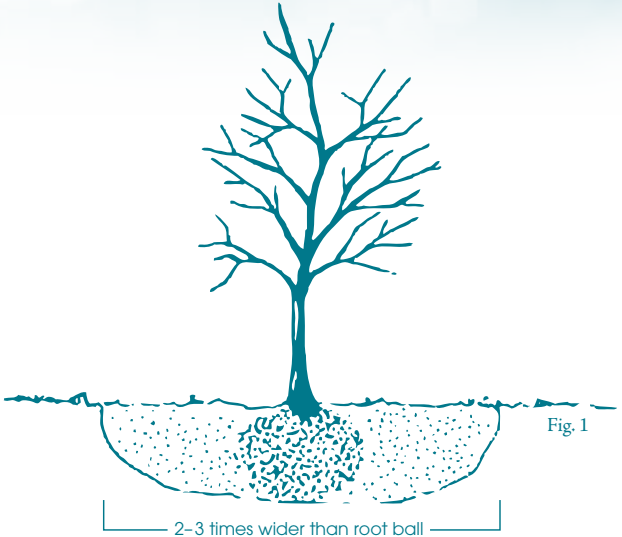


Fig. 1

North Dakota State University Agriculture and University Extension

FACT: It was discovered in Los Angeles that a tree planted to the west of a house saved about three times more energy ($120 versus $39) in a year than the same kind of tree planted to the south.

Once you have purchased your tree, either a balled and burlapped tree or containerized tree, from a reputable local nursery make sure to handle it by the root ball. Don't carry the tree by its trunk with no support underneath. Also, if you are not planting the tree immediately, make sure to keep the root ball moist.

When planting your tree, dig a saucer-shaped hole two to three times wider than your root ball (Figure 1). It is very important to dig the hole to the proper depth. The root collar should be right at the top of the planting hole (Photo 1). You may need to excavate the top of your root ball several inches to find the root collar, but it is very important to take the time to do this. The collar is easily identified as the flared bottom of the trunk before the roots begin. Next, because many Kentucky soils are heavy clay, make sure the sides of your planting hole are not glazed from digging. If they are, simply take the shovel and rough up the sides of the hole. This will help get the roots out of the hole and in to the surrounding soil.

Be sure to remove any packing materials that will not decompose from the soil ball. This includes any plastic twine, nails, non-biodegradable burlap and at least the top two rungs of the wire basket. Even with biodegradable burlap, it is still best to peel back the burlap and push it down in to the planting hole.

Coolxcooling.com

Photo 1

Now you are ready to backfill your hole with the soil that was removed to dig the hole. Place soil half way up the ball in the hole and tamp lightly with your foot. Continue filling the hole and tamp again with your foot. Staking is not recommended unless the tree is planted on a very windy site. Three to four inches of mulch is recommended, however. Make sure to pull it

FACT: When Los Angeles created a map of its tree canopy, it became clear that the districts with the fewest trees were the poorest. Thanks to the map, stepping up the effort to plant trees in poor neighborhoods could clearly be seen as a matter of social and environmental justice.

back from the trunk of the tree. Ensuring that the tree receives adequate water during establishment is essential. A good rule of thumb is to provide a deep watering every 7-10 days during dry periods. A rain log and gauge are good tools to keep track of natural rainfall and applied water.

This article is meant only as a brief introduction to tree selection and planting. There are a multitude of other resources out there. Here are some of my favorites:

- Michael Dirr has long had one of the best books on tree selection, but he now has an app for iPhones as well. Just enter Dirr in the search of your App Store. Cost is $14.99 and worth it!
- Go to kyagr.com and click on the Landscape Plant Availability Guide located under Directories. This tool is great when trying to find which species are available at local nurseries.
- The Northern Kentucky Urban & Community Forestry Council, nkyurbanforestry.org, has a Tree Planting Database that can help you select a tree for your landscape.
- The University of Kentucky Horticulture Department page, uky.edu/Ag/Horticulture, has a Kentucky Native Trees site under the trees section if you are interested in native trees.
- The Arbor Day Foundation site, arborday.org, offers a variety of information on planting trees.

Sarah Catherine Gracey is a State Urban Forester with the Kentucky Division of Forestry.

