



World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

Winter 2003

Vol. XIV, No. 4

\$15.00

Available in:
Arabic, English, Russian,
Spanish and Ukrainian

In this issue:

- 1 Special Focus:
**Healthier
Forests for a
Healthy World**
- 8 Health and
Environment:
**A Persistent
Struggle**
- 9 Food for
Thought:
**Projecting
Issues of
Population
Growth**
- 10 Chernobyl
Update:
**Cuba's
Response**
- 11 Good News
- 12 Did You Know?
- 13 Voices
- 16 Point of View:
**Faith, Women
and Health**



The WIT Report
is printed on
recycled paper.

Special Focus:

Healthier Forests for a Healthy World

Caring for ourselves in order to increase the chances of enjoying life in good health may seem like common sense. Yet, everyday around the world and in our own backyards people engage in activities that directly endanger human health: environmental pollution, global climate change, habitat destruction, the spread of invasive species and resource exploitation. These trends may threaten human health far more than we realize, or can even measure.

Biodiversity

The health of the natural world is often measured by examining the distribution and health of the many plants and animals which share this planet with us. Ecologists have shown that the healthier an ecosystem is the more diversity it will contain. Forest genetic resources, defined as the genetic variation present in the thousands of tree species on earth, constitute an inter-generational resource of vast social, economic, and environmental importance. For example, tropical fruit trees are important multipurpose species that supplement and improve the quality of diets and provide fodder, fuel, timber and medicine for local stakeholders. Furthermore, forests and woodlands provide a wide range of goods and services, such as gum, resins, shade shelter, and environmental stabilization. They are repositories of aesthetic, ethical, cultural and religious values.

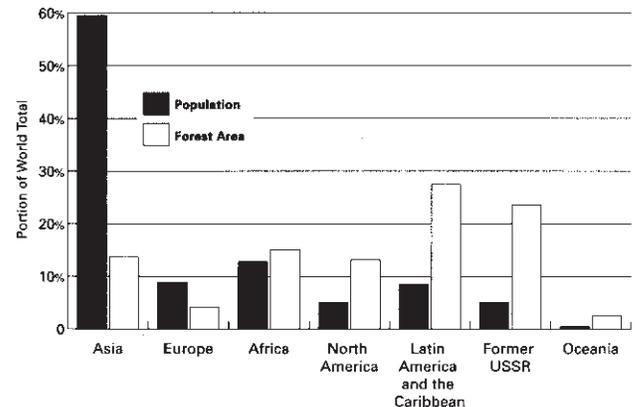
Unfortunately, the products of biological and cultural diversity are undervalued. There are two main reasons for forest exploitation and destruction under these circumstances. First, forests have been undervalued and thus misused. Second, the benefits from forest exploitation and conversion have been overestimated. Forest biodiversity is being lost mainly to the rapid deforestation, fragmentation, and degradation of all forest types.

Economic botany

The loss of forest diversity implies great loss of potential future drugs. About 80 percent of people in developing countries still rely on traditional medicine—based largely on species of plants and animals—for their primary health care. Many of these remedies are not scientifically explored yet.

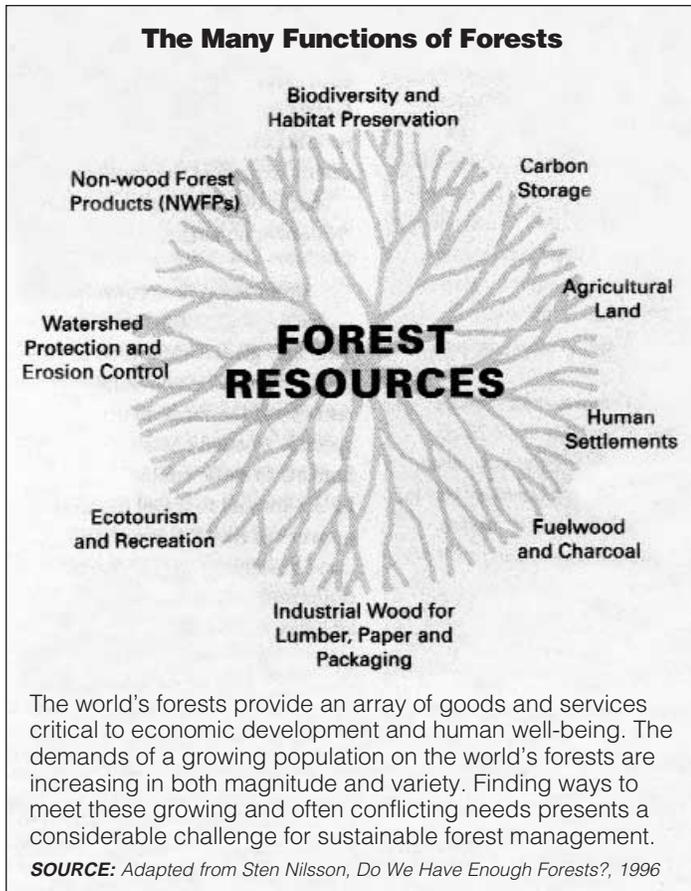
More efforts are required to create and disseminate scientific knowledge on medicinal

Percentage of the World's Forests and Population by Region: 1995



The ratio of forest area to population varies by region. Asia, for example, contains 60 percent of the world's population but less than 15 percent of the world's forests.

SOURCE: Forest area data from *State of the World's Forests, 1999*, FAO



Underlying drivers include poverty, population growth, growing trade in forest products.

Forests are also damaged by insect pests, fire, extreme climatic events, and by acid rain due to air pollution. The net loss in global forest area during the 1990s was about 94 million ha (equivalent to 2.4 percent of total forests).

Global overview

The total area covered by forest is approximately 3,866 million ha, almost one-third of the world's land area, of which 95 per cent is natural forest. Seventeen per cent of the world's forests are in Africa, 19 per cent in Asia and in the Pacific, 27 per cent in North America, and 25 per cent in Latin America and the Caribbean. About 47 per cent of forests are subtropical. Nine per cent worldwide are tropical, 11 per cent temperate and 35 per cent boreal.

■ Africa's forest cover is estimated at 650 million ha. The major forest types are dry tropical forests in the Sahel, Eastern and Southern Africa, moist tropical forests in Western and Central Africa, sub tropical forest and woodland formations in Northern Africa and the southern tip of the continent, and mangroves in coastal zones. They include a number of biodiversity hotspots. Only 1 per cent of forests in Africa has been planted. The annual rate of change in total forest area from 1990 to 2000 for the whole of Africa was estimated to be -0.74 per cent, equivalent to losing more than 5 million ha of forest a year, an area roughly the size of Togo and the highest rate of any region. Countries with the highest annual deforestation rates are Burundi (9.0 per cent), Comoros (4.3 per cent), Rwanda (3.9 per cent) and Niger (3.7 per cent). Only seven countries increased their forest areas over the same period.

Economic development strategies and lax implementation of forest protection regulations are the principal pressures on forest resources. Governments in Western and Central Africa have given concessions to private firms for logging selected species. The timber is mostly imported to earn foreign exchange. Forest clearance has negative economic impacts through loss of future export opportunities, tourism revenue and pharmaceutical development options. The annual cost of deforestation in Uganda has been conservatively estimated at US\$ 3-6 million. In many countries of Central and West Africa, more than 80 per cent of domestic energy requirements are met from wood fuel. In Madagascar and the Comoros collection of wood for fuel is the largest cause of forest clearance. Wood collection often changes the species composition of forest or woodland. In addition, nutrients are removed from the ecosystem, and animals may be deprived of shelter and nesting material. In Zambia, some 430 km₂ of woodland are cleared annually to

plants for human health improvement. Examples for pharmaceutical products that are derived from trees are the anti-ovarian cancer agent taxol, derived from the bark of the Pacific yew, *taxus brevifolia* and the leaf extract of ginko biloba or a substance from the rosy periwinkle to treat leukemia.

