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United Nations Environment Programme



Founded in 1972, the United Nations Environment Programme (UNEP) is the one international organization that has been given authority to monitor and control the global environment, responding to the problems that transcend national boundaries. It is the world leader in dissemination of global environmental information. Within the United Nations, UNEP oversees the environmental work being done by all other agencies to ensure that an ecological perspective is incorporated in development projects supported by the U.N.

A dramatic demonstration of UNEP's leadership is evidenced in its roll in convening and organizing the Montreal Protocol and subsequent meetings on ozone depletion. This landmark international agreement safeguards the earth's ozone layer by significantly reducing the production of chlorofluorocarbons, with the intention of soon eliminating them entirely. UNEP has also been responsible for a recent international agreement to control hazardous waste export. These agreements are examples of the successes achievable through a global response to an international hazard.

One of the most valuable services UNEP provides is its Global Environmental Monitoring System (GEMS) which compiles research from around the world and reports on environmental problems, offering an early warning system to alert governments to immediate and potential dangers. Each year the most serious problems are highlighted in a *State of the Environment* report. UNEP also has programs for the development of new and renewable sources of energy, environmental education problems and needed measures, and a computer network, called INFOTERRA, linking 119 countries, with accurate information on a range of topics related to environmentally sound development.

The annual *State of the Environment* report and other publications on international environmental issues are available through:

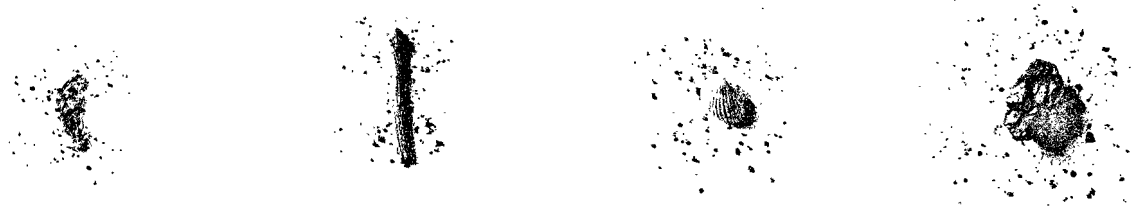
United Nations Environmental Programme
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UNITED NATIONS
ENVIRONMENTAL SABBATH • EARTH REST DAY, JUNE 1-3, 1990



ELEMENTS OF AN EMERGING PLANETARY AGENDA



**Protect the atmosphere by combatting climate change
and global warming, ozone layer depletion
and transboundary air pollution.**

Protect the quality of fresh water sources.

Protect ocean and coastal area resources.

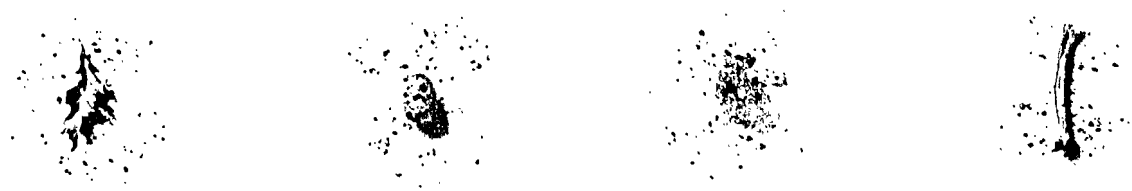
Protect land resources by combatting deforestation and desertification.

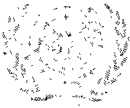
Conserve biological diversity.

Manage biotechnology in an environmentally sound way.

**Manage hazardous wastes and toxic chemicals
in an environmentally sound manner.**

**Protect human health and the quality of life,
especially the living and working environment of poor people,
from environmental degradation.**





UNITED NATIONS ENVIRONMENT PROGRAMME
PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT



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28 March, 1990

Dear Religious and Spiritual Leader,

Once again, the United Nations Environment Programme (UNEP) is pleased to invite you to join us in celebrating the "**Environmental Sabbath/Earth Rest Day**" in your ceremonies, rituals and prayers.

Although the Sabbath is not limited to a single date, we believe the weekend of 1st to 3rd June would be appropriate as this would be in keeping with the spirit of World Environment Day, 5th June, observed by the United Nations each year.

The need for establishing a new spiritual and ethical basis for human activities on Earth has never been greater - as the deterioration of our Planetary Home makes the protection of the human environment a new global imperative.

In his address to the world's scientists, politicians and spiritual leaders at the Global Forum last January, the Secretary-General of the United Nations was to dramatise the urgency of our situation when he called for fundamental changes in societal attitudes. In his words, "For that change, we need to draw, not only upon the intellectual, but also the spiritual resources of the world community". He was also to call for a new loyalty, "an earth patriotism as strong as any national patriotism to relieve the distress of our ailing and exhausted Planet".

Clearly, this is a vital and auspicious moment for Humanity to reassert our compassion, care and respect for our Earth. Thanks to the perspective provided from space, we are now able to conceive the Planet as a whole - and ourselves as a global species, with a shared inheritance and a common responsibility. We need now, however, to infuse that vision with a genuine sense of affection, optimism and hope, and to this end, we invite our religious and spiritual leaders to join us in this quest, regardless of the community we represent.

In this connection, we invite you to inspire anew our shared responsibility to care for the soil, water and air which sustain life, and the many living creatures which manifest life in all its variety and glory, as you speak about our mutual home - our Earth.

To this end, UNEP dedicates this resource publication to the Environmental Sabbath/Earth Rest Day.

Yours in the service of the Earth,

Noel J. Brown
Director

In rich and poor worlds alike, there has been a groundswell in ecological grassroots activities. Public concern is pushing governments and industry to place the environment at the top of their agenda.

DR. MOSTAFA K. TOLBA
Executive Director
United Nations Environment Programme

The best remedy for those who are afraid, lonely, or unhappy is to go outside, somewhere where they can be quite alone with the heavens, nature, and God. Because only then does one feel that all is as it should be and that God wishes to see people happy, amidst the simple beauty of nature. As long as this exists, and it certainly always will, I know that then there will always be comfort for every sorrow, whatever the circumstances may be. And I firmly believe that nature brings solace in all troubles.

- from Anne Frank's diary

PROTECTION OF THE ATMOSPHERE

By Combating Climate Change , Global Warming , Depletion of the Ozone Layer & Transboundary Air Pollution

Protection of the Earth's atmosphere — our only atmosphere — is a topic of utmost importance on the new planetary agenda of the United Nations Environment Programme. The Worldwatch Institute's *State of the World* 1989 Report ominously asserts that for the first time in history, mankind's activities are altering the atmosphere itself, heightening the effect of "greenhouse gasses" that are warming the Earth and destroying the ozone shield that protects us from ultraviolet radiation.

The year 1988 with all its frightening weather disasters may have marked a turning point in the public's perception of the state of the world, the Institute notes. The deadly heat waves in China that killed hundreds of people, the heat and drought in North America that plummeted crop yields below domestic consumption for the first time, floods in Bangladesh, and terrifying reports from NASA that ozone depletion was no longer confined to the poles — the ozone layer was beginning to thin globally — all these events engendered a new concern for man's relationship to the Earth's natural systems.

In their first issue of 1989, the editors of *Time* magazine designated *The Endangered Earth* as the *Planet of the Year* in acknowledgement of what everyone suddenly grasped — that "this gyrating globe — this precious repository of all the life that we know of" is gravely threatened.

The year 1989 produced its own weather disasters — devastating hurricanes among them.



EARTH FACTS

About Global Warming and Climate Change:

- Humanity added 5.5 billion tons of carbon to the atmosphere in 1988 through fossil fuel combustion and another 2.5 billion tons through deforestation.
- We have increased the amount of CO₂ in the air by about 25% in the last century and will almost certainly double it in the next; we have more than doubled the level of methane.
- A 1988 NASA study of the global temperature records spanning the last century shows a gradual longterm warming consistent with models of the greenhouse effect. The five warmest years have all fallen in this decade.
- Between the years 2030 and 2050, average temperatures could be 1.5-4.5 Celsius (3-8 Fahrenheit) higher than they have been in recent decades, or warmer than the earth has been for the past 2 million years — a warming 5 to 10 times as fast as that experienced during the past century.
- A temperature rise of 3 Celsius could result in a sea level rise of up to two meters by the end of the next century, flooding coastal settlements and islands.
- We are losing rain forests at the rate of one football field a second.
- Reforesting 130 million hectares would cut the release of carbon from all human activities by 8 to 11 percent.

About Ozone Depletion:

- Chlorofluorocarbons are building up in the stratosphere at unprecedented rates. There are now some 35 million tons of such gases, growing at a rate of 1 million tons a year with an atmospheric lifetime of 100 years.
- Each atom of chlorine liberated from a CFC can break up as many as 100,000 molecules of ozone.
- More than 150 million more people will get skin cancer in the U.S. alone over the next 80 years if nothing is done to save the ozone layer.

About Transboundary Air Pollution:

- The acidity of precipitation has quadrupled in the Northeast United States since 1900, paralleling increased emissions of SO₂ and NO_x gases.
- In Canada some 20,000 lakes have been impaired by acid rain.
- Growing evidence indicates that air-borne pollution from the industrial world is now threatening the health of the Inuit peoples living in the Arctic region.
- Radioactive fallout from the Chernobyl nuclear reactor explosion made vegetable and meat unfit for consumption in parts of Europe and has saturated the lichen tundras of the far north.

PROTECTING THE QUALITY OF OUR FRESHWATER RESOURCES

Freshwater resources currently available for human consumption appears to be adequate to meet the needs of present and future generations. With this stated, it should also be noted that the supply of freshwater is very unevenly distributed, seldom in the right place at the right time or in the right quantities, or of the right quality. Of critical importance is the fact that we are polluting our freshwater supply at a much faster rate than we are conserving it.

According to water expert J. W. Maurits la Riviere, currently Secretary-General of the International Council of Scientific Unions, given the fact that water is the precious resource upon which terrestrial life depends for sustenance, one might suppose "that human beings would be respectful of water; that they would seek to maintain its natural reservoirs and safeguard its purity." Yet owing to population growth, ignorance, poverty, poor agricultural practices and industrial pollution, freshwater resources are severely endangered.



EARTH FACTS

About Water Availability:

- The total volume of water on Earth is about 1,400 million cubic kilometers. More than 97% is sea water. Of the 3% that is fresh water, less than 1% is surface water available for human use. Of the rest, some is groundwater but most is locked away in snow and ice.
- Water is unevenly distributed. The Congo-Zaire basin, for example has less than 10% of Africa's population but more than 50% of its water.
- Averaged globally, 73% of fresh water withdrawn from the earth goes for agriculture (irrigation), 21% is used by industry, and 6% for domestic consumption.
- The average resident of the United States consumes more than 70 times as much water every year as the average resident of Ghana.
- Often more than 70% of the water used for irrigations never reaches the crops.

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About Water Quality:

- Nearly 2 billion people have inadequate drinking water, and 3 billion lack proper sanitation.
- Water-borne diseases cause an average of 25,000 deaths a day in the Third World. Four out of every five common diseases are caused by dirty water or lack of sanitation.
- The water-borne diseases spawned by human wastes cause 80% of all child deaths in the Third World.
- Around 10% of all rivers may be described as heavily polluted.
- The Ganges River — India's hold river — is probably the most polluted river of its size due to high population density along its banks and in the catchment basin.
- Thanks to chlorination of public water supplies, pathogens in the rivers of developed nations are no longer a threat to health as they are in developing nations. But fresh water in industrialized nations is contaminated by industrial and agricultural pollutants.
- To date, more than 700 chemicals have been detected in United States drinking water, 129 of which the Environmental Protection Agency calls dangerous, including industrial solvents, metals and radioactive substances.
- In Europe there is great concern over high levels of nitrate in the drinking water due to run-off contaminated by agricultural fertilizers. Nitrate is harmful to young children at excessive levels.
- Acidification of lakes is harming aquatic ecosystems. Damage starts at pH less than 6.5; all normal life is gone at pH less than 5.
- Underground water reserves (groundwater) in the United States, which provide 60% of the population with drinking water, have become contaminated by seepage from underground chemical storage tanks and landfills.

PROTECTION OF OCEAN AND COASTAL AREAS AND RESOURCES

The health of the world's oceans, sea and coastal areas is vital to the Earth's well-being. The oceans, which some have called the *lungs of the planet*, cover 70% of the Earth's surface and are crucial to the global water cycle. As for our coastal areas, more than two-thirds of the world's population live within 80 km of a coast, and nearly half of the world's major cities are built on or near an estuary. The coastal zone has the highest biological productivity: some 90% of the marine fish harvest is caught within 320 km of the coast and coastal aquaculture is an increasingly important food source. Coral reefs, mangrove forests and coastal wetlands act as natural barriers against powerful waves and provide essential habitats for many important marine species. Last but not least, millions of tourists flock to beaches for recreation.

Yet since the oceans are considered to be global "commons" — the property of all but the responsibility of none — they are very difficult to protect. About 20 billion tons of waste end up in the sea each year. Coastal waters have been rendered unsafe for swimming, seafood contaminated, beautiful beaches fouled by garbage, coastal habitats destroyed and populations of marine mammals, fish and shellfish endangered. Coastal settlements everywhere are threatened by the predicted sea-level rise which will result from global warming.

About four-fifths of the pollution that enters the oceans comes from the land — mainly in the form of sewage, industrial waste and agricultural run-off. The other one-fifth comes from coastal mining, energy production and ocean-going vessels, in the form of oil or heavy metals. Almost 90% of these contaminants never reach deep water, but have a serious impact on coastal areas. All these effects are worse in semi-enclosed seas such as the Baltic, the North Sea, the Mediterranean and the Gulf of Mexico, which have limited abilities for self-cleansing. For example, the average molecule of Mediterranean sea water tends to swirl around for 80 years before escaping through the Straits of Gibraltar.

Regional seas suffer more from pollution because they have more coastline per square kilometer than the high seas. Water expert J. W. Maurits la Riviere points out in the September issue of *Scientific American* on "Managing Planet Earth" that their poor condition may be a harbinger of what is to come for the world's large oceans.

The major threats to our seas are sewage, dumping of industrial wastes, oil pollution and the destruction of coastal ecosystems, according to the UN-sponsored Joint Group of Experts on the Scientific Aspects of Marine Pollution.