Other resources:

- http://forestry.ky.gov/Pages/default.aspx
- http://www.treelink.org/
- http://www.treebenefits.com/calculator/index.cfm
- http://www.treesaregood.org/
- http://www.arborday.org/index.cfm

FACT: A recent study found that planting shade trees could reduce the need for power plants. Data from California shows that 50 million shade trees planted in strategic, energy-saving locations could eliminate the need for seven 100-megawatt power plants.

Wedding Trees

Ecology and the symbolism of trees played a key role in this year's royal wedding of Prince William and Kate Middleton at Westminster Abbey in England.

After entering the 1,000-year-old abbey, the bride walked toward the prince along an aisle lined with live flowers and trees, including six English field maples and two 20-foot-tall hornbeams.

The maples stand for humility and reserve and were used to make medieval loving cups. The hornbeams signify resilience.

The trees, greenery and floral arrangements were replanted or donated after the wedding.

FACT: One arborist suggests that every city should have a plan to create a "maximally functional" canopy. For example, planners should raise precise questions: How many megawatt hours of air conditioning can be saved? How many pounds of nitrogen dioxide can be absorbed?

Bernheim Stays True to Nature

By Judith Egerton

A peaceful paradise grows amid bourbon country, a mere 30 minutes from downtown Louisville and a short jog from the rushing traffic of I-65.

The 14,000-acre Bernheim Arboretum and Research Forest, established in 1929 by whiskey distiller Isaac W. Bernheim, was founded to strengthen the bond between people and nature.

The German immigrant and former peddler, who died in 1945, would be proud of the Clermont, land he donated to Kentucky and the work of the Bernheim staff devoted to carrying out his mission. Every day at Bernheim involves preserving nature's beauty and connecting humans to that world.

Bernheim's programs and ecological efforts are nationally recognized. Among its awards is a 2007 platinum Leadership in Energy and Environmental Design (LEED) Green Building Certificate for the forest's attractive, energy-efficient visitor's center. It was the first building in a multi-state region to receive the designation from the U.S. Green Building Council. The platinum level is the highest ranking given for green buildings, based on environmental factors such as sustainability, water and energy efficiency.

The building, which is constructed mainly from recycled materials and cypress wood from old pickle vats, features active and passive solar design, as well as geothermal heating and cooling. Water harvested from the rooftop garden is collected in an underground cistern and then used to provide water for the visitor center toilets.

Designed with the idea of "a building like a tree," the structure takes advantage of evergreens to the north, which protect the building in winter and shade it in summer, and deciduous trees to the south, which offer a leafy canopy in summer and sunshine in winter after dropping their leaves.

THE UNITED NATIONS DECLARED 2011

The International Year of the Forests

FACT: The American Lung Association's *State of the Air 2011* report gave Louisville a D for particulate pollution (24 hour readings) which ranked 22nd worst among American cities.

At Bernheim, trees have fervent advocates. Foremost among them is Dena Rae Garvue, director of horticulture.

"I believe trees have a spirit," said Garvue, whose love of nature grew from a childhood spent exploring the outdoors.

She wants all children to feel an abiding connection to nature. "Trees make one feel contemplative," she said, adding that trees "tell the history of our spaces" and make communities healthier and happier.

They "purify the air and stabilize the soil. They shade our homes and provide a habitat for wildlife," she said. They serve as wind buffers and sound screens. They reduce energy costs and increase property values.

To help cities and individuals choose the best trees to plant, Bernheim created a program called Bernheim Select that provides a list of native and under-used trees for urban landscapes with information about their size, color, hardiness and other factors.

If space allows, Garvue often recommends trees such as the Kentucky yellowwood for its fragrant blooms and graceful vase-like form, the shagbark hickory with its edible nut; the fast-growing, "aristocratic" tulip tree, which is Kentucky's state tree, and the intoxicating fringetree. For more guidance on selecting a tree, see the article on Selection and Planting of Urban Trees.

Visitors can see samples of these trees and hundreds of others at Bernheim, where it is impossible to spend time without falling in love with the forest. Stroll out for a breathtaking, panaromic view from Bernheim's 75-foot high canopy walkway or sit a spell beneath the arboretum's majestic 120-year-old American Elm and inhale deeply.

As Dena Rae Garvue said, "What an incredible service these trees do for us!"

For more information about Bernheim and recommended trees, go to www.bernheim.org.

Judith Egerton is a writer and editor in Louisville.

The best time to plant a tree was 20 years ago; the next best time is today.