Threatened forests

One fourth of all tropical plants may be wiped out in the next 30 years. Outside the tropics, the greatest concentration of threatened plants is found in South Africa where 13% of endemic plants are at risk. In southwestern Australia, two-thirds of plant species are endangered by a fungus disease carried by humans walking or driving through the bush.

In the U.S., nearly one in eight native species is in danger. According to the Red List of Threatened Plants compiled by the World Conservation Union, worldwide 13.8% of vascular plants are imperiled. In addition, much of earth's biodiversity is clustered in tropical regions. Many of these "hotspots" of biodiversity are populated by indigenous peoples. Today most of the world's indigenous peoples are as imperiled as their forests.

Deforestation over the past 30 years has been the continuation of a long historical process which includes expansion of agricultural land. Major direct causes of forest clearance and degradation are over-harvesting of wood for industry, for fuel, for other forest products, and overgrazing.

In the United States 25 percent of prescriptions are filled with drugs whose active ingredients are extracted or derived from plants.

Forest area has increased slightly since 1980 in industrial countries, but has declined by almost 10 percent in developing countries.

produce charcoal. In the Western Indian Ocean Islands of Tatamaca, ebony and baobab have almost become extinct due to selective exploitation.

■ Asia and the Pacific region accounts for 18.8 per cent of global forests. Within the region, Northwest Pacific and East Asia have the largest forest area (29.3 per cent of the regional total), followed by Southeast Asia. The average per capita availability of forest area in the region was 0.2 ha, less than one-third of the world average of 0.65 ha per person.

Deforestation and forest degradation are critical issues. Population pressure, heavy dependence on fuel wood, timber and other products, as well as conversion of natural forests to agricultural, urban and industrial land are the underlying factors for the deforestation in the region. Forest degradation and deforestation have also resulted from overgrazing and shifting cultivation. In addition, as forests have become degraded, fire, pests, diseases and natural disasters have caused greater damage. Construction of irrigation schemes, dams and reservoirs as well as mining are further causes.

More than 40 per cent (and the highest diversity) of the world's mangroves grow along the coasts of South and Southeast Asia. A further 10 per cent grow in the Pacific. Mangrove forests provide numerous benefits to people and the environment, but they are disappearing at an alarming rate in this region. More than 60 per cent (some 11 million ha) of Asia's mangroves have already been converted to aquaculture and more have been cleared to make way for rice farming or urban and industrial land use. Those that remain are exploited for timber, fuel wood, tannin and food items.

Many countries are highly dependent on wood to meet national energy needs, and this use accounts for some three-quarters of total round wood production. In Nepal, for example, fuel wood accounts for 70 per cent of the country's total energy demands. Fire is an important and recurring phenomenon in these forest ecosystems. Much deforestation in the Pacific Island countries stems from commercial logging. New Zealand and Australia have also lost large amounts of their native forest and vegetation. Nearly 70 per cent of New Zealand was covered with native forest before the Europeans arrived in the early 19th century. Native forest now covers only about 16 per cent of the land area. The downside of forest clearance and degradation has been widely recognized and many governments have implemented forestry legislation and programs that aim at afforestation. Zero burning policies have been adopted by Thailand and Malaysia.

The region contains over 60 per cent of the world's plantation forests. In India, Joint Forest Management was intro-

duced in 1990 and about 45,000 village communities in 21 states are involved in improving degraded areas. A portion of the income from selling timber is given to the community in addition to the right to gather non-wood forest products. In the Philippines, a system of Integrated Protected Areas attempts to protect biodiversity and involve communities as stakeholders in managing forests. When the Chinese government began afforestation programs, forest coverage increased from 13.9 per cent in 1993 to 17.5 per cent in 2000.

■ Europe's 1,051 million ha of forests comprise 27 per cent of the world's total forest area and cover 45 per cent of the European landscape. Forest cover ranges from 0.3 per cent in Iceland to 72 per cent in Finland. A wide variety of boreal, temperate and sub-tropical forests are represented, as well as tundra and montane formations. Since the 1970s afforestation has gradually increased the area under forests: between 1990 and 2000 almost 9.3 million ha were added. However, old growth forests and forests of indigenous tree species are decreasing. Forest practices, relying on monocrop plantations and even-aged stands of exotic species, have not been conducive to maintaining biological diversity.

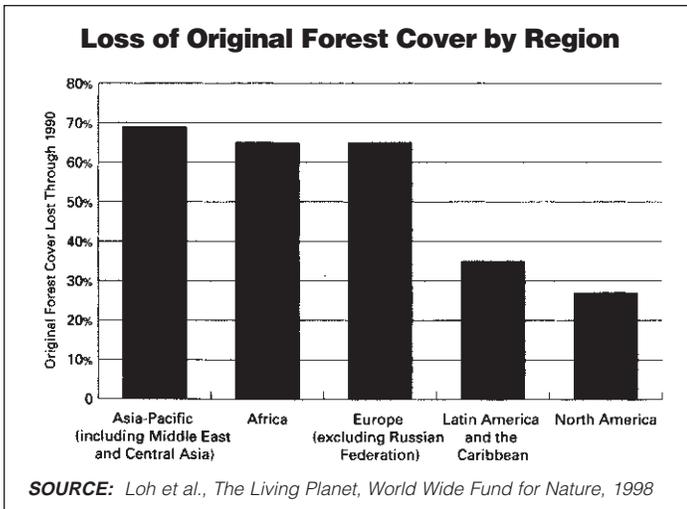
Some countries, particularly those with extensive forest cover (Finland, France, Germany and Sweden) consider their forests in an integrated context with landscapes and biodiversity. Others, particularly those with little forest cover (for example, Ireland and Spain) are more interested in rapid forest growth for commercial or watershed protection purposes. Sustainable forest management remains a challenge for many European countries.

In the Baltics and western part of the former Soviet Union, most deforestation from felling took place in the first half of the 20th century. In the late 1990s, total removals amounted to only one-third of the volume extracted in the 1970s and 1980s. With increasing poverty in these countries and a loss of traditional communist era livelihoods, pro-



Out of sink: The U.S. and Europe disagree on how to count forests, which act as a sink for carbon dioxide released when factories and cars burn fossil fuels.

SOURCE: *Scientific American*, February 2001



tected areas and forests in Central and Eastern Europe are now under pressure from illegal tree felling which, in some places, has pushed some rare species to the brink of extinction. An increasing trend towards privatization in many countries since 1990 is also reducing the area of protected forest although vast forested land in the Komi Republic and Lake Baikal basin have lately been designated as UNESCO World Heritage Sites, effectively halting planned major logging operations.

Significant forest degradation has been caused by industrial pollution. Vast tracts of forests in Central and Eastern Europe still suffer the lingering consequences of acidification, although CO₂ emissions and acid rain have been reduced. Degraded forests are found in the Russian Federation around industrial centers in the Urals, the Kola Peninsula and Siberia, with more than 500,000 ha damaged in the Siberian region of Norilsk alone.

The Chernobyl nuclear disaster in 1986, affected about 1 million ha of forests in the Russian Federation as well as large areas in Belarus and Ukraine. These lands will be excluded from use and public access for the foreseeable future. The future of the Russian Federation's 850 million ha of temperate and boreal forests (22 per cent of the world's total and the largest forest area in any one country) is important, not just for the country, but for the entire region because of its role as a carbon sink.