EARTH FACTS

- The oceans cover 70% of the Earth's surface and are crucial to the health of the planet.
- Most of the world's 20,000 known varieties of fish and 30,000 types of molluscs come from coastal waters — 90% of the worldwide fish catch is taken near the shore.
- The 240,000 square kilometers of coastal mangroves are essential habitats for many important marine species and provide timber and firewood.
- More than two-thirds of the world's population live within 80 km of a coast; nearly half of the world's major cities are built on or near an estuary.
- About 20 billion tons of wastes a year — much of it effluents from factories, homes and farms — ends up in the sea.
- Regional seas such as the Baltic and Mediterranean suffer more from pollution since there is more coastline per square kilometer. Their poor condition may portend what will happen to the larger oceans.
- About four-fifths of marine pollution comes from the land — sewage, industrial waste and agricultural run-off. The rest comes from coastal mining, energy production and ocean-going vessels, especially oil tankers.
- Sewage sludge has ruined many of the world's best shellfish beds. In 1987, 20,000 people from Shanghai suffered food poisoning from polluted clams.
- PCBs and other persistent toxic chemicals, including DDT and heavy-metal compounds, have already spread through the world's marine ecosystems through accumulation in the food chain. (la Riviere)
- Some five million tons a year of the world's total annual oil production, or more than one gram per 100 square meters of the ocean's surface, ends up in the ocean. (la Riviere)
- The *Exxon Valdez* oil spill in Alaska's Prince William Sound covered 7,800 square kilometers and contaminated 650 km of shoreline. More than 20,000 dead birds and 725 dead sea otters have been recovered.
- In East Asia so much mangrove forest has been turned over to ricefields that, although food supplies are increased, the region's natural barriers to disaster from cyclone-induced flooding have been impaired.
- The practice of drift gill-netting, called "wall-of-death" fishing, indiscriminately entangles, injure or kills thousands of creatures of both commercial and non-commercial species.
- A sea-level rise of one metre would threaten coastal areas where a quarter of the world's population — about a billion people — now live.

PROTECTION OF LAND RESOURCES

By Combating Deforestation And Desertification

Protection of our land resources is crucial to the welfare of mankind. Destruction of forests has triggered widespread flooding and loss of valuable topsoil, speeded the extinction of plant and animal species, and contributed to global warming. Meanwhile we are literally losing ground in the struggle to feed the hungry. World food production has dropped 14% since 1984 and is now at the level of 1970. The Worldwatch Institute attributes this dilemma to the pernicious effects of the 1988 drought, soil erosion, encroachment to the desert in Africa — to general scarcity of land and water. The relentless process of desertification is destroying our productive land. While the United Nations Environment Programme is coordinating efforts to battle threats to all terrestrial ecosystems — from microbial to mountaintop — the double-edged swords of deforestation and desertification are of special and immediate concern in the struggle to achieve sustainable development.



E A R T H F A C T S

About Deforestation

- Closed and open forests, shrublands and forest regrowth cover some 40% of the world's land.
- Each year between 11 and 15 million hectares of tropical forest (an area larger than Austria) are lost.
- Brazil alone may be losing more than 8 million hectares annually.
- In the tropics, 10 trees are being cut for every one planted; in Africa the rate is 29 to one.
- The rate of destruction of tropical forest is about 21.5 hectares a minute, or as Senator Gore said, "the equivalent of one football field per second."
- The breakdown of traditional shifting cultivation patterns is responsible for 70% of closed forest clearing in tropical Africa, 50% in Asia and 35% in America.

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- As a result of fuelwood demand, Delhi lost 60% of its surrounding forest cover within a decade.
- 50,000 square kilometers of closed tropical forest are logged annually. Loggers take on 5% of the trees but leave one-third of the land open to erosion.
- Every Sunday, in the U.S. more than 500,000 trees are used to produce the 88% of newspapers that are not recycled.
- The burning of forests introduces millions of tons of greenhouse gases and pollutants into the air.

About Desertification

- According to UNEP's 1984 Assessment, 4.5 billion hectares, or 35% of the earth's land surface, are threatened by desertification.
- Of this total — on which a fifth of humanity makes its living — three-fourths has already been moderately degraded and fully one-third has lost more than 25% of its productive potential.
- Each year about 6 million hectares of land are irretrievably lost to desertification.
- The rural population affected by serious desertification rose from 57 million in 1977 to 135 million in 1984.
- In 1984, with drought intensifying malnutrition, the death toll for African children under five rose to 4.75 million.
- In India, scientists now blame desertification and deforestation for the worsening of droughts and floods.
- Between 1960 and 1970 there were 43 sandstorms in Mauritania. In 1983 alone a record 240 sandstorms darkened the nation's skies.
- The Worldwatch Institute estimates yearly topsoil loss at 25 billion tons — roughly the amount that covers Australia's wheatlands.
- Desertification causes annual losses of about US \$26,000 million compared to the US \$4500 million a year needed to control it — about three quarters of what is needed is being spent but the remaining quarter is critical.

CONSERVATION OF BIOLOGICAL DIVERSITY

“Biological diversity” encompasses all species of plants, animals and micro-organisms and the ecosystems of which they are a part. It includes the remarkable genetic variation within species, varieties or breeds; the diversity of all the many species on our planet; and the diversity of ecosystems — habitats, biotic communities and ecological processes in the biosphere.

There are an estimated five to 30 million species in the world of which we have so far only managed to classify 1.4 to 1.6 million. But with the rapid destruction of the world's most diverse ecosystems, especially in the tropics, many experts have concluded that perhaps a quarter of the earth's total biota is at serious risk of extinction within 20 to 30 years. In recognition of the world community's deep concern about the state and fate of global diversity, it was unanimously agreed at UNEP's 15th Governing Council that conservation of biodiversity become a top priority for international action.

EARTH FACTS



- There are an estimated five to 30 million species in the world of which we have so far formally identified only 1.4 million.
- Biological diversity encompasses genetic variation within species, species diversity and ecosystem diversity.
- Tropical forests, which cover only 6-7% of the world's land area, contain over half the known plant and animal species, including 80% of insects and 90% of primates.
- A study of a 10-square-mile area in the Amazon has identified 320 species of birds, 800 species of trees and 460 species of butterflies.
- In 25 acres of Amazonian forests, you can have 300 species of trees; in the same area of a Pennsylvania forest, you might have 15 different species. (a hectare is 2.47 acres.)
- Half of the world's known crops originated in tropical forests.
- At least 25% of drug prescriptions in the United States owe active ingredients to plants, but under 1% of species have been investigated. About 1,400 forest plants may have anti-cancer potential.
- It is estimated that each year between 11 and 15 million hectares of tropical forest (an area the size of Austria) are lost.
- One of the world's 5-10 million species becomes extinct at least every day. This rate may be increasing to one an hour. A million species may have vanished by the year 2000.
- The main cause of extinctions is habitat destruction, especially in tropical forests where rapidly increasing numbers of people must clear more land for agricultural development, fuelwood, cattle-grazing, settlement and tropical lumber.
- Africa's elephant population has decreased from 1.4 million in 1979 to 750,000 today. At this rate of decline — 70,000 a year — they will virtually disappear by the turn of the century.
- At least 12% of the bird species in the Amazon basin, as well as 15% of the plants in Central and South America can be counted among what biologist David Janzen calls the "living dead."
- According to *Time Magazine*, since less than 5% of the world's tropical forests receive any protection, the stage is set for mass extinction.
- Several wildlife treaties exist, i.e. the Convention on International Trade in Endangered Species of Wild Flora and Fauna, but a new treaty is needed which covers the full range of biological diversity, stressing habitat protection.

Environmentally Sound Management of BIOTECHNOLOGY

Modern biotechnology is a wide range of techniques, including genetic engineering, which involves the use and manipulation of living organisms as a means of production which can then be commercially exploited. While biotechnology brings unquestioned benefits to mankind — the production of human insulin, the potential for vaccines for AIDS and malaria, the ability to breakdown toxic wastes and huge increases in agricultural production among many other things — it also brings unprecedented concerns. These include the spectre of introduced species, their release and potentially harmful spread through the environment, and ironically, the loss of diversity resulting from the mass production of clonally-propagated crops. The use of biotechnology may have very serious and often unpredictable environmental, social and economic consequences, especially in developing countries. It raises urgent moral and theological questions concerning respect for life and the environment. Since this field represents an emerging new responsibility which mankind must discharge with the utmost intelligence and caution, the 15th Governing Council of the UN Environment Programme designated the environmentally sound management of biotechnology as a crucial priority for international action.



EARTH FACTS

- Modern biotechnology is a wide range of techniques involving the use and manipulation of living organisms as a means of production which can be commercially exploited.
- Common biotech techniques included tissue or cell culture, cloning and fermentation methods, cell fusion, embryo transfer and recombinant DNA (rDNA) technology ("genetic engineering").
- Biotechnology dates back several thousand years. Ancient Egyptians used brewer's yeast to brew beer and the Mesopotamian peoples used bacteria to convert wine into vinegar.

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- In 1953 James Watson and Francis Crick discovered the structure of DNA.
- In 1973 Stanley Cohen and Herbert Boyer used enzymes to isolate fragments of DNA in one bacterium and insert it into another.
- After the 1980 U.S. Supreme Court decision that genetically-engineered micro-organisms could be patented, the way was paved for commercialization of biotechnology. Some 400 companies are developing rDNA products. One thousand new products are expected by the year 2000 with an estimated market value of \$50 billion.
- In 1981 scientists transferred genes from other species into mice, creating the first transgenic animals. By the end of 1988 there were 1000 different strains of these mice, including one trademarked "OncoMouse" which is genetically altered to develop cancer so that oncologists can use it for studying new treatments.
- In 1982 human insulin was the first rDNA pharmaceutical product approved for use. Others now include human growth hormone and interferon.
- In agriculture, biotech can improve plant quality, productivity and soil fertility; increase resistance to diseases, toxic chemicals and adverse climatic conditions; reduce water use and use of agrichemicals; and enhance livestock productivity.
- By using embryo transfer, a valuable cow can be the biological mother of 20-30 calves without actually giving birth to any.
- In 1987 a California company conducted the first legal release of an genetically-engineered organism into the environment. Trademarked "Frostban," the bacteria was put into a strawberry field to prevent frost damage. The ecological effects of such releases are not yet predictable.
- While clonally-propagated oil palms have increased oil yields by 30%, clonally-propagated crops are 6 times more vulnerable to pests and disease than seed-bred ones.
- Bioengineered products could displace some developing World exports such as coffee, cacao, vanilla and gum arabic. Replacement of gum arabic could mean a loss of U.S. \$60 million to several African countries.
- Biotech vaccines which could become available during the next decade including drugs to fight malaria, yellow and typhoid fevers, hepatitis A & B, leprosy, schistosomiasis, herpes, and dysentery. Research on AIDS continues.
- Illegal transfer of biotech experiments to developing countries and disposal of "genetic junk," i.e. waste products of experiments, must be regulated.
- Regulation of genetic engineering activities in the U.S. currently under the control of several federal agencies on a case-by-case basis.

Environmentally Sound Management of HAZARDOUS WASTES AND TOXIC CHEMICALS

More than seven million chemicals are now known. Some 80,000 chemicals are in use today and about 1000 new chemicals enter into commercial use each year. (UNEP Brief No. 4 and UNEP, 1987). While there is no doubt that mankind has benefited enormously from the use of chemicals at home, in industry, agriculture, and disease control, it is now clear that society will have to pay its dues for these wonders of modern technology. Since the 1950s chemical accidents have increased in frequency and severity. In the past few years there have been horrifying catastrophies.

Our food, water, land and air have become contaminated. Industry releases a Pandora's box of heavy metals and organic pollutants. Accidents during the manufacturing of products or the transport and disposal of wastes cause sudden or insidious contamination. Toxic substances in fertilizers and pesticides pollute soils and water supplies. Many routine household products contain dangerous substances. Hazardous wastes and toxic chemicals are endangering our own health and the health of the planet.



EARTH FACTS

- More than seven million chemicals are now known. Some 80,000 are in common use today and about 1000 new chemicals enter into commercial use each year.
- Every chemical is a potential hazard if wrongly used or if released in large quantities by accident.
- Of the more than 48,000 chemicals listed by the U.S. Environmental Protection Agency (EPA), next to nothing is known about the toxic effects of almost 38,000. Fewer than 1000 have been tested for acute effects and only about 500 for their cancer-causing, reproductive or mutagenic effects.
- About 10-20% of all manufactured waste is potentially hazardous, including cyanide and paint residues, organic solvents, arsenic, asbestos, lead, mercury, cadmium and others.

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- More than 22.5 billion pounds of hazardous waste were released or disposed of by industry in the United States in 1987.
- The first major international scare about toxic chemicals occurred in the late 1950s when large numbers of people in Minamata Bay, Japan were poisoned by eating fish contaminated by mercury that had been discharged into coastal waters.
- In December 1984 a leak of toxic gas from the Union Carbide pesticide plant in Bhopal, India, killed 2,500 people, injured 150,000 and caused the evacuation of 200,000 from the town — the worst industrial accident on record.
- Hundreds of families had to be evacuated at Love Canal, U.S.A., and Lekkerkerk, The Netherlands, after homes had been built over dumps containing toxic waste.
- The 1986 explosion at the Chernobyl nuclear reactor in the Soviet Union hurled more than seven tons of radioactive material into the atmosphere, fatally poisoning 28 people and exposing another 300 to excessive amounts. More than 100,000 people were evacuated; 2,500 square kilometers of surrounding land became uninhabitable and low-level radiation swept over Europe, contaminating crops and livestock.
- More than 700 chemicals have been detected in U.S. drinking water, 129 of which the EPA calls dangerous. Only 40 have been regulated.
- The U.S. National Academy of Sciences estimates that every year some 200,000 American children who drink heavily leaded water experience a loss of brain function equivalent to 5 IQ points.
- Thousands of tons of U.S. and European wastes have been shipped to Africa and the Middle East. Many illegal dumpings have occurred at unreported sites.
- Even a complete ban on chemicals such as DDT and PCBs will not prevent their entry into the food supply for many years due to their persistence in land and water.
- The U.S. EPA estimates that 80% of the landfills now in operation will reach capacity and close within 20 years. The U.S. recycles only 10% of its garbage; Japan recycles more than 50%.

PROTECTION OF HUMAN HEALTH AND QUALITY OF LIFE

All over the world environmental degradation is undermining development and damaging human health and quality of life. Our good health is threatened in two major ways: first, by the environmental diseases associated with poverty and underdevelopment. A vicious circle is set in motion — poor health, often caused by adverse environmental conditions, depletes the strength of the workforce and hinders development, leading to greater stress on the environment and more disease. Rich and poor alike are exposed to the hazards of pollution resulting from unwise, unregulated development. The contamination of our land, air and water by chemicals and other pollutants is causing illness as a result of toxic chemical disasters. UNEP's 15th Governing Council has designated protection of human health and quality of life, especially the living and working environment of poor people, from the environmental degradation, as an essential priority for international action.