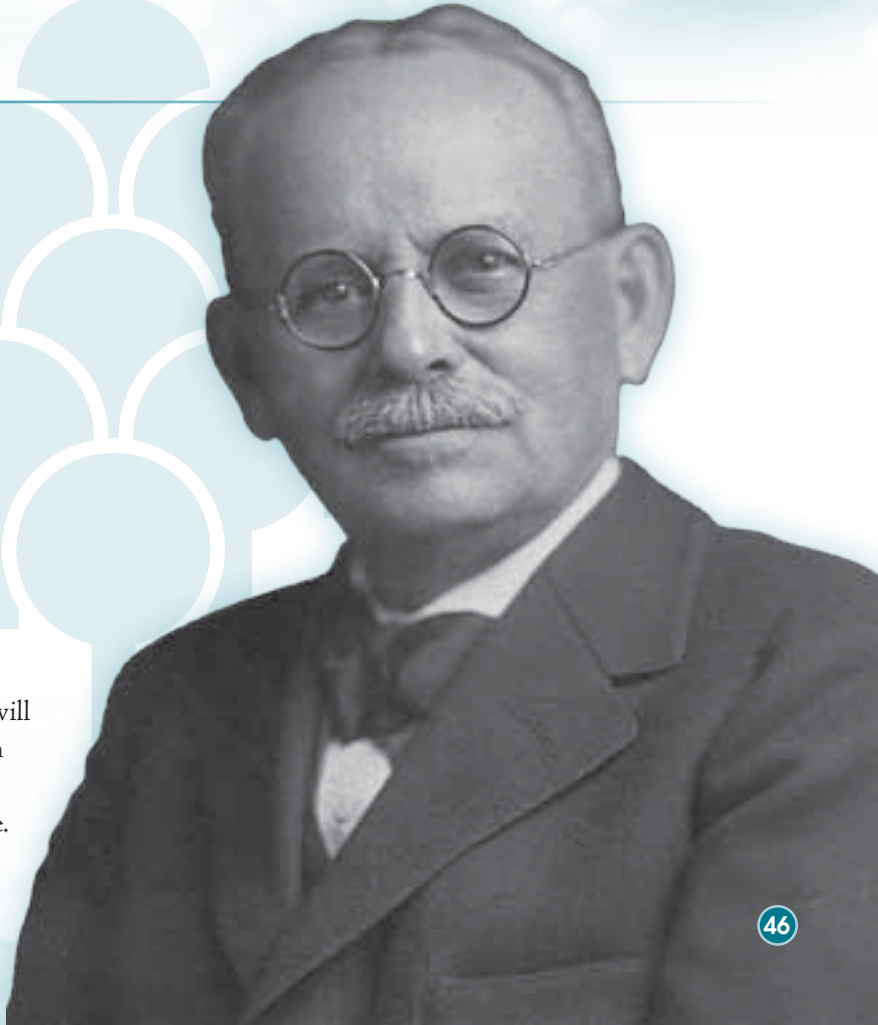
— Theodore Roosevelt

FACT: Planting trees is more than a kumbaya project. In New York City, the net benefit from its street trees amounted to about $100 million in 2006. Where do these benefits come from? Trees remove air pollutants, reduce stormwater runoff and have measurable aesthetic value, such as increasing property value, reducing human stress, and improving public health. Convinced of these benefits, Mayor Bloomberg quadrupled the city's forestry budget in 2008 to $31 million, with a goal of planting one million trees by 2018.

In Grateful Remembrance

Isaac W. Bernheim (1848–1945)

During this 16th annual Festival of Faiths, celebrating the theme of *Sacred Air: Breath of Life*, it is fitting that we recall with grateful appreciation the memory of Isaac W. Bernheim, entrepreneur, philanthropist and founder of Bernheim Arboretum and Research Forest. In the 1920s, Bernheim purchased 14,000 acres of damaged land in Bullitt and Nelson Counties and converted this land into a home for a world-renowned collection of trees, birds, wildlife, and flowers, made accessible through miles of picturesque trails. To accomplish this in a way that fortuitously combines art and nature, he commissioned the Olmsted firm to create the design for what was to become the arboretum and research forest. Since it opened to the public in 1950, Bernheim Arboretum and Research Forest has delighted and inspired hundreds of thousands of nature lovers. This year's Festival will conclude with the planting of trees in Louisville, the common action undertaken by the diverse religious community to help safeguard the quality of the sacred air that we all breathe. All of us do so in the happy memory of Isaac Bernheim, our inspiration and our esteemed benefactor.