Around the Mediterranean, forests have been degraded since historic times, from overgrazing and wood removal, and little undisturbed forest now remains. Fire is one of the great enemies of Mediterranean wooded areas. An average of 500,000 ha burn each year. The fires are almost always caused by humans. The number of fires rises drastically in dry areas, especially in tourist areas.

In many parts of Western and Central Europe, conifer monocultures have displaced indigenous broadleaved forest species but now the framework for Pan-European Forest certification (PEFC) provides a voluntary mechanism for forest certification. National PEFC governing bodies have been established in 15 European countries.

■ Latin America and the Caribbean forests have many important socio-economic functions in addition to providing environmental goods and services, acting as natural shields against disasters, affording watershed protection, biodiversity preservation of soil erosion, and serving as a sink for carbon dioxide.

The Latin American and the Caribbean region is one of the most important forest areas, with nearly one-quarter of the world's forest cover. The region contains 834 million ha of tropical forest and 130 million ha of other forests, both temperate and dry, coastal and montane, covering 48 per cent of the total land area.

The Amazon Basin contains the world's most extensive tropical rainforest. It includes at least 20 different rainforest types and is considered to be the world's richest ecosystem in terms of biodiversity. A study by the Smithsonian Institution predicts that 42 percent of the Amazonian forest in Brazil could be lost or heavily damaged if current land-use trends continue.

The rate of deforestation is one of the highest in the world at an annual average of 0.48 per cent. Almost half of the natural forest loss worldwide over the past 30 years happened to be in Latin America. Total forest area in the region was reduced by 46.7 million ha only between 1990 and 2000. The expansion of agricultural frontier has been one of the main causes of deforestation along with land tenure regulations and timber exploitation.

The effects cause a loss of the potential capacity of forest resources to generate economic benefits. Most Caribbean countries have depleted forest resources so much that they must now import forest products, creating an additional need for foreign exchange.

A number of countries have recently adopted new forest regulations. For example, Bolivia adopted a new forestry law which makes state-owned forests available to companies through concessions provided that local and indigenous populations are involved. Market-based instruments such as certification can also contribute to sustainable forest management. Most governments receive international support to formulate environmental policies, strengthen institutions and mechanisms to improve monitoring and evaluation. Most of the internationally supported programs and projects are linked to global concerns such as biodiversity conservation and climate change.

Depending on each other

The Shuar of Amazonian Ecuador find shelter in houses with thatch roofs made from the local palms. They also use palm stems for weaving baskets and containers. They grow manioc, papaya, sweet potato, and other crops derived from the rainforest for their own subsistence and for cash. The forest is also the source of their fuel wood and medicines, as well as fish and game.

We depend on ecosystems to sustain us, but the continued health of ecosystems depends, in turn, on our care.

■ North America's forests cover about 26 per cent of the continent's land area and represent more than 12 per cent of world forests. North America has more than one third of the world's boreal forests as well as a wide range of other forest types. Some 96 per cent are natural forests. The region accounts for about 40 per cent of the world's production and consumption of industrial wood products.

The United States is the fourth most forested country with 226 million ha. While Canada's forest area remained static during the past decade, it has increased by almost 3.9 million ha, approximately 1.7 per cent. The land area under plantation is increasing in both countries.

In the past, a forest was deemed healthy if it was free from disease and was growing vigorously. Over the last 20 years, however, the long-term sustainability, biodiversity, as well as aesthetic appeal of the forest ecosystem has become the primary measure of forest health. In many areas, forests are becoming increasingly fragmented, biologically impoverished, and weakened or stressed, which works against their health.

Human intervention and demand for timber are the primary drivers of forest modification. Air pollution is increasingly recognized as a contributing factor to forest degradation. It has played a role in the major die-off of spruce-fir forests in the southern Appalachians. Although pollution has reduced acid rain in the northeast, there is evidence that reduced growth in some tree species is linked to long-term effects of acid precipitation.

North America's forests, particularly its broadleaf ecosystems that appear to have large capacities for carbon absorption, are unlikely to retain their absorption attributes. It becomes increasingly important to reduce North America's consumption of both wood products and fossil products.

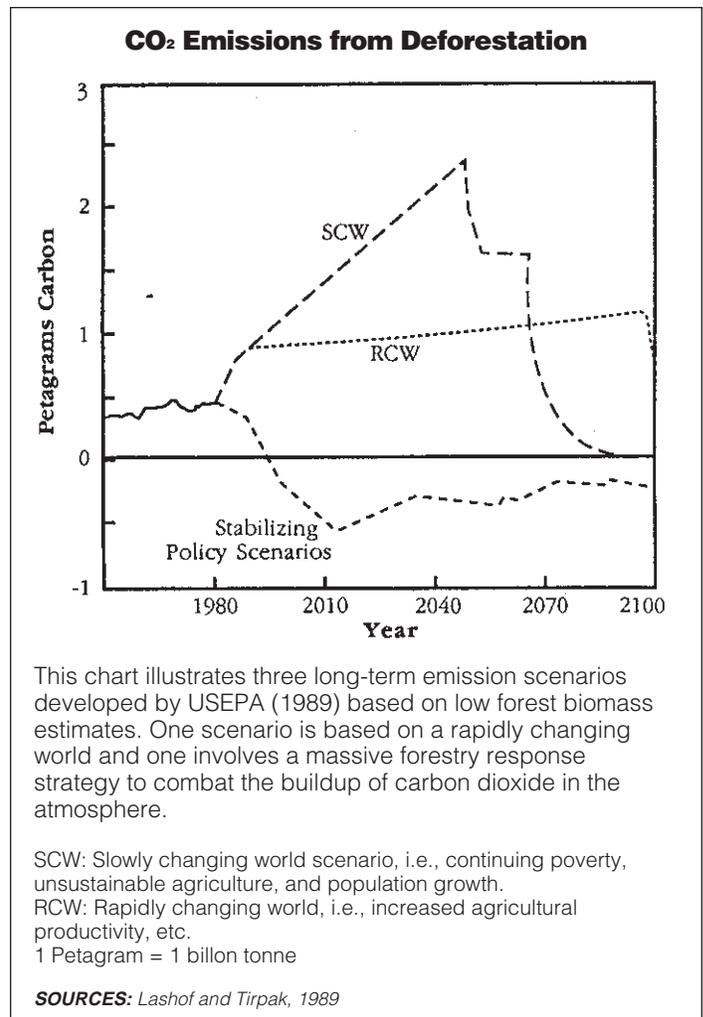
Canada's growing commitment to sustainable forestry is reflected in its 1998–2003 National Forest Strategy. The US Forest Service has also incorporated the concept of sustainable forestry, and in 1999 it began to develop criteria and indicators for sustainable forest management. By 2002, more than 3 million ha of North American forests had been certified by the Forest Stewardship Council.

■ The northern boreal forest system circles around the globe through Russia, Scandinavia and North America.

The major environmental issues in the polar regions include the depletion of the stratospheric ozone layer, the long-range transport of air pollutants, warming associated with global climate change, the decline of animal diversity and pollution of major rivers.

Any significant change in the area of boreal forests could have a considerable effect on the level of CO₂ in the atmosphere. With 26 per cent of total carbon stocks, boreal forests account for more carbon than any other terrestrial ecosystems.

Conversely, it has been calculated that boreal forests will experience greater temperature increases from climate change than any other forest type. The warming will shift climate zones north by as much as 5 km a year. Boreal forests will advance northwards while their southern counterparts will experience die back or replacement by temper-



ate species. During summer, soils will be drier, and fires and drought more frequent. Local species loss may be significant.