The underlying cause of most environmental degradation is a manifestation of a surging population and disappearing productive lands in collision with each other. Currently at 5.1 billion, the global population has doubled since 1954. By the year 2025, projections indicate a further increase to 8.5, 95% of which will be in the less developed countries. Meanwhile worldwide soil erosion now totals 20 billion tons a year, or more than six million hectares annually. People are forced to exploit marginal environments. Food security is a matter of life or death in many regions of the developing world; the world's food production has dropped 14% per capita since 1984. Malnutrition weakens the body's defenses against disease. At the same time, competition for scarce natural resources leads to harmful development practices — from ignorance, inertia, or greed — that poison our land, air, and water and endanger our health.

EARTH FACTS



Environmental Aspects of Communicable Disease:

- Environmentally-related communicable diseases along with malnutrition are the major causes of death and debility among the poor people of developing nations, mainly due to the poor state of water supply and sanitation, overcrowded living conditions, and harmful water management practices.
- A European or a North American can expect to live more than 20 years longer than an African or a South Asian.
- It has been estimated that globally between 450-750 million people are seriously malnourished, weakening the body's ability to fight infectious disease.
- A baby born in a developing country is 10 times more likely to die before its first birthday than one born in an industrialized one.
- WHO estimated that at least 13 million children would die in 1980 from contaminated water. Acute diarrhoeal diseases alone now cause some 4 million deaths in children

under five. Many have been saved by oral rehydration therapy, but only where it is available.

- About 100 million cases of malaria occur in the world each year. Irrigation and other water development projects create standing water that increases mosquito breeding. In tropical Africa alone, malaria accounts for about 750,000 deaths each year, mainly among young children.
- Other water-associated diseases which affect people in developing countries, especially rural but sometimes urban poor, include schistosomiasis (some 200 million worldwide) and river blindness, which infects some 17 million people in the Americas, Africa and Arabia.

The Hazards of Pollution:

- Two-thirds of the world's 1.8 billion city dwellers breath air that contains dangerously high levels of sulphur dioxide and dust.
- Some 500 million people worldwide are exposed to toxic fumes from burning wood, dung and coal indoors for cooking and heating. Exposure to biomass fuel emissions is probably the single most important occupational health hazard for women in developing countries.
- Arsenic, barium, cadmium, mercury, lead and other pollutants in U.S. drinking water are responsible for health problems ranging from stomach disorders to neurological, kidney and liver damage, cancer and birth defects.
- Pesticides such as chlordane and heptachlor which are banned in the U.S. but sold overseas have been detected in a large variety of imported foods in the U.S. Only 10% of the 35,000 pesticides introduced since 1945 have been tested for health effects.
- During the past decade major accidents involving chemicals, including the toxic leak at Bhopal, India, have resulted in at least 5,000 deaths, 100,000 injuries or poisonings, and an estimated 620,000 people evacuated.
- Due in part to the intense use of toxins in the United States, the rate of cancer is rising by 2% each year.
- Domestic products such as oil-based paints, furniture oils and degreasers often contain organic solvents which evaporate quickly and cause serious health effects when inhaled.

Our failure to adequately protect and preserve the other species and the natural environment is already having grave consequences for much of humanity. Throughout the world, the clear-cutting of forests and the resulting flooding have caused massive loss of life, homes, and farmlands.

Pollution, destruction of habitat and direct killing threaten to wipe out much of our irreplaceable wildlife heritage. With one or two million species of plants and animals threatened with extinction, this fundamental question must now be faced: does man have the right to extirpate any and all other forms of life on this planet and, in so doing, render it uninhabitable? Since human survival — like that of all species — depends on the protection and preservation of our habitat, is not the despoiling and destruction of the earth the ultimate sin?

The decisions we make in the next decade and beyond may well determine the fate of our planet — and ourselves.

On the following pages you will find materials you can draw from to incorporate into your Environmental Sabbath celebration, and into other services you hold throughout the year.

Suggestions for the Celebration: WORDS, PRAYERS AND SONGS

We Call You To:

Make the Environmental Sabbath a special day for your congregation.

To help you to organize the day, we have included in this package, prayers from Buddhism, Christianity, Hinduism, Judaism, Sikhism and Islam, as well as from the Native American tradition, the Society of Friends, and the Baha'i faith. We have also enclosed useful quotes, suggestions for rituals, appropriate music and music scores, and an extensive bibliography.

There are two ways to ensure that the Environmental Sabbath has lasting impact. One is to act by creating the Sabbath itself. The other is to encourage action which goes beyond the Sabbath, into every area and every day of your congregation's lives.

Included in this Environmental Sabbath magazine is a personal action poster. UNEP enthusiastically encourages the duplication of this and all other materials contained in this publication by all readers. Credit to UNEP would be appreciated.

The Sermon:

Describe the crisis. Use scientific data. Highlight the urgency of the situation.

Speak of the essential earth-human relationship. What is it? What is our responsibility?

Tell your congregation that this is a special day; a day on which we make our commitment to restore Earth.

Point to various sources of inspiration: to scripture; to wisdom and spirituality; and to the Earth itself. Show how they are all important, and tied together.

Draw from the holy words of your religion. (Excerpts follow on the pages marked THE ASSISI DECLARATIONS and WORDS.)

Mention some initiatives at the global and local levels, (Assisi, North American Conference on Christianity and Ecology, etc.) to show that the work is going forward, globally and regionally.

Direct your congregation toward action: not only in church, but in the home, at school, in the political process. Be specific, mentioning local issues if possible.

The Service:

See the attached PRAYERS and MUSIC. Incorporate them or others like them into your service.

Decorate your sanctuary with photographs of the Earth as seen from outer space, and with other Earth images.

Invite guest speakers or 'representatives' from other species, i.e. plants and animals.

Go Further:

In regular services, insert a portion that focuses on reverence and care for the Earth.

Organize an interfaith ceremony.

Organize an Environmental Sabbath concert or festival, clean up day(s), or tree-planting retreats.

Follow up with an environmental study group; a community environment-watch; collaborations with local environmental groups.

Write letters to the national and regional leaders of your faith, encouraging them to take action.

Encourage Your Congregation to Act:

A day is only one day unless it effects change in our everyday lives.

To this end, *please urge your congregation to take the following steps:*

Follow environmental stories in newspapers, magazines, and on TV.

Plant trees. This is essential to combatting the high level of CO₂ built up in the atmosphere.

Fight pollution wherever and whenever you find it. Write to your elected representatives. Join you local environmental group.

Enjoy nature and be kind to living things.

Recycle cans, bottles and paper whenever possible.

Try not to waste.

Cut down on energy consumption.

Refer to the enclosed **Personal Action Poster**.

Individuals can make a difference. Please encourage your congregation to re-examine their lifestyles: Are they wasteful? Excessive? Thoughtless? If the Earth is to survive, temperance, balance and compassion will be necessary components of the good life.

Words.

Prayers.

Included are universal prayers which can be used as a framework for denominational prayers. These are deliberately in 'secular' language. Following the universal prayers, are prayers from the following faiths, organized in the order listed below:

BUDDHISM

CHRISTIANITY

HINDUISM

JUDAISM

ISLAM (See pages marked Moslem Reflections)

NATIVE AMERICAN

RELIGIOUS SOCIETY OF FRIENDS

BAHA'I

SIKHISM

Music.

We thank you for joining with us to celebrate the Environmental Sabbath and for working with us to restore Earth.

SONG OF PEACE FOR THE CHILDREN

The Blessing Way children's Prayer for the Earth

Music by
EDITH HILLMAN BOXHILL
©Copyright, July 1987

With loving harmonic convergence

Free improvisational vocalization
in tonality of D \flat major

O Earth _____

p (2nd time *f*)

Detailed description: This block contains the first system of the musical score. It features a vocal line at the top and a piano accompaniment below. The vocal line begins with a series of notes and rests, followed by the text 'O Earth' with a long horizontal line underneath. The piano accompaniment consists of two staves (treble and bass clef) with chords and melodic lines. Dynamics include piano (*p*) and a second time *f* (forte).

make a bless - ing - way _____ for the chil - dren, _____
make a bless - ing - way _____ for the chil - dren, _____

Detailed description: This block contains the second system of the musical score. It features a vocal line with lyrics and a piano accompaniment. The lyrics are: 'make a bless - ing - way _____ for the chil - dren, _____' on the first line, and 'make a bless - ing - way _____ for the chil - dren, _____' on the second line. The piano accompaniment continues with chords and melodic lines.

Show them a path _____ that is free, _____
Send them a path _____ where they may walk free, _____ And the

Detailed description: This block contains the third system of the musical score. It features a vocal line with lyrics and a piano accompaniment. The lyrics are: 'Show them a path _____ that is free, _____' on the first line, and 'Send them a path _____ where they may walk free, _____ And the' on the second line. The piano accompaniment continues with chords and melodic lines.

Make them a bless - ing way that is free of war! —
 stars will make bright each step of that bless - ing - way,

Show them a path ————— that is free of war!
 Show them a path ————— that is free of war!

ff

subito pp (very gradual cresc. and accel.)

Free of war be - tween broth - er and broth - er, —————

subito pp (very gradual cresc. and accel.)

Free of war be - tween sis - ter and sis - ter, —————

Free of war be - tween fam - i - ly and fam - i - ly, _____

Free of war be - tween na - tion and na - tion. _____

ff

Codetta *(a tempo)*

O Earth! Show the chil-dren a plan - et that is
Send them a new dawn where the
let them hear the

(a tempo)

free of war for - ev - er, _____
light _____ is the col - or of love, _____ And
song _____ and the sounds of PEACE. _____

ad infinitum. . . .

PEACE WITH NATURE: Meditations for the Young

By Sopia Jakowski

We were not here when the Lord
and powerful
made the universe out of nothing
and when He made the Planet Earth.

He made the light, the air, the water
and the land,
with minerals and other hidden
treasures.

He made the plants and the animals,
all sorts of living things,
all beautiful and interesting.

When there were no people on this
earth
the air, the waters, the soil, were
clean and healthy
for all the living being to share.

All the living creatures and all forms
of matter the Lord made
gave glory to the Lord just by being
what they were.

God created human beings in His
image
to be witnesses of His love.
He wanted us to be happy and He
wanted us to be free:
to use of free will participating in
His Divine Plan,
lovingly caring for His creation,
common inheritance for all people
of all times.

People came into a world of clean
air, waters and soil,
full of different forms of plants and
animals
to live among them and with them as
a very special form of life.

The Lord gave us intelligence and
skills
and ways to know right from wrong.
God gave us the task to care for the
Earth

and to make it more useful and
helpful to each person and to society
through science and technology,
so that we could all live in peace.

When there were no people on the
Earth there were no wars.
Plants and animals followed the
laws of the Lord
serving one another in their life and
in their death.

But people did not recognize that
they were placed on the Earth
to care for the heritage of God who
made everything out of nothing.

People made wars on nature and
they made wars among
themselves.
And now we have an environmental
crisis:
Air and water pollution, massive
deforestation,
fertile lands turned into deserts,
important plants and animals in
danger of disappearing forever,
disasters caused by human errors.

The living beings that occupied the
Earth before we came
did not cause all this damage.
Many of them did not survive
and others are in serious danger of
extinction
because people are constantly at war
with nature
and what we need is to be at peace.

War with nature is a war we cannot
survive.
We must do everything we can to
stop it.
Science and technology must not
destroy nature.
Knowledge must be used to save
nature and to restore it.

Forests, soils, waters, the fauna, all
are necessary.
They must be used wisely to permit
their renewal.

We cannot use them without
considering the future.
Future generations, after us, will
depend on what is left.

We have duties towards God and
towards our fellow men.
We also have serious obligations
towards nature.
Our life depends on it and we owe
nature a great debt.

Let us contemplate nature
undisturbed and at peace:
the skies and the mountains,
the sea and the rivers,
the fields and the forests.

Let us look at the beauty of the little
corner where we live.
There are still many beautiful places
on Earth
that we can protect and make more
beautiful.
There are still many plants and
animals we can save from extinction.
They may help us survive.

All the things the Lord made are
wonderful:
all are good, all are beautiful.

He gave us all these things to care
for, to share,
to protect from destruction
and to restore in abundance and beauty.

The Lord gave us the intelligence
and the capacity to love.
He also gave us His grace to do this
with joy:
to restore the Earth so that we must
live in peace with Mother Nature.

Liturgical Prayer for the Environment

- Reader: Humankind is forbidden to enjoy anything without pronouncing a benediction, and whoever enjoys anything in this world without a benediction commits a trespass against sacred things.
- All: How are we to understand that? In one place it is written, "The earth is the Lord's and the fullness thereof," yet in another place it is written, "The heavens are the heavens of Adonai but the earth God has given to the children of humanity."
- Reader: The answer is that the former verse applies to the status prior to pronouncing the benediction; the latter verse applies after one pronounces the benediction.
- All: Upon seeing exceptionally beautiful people, trees or fields we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: Who has such beauty in the universe.
- All: Upon seeing interesting or different people or animals we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: Who makes the creatures different.
- All: Upon seeing the first bloom of fruit trees we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: For nothing is lacking in God's universe, and God created in it good creatures and good trees, to cause humanity pleasure with them.
- All: Upon seeing lightning, a comet, exceptionally lofty or beautiful mountains, exceptionally large rivers in their natural course, or after experiencing an earthquake we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: Who makes the work of Creation.
- All: Upon hearing thunder, or during a storm we say: "Blessed Are You, our God, Ruler of the Universe . . .
- Reader: Your strength and Your power fill the universe.
- All: Upon seeing the ocean or a large body of water we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: Who made the great sea.
- All: And upon seeing a rainbow we say: "Blessed Are You, Adonai our God, Ruler of the Universe . . .
- Reader: Who remembers and is true to the covenant, thus fulfilling Your promise.
- All: Amen.

The Assisi Declarations: A Call

In September 1986, the World Wide Fund for Nature (WWF) celebrated its 25th anniversary by bring together, for the first time in history, five of the major ethical systems of the world to declare how their faith leads each of them to care for nature.

What resulted were the five declarations of Assisi: calls from Buddhist, Christian, Hindu, Jewish and Moslem leaders to their own faithful. These messages, excerpts of which follow, are of tremendous significance for the future of the environment.

In these clear calls a relationship of fundamental importance was re-established: that between religion and science which can begin again to inspire and challenge, cooperatively as guides of human existence.

“Every major religion and tradition of the world is represented here. No one pretends that our respective beliefs are or can be held in common; but we do believe that religious concern for the conservation and ecological harmony of the natural world is our common heritage, our birthright and our duty.”

— FR. LANFRANCO SERVINI

Opening ceremony

BUDDHIST DECLARATION

“Buddhism is a religion of love, understanding and compassion and is committed towards the ideal of non-violence. As such it also attached great importance towards wildlife and the protection of the environment on which every being in this world depends for survival.

The underlying reason why beings other than humans need to be taken into account is that, like human beings, they too are sensitive to happiness and suffering. We should therefore be wary of justifying the right of any species to survive solely on the basis of its usefulness to human beings.