Connecting with Your Breath

By Jody Zimmerman

Taking a breath is the first thing you do when you are born, and it is the last thing you do before you die. We need food and water to survive, but we need to breathe more than anything else. The body can survive days without water and weeks without food, but only a few minutes without the breath.

We tend to forget about the breath, especially as we mature and get caught up in everyday living and routines. When was the last time you enjoyed taking a deep, rejuvenating breath, letting your lungs expand completely, all the way down to the lowest lobes?

The following five breathing techniques offer simple ways for you to connect with your breath. Returning to your breath grounds you and connects you with your inner self and with the universe.

The brain is smart. It learns, remembers, and is influenced by a multitude of internal and external forces. The brain is the control center of your body: So long as you are getting enough oxygen for normal body functions, it will not ask you to breathe deeper, using the full capacity of your lungs. The following breathing techniques require you to put the brain in the background, slowing or silencing the chatter of the mind so that you focus only on the breath. Listening to your breath is the basis of most meditation practices.

Taking a few minutes each day to connect with your breath will create positive changes in your life, make you healthier, and give you a richer perspective of your world and the universe.

Technique 1 - Deep-Breathing 7's

a) Sit up straight in a chair—no slouching or unnatural curving in your spine.

b) Close your eyes and rest your hands on your thighs or knees.

c) Relax your shoulders and hips, visualize any tension in your body draining down your body out through the bottoms of your feet into the floor or ground.

d) Relax your jaw, but keep your lips closed, exhale completely though your nose.

e) Inhale through your nose to your own personal count of 7, breathing from the bottom of the lungs up. Put your hand right below your sternum. You should be able to feel your ribs expanding as your breathe in. Relax the back of the throat and let it open as you breath in.

f) Exhale slowly through your nose to your own personal count of 7.

g) Focus on the sound and rhythm of your breath with your eyes closed. Try not to let your mind wander; keep retuning to the breath. Repeat at your own pace for 7 minutes.

h) I recommend setting a kitchen timer. When the time is up, slowly open your eyes, smile, and thank yourself for taking the time to do this breathing technique.

Technique 2 – Deep-Breathing 7's with Pauses

This technique is performed exactly as above, except that you pause for 7 counts between each inhale and exhale. If this is a challenge at first, just pause for a count of 2 or 3 and build up as you relax and gain more confidence experiencing a 'breathless' state.

This technique helps your brain move from the beta state (fully awake and alert) into the alpha state (relaxed, more right brain activity) that is a key requirement to reach meditative states.

Technique 3 – Alternate Nostril Breathing

a) Get comfortable in a chair, sitting up straight or sit on the floor with your legs crossed, or in lotus position.

b) Close your eyes, breathing in and out through your nose, focusing on the breath. Take normal, relaxing breaths.

c) Use your right thumb to close off your right nostril as you breathe in through your left nostril.

d) When you have breathed in a full, deep breath, immediately release your right nostril and close off your left nostril with your right index finger and exhale completely through the right nostril.

e) Once you have exhaled completely through the right nostril, inhale deeply through the right nostril, with the left nostril still shut using your right index finger.

f) Once you have inhaled completely use your right thumb to shut off the right nostril, release the right index finger from the left nostril, and exhale completely through the left nostril.

g) Inhale through the left nostril and repeat the cycles.

The alternate sequence can sometimes at first be confusing. Relax and start with three minutes. Before long you'll be able to do five to ten minutes easily.

Technique 4 – Favorite Place Breathing

Almost everyone has a special place, a place that warms your heart, makes you smile when you think about it, a place where you feel safe, secure, and special, and a place where you long to go.

a) Get comfortable in a chair, sitting up straight or sit on the floor with your legs crossed, or in lotus position.

b) Close your eyes, breathing in and out through your nose, focusing on the breath. Take normal, relaxing breaths.

c) As you breathe normally, let your mind visualize your favorite place: focus on the sights, the sounds, the smells, the feeling of the place you know and love so well.

d) As your mind carries you to your favorite place, relax your body and begin to slow and lengthen your inhales and exhales. Continue to breathe in and out through the nose with the lips shut, the jaw relaxed.

e) After three to five minutes of deep breathing focusing on your favorite place, allow your mind to focus more on the breath and less on the favorite place.

f) Continue in this manner for ten to twenty minutes.

g) You will probably be in a fairly deep meditative state by the end of this exercise. To come out of it, begin to wiggle your toes and fingers as you slowly open your eyes. Smile, knowing you can be instantly transported to your favorite place through the mind and the breath.