■ Forests and Woodlands of West Asia occupy only 3.66 million ha or 1 per cent of the region's land area and account for less than 0.1 per cent of the world's total forested area. The majority of forest cover is in the Arabian Peninsula with the remainder scattered in the mountains and hills of northern Iraq, Jordan, Lebanon, Syria, the West Bank and Gaza. The best stands of closed forests are found on the uplands near the Mediterranean. Tracts of mangrove forests grow along the coasts of the Arabian Peninsula. Forest resources are state owned and administered centrally.

Harsh climatic conditions limit forestry potential and restrict regeneration once forests are degraded. All countries in the region depend on imports to meet the bulk of their wood product needs. Nevertheless, forests play a vital role in protecting the region's water and soil resources, especially in steep terrain, and in areas prone to desertification. They also afford protection from dust storms and stabilize river banks.

The region's forests and woodland have suffered from a long history of degradation and exploitation. Traditional sheep and goat herding is still practiced in juniper (*Juniperus excelsa*) forest ecosystems in the Anti-Lebanon mountains

and on the Syrian steppes where relics of *Pistacia atlanta* trees still remain. Over the past 30 years, natural forest areas have been fragmented and isolated and turned into a mosaic with agricultural fields in Syria, and with urban dwellings in Lebanon and Syria. In Lebanon, up to 60 per cent of forests were lost between 1972 and 1994, while the small area of forest in the Occupied Palestinian territories decreased by 50 per cent during the 1980s and 1990s according to the Palestinian Authority in 1999. In Yemen, forest area has also significantly decreased by 17 per cent, but in the United Arab Emirates plantation forests increased the total area by 32 per cent. Afforestation programs increased the forested area in Jordan by 20 per cent during the 1980s and 1990s. Several other countries have a high proportion of planted forests.

Population growth, urbanization, economic developments (including tourism) and conflict (for example in Iraq, Lebanon and Syria) are among the external factors that significantly affect forests. Fire, overgrazing and over-cutting of wood products have contributed locally to forest degradation. Poverty and inappropriate forest policies are overriding factors contributing to forest and woodland deterioration in the Mashriq countries and Yemen. Until recently, poor damage of public and private lands has led to ownership disputes, providing the opportunity for some people to increase their private land holdings at the expense of public forests. Fire has also been a major factor of forest destruction.

Traditionally woodlands were looked at as source of timber, fuel wood and grazing sites. West Asian governments have only recently recognized the ecological importance of forests. There is now a positive trend towards conservation of biological diversity and development of the eco-tourism industry in the region. Some countries have declared forest reserves, but these initiatives have been politically motivated with little involvement of stakeholders and

lack the support of local communities.

If sustainable forest management is to be achieved, further efforts are needed to mobilize resources and involve local communities, NGOs and other stakeholders in forest management.

Climate change effects on human welfare

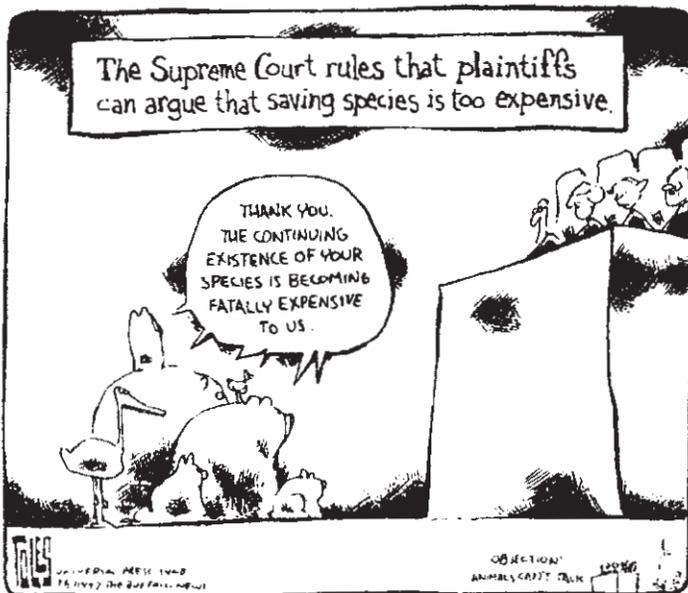
Global climate change is caused by the accumulation of greenhouse gases in the lower atmosphere. The global concentration of these gases is increasing, mainly due to human activities such as the combustion of fossil fuels (which release carbon dioxide) and deforestation (because forests remove carbon from the atmosphere). It is estimated that global mean surface temperature will rise by 1.5–3.5°C by 2100. Large changes in precipitation, both increases and decreases, are forecast largely in the tropics.

Climate change is very likely to affect the frequency and intensity of weather events (e.g. storms, floods) around the world. Climate change will also cause sea levels to rise due to thermal expansion of the ocean and the melting of mountain glaciers. Sea levels are anticipated to rise by 24–95 cm by 2100. Sea level rise will increase vulnerability to coastal flooding and storm surges. Many countries will be able to maintain coastal defenses but some developing country populations and small island states are extremely vulnerable.

Global climate change would have a wide range of potential health impacts. Some impacts would result directly from increases in heat waves, floods, droughts and storms. An increase in the frequency of severe heat waves would translate into greater heat-related mortality and illness. Studies indicate that in very large cities, this would represent several thousand additional deaths annually.

The transmission of many infectious diseases is particularly sensitive to climate or weather conditions, especially those that are transmitted by mosquitoes, such as malaria and dengue fever. In general, increased warmth and moisture would enhance transmission of vector borne disease (VBD). It is predicted that the weather patterns would affect the range (both altitude and latitude), intensity and seasonality of many vector borne diseases. In tropical countries, VBDs are a major cause of illness and death. High temperatures also speed up the development of viruses within the mosquito carriers of the West Nile Virus—the insects only live for about two weeks. The faster a virus develops, the greater is the chance that it will reach the dangerous mature stage, while the mosquito is alive and capable of biting.

Climate change also fosters the probability of forest fires. The natural occurrence, as well as the application of forest fires in land use systems, annually affects several hundred million hectares of forest and vegetation of the world. They lead to the destruction of forests or to long term site degradation. Fires in forests and other vegetation produce gas and particle emissions that effect the composition and functioning of global atmosphere. These emissions interact with those from fossil-fuel combustion and other technological sources, which are the major cause of anthropogenic climate forcing. Smoke emissions from wildfires also cause visibility



SOURCE: The Buffalo News, 1997

problems, which may result in accidents and economic losses, and also affects human pulmonary. The fires in the Northeast of the People's Republic of China during the 1987 drought burned 1.3 million hectares and cost 221 people's lives, leaving 50,000 homeless. The Mongolia steppe and forest fires in 1996-97 burned an area of 23.1 million hectares, 7000 domestic animals and 25 people died.

More than any other kind of vegetation, forests, capture vast amounts of atmospheric carbon dioxide stored in wood tissues, in forest floor and in soil organic matter.



SOURCE: *Corporate Power, Corruption and the Destruction of the World's Forests* report, Environmental Investigation Agency, 1996

Acting Together around the Globe

Short term conservation of old forests may be better policy for tackling global warming than planting new forests, according to CarboEurope, a Europe-wide program that has pioneered research into carbon budgets. When forest ground has been clear cut, rotting organic matter in the soil releases a surge of CO₂ into the air. This release will exceed the CO₂ absorbed by growing trees for at least the first 10 years.

Many countries hope to achieve between 10 and 40 per cent of its emission reduction target for 2012 through forest planting. But these sinks might not work until the forest matures, which means the Kyoto targets may not be met.