We are told that history is a record of human society in the past. From existing sources there is evidence to suggest that for all their limitations, people in the past were aware of the need for harmony between human beings and nature. They loved the environment. They revered it as the source of life and well-being in the world.

We regard our survival as an undeniable right; as coinhabitants of this planet, other species too have this right for survival. And since human beings as well as non-human sentient beings depend upon the environment as the ultimate source of life and well-being, let us share the conviction that the conservation of the environment, the restoration of the imbalance caused by our negligence in the past, be implemented with courage and determination.

These teachings lead us to the following words by His Holiness the Dalai Lama: “As we all know, disregard for the Natural Inheritance of human beings has brought about

the danger that now threatens the peace of the world as well as the chance to live of endangered species.

Such destruction of the environment and the life depending upon it is a result of ignorance, greed and disregard for the richness of all living things. This disregard is gaining great influence. If peace does not become a reality in the world, and if the destruction of the environment continues as it does today, there is no doubt that future generations will inherit a dead world.

It is clear that this generation is at an important crossroad. On the one hand the international community is able now to communicate each other's views, on the other hand the common fact is that confrontation far outweighs constructive dialogue for peace.

We are the generation with the awareness of a great danger. We are the ones with the responsibility and the ability to take steps of concrete action, before it is too late."

by THE VENERABLE LUNGRIG NOMGAYAL

CHRISTIAN DECLARATION

. . . Because of the responsibilities which flow from his dual citizenship, man's dominion cannot be understood as licence to abuse, spoil, squander or destroy what God has made to manifest his glory. That dominion cannot be anything else than a stewardship in symbiosis with all creatures. On the other hand, his self-mastery in symbiosis with creation must manifest the Lord's exclusive and absolute dominion over everything, over man and over his stewardship. At the risk of destroying himself, man may not reduce to chaos or disorder, or, worse still, destroy God's bountiful treasures.

For St. Francis, work was a God-given grace to be exercised in that spirit of faith and devotion to which every temporal consideration must be subordinate: uncontrolled use of technology for immediate economic growth, with little or no consideration for the planet's resources and their possible renewal; disregard for just and peaceful relations among peoples; destruction of cultures and environments during war; ill-considered exploitation of natural resources by consumer-oriented societies; unmastered and unregulated urbanization; and, the exclusive preoccupation with the present without any regard for the future quality of life.

Therefore, in the name of Christ who will come to judge the living and the dead, Christians repudiate:

1. All forms of human activity — wars, discrimination, and destruction of cultures — which do not respect the authentic interests of the human race, in accordance with God's will and design, and do not enable men as individuals and as members of society to pursue and fulfill their total vocation within the harmony of the universe.
2. All ill-considered exploitation of nature which risks to destroy it and, in turn, to make man the victim of degradation.

by FATHER LANFRANCO SERRINI

HINDU DECLARATION

Not only in the Vedas, but in later scriptures such as the Upanishads, the Puranas and subsequent texts, the Hindu viewpoint on nature has been clearly enunciated. It is permeated by a reverence for life, and an awareness that the great forces of nature — the earth, the sky, the air, the water and fire — as well as various orders of life including plants and trees, forests and animals are all bound to each other within the great rhythms of nature. The divine is not exterior to creation, but expresses itself through natural phenomena.

In addition, according to the Vaishnava tradition, the evolution of life on this planet is symbolized by a series of divine incarnations beginning with fish, moving through amphibious forms and mammals, and then on into human incarnations. This view clearly holds that man did not spring fully formed to dominate the lesser lifeforms, but rather evolved out of these forms, and is therefore integrally linked to the whole of creation.

This leads necessarily to a reverence for animal life. The Yajurveda lays down that “no person should kill animals helpful to all. Rather, by serving them, one should attain happiness” (Yajurveda 13:46). This view was later developed by the great Jain Tirthankara, Lord Mahavira, who regenerated the ancient Jain faith that lives down to the present day. For the Jains, Ahimsa, or non-violence, is the greatest good, and on no account should life be taken. This philosophy was emphasized more recently by Mahatma Gandhi who always spoke of the importance of Ahimsa and looked upon the cow as a symbol of the benign element in animal life. All this strengthens the attitude of reverence for all life including animals and insects.

The Hindu tradition of reverence for nature and all forms of life, vegetable or animal, represents a powerful tradition which needs to be re-nurtured and re-applied in our contemporary context. India, the population of which is over 80 percent Hindu, has in recent years taken a special interest in conservation.

What is needed today is to remind ourselves that nature cannot be destroyed without mankind ultimately being destroyed itself. With nuclear weapons representing the ultimate pollutant, threatening to convert this beautiful planet of ours into a scorched cinder unable to support even the most primitive lifeforms, mankind is finally forced to face its dilemma. Centuries of rapacious exploitation of the environment have finally caught up with us, and a radically changed attitude towards nature is now not a question of spiritual merit or condescension, but of sheer survival.

Let us declare our determination to halt the present slide towards destruction, to rediscover the ancient tradition of reverence for all life and, even at this late hour, to reverse the suicidal course upon which we have embarked. Let us recall the ancient Hindu dictum — “The Earth is our mother, and we are all her children.”

by DR. KARAN SINGH

JEWISH DECLARATION

The festivals of the Jewish religion do call upon us to stand before God, in awe at His majesty, trembling before His judgements, but that is not the dominant mood of the Jewish faith. The festivals celebrate, in joy, the cycle of three seasons of nature. The rabbis even insisted that “he who has denied himself any one of the rightful joys of this work is a sinner” (Baba Kama 91b). The highest form of obedience to God’s commandments is to do them not in mere acceptance but in the nature of union with Him. In such a joyous encounter between man and God, the very rightness of the world is affirmed.

The encounter of God and man in nature is thus conceived in Judaism as a seamless web with man as the leader, and custodian, of the natural world. Even in the many centuries when Jews were most involved in their own immediate dangers and destiny, this universalist concern has never withered . . . Now, when the whole world is in peril, when the environment is in danger of being poisoned, and various species, both plant and animal, are becoming extinct, it is our Jewish responsibility to put the defence of the whole of nature at the very centre of our concern . . . Man was given dominion over nature, but he was commanded to behave towards the rest of creation with justice and compassion. Man lives, always, in tension between his power and the limits set by conscience.

Our ancestor Abraham inherited his passion for nature from Adam. The later rabbis never forgot it. Some 20 centuries ago they told the story of two men who were out on the water in a rowboat. Suddenly, one of them started to saw under his feet. He maintained that it was his right to do whatever he wished with the place that belonged to him. The other answered him that they were in the rowboat together — the hole that he was making would sink both of them (Vayikra Rabbah 4:6).

We have a responsibility to life, to defend everywhere, not only against our own sins, but also against those of others. We are now all passengers, together, in this same fragile and glorious world. Let us safeguard our rowboat — and let us row together.

by RABBI ARTHUR HERTZBERG

MOSLEM DECLARATION

Unity, trusteeship and accountability, that is tawheed, khalifa and akhrah, the central concepts of Islam, are also the pillars of the environmental ethics of Islam. They constitute the basic values taught by the Qur'an. It is these values which led Muhamad, the Prophet of Islam to say: "Whoever plants a tree and diligently looks after it until it matures and bears fruit is rewarded," and "If a Moslem plants a tree or sows a field and men and beasts and birds eat from it, all of it is charity on his part," and again, "The world is green and beautiful and God has appointed you his stewards over it." Environmental consciousness is born when such values are adopted and become an intrinsic part of our mental and physical makeup.

Moslems need to return to this nexus of values, this way of understanding themselves and their environment. The notions of unity, trusteeship and accountability should not be reduced to matters of personal piety; they must guide all aspects of crime and punishment, it must also become the vanguard for environmental legislation. We often say that Islam is a complete way of life, by which it is meant that our ethical systems provide the bearings for all our actions. Yet our actions often undermine the very values we cherish. We must judge our actions by them. They furnish us with a worldview which enables us to ask environmentally appropriate questions, draw up the right balance sheet of possibilities, properly weigh the environmental costs and benefits of what we want, what we can do within the ethical boundaries established by God, without violating the rights of His other creations. If we use the same values, the same understanding in our work as a scientist and technologist, economist or politician as we do to know ourselves as Moslems — those who subject themselves to the Will of God, then I believe, we will create a true Islamic alternative — a caring and practical way of being, doing and knowing — to the environmentally destructive thought and action which dominate the world today.

by DR. ABDULLAH OMAR NASSEF

A New Sense of the Earth

Most of us sense that the Earth is more than a sphere of rock with a thin layer of air, ocean and life covering the surface. We feel that we belong here as if this planet were indeed our home. Long ago the Greeks, thinking this way, gave to the Earth the name Gaia or, for short, Ge. In those days science and theology were one; and science, although less precise, had soul. As time passed this warm relationship faded and was replaced by the rigidity of the academy. The life sciences, no longer concerned with life, fell to classifying dead things and even to vivisection.

The new understanding has come from going forth and looking back to see the Earth from space. The vision of that splendid white flecked blue sphere stirred us all, no matter that by now it is almost a visual cliché. It even opens the mind's eye, just as a voyage away from home enlarges the perspective of our love for those who remain there.

We now see that the air, the ocean and the soil are much more than a mere environment for life; they are a part of life itself. Thus the air is to life just as is the fur to a cat or the nest for a bird. Not living but something made by living things to protect against an otherwise hostile world. For life on Earth the air is our protection against the cold depths and fierce radiations of space.

If we are "all creatures great and small," from bacteria to whales, part of Gaia, then we are all of us potentially important to her well being. We knew in our hearts that the destruction of whole ranges of other species was wrong but now we know why. No longer can we merely regret the passing of one of the great whales, or the blue butterfly; nor even the smallpox virus. When we eliminate one of these from the Earth, we may have destroyed a part of ourselves, for we also are a part of Gaia.

James Lovelock

"The environmental crisis is an outward manifestation of a crisis of mind and spirit. There could be no greater misconception of its meaning than to believe it to be concerned only with endangered wildlife, human-made ugliness, and pollution. These are part of it, but more importantly, the crisis is concerned with the kind of creatures we are and what we must become in order to survive."

Lynton K. Caldwell

A RE-EMERGING CONSCIOUSNESS

Teach your children what we have taught our children, that the earth is our mother. Whatever befalls the earth, befalls the children of the earth. If we spit upon the ground we spit upon ourselves. This we know. The earth does not belong to us; we belong to the earth . . . One thing we know, which the white man may one day discover, our God is the same God. You may think now that you own Him (sic) as you wish to own our land; but you cannot. He (sic) is the God of ALL people, and (His) compassion is equal for all. This earth is precious to God, and to harm the earth is to heap contempt on its Creator. So love it as we have loved it. Care for it as we have cared for it. And with all your mind, with all your heart, preserve it for your children and love . . . as God loves us all.

Chief Seattle, 1855

All human societies are built on fragile ecological foundations. Without clean air, fresh water, productive soil and a sustaining web of life, homo sapiens can neither survive or prosper. In a few short decades we are eroding those foundations beyond repair. By the year 2000, if present trends continue, one third of the world's productive land will have eroded or turned to dust. One million species may have been driven to extinction, the sharpest setback to life on earth since our remotest ancestors first appeared on the planet. And the world's climate will almost certainly change, with enormous, but incalculable consequences. In each case, human activities will be to blame.

UNEP Profile

What we do about ecology depends on our ideas of the man-nature relationship. More science and more technology are not going to get us out of the present ecological crisis, until we find new religion, or rethink our old one.

Lynn White, Jr.

Let us declare the five hundred year experiment with modern humanism a success, but let us also declare it ended. The next step can be an affirmation that every form of life is endowed with freedom and dignity, and that the highest power rests in those who fulfill themselves without denying fulfillment to others, human or otherwise.

Joseph W. Meeker

Universal Prayer

A Call to Prayer

We who have lost our sense and our senses — our touch, our smell, our vision of who we are; we who frantically force and press all things, without rest for body or spirit, hurting our earth and injuring ourselves: we call a halt.

We want to rest. We need to rest and allow the earth to rest. We need to reflect and to rediscover the mystery that lives in us, that is the ground of every unique expression of life, the source of the fascination that calls all things to communion.

We declare a Sabbath, a space of quiet: for simple being and letting be; for recovering the great, forgotten truths; for learning how to live again.

A Prayer of Awareness

Today we know of the energy that moves all things: the oneness of existence, the diversity and uniqueness of every moment of creation every shape and form, the attraction, the allurements, the fascination that all things have for one another.

Humbled by our knowledge, chastened by surprising revelations, with awe and reverence we come before the mystery of life.

A Prayer of Sorrow

Reader **We have forgotten who we are.**

We have forgotten who we are
We have alienated ourselves from the unfolding of the cosmos
We have become estranged from the movements of the earth
We have turned our backs on the cycles of life.

Reader

We have sought only our own security
We have exploited simply for our own ends
We have distorted our knowledge
We have abused our power.

Reader

Now the land is barren
And the waters are poisoned
And the air is polluted.

Reader

Now the forests are dying
And the creatures are disappearing
And the humans are despairing.

Reader

We ask forgiveness
We ask for the gift of remembering
We ask for the strength to change.

Reader

Silence

A Prayer of Healing

Reader **We join with the earth and with each other.**

To bring new life to the land
To restore the waters
To refresh the air

Reader

To renew the forests
To care for the plants
To protect the creatures

Reader

To celebrate the seas
To rejoice the sunlight
To sing the song of the stars

Reader

To recall our destiny
To renew our spirits
To reinvigorate our bodies

Reader

To create the human community
To promote justice and peace
To remember our children

Leader: We join together as many and diverse expressions of one loving mystery: for the healing of the earth and the renewal of all life.

Meditation

A Prayer of Gratitude

Reader **We rejoice in all life.**

We live in all things
All things live in us.