Jody Zimmerman is a Registered Yoga Teacher, RYT®.

The Beauty and Strength of Co-Existence

By Lisa Miller

The wisdom traditions of our world teach us that we are co-creators of the present and future. We human beings are responsible for the attitudes, decisions, and actions — the energy — we bring into a space, a family, a community, and into the world as a whole.

We see this truth from the point of view of the Dog Soldiers of the Native tribes, the wise men and women tasked to consider how their community's decisions will affect their children and grandchildren. And through the study of soul traits along the Jewish spiritual path of Mussar, we learn that humility ("anavah" in Hebrew) is as much about standing up for social justice as it is about being humble. We see this truth from the tradition of Yoga in the law of giving and receiving, Om Vardhanam Namah — I am the nourisher of the universe.

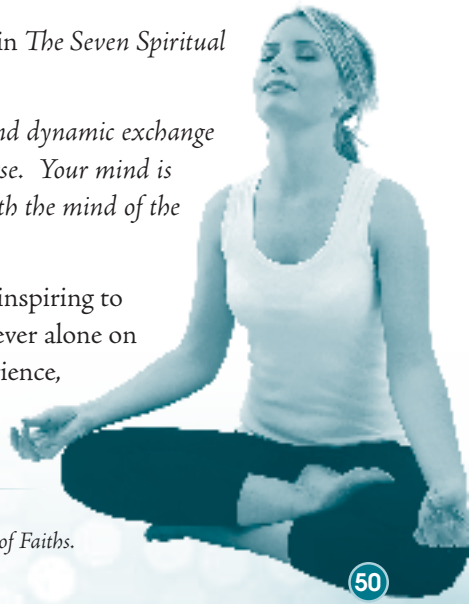
With the theme of *Sacred Air* comes a profound opportunity to realize the responsibility and beauty we enjoy as human beings. Just as we can't help but breathe, neither can we ignore the fact that our very existence co-creates reality on this planet.

We are co-creating all the time by our very existence. Like the air that permeates the vast expanse of planet Earth, we as individuals are intricately woven into the fabric of all of life. Symbolically, this is fantastic to feel and think about while, literally, our exhales provide nourishment for the trees.

As Deepak Chopra said in *The Seven Spiritual Laws of Yoga*,

> *Your body is in constant and dynamic exchange with the body of the universe. Your mind is dynamically interacting with the mind of the cosmos.*

It is both reassuring and inspiring to realize that not only are we never alone on these paths through life experience, we are also powerful beyond measure.



Lisa Miller is chair of the Yoga and Meditation Committee of the Festival of Faiths.

AIR

Resources

You must be the change you want to see in the world.

— Mahatma Gandhi

We do not inherit the earth from our ancestors, we borrow it from our children..

— Native American Proverb

Air: The Search for One Clean Breath

Discussion Questions for the Film

1. *Air: The Search for One Clean Breath* traces the history of air. For the past 200 years, much of air's history has been an account of rising pollution, caused mainly by industrialization. Will eliminating pollution mean giving up the comforts and benefits derived from industrialization?
2. What is your reaction to seeing the fragility of our atmosphere, which barely covers Earth's surface? Is it possible that it has been damaged beyond repair? What would Earth be like without an atmosphere?
3. How would you feel about living in a community like the eco-village of BedZED in the United Kingdom? What aspects of that lifestyle would you like to recreate in your own community and why?
4. The village of BedZED and the environmental practices observed in Norway suggest that the people living in these places have created new values and lifestyles. How difficult is it to embrace new values and habits? What specific values would you have to re-examine and revise in order to reduce your carbon footprint? What would you change and what new habits would you adopt? Will that be difficult? Do you think you have a moral obligation to reduce your carbon footprint? Why or why not?
5. How does this documentary present ideas related to air pollution and environmental justice? Do you think poor people are more or less likely to suffer from air pollution than wealthier people? Why? What are the challenges to environmental justice that you see in your community?
6. The history of air seems to be recorded in the ice core of the South Pole, dating back a million years. What does the ice core teach us about global climate change? Is there a chance that the ice core could melt, undoing the work of over a million years?
7. In your judgment, what are the most promising clean-air technologies developed so far? Are they capable of assuring cleaner air for all people, no matter where they live?