The World Summit on Sustainable development which was held in Johannesburg, South Africa, 26 of August to 4th September made some encouraging steps forward, with over a billion dollars of new funding for the environment. It was the occasion for several countries to launch official partnerships. Three of the forest related partnerships include the Caribbean. A number of countries, intergovernmental organizations and NGOs are involved in the Asia Forest Partnership aimed at promoting sustainable forest management in Asia by addressing the following urgent issues: good governance and forest law enforcement, developing capacity for effective forest management, control of forest fire-land rehabilitation, and reforestation of degraded lands. Japan highlighted the Asian Forest Partnership, which will provide a framework to promote cooperation in the region.

The U.S. launched the Congo Basin Forest Partnership to protect eleven key landscapes in six Central African countries. The summit's major outcome document, the Plan of Implementation, enhances the political commitment to achieve sustainable forest management by placing it as a

priority on the international political agenda.

One of the United Nations Development Programme's (UNDP) projects is aimed at strengthening China's capacity to implement the Convention to Combat Desertification. In some countries, particularly in the Asia Pacific region, governments have implemented logging bans over large areas of natural forests. The reasons vary but are related to environmental concern.

Credible, independent timber certification, such as that overseen by the Forest Stewardship Council (FSC) is an important step towards sustainable forest management

UNESCO recently presented a proposal for a Decade of Education for Sustainable Development, possibly beginning in 2005. At the global and regional levels, a number of international NGOs have played a major role in raising awareness of forest conservation and protection issues among the general public. Such organization, as well as indigenous peoples' organizations, have undertaken similar successful activities on the local level.

We cannot delay any longer: Restabilizing our forests and with them the climate system must be a genuine priority to secure human health.

SOURCES: **1** UNEP *Global Environmental Outlook 2002 (GEO-3)*; **2** UNESCO <http://unesco.org/science/joburg/>; **3** Smithsonian Environmental Research Center 2002: *Forest Growth and the Global Carbon Cycle*; **4** World Health Organization WHO, http://who.int/peh/climate_and_health.htm; **5** <http://ecology.org/biod/value/medplants/>; **6** UN Food and Agriculture Organization, <http://www.fao.org/forestry>; **7** Kew Royal Botanical Gardens, London, UK, 2002, <http://rbgkew.org.uk/peopleplants/>; **8** <http://taigaescape.org>; **9** CNN at <http://cnn.com/2002/NATURE/>; **10** World Resource Institute, <http://www.wri.org/wr2000/forests.html>; **11** Yale University, <http://research.yale.edu/gisf/ypfc/>; **12** UN Economic and Social Council, 4 February 2002, "Forest Conservation and Protection of Unique Types of Forests and Fragile Ecosystems"; **13** United Nations Forum on Forests UNFF 2002, "Forests and the World Summit"; **14** National Institute for Environmental Studies, Japan 2002, <http://www.nies.go.jp/>

Health and Environment: A Persistent Struggle

Persistent organic pollutants (POPs) can cause serious health impacts, both in local areas and by water and air transport, to surrounding countries and to the rest of the world. Pesticide use in developing countries is expanding, even though these countries already suffer 95 per cent of serious poisonings and fatalities. Some of the most acutely toxic chemicals are widely used, with no protection, by farmers and workers with no training and limited knowledge about the hazards. Pesticide exposures occur during mixing, from leaking equipment, by inhaling fumes from saturated work clothes and from obsolete pesticide dumps. Agricultural workers and rural communities are affected by POPs when entering fields after spraying. They are also affected at home by washing work clothes and using pesticide containers for food or water storage. POPs additionally pollute drinking water.

Successful elimination of these toxic substances requires efforts by industry groups, educational institutions, scientific centers and NGOs in joint activities with governments. In 1998 a small number of NGOs founded The International POPs Elimination Network (IPEN). The mission of IPEN through its participating organizations, is to work for the global elimination of persistent pollutants on an expedited yet socially equitable basis. It was conveyed by the United Nations Environment Programme's Intergovernmental Negotiating Committee (INC) to start negotiations on developing a global, legal instrument to reduce and eliminate persistent organic pollutants. It gained the participation of non-governmental organizations on six continents and convened activists and scientists for conferences that coincide with the treaty negotiating sessions. IPEN has now 84 NGO organization members in North America, 10 in South America, 36 in Africa, 43 in Asia, 3 in Australia and 58 NGOs in Europe. It is also supported by three types of working groups which derived from the different member organizations.

Working groups of IPEN
IPEN Dioxin, PCB and Waste Working Group
IPEN Pesticides Working Group
IPEN Community Monitoring Working Group

IPEN fosters the implementation of the Stockholm Convention which released an initial list of twelve identified POPs, informally known as the Dirty Dozen. The Stockholm Convention was signed on May 23, 2001 in Stockholm, Sweden. The Convention is not expected to be valid until 2004.

According to IPEN, African stockpiles of POPs require urgent attention. Waste incineration of various types of toxins emits over 100 different chemical pollutants, including dioxins, furans and mercury. IPEN aims at including more hazardous substances to the list of banned compounds.

Chemicals on the black list of the International Stockholm Convention

- **Pesticides:** aldrine, DDT, endrine, heptachlor, chlordane, mirex, toxaphen
- **Industrial compounds:** hexachlorbenzene and polychlorinated biphenyls (PCBs)
- **Undesired byproducts emerging in various processes:** PCB, polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF), both are generally named "dioxins".

In November 2002, a new international code on pesticide use was adopted. The revised International Code of Conduct on the Distribution and Use of Pesticides places greater emphasis on reducing risks and hazards, with a recommendation against using extremely and highly toxic substances in developing countries. This sets higher standards and provides more precise guidance to governments, regulators, traders and industry for the first time.

World Information Transfer is a member of IPEN and serves on its Steering Committee because we believe that the elimination of POPs is one major step towards a sustainable future.

SOURCE: International POPs Elimination Network (IPEN) at <http://ipen/ecn.cz/>

Stockholm Convention on POPS

List of Ratifications (dated December 23, 2002)

Participant	Signature	Ratification / Acceptance (A) Approval (AA) / Accession (a)
Austria	23 May 2001	27 Aug 2002
Botswana		28 Oct 2002 a
Canada	23 May 2001	23 May 2001
Czech Republic	23 May 2001	6 Aug 2002
Democratic People's Republic of Korea		26 Aug 2002 a
Fiji	14 Jun 2001	20 Jun 2001
Finland	23 May 2001	3 Sep 2002 A
Germany	23 May 2001	25 Apr 2002
Iceland	23 May 2001	29 May 2002
Japan		30 Aug 2002 a
Lesotho	23 Jan 2002	23 Jan 2002
Liberia		23 May 2002 a
Nauru	9 May 2002	9 May 2002
Netherlands	23 May 2001	28 Jan 2002 A
Norway	23 May 2001	11 Jul 2002
Rwanda		5 Jun 2002 a
Saint Lucia		4 Oct 2002 a
Samoa	23 May 2001	4 Feb 2002
Slovakia	23 May 2001	5 Aug 2002
South Africa	23 May 2001	4 Sep 2002
Sweden	23 May 2001	8 May 2002
Trinidad and Tobago		13 Dec 2002 a
United Arab Emirates	23 May 2001	11 Jul 2002
Viet Nam	23 May 2001	22 Jul 2002

Food for Thought: Projecting Issues of Population Growth

In less than fifty years, human longevity worldwide has increased by more than 40%. The average life expectancy at birth has risen from around 46 years in the early 50's to more than 65 years by 2000. Except for the countries most damaged by the radioactive fallout from the Chernobyl nuclear disaster of 1986—Ukraine and Belarus—which continue to show negative population growth with death exceeding birth rates and the age of death is decreasing, global longevity is increasing worldwide.