Reader

We live by the sun
We move with the stars

Reader

We eat from the earth
We drink from the rain
We breathe from the air

Reader

We share with the creatures
We have strength through their gifts

Reader

We depend on the forests
We have knowledge through their secrets

Reader

We have the privilege of seeing and understanding
We have the responsibility of caring
We have the joy of celebrating

Leader: We are full of the grace of creation

We are graceful
We are grateful
We rejoice in all life

Buddhist Prayers

“THE RAIN CLOUD”

It is like a great cloud rising above the world,
Covering all things everywhere —
A gracious cloud full of moisture; lightning-flames flash and dazzle
Voice of thunder vibrates afar, bringing joy and ease to all.
The sun's rays are veiled, and the earth is cooled;
The cloud lowers and spreads as if it might be caught and gathered;
Its rain everywhere equally descends on all sides,
Streaming and pouring unstinted, permeating the land.
On mountains, by rivers, in valleys,
In hidden recesses, there grow the plants, trees, and herbs;
Trees, both great and small, the shoots of the ripening grain,
Grape vine and sugar cane.
Fertilized are these by the rain and abundantly enriched;
The dry ground is soaked; herbs and trees flourish together.
From the one water which issued from that cloud,
Plants, trees, thickets, forests, according to need receive moisture.
All the various trees, lofty, medium, low, each according to its size,
Grows and develops roots, stalks, branches, leaves,
Blossoms and fruits in their brilliant colors;
Wherever the one rain reaches, all become fresh and glossy.
According as their bodies, forms, and natures are great and small,
So the enriching rain, though it is one and the same,
Yet makes each of them flourish.
In like manner also the Buddha appears here in the world
Like unto a great cloud universally covering all things;
And having appeared in the world, for the sake of living,
He discriminates and proclaims the truth in regard to all laws.
The Great Holy World — honored One among the gods and humans,
And among all living beings proclaims abroad this word:
“I am the Tathagata, the Most Honored among humans;
I appear in the world like this great cloud,
To pour enrichment on all parched living beings,
To free them from their misery to attain the joy of peace,
Joy of the present world and joy of Nirvana . . .
Everywhere impartially, without distinction of persons . . .
Ever to all beings I preach the Law equally; . . .
Equally I rain the Law — rain untiringly.

from the *Lotus Sutra*”

LOVING KINDNESS

May every creature abound in well-being and peace.
May every living living being, weak or strong, the long and the small
The short and the medium-sized, the mean and the great

. . . .

May every living being, seen or unseen, those dwelling far off,
Those near by, those already born, those waiting to be born
May all attain inward peace.

Let no one deceive another
Let no one despise another in any situation
Let no one, from antipathy or hatred, wish evil to anyone at all.
Just as a mother, with her own life, protects her only son from hurt
So within yourself foster a limitless concern for every living creature.
Display a heart of boundless love for all the world
In all its height and depth and broad extent
Love unrestrained, without hate or enmity.
Then as you stand or walk, sit or lie, until overcome by drowsiness
Devote your mind entirely to this, it is known as living here life divine.

Christian Prayers

Meditation

I live at the heart of a single, unique Element, the Center of the Universe, and present in each part of it: personal Love and cosmic Power.

To attain to Him and become merged into His life, I have before me the entire universe with its noble struggles, its impassioned quests, its myriad of souls to be healed and made perfect. I can and I must throw myself into the thick of human endeavor, and with no stopping for breath. For the more fully I play my part and the more I bring my efforts to bear on the whole surface of reality, the more also will I attain to Christ and cling close to him. God who is eternal Being-in-itself, is, one might say, ever in process of formations *for us*.

And God is also the heart of everything; so much so that the vast setting of the universe might be engulfed or wither away or be taken from me by death without my joy being diminished. Were creation's dust, which is vitalized by a halo of energy and glory, to be swept away, the substantial Reality wherein every perfection is incorruptibly contained and possessed would remain intact; the rays would be drawn back onto their Source and there I should still hold them all in a close embrace.

Hymn of the Universe, Teilhard de Chardin

A Call to Prayer

The earth is at the same time mother,
She is mother of all that is natural, mother of all that is human.
She is the mother of all, for contained in her are the seeds of all.
The earth of humankind contains all moistness, all verdancy, all
germinating power.
It is in so many ways fruitful.

All creation comes from it. Yet it forms not only the basic raw material for mankind, but also the substance of the incarnation of God's son.

Hildegard of Bingen

A Prayer of Awareness

God is the foundation for everything
This God undertakes, God gives.
Such that nothing that is necessary for life is lacking.
Now humankind needs a body that at all times honors and praises God.
This body is supported in every way through the earth.
Thus the earth glorifies the power of God.

Hildegard of Bingen

A Reflection on our Present Plight

The high, the low all of creation,
God gives to humankind to use. If this privilege is misused,
God's Justice permits creation to punish humanity.

Hildegard of Bingen

Prayers of Healing

- I At Tara today in this fateful hour
I place all heaven with its power,
And the sun with its brightness,
And the snow with its whiteness,
And the Fire with all the strength it has,
And the lightning with its rapid wrath,
And the winds with their swiftness along the path,
And the sea with its deepness.
And the rocks with their steepness
And the Earth with its starkness;
All these I place
By God's almighty help and grace,
Between myself and the powers of Darkness.
- II I arise today
Through a mighty strength, the invocation of the Trinity,
Through belief in the threeness,
Through confession of the oneness
Of the Creator of Creation.
- I arise today
Through the strength of heaven;
Light of sun,
Radiance of moon,
Slendor of fire,
Speed of lightning,
Swiftness of wind,

Depth of sea,
Stability of earth,
Firmness of rock.

I arise today,
Through a mightly, the invocation of the Trinity,
Through belief in the threeness,
Through confession of the oneness
Of the Creator of Creation.

St. Patrick

A Prayer of Gratitude

Most High, all powerful, good Lord,
to you all praise, glory and honor
and all blessing;
to you alone, Most High, they belong
and no man is worthy of naming you.
Praised be you, my Lord,
with all you creatures,
especially My Lord Brother Sun,
who brings day, and by whom you enlighten us;
he is beautiful, he shines with great splendor;
of you, Most High, he is the symbol.

Praised be you, my Lord,
for Sister Moon and the Stars:
in the heavens you formed them,
clear, precious and beautiful.

Praised be you, my Lord, for Brother Wind
and for the air and for the clouds,
for the azure calm and for all climes
by which you give life to your creatures.

Praised be you, my Lord, for Sister Water,
who is very useful and humble,
precious and chaste.

Praised be you, my Lord, for Brother Fire,
by whom you enlighten the night:
he is beautiful and joyous,
indomitable and strong.

Praised be you; my Lord,
for Sister our Mother the Earth
who nourishes us and bears us,
and produces all kinds of fruits,
with the speckled flowers and the herbs.

Francis of Assisi

Hindu Prayers

THE WATERS OF LIFE

Waters, you are the ones who bring us the life force.

Help us to find nourishment so that we may look upon great joy.

Let us share in the most delicious sap that you have, as if you were loving mothers.

Let us go straight to the house of the one for whom your waters give us life and give us birth.

For our well-being let the goddesses be an aid to us, the water be for us to drink.
Let them cause well-being and health to flow over us.

Mistresses of all the things that are chosen, ruler over all peoples, the waters are the ones I beg for a cure.

Soma has told me that within the waters are all cures and Agni who is salutary to all.

Waters, yield your cure as an armour for my body, so that I may see the sun for a long time.

Waters, carry far away all of this that has gone bad in me either what I have done in malicious deceit or whatever lie I have sworn to.

I have sought the waters today; we have joined with their sap. O Agni full of moisture, come and flood me with splendour.

A PRAYER FOR BLESSING

May the axe be far away from you;
May the fire be far away from you;
May there be rain without storm;
Lord of Trees, may you be blessed;
Lord of Trees, may I be blessed.

PRAYER FOR PEACE

Supreme Lord, Let there be peace in the sky and in the atmosphere, peace in the plant world and in the forests; Let the cosmic powers be peaceful; let Brahma be peaceful; Let there be undiluted and fulfilling peace everywhere.

Atharvaveda

THE WATERS, WHO ARE GODDESSES

They who have the ocean as their eldest flow out of the sea, purifying themselves, never resting. Indra, the bull with the thunderbolt, opened a way for them; let the waters, who are goddesses, help me here and now.

The waters of the sky or those that flow, those that are dug out or those that arise by themselves, those pure and clear waters that seek the ocean as their goal — let the waters, who are goddesses, help me here and now.

Those in whose midst King Varuna moves, looking down upon the truth and falsehood of people, those pure and clear waters that drip honey — let the waters, who are goddesses, help me here and now.

Those among whom King Varuna, and Soma, and all the gods drink in ecstasy the exhilarating nourishment, those into whom Agni Of-all-men entered — let the waters, who are goddesses, help me here and now. *from The Rig Veda*

HINDU

Tirukkural by Saint Tiruvalluvar:

On the Subject of Rain; On Charity; On Compassion;
On Not Eating Meat; Avoidance of Killing.

Tirumantiram by Saint Tirumular.

Verses: 407, 409, 412, 413, 1724, 1725, 3007, 3045.

Vedas by the Vedic Rishis

Brihadaranyaka Upanishad; Aitareya Upanishad; Rig Veda Samhita.

Jewish Prayers

Unison Reading

“And God saw everything that He had made, and found it very good.” And He said: This is a beautiful world that I have given you. Take good care of it; do not ruin it.

It is said: Before the world was created, the Holy One kept creating worlds and destroying them. Finally He created this one, and was satisfied. He said to Adam: This is the last world I shall make. I place it in your hands: hold it in trust.

(Gates of Prayer . . .p. 655)

Some Suggested Readings

Let the heaven rejoice, let the earth be glad. Let the sea and all it contains roar in praise. Ps. 96

Let the sea roar, and all its creatures; the world, and its inhabitants.

Let the rivers burst into applause, let the mountains join in acclaim with joy.

The Lord is coming to sustain the earth. He will sustain the earth with kindness, its people with graciousness. Ps. 98

Your works, O Lord, make me glad; I sing with joy of Your creation.

How vast Your works, O Lord. Your designs are beyond our grasp. Ps. 92

Responsive Reading

How wonderful, O Lord, are the works of your hands!

The heavens declare Your glory, the arch of sky displays Your handiwork.

The heavens declare the glory of God.

In Your love You have given us the power to behold the beauty of Your world, robed all its splendor. The sun and the stars, the valleys and hill, the rivers and lakes all disclose Your presence.

The earth reveals God's eternal presence.

The roaring breakers of the sea tell of Your awesome might; the beasts of the field and the birds of the air bespeak Your wondrous will.

Life comes forth by God's creative will.

In Your goodness You have made us able to hear the music of the world. The raging of the winds, the whisperings of trees in the wood, and the precious voices of loved ones reveal to us that You are in our midst.

A divine voice sings through all creation. *(Gates of Prayer . . .p. 652)*

Environmental Responsibility

The earth is Adonai's and the fullness thereof.

Psalm 24:1.

How great are Thy works, Adonai; in wisdom You have made them all; the earth is full of Your possessions.

Psalm 104:1,24.

God acquired possession of the world and apportioned it to humankind but God always remains the Master of the world.”

Rosh Hashanah 31a.

All that [we] see — the heaven, the earth, and all that fills it — all these things are the external garments of God. *Shneur Zalman of Liadi, Tanya, chapter 42.*

In the hour when the Holy One created the first human being, God took the person before all the trees of the garden of Eden, and said to the person: “See my works, how fine and excellent they are! Now all that I have created, for you have I created. Think upon this, and do not corrupt and desolate my world; for if you corrupt it, there is no one to set it right after you.” *Ecclesiastes Rabbah 7:28.*

Why was the first human being called Adam? Rabbi Yehuda says: By virtue of the earth (Adamah) from which Adam was taken. *Midrash Hagadol Bereshit.*

No mortal can in solid reality be ruler of anything . . . God alone can rightly claim all things . . . to this sovereignty of the Absolutely Existent, the oracle is a true witness in these words: “And the land is not to be sold in perpetuity, for all land is Mine, because you are strangers and sojourners before Me” (Lev. 25:23). A clear proof surely that in possession all things are God’s, and only as a loan do they belong to created beings. *Philo, vol. 2, Loeb Classical Library, pp. 83, 119.*

The Land is for Our Use

And God said: “Behold, I have given you every herb yielding seed, which is upon the earth, and every tree in which is the fruit of a tree yielding seed — to you shall it be for food.” *Genesis 1:29.*

God blessed them; and God said to them: “Be fruitful and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves on the earth.” *Genesis 1:28.*

The Proper Use of Technology

In a remarkable passage we read that Turnus Rufus, a pagan Roman general asked R. Akiva which was more beautiful (or useful): the works of God or the works of humanity. Holding some stalks of grain in one hand, and loaves of bread in the other, R. Akiva showed the astounded pagan that the products of technology are more suited for humanity than results of the natural process alone. So did R. Akiva proceed to explain the commandment of circumcision; both world and humanity were created incomplete, God having left it to humanity to perfect its environment and its body. Similarly, the commandments, in general were given in order that people thereby purify their character, that they attain spiritual perfection (M. Tanhuma, Tazria). Humanity, the created creator, must, in imitation of its Maker, apply its creative abilities to all life: its natural environment, its body, its soul. *Rabbi Norman Lamm in “Ecology and Jewish Law and Theology,” in Faith and Doubt. New York: KTAV, p. 178.*

Reforestation — Reclaiming the Land

One day he, Honi the circle-drawer, was journeying on the road and he saw a man planting a carob tree; he asked him, "How long does it take [for this tree] to bear fruit?" The man replied, "Seventy years." He then further asked him, "Are you certain that you will live another seventy years?" The man replied, "I found [ready grown] carob trees in the world; as my ancestors planted these for me, so I too plant these for my children." *Taanit 23a.*

If you are in the midst of planting and word reaches you that the Messiah has arrived, do not interrupt your work; first finish your planting, and only then go out to welcome the Messiah. *Rabbi Yochanan Ben Zakai.*

Pollution

The Mishnah says: If a person desires to open a shop in the courtyard, her neighbor may stop her because he [the neighbor] will be kept awake by the noise of people going and coming to and from the shop. *Baba Batra 20b.*

Care was to be taken that bits of broken glass should not be scattered on public land where they cause injury. We are told that saintly persons would bury their broken glassware deep down in their own fields (Bava Kama 30a). Other rubbish could be deposited on public land, but only during the winter months when in any event the roads were a morass of mud due to the rains (Bava Kama 30a) . . . A tannery must not be set up in such a way that the prevailing winds can waft the unpleasant odor to the town. *Louis Jacobs, "What Does Judaism Say About . . ." , p. 120.*

A permanent threshing floor may not be made within 50 cubits from the city. None may make a permanent threshing floor within one's own domain unless her property extends 50 cubits in every direction, and it must be far enough away from the plantings and plowed land of a neighbor for [the chaff] to cause no damage. Carcasses, graves and tanneries may not remain within a space of 50 cubits from the town. A tannery may be set up only on the east side of the town. Rabbi Akiba says: "[The tannery] may be set up on any side except the west." *Baba Batra 2:8-9.*

The Talmud tells a story of a farmer who was clearing stones from his field and throwing them onto a public thoroughfare. A hasid (pious one) rebuked him saying, "Worthless one! Why are you clearing stones from land which is not yours and depositing them on property which is yours?" The farmer scoffed at him for this strange reversal of the facts. In the course of time the farmer had to sell his field, and as he was walking on the public road, he fell on those same stones he had thoughtlessly deposited there. He then understood the truth of the hasid's words: the damage he had wrought in the public domain was ultimately damage to his own property and well-being.