This DVD was produced by the 2008 Ventura County Air Pollution Control District. It has been made available to the Festival of Faiths free of charge, with the provision that no charges be imposed for screenings or distribution. We are pleased to be able to include a complimentary copy of the DVD in the 2011 Tool Kits. Those using the DVD are bound by the same provision.

Books by Festival of Faiths Participants

- Grim, John *The Shaman: Patterns of Religious Healing Among the Ojibway Indians*
- Logan, William Bryant
  - *Dirt: The Ecstatic Skin of the Earth*
  - *Oak: The Frame of Civilization*
- McKibben, Bill
  - *The End of Nature*
  - *The Age of Missing Information*
  - *Hope, Human and Wild: True Stories of Living Lightly on the Earth*
  - *Maybe One: A Personal and Environmental Argument for Single Child Families*
  - *Hundred Dollar Holiday*
  - *Long Distance: Testing the Limits of Body and Spirit in a Year of Living Strenuously*
  - *Enough: Staying Human in an Engineered Age*
  - *Wandering Home*
  - *The Comforting Whirlwind : God, Job, and the Scale of Creation*
  - *Deep Economy: The Wealth of Communities and the Durable Future*
  - *Fight Global Warming Now: The Handbook for Taking Action in Your Community*
  - *The Bill McKibben Reader: Pieces from an Active Life (2008)*
  - *American Earth: Environmental Writing Since Thoreau*
  - *Earth: Making a Life on a Tough New Planet*
  - *The Global Warming Reader*
- Tucker, Mary Evelyn
  - *Worldly Wonder: Religions Enter Their Ecological Phase*
  - *Moral and Spiritual Cultivation in Japanese Neo-Confucianism*
  - *The Philosophy of Qi*
  - *Worldviews and Ecology*
  - *Buddhism and Ecology*
  - *Confucianism and Ecology*

- *Hinduism and Ecology*
- *When Worlds Converge*

- Tucker, Mary Evelyn with Tu Weiming *Confucian Spirituality*
- Tucker, Mary Evelyn (co-editor with John Grim) *Religion and Ecology: Can the Climate Change?*

Other Books on Air-Related Issues

- Berry, Thomas *Dream of the Earth*
- Berry, Thomas, Edited by Mary Evelyn Tucker *Evening Thoughts: Reflecting on Earth as Sacred Community.*
- Barry, Thomas Edited and with a foreword by Mary Evelyn Tucker *The Sacred Universe: Earth, Spirituality, and Religion in the 21st Century*
- Barry, Thomas Edited by Mary Evelyn Tucker and John Grim *The Christian Future and the Fate of Earth*
- Bingham, Rev. Sally G. *Love God Heal Earth*
- Bridges, William *Breath and Other Ventures*
- Brockman, C. Frank *Trees of North America*
- Buhner, Stephen Harrod *One Spirit, Many Peoples: A Manifesto for Earth Spirituality*
- Fijalkowski, Dennis and Mary Steele Energy *Savings for the Novice*
- Freese, Barbara *Coal: A Human History*
- Gatta, John *Making Nature Sacred: Literature, Religion, and Environment in America from the Puritans to the Present*
- Godish, Thad *Air Quality*
- The Green Bible, edited by Harper One with a forward by Rev. Desmond Tutu
- Hansen, James *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*
- Hayhoe, Katharine and Farley, Andrew *A Climate for Change: Global Warming Facts for Faith-Based Decisions*
- Horan, Richard *Seeds*
- Low, Alaine M. *Woman as Sacred Custodians of the Earth: Women, Spirituality and the Environment*
- Maathai, Wangari *Replenishing the Earth: Spiritual Values for Healing Ourselves and the World*
- Prince Charles *Harmony: A New Way of Looking at Our World*

- Ross Benjamin and Amter, Steven *The Polluters: The Making of Our Chemically Altered Environment*
- Sierra Club *Faith in Action: Communities of Faith Bring Hope for the Planet*
- Silver, Jerry *Global Warming and Climate Change Demystified*
- University of Kentucky College of Agriculture Kentucky *Forest Trees, How to Know Them*