One of the unknown factors in the current population estimates is how environmental change—for example the twin effects of global warming and stratospheric ozone depletion—will affect life expectancy. Another unknown is the impact to the earth's carrying capacity of the growing numbers of people. As long as the environmental unknowns do not repeat the long term impact of Chernobyl and the AIDS pandemic is brought under control, we can expect that the world's population will continue to its transition path toward lower birth rates and increasing life span. The current demographic trends are expected to continue well into the coming centuries.

Some of the major features of these trends include the following:

- One of every ten persons is now 60 years or above; by 2050, one out of five will be 60 years of older; and by 2150, one of three persons will be 60 years of older.

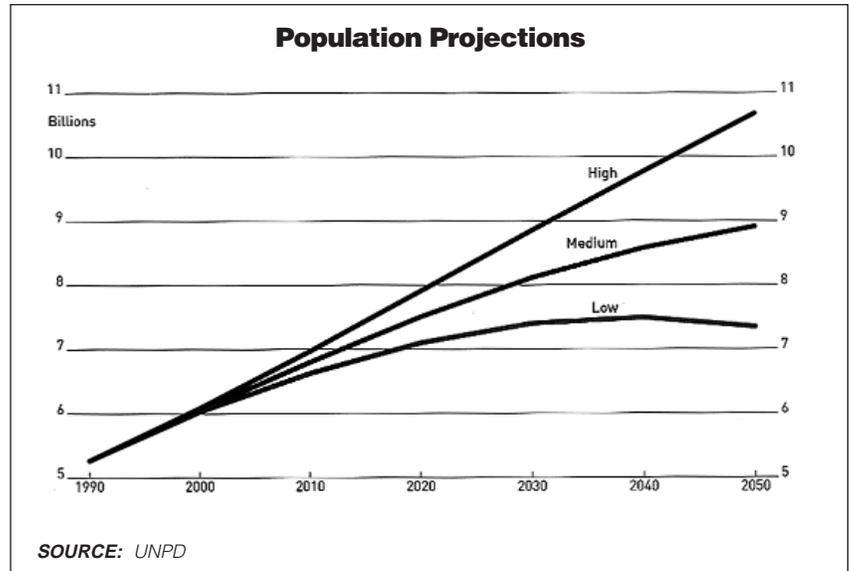
- Older population itself is aging. The increase in the number of very old people—aged 80 and above—is projected to grow from 8 to 10 times on the global scale between now and 2050. Currently, the oldest of the old constitutes 11% of the population aged 60 and above. By 2150, about a third of the older population will be 80 or older.

- The majority of the older persons (55%) are women. Among the oldest old (80 and above) 65% are women.

- Striking differences exist between regions. One out of five Europeans, but only one out of twenty Africans, is 60 years or older.

- In some developed countries today, the proportion of older persons is close to one in five.

- During the next 50 years that proportion will reach one in four and in some countries one in two.



- The tempo of aging in developing countries is more rapid than in developed countries—this can bring about social and economic consequences due to difficulties in adaptation of the governments to the aging population.

- The majority of the world's older persons live in urban areas. The majority of older persons in developing regions are expected to remain rural.

- At the individual level, more than 20 years has been added to the average individual life span in the last few years.

- In 1998 the United Nations population estimates and projections for the first time disaggregated the population aged 80 years and above into ages 80-84, 85-89, 90-94, 95-99, and 100 and above.

- The growth in the size of the world population is matched by a large shift in the age structure of the world population. At medium fertility levels, the median age of the world population is projected to rise from 36.5 in 2050 to 42.9 in 2150.

- It is estimated that the number of individuals aged 80 or over will grow to 320 million by 2050 and 1055 million by 2150.

The estimates reported here are based on a medium fertility scenario. However, the low and high fertility scenarios put a large band around the numbers—from 3.6 billion persons to 27 billion by 2150. Most important is the interconnection between population, growth, access to resources, poverty and health. Realizing the ultimate potential requires that population rates continue to decrease for the long-range future of the world.

SOURCES: <http://www.un.org/> population division of DESA, World Population Projections, United Nations.

"They that give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."

Benjamin Franklin

Chernobyl Update: Cuba's Response

Cuba has a ratio of about one doctor to every 200 people with medical clinics accessible in local communities throughout the country. Medical care is free to Cuban citizens. While Cuba is well known for its medical system, it is less recognized for the continuing aid it gives to the children victims of the Chernobyl nuclear disaster. In November 2002, a delegation from World Information Transfer visited the medical facility and residence that currently treats Ukrainian children bearing the impact of Chernobyl.



Tarara, Cuba, Chernobyl Village, 2002

In the former seaside resort town of Tarara, outside of Havana, the Government of Cuba has been providing medical treatment to the young victims of the Chernobyl nuclear disaster since 1990. To date, over 18,500 children have been treated by teams of Cuban physicians at no cost to the children or their families. The facility can accommodate up to 250 children at any one time and offers a complete residential life for the children including a school staffed by Ukrainian teachers. The patients are divided into four categories based on the severity and type of their disorders that are related to immunological diseases and birth defects causing motility impairment. The Chernobyl children are also treated for dermatological problems, mainly pigmentation problems, psoriasis and aleupetia and psychosomatic disorders. According to the Director of the Center, Dr. Julio Medina de Armas, a 70% improvement has been observed in the health status of the children that have undergone rehabilitation in Tarara.

A joint decision by the Ministry of Health of Ukraine, Chernobyl Youth Fund and a Cuban coordinator—a physician from Tarara—decides which children will be selected to go to Cuba. The length of their stay is determined by their illness. Children return home when they can function; though, some have remained at the treatment center in Tarara for over 10 years. Children six years or younger come with a relative. A guardian attends older children up to age 15.

Since shipments of medical supplies are generally unreliable in Cuba, a system of alternative medicine integrated

into medical education as well as clinics and treatment centers has arisen. According to our information, children presently being treated with botanical compounds cannot take their treatments home with them, but Cuban doctors are working with their Ukrainian counterparts in the Yalta rehabilitation center to enable the children to continue their use of alternative medicines at home.

After the Chernobyl explosion and fire, which began April 26, 1986, the Cuban government offered to aid victims from Russia and Belarus as well as Ukraine. Currently, only Ukraine continues to send sick children for medical treatment, which would be unaffordable to most Ukrainian families.

Staff doctors indicated that their program would continue as long as there are children suffering the radiological effects from Chernobyl. The only restraint in sending children

is the inability of the Ukrainian government to provide charter flights for the children and their guardians. Previously, a charter was available four to five times a year, while currently only two charters a year are possible due to financial constraints.

During a recent visit to Ukraine, we visited the head of the Chernobyl Mother's in Sokolo who described some of the difficulties with the displaced children from the Chernobyl region. Unfortunately, for some reason unknown to them, none of their 18,000 children had the opportunity to go to Tarara for rehabilitation.



Ukrainian Director of the Program; Dr. Julio Medina de Armas, Director of the Center; and another attending physician from Ukraine



GOOD NEWS!

■ Poland is well known for its so called chemical tombs inherited from the Cold War. Since the dissolution of the Soviet Union, Poland is cleaning up many of the hot spots. These chemical tombs contain many hazardous chemicals including POPs. Recently Poland identified ten hot spots already cleaned up which include the municipal Baltic coast wastewater treatment plant in Gdynia and the Central wastewater Municipal treatment plant in Poznan,

SOURCE: *POP's and Obsolete Pesticides Newsletter, No 3, December 2002*

■ Because people spend about 85-90% of their time indoors, indoor environmental quality (IEQ), which includes air quality, thermal comfort, lighting, vibration, and acoustics, is an issue of critical importance to society, both from a public health standpoint as well as from an economic perspective. Potential savings and productivity gains in the U.S. from improvements in IEQ have recently been estimated at \$40-\$250 billion from reduced respiratory disease, allergies, asthma,

and sick building syndrome (SBS) symptoms, as well as direct improvements in worker performance.