*Tosefta, Bava Kama, 10:2. Cf. Bava Kama, 50b
(Paraphrased by Jonathan Helfand; Judaism and
Environmental Ethics)*

Environmental Land Usage

Six years shall you sow your field, and six years shall you prune your vineyard, and gather in the produce thereof. But the seventh year shall be a Sabbath of solemn rest, a Sabbath unto the Lord, you shall neither sow your field, nor prune your vineyard."

Leviticus 25:3-4.

The Holy One blessed be God said to the children of Israel: "Sow for six years and leave the land at rest for the seventh year, so that you may know the land is Mine!"

Sanhedrin 39a.

Waste Control and Sanitation

And thou shalt have a place outside the (military) camp, thither shalt thou go out, and a spade shalt thou have with the accoutrements, so that when thou sittest down outside thou shalt dig therewith, and turn back and cover over again that which cometh from thee.

Deuteronomy 23:13-15.,D

It is forbidden to relieve oneself inside the camp or anywhere on a field. It is a positive commandment to prepare a special path for easing oneself there. For it is said: "Thou shalt have a place outside the camp." Furthermore, it is a positive commandment for everyone to carry a spade as part of their war gear. One shall go out by that path and dig, ease oneself and coverup. As it is said: "A spade shall be with your gear."

Regardless whether or not the Holy Ark travels with the troops, this must be the procedure to be followed. For it is said: "Your camp shall be holy."

Maimonides, Laws of Kings, 6:14-15.

Preservation of Species

You must hate me, for you did not choose [to send a scout] from the species of which there are seven [that is, the clean birds of which Noah was commanded to take seven pairs], but from a species of which there are only two. If the power of the sun or the power of cold overwhelm me, would not the world be lacking a species? *Sanhedrin 108b.*

If you chance to come upon a bird's nest, in any tree or on the ground, with young ones or eggs, and the mother sitting upon the young or upon the eggs, you shall not take the mother with the young. You shall let the mother go, but the young you may take to yourself, that it may go well with you, and that you may live long.

Deuteronomy 22:6-7.

Moslem Reflections

Under Islam, everything is created by Allah (God) and therefore everything is sacred, useful and has its place in the general scheme of things and in the interest of man.

The protection of God's creation is therefore the duty of the Muslim and God will reward all who protect his creation.

God has created the skies, the earth, the sun and the moon, the rivers and the mountains. God has created the animals and vegetables, the birds, the fish and all that exists between the earth and sky!

The totality of the environment is God's creation and man's responsibility to protect.

The Holy Quran declares, "We have created everything from water." Hence the importance of water resources for human life. The survival of human life also depends upon agriculture and animal husbandry. Hence the Muslim obligation to be kind to animals and grateful for the availability of the rivers and the rain. Indeed, there are special prayers for rain in which Muslims express appreciation for God's bounty and beg Him to continue it by providing the faithful with rain.

The relationship of the Muslim to God is a direct and simple one. A Muslim calls upon his Creator for everything! When he is sick, he prays for God to provide him with health. If he is poor and hungry, he begs God for food and support, and so on. Hence, the permanent link between man and the environment through God and prayers to the Creator.

Islam is a religion which started in the deserts of Arabia with a universal message. Its concern for the environment is a universal concern, cutting across national, religious and geographical barriers. Its major commandments are directed, not to the Muslims, but to the human race. Hence its call upon "people" (not the Arabs nor the Muslims) to conserve the natural resources which are God's gift to mankind.

There are many verses from the Holy Quran and Hadith (statements by the Prophet), urging people to be kind to the land, to the rivers, to the air and not to abuse the fertile valleys. Kindness to "those who cannot speak" (animals) is urged by the Prophet again and again.

In his letter of recommendation, the First Muslim Khalifa, Abu-Baker, ordered his troops, "Do not cut down a tree, do not abuse a river, do not harm animals and be always kind and humane to God's creation, even to your enemies."

Muslim commitment to the sanctity of life is most pronounced during the Hajj to Mecca where the pilgrims are not permitted even to kill an insect.

Under Islam, the individual is responsible for the "good" and for the "bad." *En Absantum, Absantum le-Anfosekum wa en Asaatum fa-lahaa.* (If you do good things, you do that for yourselves, and if you do wrong things, that is for you, too!) Hence, the responsibility for the protection of the environment is an individual responsibility in the first place and a "collective" obligation of the society secondarily.

Following is a Moslem prayer for rain, called “Prayer for ‘ Istesquaa’, . . . begging God for rain.

O God! The Creator of everything!

You have said that water is the source of all life!

When we have needs, You are the Giver

When we are sick, You give us health.

When we have no food, You provide us with your bounty.

And so God, presently, we have no rain. We need water.

Our water resources are dry; we need you to help

us with rain — rain for our field, our orchards

and our animals. We need water for ablution and

general cleanliness to prepare for worshipping You, O Lord.

Our confidence, O Lord, is in you and your unlimited mercy and compassion.

Please, Merciful God, provide us with rain.”

— *Statement provided by Dr. Mohammed Mehdi, Secretary General,
National Council on Islamic Affairs*

Native American Prayers

A Call to Prayer

O Great Spirit,
Whose breadth gives life to the world
and whose voice is heard in the soft breeze
We need your strength and wisdom
May we walk in beauty. May our eyes
ever behold the red and purple sunset
Make us wise so that we may understand
what you have taught us
Help us learn the lessons you have hidden
in every leaf and rock
Make us always ready to come to you
with clean hands and straight eyes
So when life fades, as the fading sunset
our spirits may come to you without shame.

A Prayer of Awareness

ALL: Now Talking God
With your feet I walk
I walk with your limbs
I carry forth your body

For me your mind thinks
Your voice speaks for me
Beauty is before me
Above and below me hovers the beautiful
I am surrounded by it
I am immersed in it
In my youth I am aware of it
And in old age I shall walk quietly
The beautiful trail.

Religious Society of Friends Reflections

To deepen our faith and practice, Friends Committee on Unity with Nature offers the following as an expression of our goals:

To search for that Life which affirms the unity of divine creation.

To apply Friends' practice to live in deep communion with all life spirits.

To be guided by the Light within us to participate in healing the environmental crises that confront the earth.

To be an energetic forum within the Society of Friends to strengthen and deepen our spiritual unity with nature.

*Goals of Friends Committee on Unity with Nature
Revised, July 1988, at Boone, N.C.*

Minute: Our concern for the earth is a spiritual one. We feel a need to examine our faith and practice in the context of this concern. We invite and celebrate the Light that each Meeting has to shed on this.

*From a Conference on Being in Unity with Nature
Pacific Yearly Meeting, 1988*

The scope and immediacy of the current threat to life on earth have led some to call for the formulation of a clear Quaker testimony on our relationship with the natural world, and for the dissemination of such a testimony with the vigor that has marked Quaker testimonies such as those on Peace and Slavery. The following queries have been developed as a way of helping us to develop such a testimony, to examine our spiritual relationship with the natural world, and to explore the implications of living our lives centered in such a relationship.

Am I walking gently on the earth? Do I live simply, mindful how my life affects the earth and her resources?

Do I honor the life of all living things, the order of nature, the wildness of wilderness, the richness of the created world? Do I seek the holiness which God has placed in these things, and the measure of Light which God has lent them?

Do I extend the Quaker practice of answering that of God in every person to answering that of God in all creation?

Do I hold in the Light my own and other spiritual traditions to examine the extent they foster a cooperative relationship with the natural world?

What am I doing to teach others, including children and members of my community, to cherish each strand of the intricate web of life?

What actions am I taking to reverse the destruction of the earth's ecosystems, and to promote her healing?

How does my relationship to the local and global environment exemplify my attunement to and appreciation of the essential oneness of all creation. Do I accept personal responsibility for stewardship of creation?

Do I recognize that the preparation for and the conduct of war are among the greatest causes of environmental degradation?

Does my daily life exemplify and reflect my respect for the oneness of creation and my care for the environment?

Am I willing to consume less myself in order to promote rightful sharing of the world's limited resources in a manner that reduces environmental degradation? Am I prepared to give up products, services and conveniences, even those I may consider as necessities, in order to help preserve life on earth?

Do I apply honesty to my environmental relationships, accepting fully the truths that:

There is not "away" when I throw anything away.

The human species is a co-member of the global community

The material elements of the earth are finite and not inexhaustible.

As I consume material goods am I mindful of the extent that I consume the earth's resources? Do I reciprocate by nurturing the earth's resources and giving back to the earth?

Am I aware of what happens to the waste products that I generate? Do I dispose of that waste in ways that are regenerative, or at least that do no harm?

Am I careful to avoid spending and investing money in ways that result in others doing things to the world that I would not do myself?

If I own land, do I respect the heritage of the land, exercising sound stewardship over its natural resources, so that they are maintained not just for my use, but for future generations?

If a farmer or a forester, do I seek to conserve and care for the soil, the water and their wildlife habitat, so that my actions replenish, rather than deplete the land I work with?

In my work, do I seek to integrate a concern for the environment into my goals and actions, seeking ways to share with others the values and importance of environmental concerns?

Do I seek to avoid destruction of the environment by conserving energy and relying on renewable forms of energy?

Am I mindful of the extent that the rapidly increasing number of people on the earth contributes to environmental degradation? Do I accept responsibility for supporting efforts to slow population growth?

Does our Meeting plan and carry out activities such as camping, hiking, bicycling, and picnics for young Friends to develop their understanding of the environment and their appreciation of the value and beauty of wildlife in its natural surroundings of woods, fields, streams, and hills?

Do we examine and appreciate cultures and communities whose lives are based on close harmony with the natural world?

Does our Meeting inform its members about legislative issues related to clean water, clean air, soil erosion, acid rain, deforestation, protection of the wilderness, parks and forests, and nuclear, toxic and household waste disposal? As Friends, do we communicate to concerns on these matters to local, state and federal legislators?

Are friends aware of, and working with, other individuals and groups who share our concern and commitment to unity with nature?

Is our Meeting actively involved in substantial efforts to recycle glass, paper and other reusable materials, and in the preservation or enhancement of our local natural environment, including local streams and open spaces? Does our Meeting use recyclable and biodegradable materials as much as possible?

— *Friends Committee of Unity with Nature*

Baha'i Reflections

"With respect to environment . . . We cannot segregate the human heart from the environment outside us and say that once one of these is reformed everything will be improved. Man is organic with the world. His inner life moulds the environment and is itself also deeply affected by it. The one acts upon the other and every abiding change in the life of man is the result of these mutual reactions."

"Nature is God's will and is its' expression in and through the contingent world. It is a dispensation of Providence ordained by the Ordainer, the All-Wise."

"The earth is but one country, and mankind its citizens."

"Look not upon the creatures of God except with the eye of kindliness and of mercy, for Our loving providence hath pervaded all created things, and Our grace encompassed the earth and the heavens."

". . . it is not only their fellow human beings that the beloved of God must treat with mercy and compassion, rather must they show forth the utmost loving-kindness to every living creature . . . The feelings are one and the same, whether ye inflict pain on man or on beast."

From Baha'i Sacred Writings

The Bahá'í Writings

THE ENVIRONMENT

Blessed is the Spot, the house, and the place, and the city, and the heart, and the mountain, and the refuge, and the cave, and the valley, and the land, and the sea, and the island, and the meadow where mention of God hath been made, and His praise glorified.

Every man of discernment, while walking upon the earth, feeleth indeed abashed, inasmuch as he is fully aware that the thing which is the source of his prosperity, his wealth, his might, his exaltation, his advancement and power is, as ordained by God, the very earth which is trodden beneath the feet of all men. There can be no doubt that whoever is cognizant of this truth, is cleansed and sanctified from all pride, arrogance, and vainglory.

Nature in its essence is the embodiment of My Name, the Maker, the Creator. Its manifestations are diversified by varying causes, and in this diversity there are signs for men of discernment. Nature is God's Will and is its expression in and through the contingent world. It is a dispensation of Providence ordained by the Ordainer, the All-Wise.

Civilization, so often vaunted by the learned exponents of arts and sciences will, if allowed to overleap the bounds of moderation, bring great evil upon men.

Any agency whatever, though it be the instrument of mankind's greatest good, is capable of misuse. Its proper use of abuse depends on the varying degrees of enlightenment, capacity, faith, honesty, devotion and highmindedness of the leaders of public opinion.

Until material achievements, physical accomplishments and human virtues are reinforced by spiritual perfection, luminous qualities and characteristics of mercy, no fruit or result shall issue therefrom, nor will the happiness of the world of humanity, which is the ultimate aim, be attained. For although, on the one hand, material achievements and the development of the physical world produce prosperity, which exquisitely manifests its intended aims, on the other hand dangers, severe calamities and violent afflictions are imminent.

Consequently, when thou lookest at the orderly pattern of kingdoms, cities and villages . . . thou wouldst conclude that civilization conduceth to the happiness and the progress of the human world. Yet shouldst thou turn thine eye to the discovery of destructive and infernal machines, to the development of forces of demolition and the invention of fiery implements, which uproot the tree of life, it would become evident and manifest unto thee that civilization is conjoined with barbarism. Progress and barbarism go hand in hand, unless material civilization be confirmed by Divine Guidance, by the revelations of the All-Merciful and by godly virtues, and be reinforced by spiritual conduct, by the ideals of the Kingdom and by the outpourings of the Realm of Might.

Sikhism Reflections

Guru Nanak, the Founder of Sikhism, very aptly said:

“Air is the Vital Force, Water the Progenitor

The Vast Earth the Mother of All:

Day and Night are nurses, fondling

all creation in their lap.”

Nature is not only source of life, beauty and power, but it is also an inspiration of strength in formulation of our character. Man is composed of Five Elements.

According to Sikh Scripture, “Guru Granth Sahib”, These five elements of nature teach us valuable lessons:

Earth teaches us	: Patience, Love
Air	: Mobility, Liberty
Fire	: Warmth, Courage
Sky	: Equality, Broadmindedness
Water	: Purity, Cleanliness

We have to imbibe these fine traits of Nature in our personality for fuller, happier, and nobler lives.

For the sake of posterity, those countless generations of unborn children to come, let us save this Earth. Let us not misuse our privileges.

Please don't let the song of birds die.

Don't let the water babies perish.

Don't let magnificent animals become extinct.

Above all, don't let human beings die of starvation and man made disasters.

Live and Let Live

He alone is holy, eternal, none other

He who has made creation, also destroys it after.

We abide as you keep us — before you what denial avails?

Himself He creates and destroys.

Himself each to a task He appoints.

Himself grants meritorious thinking,

Himself to the *true* path directs.

Himself all-knowing, all-seeing;

Himself raising creation, He ennobles it.

Himself air, water and fire making, to *these* has granted union.