Books for Children on Air-Related Topics

- Armentrout, Patricia *The Ozone Layer*
- Auerbach Central Agency for Jewish Education *Traditional Tree Tales*
- Bouler, Olivia *Olivia's Birds: Saving the Gulf*
- Kahl, Jonathan D. *Hazy Skies: Weather and the Environment*
- Barber, Nicola *Pollution*
- Matasuda, Ethan Khiem and Matasude, Michael *The North Pole is Sinking! A Tale about Global Warming*
- Patten, J.M *Acid Rain*
- Miller, Christina G. *Air Alert: Rescuing the Earth's Atmosphere*
- Bunting, Eve *Someday A Tree*
- Yount, Lisa *Air*
- Patten, J.M. *Polluted Air*
- American Education Publications *Exploring the Environment: Wetlands/Forests/Natural Energy/Air Pollution*
- Cast, C. Vance *Where Does Pollution Come From*
- Patchett, Lynne *Clean Air, Dirty Air*
- Kallen, Stuart A *If the Sky Could Talk*
- Wheeler, Jill *For the Birds!: A Book About Air*
- Nielsen, Shelly *Love Earth: The Beauty Makeover*
- Costa-Pau, Rosa *Keeping the Air Clean*
- Ravage, Barbara Rachel Carson: *Protecting Our Environment*
- Charman, Andrew *First Starts: Air*
- Madgwick, Wendy *Science Starters: Up in the Air*
- Ardley, Neil *The Science Book of Air*
- Donald, Rhonda Lucas *Air Pollution*
- Branley, Franklyn M. *Air is All Around You*
- Dorros, Arthur *Free the Wind*

Books by Kentucky Authors on Air-Related Topics:

- Berry, Wendell
  - *A Continuous Harmony: Essays Cultural & Agricultural*
  - *Meeting the Expectations of the Land: Essays in Sustainable Agriculture and Stewardship*
  - *Home Economics: Fourteen Essays*
  - *What Are People For?*
  - *Standing on Earth, (Selected Essays)*
  - *Sex, Economy, Freedom & Community*
  - *Life Is a Miracle*
  - *In the Presence of Fear: Three Essays for a Changed World*
  - *The Art of the Commonplace: The Agrarian Essays of Wendell Berry*
- Carreiro, Margaret M., Yong-Chang Song and Jianguo Wu *Ecology Planning and Management of Urban Forests: International Perspective*
- Caudill, Harry
  - *Night Comes to the Cumberlands: A Biography of a Depressed Area.*
  - *The Watches of the Night*
  - *A Darkness at Dawn: Appalachian Kentucky and the Future*
- Kingsolver, Barbara
  - *Another America*
  - *Prodigal Summer*
  - *Small Wonder: Essays*
  - *Last Stand: America's Virgin Lands*
  - *Animal, Vegetable, Miracle*
  - *The Lacuna*
- Kramer, Karl *A Time to Plant: Life Lessons in Work, Prayer, and Dirt*
- House, Silas
  - *Clay's Quilt*
  - *A Parchment of Leaves*
  - *The Coal Tattoo*
  - *The Hurting Part*
  - *Something's Rising co-authored with Jason Howard*
  - *Eli the Good*

Films on Air-Related Topics

- *Harmony: A New Way of Looking at Our World*
- *An Inconvenient Truth*
- *11th Hour*
- *2012*
- *Camfil Farr Indoor Air Quality Movie*
  http://www.youtube.com/watch?v=1jPDJ_tXuWs
- *Indoor Air Pollution: The Silent Killer*
  http://www.youtube.com/watch?v=gciSp5X40t0&feature=related
- *The Day After Tomorrow*

Magazines on Air-Related Topics

- http://www.environmentmagazine.org
- http://discovermagazine.com
- http://www.nrdc.org/
- http://www.conservation.org
- http://www.sciencemag.org/

Thank God men cannot fly, and lay waste the sky as well as the earth.