FROM: *Energy Central EPRI WARCH Jan. 2003*

■ The U.S. Senate voted 54-46 to protect the Arctic National Wildlife Refuge from oil and gas drilling in April 2002. The complete range of Arctic and sub-arctic landscapes protected in the Refuge are unique: from America's northernmost forest, to the peaks and glaciers of Brooks Range, to the rolling tundra, lagoons and barrier islands of the coastal plain. No other conservation area in the circumpolar north has such abundant and diverse wildlife, including rare musk oxen, polar bears, grizzlies, wolves, and millions of migratory birds. Citizen opposition expressed through letters and phone calls to Senators, editorial writing, and personal visits with lawmakers overcame the influence of special interests. The Audobon Society was instrumental in this effort.

SOURCE: *From Audobon Advisory Vol. 2002, Issue 23 November 27, 2002; www.protectthearctic.com.*

■ Canada has decided to ratify the Kyoto Protocol, the agreement to reduce greenhouse gas emissions. Canada's ratification means that those developed countries, that have so far ratified, represent close to 44 per cent of the 1990 emissions of carbon dioxide, the principal greenhouse gas.

SOURCE: *UNEP News Release, 19 December 2002, 2002/88, www.unep.org*

■ The Lviv (Ukraine) Regional School for Artistic Development began in 1991 for children ages 6 to 18, spending 9 to 13 hours per week in various classes in ceramics, weaving, glass design, wood carving, fabric design, needlepoint, graphic arts and "pysanky" or egg painting. The school, under the dynamic leadership of Mrs. Vuchovanska, has grown from one class to 120 students all involved in various forms of artistic development. WIT has donated supplies, which included a loom, and three computers to the school and plans to donate enough computers for a class of students.

SOURCE: *World Information Transfer*

Students weaving at the loom donated by WIT



pictured above: Students of the school (computers donated by WIT)

Students working on egg painting (pysanky)





DID YOU KNOW?

World Fish Catch

The world fish catch measures the productivity and health of the oceanic ecosystem that covers 70 percent of the earth's surface. The extent to which world demand for seafood is outrunning the sustainable yield of fisheries can be seen in shrinking fishery stocks, declining catches, and collapsing fisheries. The world fish catch in 2000, (the last year for which global data are available), was reported at 94.8 million tons. After decades of steady growth, the oceanic fish catch has reached a plateau and since the late 1980s has fluctuated between 85 million and 95 million tons. Approximately three fourths of oceanic fisheries are fished at or beyond their sustainable yields, while one third of these fisheries show declining stocks.

SOURCE: <http://www.earth-policy.org/Indicators/indicator3.htm>

Pesticides in Groundwater

Researchers in Limburg, Netherlands, found high levels of pesticides occurring in groundwater and rainwater. Groundwater

samples in particular showed the presence of triazines—atrazine, simazine and propazine. Dieldrin was also been observed. Atrazine and simazine were found to exceed the groundwater standard. The presence of 13 of 23 different analyzed pesticides were found in the rainwater samples. Two of the pesticides detected in rainwater were found to exceed the groundwater standard and three pesticides in rainwater exceeded the maximum tolerable risk value. These were DDT, heptachlor and heptachlorepoxyde A. Nitrate in 15 of 16 analyzed natural springs exceeded the guideline value for nitrate in drinking water of 50 mg/L, up to levels of about 200 mg/L. Nitrate concentrations in rainwater samples were observed up to 4.5mg/L.

SOURCE: Van Maanen, J., De Vaan, M., Veldstra, A., Hendrix, W., 2001. "Pesticides and nitrate in groundwater and rainwater in the province of Limburg in the Netherlands: Environmental Monitoring and Assessment" (GreenPeace)

Asian Brown Haze

A study commissioned by the United Nations Environment Programme reports that the vast blanket of pollution stretching across South Asia is damaging agriculture, modifying rainfall patterns including those of the mighty monsoon, putting hundreds of thousands of people at risk, and threatening the regions' dramatic economic growth. The "Asian Brown Haze" is a three kilometre-deep pollution blanket composed of a mass of ash, acids, aerosols and other particles. The pollution cover is reducing the amount of

sunlight hitting the Earth's surface by as much as 10 to 15 per cent and is disrupting weather systems, including rainfall and wind patterns, and triggering droughts in western parts of the Asian continent. The heat-absorbing properties of the haze are estimated to be warming the lower parts of the atmosphere considerably. The regional and global impacts of the haze are set to intensify over the next 30 years as the population of the Asian region rises to an estimated 5 billion people. Research carried out in India indicates that the haze may already be reducing the winter rice harvests by as much as 10 per cent. The report suggests that the pollution forming the haze could be leading to "several hundreds of thousands" of premature deaths as a result of higher levels of respiratory diseases." The South Asian region of the study includes the countries of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. A copy of the "Asian Brown Cloud: Climate and Other Environmental Impacts" Report is available at www.rrcap.unep.org/abc/impactstudy/

SOURCE: UNEP News Release 2002/55

Poverty and Water

By 2050, India is projected to add 519 million people and China 211 million. Pakistan is projected to add nearly 200 million, going from 151 million at present to 348 million. Egypt, Iran, and Mexico are slated to increase their populations by more than half by 2050. In these and other

water-short countries, population growth is sentencing millions of people to a local hydrological poverty that is difficult to escape. 70 percent of the water consumed worldwide, including both that diverted from rivers and that pumped from underground, is used for irrigation, while 20 percent is used by industry, and 10 percent for residential purposes.

SOURCE: Worldwatch Institute
www.worldwatch.org

World Grain Harvest

2002 is the third consecutive year in which world grain production has fallen short of consumption. In 2000, the shortfall was 35 million tons; in 2001, it was 31 million tons. Combined, these three annual deficits—totaling 149 million tons—have dropped grain stocks to the lowest level in three decades. Three key factors have contributed to the reduced harvest in 2002: low grain prices at planting time, crop-withering temperatures, and falling water tables. US Department of Agriculture reports that in parts of Texas, Oklahoma, and Kansas, the underground water table has dropped by more than 30 meters (100 feet). As a result, farmers in some states in the southern Great Plains have discovered their pumps are pumping air instead of water. Farmers in key food-producing regions were confronted with some of the highest temperatures on record. The severe temperatures that stressed crops and reduced yields. The average global temperatures for September and November 2001 were the highest ever recorded for those two

months in 134 years of record keeping. December 2001, January, February, April, and May of 2002 posted their second highest temperatures on record. July 2002 was the fourth hottest ever. High temperatures combined with low rainfall in many countries to create drought conditions. Reports of heat-stressed crops have been common in the top three food producers—the United States, India, and China. Irrigated crops also suffer from high evaporation losses and heat stress. When temperatures range above 32 degrees Celsius (90 degrees Fahrenheit), crop yields can suffer. India's harvest has suffered from high temperatures, including a heat wave with temperatures reaching 45 degrees Celsius (113 degrees Fahrenheit) in May that killed more than a thousand people. In addition, monsoon in 2002 were late and weaker than normal affecting crops in the region.