Himself is He moon and sun of perfect *enlightenment*

Himself assuming *form of* the Master heroically — endowed;

As devotion to the holy Eternal is fixed, snare of death seeks not man.

Himself is He male and female;

Himself the chessboard and chessmen.

Himself fixing arena of the world, wherein the world disports —
Himself *this play* evaluates.
Himself the humming-bee, flower, fruits and tree.
Himself the flooding water, dryland, ocean and lake.
Himself the crocodile the tortoise, almighty — unknowable Thy aspect.
Himself day and night;
Himself by the Master's word exalts.
In all time and ever the unstruck music He plays;
In each being is sound of the Lord of Supreme will heard.
Himself the unique jewel, beyond value.
Himself with perfect justice He judges.
Himself after tasting on the touchstone He absolves.
Brother! Himself *illumination* grants and *ignorance* takes away.
Himself the bow and the bowman;
Himself wisdom and sapience perfect.
Himself the lord of utterance and speech.
Himself listening — His creation the cosmos.
Air the Master and water the progenitor have we realized.
The earth that in her womb has kept us, is mother.
Night and day are nurses that the whole world fondle.
Himself the fish and net.
Himself *herd of kine*,
Himself the keeper.
Lord, as decreed by you, in all creatures is pervasive your light.
Himself the ascetic and world-enjoyer.
Himself the voluptuary, master of supreme felicity.
Himself unattached, formless, in fearless trance absorbed.
All species and their utterance in Thee absorbed.
All that is visible, is evanescent.
Such are the masters of *true* wealth, the merchants of truth,
As by the Master are granted realization.
The Master, perfectly endowed,
Who with the holy Eternal, Lord of all faculties is fulfilled.
Himself the tree, with outspread branches.
Of His cultivation is He Himself guardian.
Wherever I look, His sole presence I behold;
Himself in each being immanent.
Himself the sun, with rays outspread;
Himself the hidden reality; Himself the visible forms.
Attributed and unattributed are two terms devised —
Both in unison one Reality formulate.

Saith Nanak: The Master our illusion and fear has shed;
The Lord, Bliss Incarnate, with our eyes have we beheld.

The International Society for Krishna Consciousness The Peace Formula

"The earth is the property of God, but we, the living entities, especially the so-called civilized human beings, are claiming God's property as our own, under both an individual and collective false conception. If you want peace, you have to remove this false conception from your mind and from the world . . ."

The great mistake of modern civilization is to encroach upon others' property as though it were one's own and to thereby create an unnecessary disturbance of the laws of nature. These laws are very strong. No living entity can violate them. Only one who is Krsna conscious can easily overcome the stringency of the laws of nature and thus become happy and peaceful in the world.

As a state is protected by the department of law and order, so the state of Universe, of which this earth is only an insignificant fragment, is protected by the laws of nature. This material nature is one of the different potencies of God, who is the ultimate proprietor of everything that be. This earth is, therefore, the property of God, but we, the living entities, especially the so-called civilized human beings, are claiming God's property as our own, under both an individual and collective false conception. If you want peace, you have to remove this false conception from your mind and from the world. This false claim of proprietorship by the human race on earth is partly or wholly the cause of all disturbances of peace on earth.

Foolish and so-called civilized men are claiming proprietary rights on the property of God because they have now become godless. You cannot be happy and peaceful in a godless society. In the *Bhagavad-gita* Lord Krsna says that He is the factual enjoyer of all activities of the living entities, that He is the Supreme Lord of all universes, and that He is the well-wishing friend of all beings. When the people of the world know this as the formula for peace, it is then and there that peace will prevail.

Therefore, if you want peace at all, you will have to change your consciousness into Krsna consciousness, both individually and collectively, by the simple process of chanting the holy name of God. This is a standard and recognized process for achieving peace in the world. We therefore recommend that everyone become Krsna conscious by chanting Hare Krsna, Hare Krsna, Krsna Krsna, Hare Hare/Hare Rama, Hare Rama, Rama Rama, Hare Hare.

This is practical, simple, and sublime. Four hundred and eighty years ago this formula was introduced in India by Lord Sri Caitanya, and now it is available in your country. Take to this simple process of chanting as above mentioned, realize your factual position by reading the *Bhagavad-gita As It Is*, and reestablish your lost relationship with Krsna, God. Peace and prosperity will be the immediate worldwide result.

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RECENT ALBUMS WITH ENVIRONMENTAL THEMES

- Paul Winter: *Miss Gaia, Common Ground, Calling, Wales Alive, Concert for the Earth*
- Jim Scott. *Radiance*
- David Darling: *River Notes*
- Gentlemen Without Weapons. *Transmissions*

LIVING GREEN: 101 Green Things You Can Do

The Green Movement is more than a political ideology because Green values also involve how we live every day. This list is for those who have the "Green Spirit" and would like to incorporate it further into daily living . . . Only by activating the

items on this list, can our great-great-great grandchildren have an opportunity to interact directly with the great whales, the elephants, the ravens, the wolves. This list was created by Interspecies Communication board member Christoph Enderlein and his wife Mary-Clayton. Feel free to copy, but do not change it without permission.

1. Recycle paper, glass, and metals
2. Recycle motor oil, dispose of hazardous waste responsibly
3. Use cloth diapers
4. Reuse egg cartons and paper bags
5. Avoid using styrofoam
6. Avoid disposable plates, cups and utensils
7. Use rags instead of paper towels
8. Use paper bags, not paper towels, to drain grease
9. Give away rather than dispose of unneeded items
10. Use the back of discardable paper for scratch paper
11. Be responsible and creative with leftover food
12. Use the water from cooking vegetables to make a soup
13. Mend and repair, rather than discard and replace
14. Invest in well-made, functional clothing
15. Buy bulk and unpackaged rather than packaged goods
16. Purchase goods in reusable or recyclable containers
17. Buy organic, pesticide-free food
18. Avoid highly processed foods
19. Eat foods from low on the food chain
20. Compost your food scraps
21. Grow your own food (even small kitchen gardens!)
22. Volunteer to start or help with a community garden
23. Support your local food co-ops
24. Discover where the food and goods you buy come from
25. Buy locally grown produce and other foods
26. Use glass and steel cookware rather than aluminum
27. Volunteer to maintain local parks and wilderness
28. Buy living Christmas trees
29. Plant trees in your community
30. Learn about the plants and animals in your region
31. Discover your watershed and work to protect it
32. Oppose the use of roadside defoliant in your area
33. Use non-toxic, biodegradable soaps and detergents
34. Use non-toxic pest control
35. Don't buy products tested on animals
36. Keep hazardous chemicals in spillproof containers
37. Put in a water-conserving showerhead
38. Take shorter showers
39. Turn off the water while you brush your teeth
40. Put a water conservation device in you toilet tank
41. Learn where you waste and sewage goes
42. Learn where the energy for your home comes from
43. Support you local utility's conservation program
44. Hang your clothes out to dry
45. Be sure your home is appropriately insulated
46. Weather-seal your home thoroughly
47. Heat your home responsibly, with renewable energy
48. Don't burn green wood
49. Choose the longterm investment of solar energy
50. Turn off lights when not in use
51. Turn down your hot water heater

52. Lower your thermostat and wear warmer clothes
53. Buy energy efficient electrical appliances
54. Keep your car engine well tuned
55. Drive a fuel-efficient car that uses unleaded gas
56. Walk, bicycle, carpool, and use public transportation
57. Shop by phone first, then pick up your purchase
58. Use rechargeable batteries
59. Research socially-responsible investments
60. Support local credit unions
61. Support local shops and restaurants, not chains
62. "Adopt a grandparent" from the local senior center
63. Volunteer to cook for senior citizens
64. Provide for children in need
65. Hold a community potluck to meet your neighbors
66. Pick up litter along highways and near your home
67. Sponsor a clothes swap
68. Become involved with community projects and events
69. Organize or participate in community sports
70. Be responsible for the values you express
71. Participate in sister city and cultural exchanges
72. Educate yourself on global and "third world" issues
73. Learn about the cultural diversity in your region
74. Work for global peace
75. Learn how your legislators vote, let them know your views
76. Be an active voter — attend "Town Meetings"
77. Vote for candidates who support Green values
78. Become involved with your child's school
79. Encourage you child's natural talents and interests
80. Organize or join a neighborhood toy co-op
81. Put toxic substances out of reach of children
82. Teach your children ecological wisdom
83. Listen to their needs and support their dreams
84. Discourage the use of violent toys in your household
85. Communicate openly with your friends and coworkers
86. Acknowledge someone who provides quality service
87. Work to understand people with different views
88. Be conscious of the struggles of oppressed people
89. Unlearn cultural sexism and racism
90. Acknowledge individual spirituality in yourself and others
91. Donate blood if your health permits
92. Explore ways to reduce the stress in your life
93. Practice preventative health care
94. Exercise regularly and eat wisely
95. Bring music and laughter into your life
96. Learn about the medications you put into your body
97. Practice responsible family planning
98. Learn First Aid and emergency procedures
99. Take time to play, relax, and go into nature
100. Decrease TV-watching and increase creative learning
101. Have fun and be joyful!

EARTH COVENANT

A Citizens' Treaty for Common Ecological Security

Preamble

We, the peoples of the Earth, rejoice in the beauty and wonder of the lands, skies, waters, and life in all its diversity. Earth is our home. We share it with all other living beings.

Yet we are rendering the Earth uninhabitable for the human community and for many species of life. Lands are becoming barren, skies fouled, waters poisoned. The cry of people whose land, livelihood and health are being destroyed is heard around the world. The Earth itself is calling us to awaken.

We and all living beings depend upon the Earth and upon one another for our common existence, well-being, and development. Our common future depends upon a reexamination of our most basic assumptions about humankind's relationship to the Earth. We must develop common principles and systems to shape this future in harmony with the Earth.

Governments alone cannot secure the environment. As citizens of the world, we accept responsibility in our personal, occupational and community lives, to protect the integrity of the Earth.

Principles and Commitments

In covenant with each other and on behalf of the whole Earth community, we commit ourselves to the following principles and actions:

- *Relationship with the Earth:* All life forms are sacred. Each human being is a unique and integral part of the Earth's community of life and has a special responsibility to care for life in all its diverse forms.

Therefore, we will act and live in a way that preserves the natural life processes of the Earth and respects all species and their habitats. We will work to prevent ecological degradation.

- *Relationship with Each Other:* Each human being has the right to a healthful environment and to access to the fruits of the Earth. Each also has a continual duty to work for the realization of these rights for present and future generations.

Therefore—concerned that every person have food, shelter, pure air, potable water, education, employment, and all that is necessary to enjoy the full measure of human rights—we will work for more equitable access to the Earth's resources.

- *Relationship Between Economic and Ecological Security:* Since human life is rooted in the natural processes of the Earth, economic development, to be sustainable, must preserve the life-support systems of the Earth.

Therefore, we will use environmentally protective technologies and promote their availability to people in all parts of the Earth. When doubtful about the consequences of economic goals and technologies on the environment, we will allow an extra margin of protection for nature.

- *Governance and Ecological Security:* The protection and enhancement of life on Earth demand adequate legislative, administrative and judicial systems at appropriate local, national, regional, and international levels. In order to be effective, these systems must be empowering, participatory, and based on openness of information.

Therefore, we will work for the enactment of laws that protect the environment and promote their observance through educational, political and legal action. We shall advance policies of prevention rather than only reacting to ecological harm.

Declaring our partnership with one another and with our Earth, we give our word of honor to be faithful to the above commitments.

UNITED NATIONS ENVIRONMENT PROGRAMME
NORTH AMERICAN ENVIRONMENTAL SABBATH

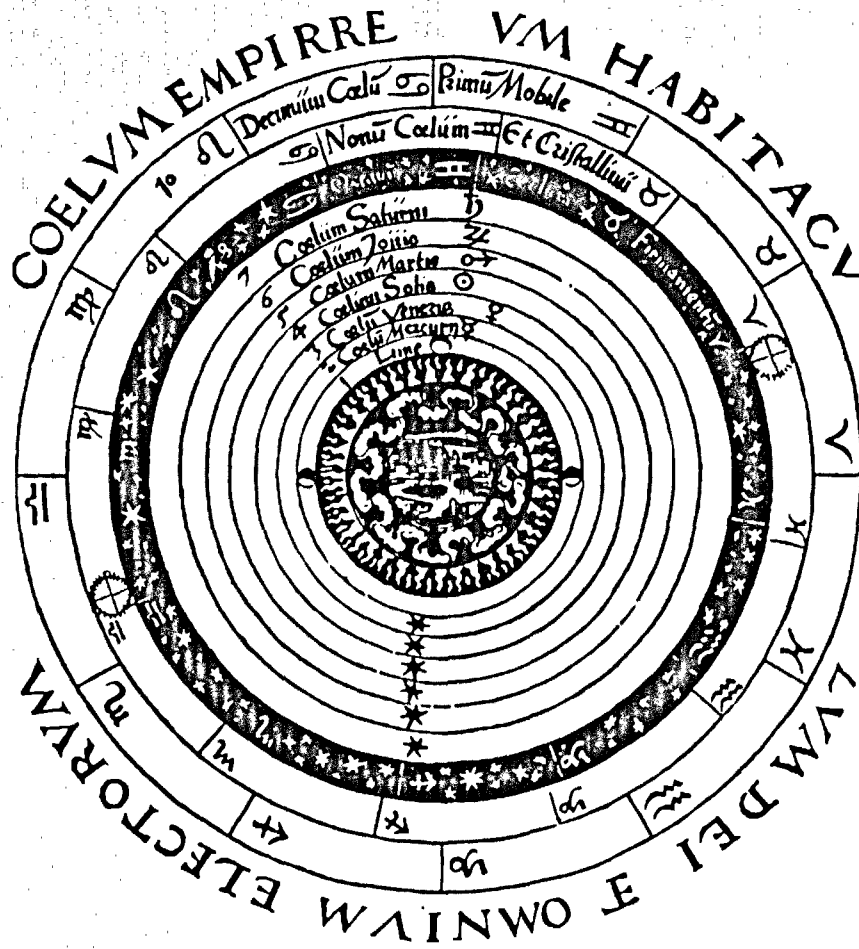
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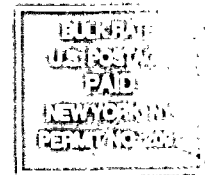
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This 16th-century engraving represents a conceptualization that mixes metaphysics and astronomy to analyze the realm of the heavens.

United Nations Environment Programme
 United Nations, Room DC 2-802,
 New York, New York 10017



Home Personal

ings are interconnected . . .

ver befalls the earth befalls the people of the earth.

nd not weave the web of life; he is merely a strand in it.

ver he does to the web, he does to himself."