— Henry David Thoreau, American writer and philosopher

Air-related websites

- Green Belt Movement and its founder, 2004 Nobel Peace Prize winner Wangari Maathai: Greenbeltmovement.org
- Union of Concerned Scientists: www.ucsusa.org.
- Physorg.com: www.physorg.com/news/2011-06-climate-cities-wake-up-global-policymakers.html
- Pew Center on Global Climate change: www.pewclimate.org/global-warming-basics/climate_change_101
- Environmental Defense Fund: www.edf.org/home.cfm
- National Climate Data Center: www.ncdc.noaa.gov/sotc/global/
- Kentucky Interfaith Power and Light: www.kentuckyipl.org/
- University Center for Environmental Protection and Management: www.cepm.louisville.edu/
- Global Warming Awareness: www.globalgwa.org/tag/agricultural-scientists
- American Lung Assn report: www..stateoftheair.org/2010/city-rankings/
- Green Prophet: www.greenprophet.com
- GreenFaith Interfaith Partners for the Environment: www.greenfaith.org/
- Kentucky Environmental Education Council: www.keec.ky.gov/

Curriculum

- From Interfaith Power and Light: http://interfaithpowerandlight.org/resources/books
- *Your Will Be Done on Earth: Eco-Spiritual Activities for 12-15 Year-Olds*, by Christie L. Jenkins
- *Caring for God's World: Creative Ecology Ideas For Your Church*, edited by Kristin Kemper
- *Operation Creation*, by Barb Holtz with Jody Gunn and David Radcliff
- *Keepers of the Earth: Native American Stories and Environmental Activities for Children*, by Michael Caduto and Joseph Bruchac,
- *Let's Explore God's World*, by Debby Anderson
- *Wicked Cool Sustainable Solutions for the Earth Coloring Book*, by Becky Johnson,
- Marian Koshland Science Museum of the National Academy of Science:
  - http://www.koshland-science-museum.org/teachers/index.jsp
  - http://www.koshland-science-museum.org/exhibitgcc/
- BrainPOP:
  - http://www.brainpop.com/science/ourfragileenvironment/airpollution/preview.weml
- Jefferson County Public Schools:
  - http://www.jefferson.k12.ky.us/departments/environmentaled/images/otherart/EnvEdElemCurrMap.pdf
- Blackacre Nature Preserve:
  - http://www.jefferson.k12.ky.us/departments/environmentaled/undrstndblackacre/ubplanfldstdy.html
- Bernheim Forest: http://www.bernheim.org/ecoKids.html
- Clean Air Partners:
  - http://www.cleanairpartners.net/onTheAir.cfm
- EPA:
  - http://www.nature.nps.gov/air/edu/docs/Curriculum_Info_Guide.pdf
- National Institute of Environmental Health Sciences:
  - http://www.niehs.nih.gov/health/scied/integrated/index.cfm
- Kentucky Air Education (KAIRE):
  - http://www.helptheair.org/content/view/5/7/

Songs About Our Air

Clear blue skies—not too much to ask for;
They were here before we came;
Will they be here when we're gone?

—Crosby, Stills, Nash and Young

We've strangled all her trees and starved her creatures;
There's poison in the sea and in the air;
But worst of all, we've learned to live without her;
We've lost the very meaning of our lives . . .
And now she's gonna die!

Once she ruled the earth with love and wisdom;
But we were much too smart to live her way;
With greed and lust we tried to rise above her;
The ignorance of man will reach an end…
'Cause now we're gonna die!

—*Kansas*

They took all the trees/Put 'em in a tree museum/And they charged the people/A dollar and a half just to see 'em.

—*Joni Mitchell*

Woh-oh.... Mercy, mercy me;
Things ain't what they used to be, no no;
Where did all the blue skies go?
Poison is the wind that blows
From the north and south and east.

—*Marvin Gaye*

Broken cutters, broken saws
Broken buckles, broken laws
Broken bodies, broken bones
Broken voices on broken phones
Take a deep breath, feel like you're chokin'
Everything is broken.

—*Bob Dylan*

For a list of songs about the environment by artists ranging from Alabama to Warren Zevon, go to the International Society for Environmental Ethics at www.isethics.org/song-music.

You can also find songs about air and ecology at www.grinningplanet.com and Youtube.com.

Contributors

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Religious communities are, without question, the largest and best organized civil institutions in the world today, claiming the allegiance of billions of believers and bridging the divides of race, class, and nationality. They are uniquely equipped to meet the challenges of our time; resolving conflicts, caring for the earth, the sick and needy, and promoting peaceful co-existence among all people.

— Religions for Peace