Chief Seattle



All known life exists within the thin, fragile layer which lies between the earth's crust and the vast universe. Humanity is now its caretaker. Exponential population growth from one to five billion in the last 150 years coupled with wasteful consumption patterns have brought about an unprecedented environmental crisis: we are poisoning our land, water, and air, depleting natural resources, and destroying the biosphere which maintains life.

The World Commission on Environment and Development, established by the General Assembly of the United Nations, served an urgent notice

The higher we eat on the food chain, the more natural resources and pesticides we consume. Animals raised for food in the U.S. eat enough grain to feed over five times the U.S. human population; if Americans reduced meat eating by 10%, the 12 million tons of grain saved annually could feed all the people on earth who starve to death.

Animal agriculture is responsible for: 85% of topsoil loss; 260 million acres of U.S. forest destruction; over half our water consumption; 20 billion pounds of manure every day, contaminating groundwater; and 25 times the fossil fuel needed to produce the same amount of protein in grain. Processing food wastes valuable resources. Pesticides poison groundwater, kill wildlife, and trigger the spread of insects and weeds resistant to pesticides. Our growing reliance on monoculture foodcrops is eroding the resilience of genetic diversity, increasing the likelihood of whole species being wiped out by pathogens, pests, and weather fluctuations.

ACTIONS:

- Consider how the production of the food you eat affects the environment.
- Eat lower on the food chain — vegetables, fruits, and grains; decrease consumption of meat and animal products.
- Learn vegetarian recipes and encourage restaurants to serve vegetarian foods; in addition to environmental damage, the high cholesterol in meats contributes to many of the chronic diseases.
- Read the labels on food; buy foods that have not been heavily processed; learn which additives are harmful. (Center for Science in the Public Interest, see next page).
- Support laws that ban harmful pesticides and that require disclosure of pesticides, drugs, and other chemicals used in food production; support markets that offer contaminant-free food.

- Close off and do not heat unused rooms.
- Use insulating shades and curtains on cold winter nights and hot summer days; allow sun in on cold days for heat.
- Install double pane windows, storm windows, or new "superwindows."
- Install passive-solar south windows for space heating, and solar collectors for water heating.
- Cool house by opening windows at night and closing them during the day; use attic fans and window coatings; use a room air conditioner rather than a central system.
- Plant deciduous shade trees that protect west windows from summer sun but allow it in during the winter.
- Use electricity and hot water efficiently.
- Add an insulation blanket to your water heater; turn it down to 120 degrees; insulate hot water pipes.
- Use high-efficiency electrical appliances; compare energy guide labels.
- Use your clothes dryer only when you have a full load; air dry whenever possible.
- Use low-voltage, low-watt or compact fluorescent light bulbs.
- Use solar photovoltaic cells to run yard lights.
- Turn off heat, water heater, and pilot lights when you are on vacation.
- Buy local and recycled products to cut indirect energy use.

WATER



In the United State, over half the population drinks groundwater, 40% of which comes from untreated contaminated wells. Industrial and agricultural pollution, underground injection of waste disposal, and chemical

- Buy food grown organically if possible; organically grown food doesn't use harmful pesticides, requires less energy-powered machinery, and recycles organic waste, thus retaining the nutrients in the soil.
- Grow food gardens rather than lawn, saving water and energy and producing pesticide-free produce.
- Buy foods grown locally and in season to cut energy consumption.
- Be aware that many consumer groups question the health and environmental safety of food irradiation, food irradiation plants, and transportation of radioactive substances; irradiated whole foods are labeled; ask your grocer if prepared/processed foods are irradiated.
- Support the development of seed exchanges and home gardening with heirloom varieties of seeds of maintain genetic diversity.
- Inform schools, hospitals, airlines, stores, restaurants, and the media of your food concerns.

ENERGY



Between 1850 and 1950, the United States switched from being 91% dependent on renewable wood to being 96% dependent of nonrenewable oil, coal, and natural gas. Burning these fossil fuels produces gasses that are polluting and seriously damaging our environment. Carbon dioxide build-up is causing a global greenhouse effect which will likely raise temperatures and sea levels, disrupting agriculture and ecosystems worldwide.

The U.S. adds over a billion tons of carbon to the atmosphere each year. Sulfur and nitrogen oxides contribute to acid rain, which is killing fish, trees and crops, damaging buildings, and polluting water. Nuclear energy is expensive, technically problematic, and environmentally risky. Renewable energy is safe and plentiful, but few systems have been developed to harness it adequately. Using energy efficiently can greatly reduce household energy requirements.

SOLUTIONS:

- Drive an energy efficient car, preferably one that gets 40 mpg or better; use radial tires.
- Save gas by driving smoothly, within the speed limit; have regular tune-ups and emissions checks.
- Use public transportation, carpool, bike, or walk.
- Get a free or low-cost home energy audit from your utility company.
- Invest in ample insulation, weatherstripping, and caulking.
- Use natural gas rather than electricity for heat and appliances for a considerable savings in energy.
- Use a clock thermostat to control heat; turn down the thermostat a few degrees, especially at night and when house is empty; wear warmer clothes.

wastes from mining and petroleum production are steadily accumulating in our water.

Once groundwater is contaminated, it is extremely difficult and quite expensive to purify. Aquifers, or underground water supplies, are shrinking all over the world. In all but countries of very high rainfall, we are delving into and seriously depleting our "capital" instead of living off our "income" of available water.

SOLUTIONS:

- Install sink faucet aerators and water-efficient showerheads; these use two to five times less water with no noticeable decrease in performance.
- Take showers instead of baths to cut water consumption.
- Do not let water run when it's not actively in use while you are showering, shaving, brushing your teeth, washing dishes or hand washing clothes.
- Promptly replace rubber washers on leaky water valves.
- Use ultra low-flush or air-assisted toilets, saving 60-90% water; composting toilets use no water, and recycle organic waste.
- Use water-efficient washing machines and dishwashers, and run them only when they are full.
- When washing dishes in the sink, plug and fill second sink with rinse water rather than running water freely.
- Cut down on car washings, and shut off the hose when you are soaping the car.
- Minimize hosing down your driveway or patio; sweep instead.
- Water your lawn only when the grass doesn't spring back when it is stepped on.
- Water at night with a timer; use efficient equipment.
- Use an underground drip irrigation system for your garden; the water goes directly to the roots, without evaporation or wastage.
- Use rainwater or "greywater" from sinks and showers for plants and garden.
- Consult your nursery about plants native to your environment or from similar climates which require little or no watering.
- Buy phosphate-free, biodegradable soaps and detergents; ask your supermarket to carry them if it doesn't already.
- Find out where your water comes from, what is in it, and what is being done to test or treat it; if it's contaminated:
- Ask your congressmen to enforce laws on water safety.
- Join with local groups and neighbors in demanding that the industries responsible for contaminating it pay for cleaning it up.
- Request your water utility company to treat water.
- Install a water filtration system that removes the specific contaminants in your water.

ENVIRONMENT PROGRAMME

Action Guide

in 1987. They proclaimed that hope for future life of earth depends on our taking decisive action now to manage environmental resources. They called for a common endeavor and for new norms of behavior in the interest of all.

The responsibility belongs to each of us. We can no longer make our decisions in isolation of the larger whole: Our planet is a closed system, and we are all inheritors of our past actions. We must each assess the consequences of our daily decisions — our purchases, our use of natural resources, our methods of waste disposal. Our economic decisions can no longer be based simply on short-term gain; long-range effects on health

and environment must be part of the equation. Stewardship and reverence for all of life need to be in the forefront of our thinking. The whole system and its future must be considered if life on this planet is to survive and prosper.

The United Nations Environment Programme (UNEP) invites you to take increased responsibility for the critical condition of our environment. This booklet gives suggestions on what each of us can do in our daily lives to make a difference.

TOXINS & POLLUTANTS

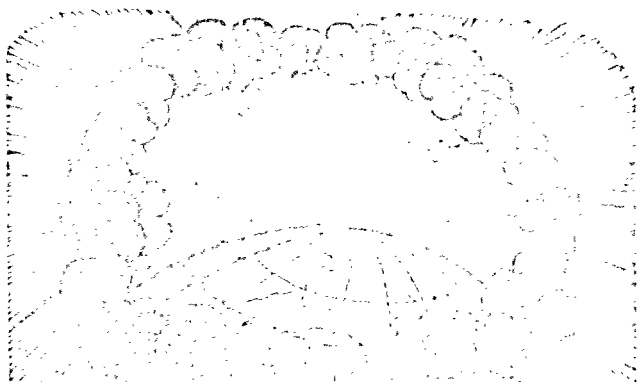


The earth's protective ozone layer is being depleted by chlorofluorocarbons (CFC's), methyl chloroform and carbon tetrachloride, increasing the likelihood of skin cancer, global climate change, serious reduction of crop yields, and disruption of the marine food chain. CFC's are in refrigerators, air conditioning units, plastic foam insulation, solvents, and halon fire extinguishers.

Advanced nations manufacture 70,000 different chemicals, most of which have not been thoroughly tested for toxicity. Much of the pollution that runs into our rivers and oceans is introduced through our homes by way of sewers and storm drains: insecticides, herbicides, car oil, paint, thinner, harsh cleansers, etc. Toxic substances thrown into the trash go to landfills or incinerators, and end up in our air, water, and soil.

SOLUTIONS:

- Request a bill in Congress to ban CFC's by 1995, to require labeling of products containing CFC's stating their dangers to the environment, to tax CFC producers, to ensure the safety of alternatives, to prohibit preventable emissions and to prohibit the import of CFC products.
- If your car air conditioner is leaking or needs repair, ask your service station to use CFC recovery equipment.
- Use fiberglass instead of plastic foam insulation.



- Double-side photocopies; use reverse sides of paper.
- Buy products in bulk or with the least packaging.
- Put parcels in one large bag rather than using several smaller ones.
- Bring your own canvas shopping bags to the market, or reuse paper bags.
- Buy products that are recycled, recyclable, reliable, repairable, refillable, reusable; avoid disposables.
- Ask for paper bags instead of plastic at the market.
- Buy returnable/recyclable glass, metal, or plastic containers.
- Ask for recycled paper at stationers and printers.
- Recycle/reuse motor oil, tires, and scrap metal.
- Don't use disposable plastic items, like razors.
- For infants, use cloth or biodegradable diapers.
- Separate your recyclable garbage (newspaper, glass, paper, aluminum, and organic waste if you have a garden); only send to the landfill what you can't reuse.
- Use curbside pickup for recyclables if available; if not:
- Contact your City Council.
- Support local, state, and national recycling legislation and initiatives.
- Request independent garbage companies to begin this service.
- Join with local environmental groups and neighbors to strengthen your position.
- Or, make regular trips to your local recycling center; ask if they recycle plastics, batteries, and appliances.
- If you don't have a recycling center, request that your city council establish one.
- Find local groups that can use your recyclables.

- Replace CFC solvents (used mostly in electronics and hospitals) with safer products, or contain and recycle them.
- Avoid purchasing clothes that require dry cleaning, which uses toxic chlorinated solvents, or dry clean infrequently.
- Read labels, and buy the least toxic products available: "danger" or "poison" means highly toxic, "warning" means moderately toxic, "caution" means slightly toxic.
- Dispose of your toxic products through household hazardous waste collection; if it is not available, contact your elected representatives to mandate it.
- Use nonharmful substitutes; for cleaning: baking soda and/or salt can be used as a cleanser, vinegar in water cleans glass and tile floors, oil and vinegar polishes furniture and wood floors; for insects: peppermint, pennyroyal, or red chili powder repels ants, cloves and citrus oil repels flies.
- To control insects keep environment clean and screened.
- Replace asbestos heat insulation in exposed places.
- Test your home for radon, especially if on the east coast.
- Test for formaldehyde gas; chipboard, plywood, insulation, carpet, and upholstery may contain it.
- Avoid cigarette smoke; its gases are toxic.
- Join with local groups and neighbors to pressure polluting industries; support legislative initiatives that encourage industry to modify manufacturing processes to eliminate the production of hazardous wastes, and reduce, reuse, recycle what is produced.

PRESERVATION OF LIFE & ENVIRONMENT



Over population and overuse stress the environment. The U.S. population is growing faster than any other industrialized country, and with only 5% of the world's population, it uses 25% of the resources. Humanity's short-sighted consumption has destroyed 40% of the earth's rainforests in the last 30 years, now 70,000 acres per day, for agricultural development, cattle-grazing, settlements, fuelwood, and tropical lumber.

This loss of rainforest is contributing to the build-up of carbon in the atmosphere, to the destruction of native cultures and wisdom, and to the extinction of plants and animals which produce foods, medicines, and raw materials vital to human survival. Over half of the earth's plant and animal species live in these rainforests; as many as 100 species may be going extinct each day due to habitat destruction, exploitation, and pollution.

SOLUTIONS:

- Be aware that overpopulation stresses the environment; an average of two children per family achieves zero population growth.
- Don't buy endangered plants, animals, or products made from overexploited species, such as furs, ivory, reptile skin or tortoise shell.
- Avoid buying wood from the tropical rainforests unless you are sure it was propagated by sustainable tree farming methods.
- Boycott canned tuna, (let tuna companies know you are boycotting them), until they stop buying tuna caught by methods that unnecessarily kill at least 100,000 dolphins each year.
- Avoid food whose production endangers the environment; ask fast food chains if the hamburgers they serve are from rainforest cattle.
- Protect and plant trees; they produce oxygen from carbon dioxide and reduce pollution; around the home, they decrease rain water runoff and increase natural cooling.
- Buy products from companies that don't pollute or damage the environment and don't test products on animals.
- Become informed on environmental issues and how they affect your life, your community, your world.
- Join, support, volunteer your time to organizations working on causes that are important to you.
- It is very important to contact your elected representatives through letters, telegrams, calls or visits, to support bills that affect the environment.
- Use your local newspaper; write letters to the editor, contact a staff writer about a news story, take out an ad.
- Notify program directors of radio and television stations of newsworthy stories with environmental impact.

WASTE REDUCTION/RECYCLING



In the United States, each year we generate nearly a ton of trash per person; 90% of this ends up in local landfills, half of which will be full within three years. Incineration causes molecules to regroup and form some of the most toxic molecules known. The most environmentally sound and cost effective means to alleviate the crisis is to reduce the amount of waste we generate in the first place.

More than half our wastes can be economically recycled. Recycling existing manufactured materials instead of using virgin resources would save: for paper production, up to 75% energy, more than half the water needed, and millions of acres of forest; for drink containers, half a million tons of glass and fifty million barrels of oil annually, as well as 80% of the mining required for new glass; for aluminum, 95% savings of energy, with similar savings in air and water pollution.

SOLUTIONS:

- Reduce consumption wherever possible.
- Use mugs instead of paper cups (paper before styrofoam), cloth instead of paper napkins, rags instead of paper towels.