SOURCE: Earth Policy Institute Alert, August 21, 2002, epi@earth-policy.org

Popularity of Religion

The Global Attitudes Study, prepared by the Pew Research Center For The

People & The Press, correlated views on religion with annual per capita income and found that wealthier nations tend to place less importance on religion—with the notable exception of the United States. 59% of Americans say religion plays a very important role in their lives. This is roughly twice the percentage of self-avowed religious people in Canada (30%), and higher than in Japan and Western Europe. Americans' views are closer to people in developing nations than in developed countries. The survey found that in Asia, populations in the two wealthiest nations—Japan and South Korea—are far less likely to cite religion as personally important than those in poorer nations of the region. The exception is Vietnam, where 24% of the public view religion as very important. Questions on the personal importance of religion were not permitted in China, and were deemed too sensitive to ask in Egypt, Jordan and Lebanon. This poll is part, "What the World Thinks in 2002," released Dec. 4, 2002,

SOURCE: www.people-press.org, The Pew Research Center For The People & The Press, Washington, D.C. 20036



VOICES

World Information Transfer's
12th International Conference on Health and Environment: Global Partners for Global Solutions

will take place on April 24 and 25, 2003, at UN headquarters in New York.

The theme will be **Water and Health: Problems and Solutions.**

Visit our web site for updated information and registration.

www.worldinfo.org

The Government of Ukraine and UNICEF are cosponsors.

■ 2003 has been designated by the United Nations as the International Year of Freshwater. The Year aims to raise awareness for water issues through educational materials, events and informative brochures and websites. Visit the UN website for complete information on upcoming events and background information. www.un.org

■ UNEP's European Portal is publicly accessible at <http://europe.unep.net> or through www.unep.net. The portal is among the first group of environmental information portals available as part of the globally distributed UNEP.Net information network. The European portal aims to provide on-line authoritative information on the environmental situation throughout the pan-European geographic region, while highlighting key issues in specific problematic areas. The UNEP.Net system was initiated in 2001 to support the integrated environment assessment process, most

notably UNEP's Global Environmental Outlook (GEO) series. The system is developing information portals for major environmental issues at global and regional levels, by linking and presenting vital graphics, core data sets and background material for efficient reporting and sound decision-making. For further information contact GEO & Earthwatch Data Coordinator, UNEP/DEWA/GRID-Geneva by e-mail woerden@grid.unep.ch.

■ Chernobyl.info went online on June 25, 2002. The website newsletter is published four times a year and is available through e-mail subscription. Chernobyl.info is a communication platform which invites organizations to add their projects in the chernobyl.info database. One project is the UN Development Programme (UNDP) in the Russian Federation which is setting up an economic development agency in Briansk to promote sustainable development in the area. <http://www.chernobylinfo/en/Projects/List/BrianskProj>. The site contains a forum, a factual section with basic information on the Chernobyl nuclear disaster, postings for events and news related to Chernobyl concerns.



The Arab Human Development Report 2002

Produced by the UN Development Programme (UNDP) this Report provides a broad picture of development in the Arab Region noting the disparities among countries, between rural and urban areas, and between women and men. The Report states that, "Although income poverty is low compared to other parts of the world, the Arab region is hobbled by a different kind of poverty—poverty of capabilities and poverty of opportunities. These have their roots in three deficits: freedom, women's empowerment, and knowledge." Economic growth by itself cannot address these deficiencies, concludes the Report. Excerpts of the Report's Executive summary follow.

- **Health:** "People in most Arab countries live longer than the world average life expectancy of 67...Arab women have lower life expectancy than the world average, partly due to high maternal mortality ratios. Disability is higher for females than males...In many Arab countries, the elderly can be at a disadvantage as social security benefits...are very limited..."

- **Habitat:** Fifteen Arab countries are below the water "poverty line"—less than 1,000 cubic metres per person per year. Land-based pollution is creating coastal zone degradation that is costing countries \$1 to \$2 billion a year in lost tourism. Cultivated land per capita in Arab countries dropped from an average 0.4 hectares in 1970 to 0.24 hectares in 1998.

- **Education:** Adult illiteracy dropped from 60% in 1980 to around 43% in the mid-1990s; female literacy rates tripled since 1970. Yet 65 million adults are illiterate, almost two-thirds of them women...the quality of education has deteriorated, implying a decline in knowledge acquisition and analytical and creative skills. The mismatch between the labour market and level of development on the one hand, and the system of education on the other, results in weak labour productivity, imbalances in the wage structure, the preponderance of unemployment and the decline of real wages for the vast majority.

- **Freedom and Political Participation:** Out of the seven regions of the world, Arab countries had the lowest freedom score in the late 1990s. This low level of freedom in the region is confirmed by another set of indicators of "voice and accountability"...The Arab region has the lowest value of all regions of the world for voice and accountability...Civil society actors continue to encounter...control of civic associations by public authorities...attitudes of Arab public authorities [which] range from opposition to manipulation to "freedom under surveillance". The media is at best partly free.

- **Women's Empowerment:** Utilization of Arab women's capabilities through political and economic participation remains the lowest in the world...Women occupy only 3.5 per cent of all seats in parliaments of Arab countries compared to 11% in sub-Saharan Africa and 12.9% in Latin America and Caribbean countries. In many countries of the region, women suffer from unequal citizenship and legal entitlements. In some countries with elected national assemblies, women are still denied the right to vote or hold office. And one in every two Arab women can neither read nor write...

- **Knowledge gap and ICT:** serious knowledge deficits include weak systems of scientific research and development, and low access to ICT. Scientific expenditure in Arab countries was less than 0.5% of Arab GDP for 1996, compared to 1.26% for Cuba and 2.9% for Japan in 1995. Investment in research and development (R&D) is less than one seventh of the world average. The Arab region also has the lowest level of ICT access of any world region: only 0.6% of the population uses the Internet, and personal computer penetration is 1.2%. The digital gap between Arab countries and the advanced world has widened.

Point of View

(continued from page 16)

occurred in East Asia has been estimated to have accounted for almost one third of the region's economic growth.

The Arab Region with higher birth rates and higher poverty levels shows a different picture in the 2002 Arab Human Development Report produced by the United Nations. The Report concluded that Arab countries fell so low on all human development indices because the region lacks: 1) Freedom; 2) Modern education; 3) Empowerment of women. A fundamentalist interpretation of Islam in the region is partly to blame according to the report.

A fundamentalist interpretation of Christianity, which has taken hold in some centers of power in the US, is being reflected in policies towards women and toward poverty eradication. The fundamentalist perspective seeks to control women, to curtail freedom, and to replace science based public education with faith based teaching promoting the literal interpretation of the Bible. This orientation turns away from modern science, modern education, and factual knowledge.

A fundamentalist orientation turns faith in a supreme being into the highest form of thinking and sets up a restrictive moral code which falls hardest on women. This viewpoint has forgotten that the highest form of faith is belief in ourselves to make reasoned choices on behalf of our living children and those yet to be born.

Sources: *The Economist*, (Vol. 365, No. 8302) Dec. 7-13, 2002; *State of the World Population 2002*, UNFPA

World Information Transfer is a Non-Profit, Non-Governmental Organization in Consultative Status with the United Nations, Promoting Health and Environmental Literacy.

World Information Transfer
BOARD OF DIRECTORS

Dr. Christine K. Durbak
Chair

Peter F. Sprague
Executive Vice Chair

Roland A. DeSilva
Vice Chair

Dr. Claudia Strauss
Secretary

Carolyn Comitta
Treasurer

Dr. Sophie Balk

Dr. Mohamed El-Banna

Dr. Ruth Etzel

Dr. Bernard D. Goldstein

Amb. Nina Kovalska

Dr. Michel Loots

Jonathan Otto

Dr. Scott C. Ratzan

Dr. William Rom

Dr. Luz Maritza Tennessee

Jay Walker

World Information Transfer
MISSION STATEMENT

**Knowledge brings new choices.
Education brings new knowledge.**

World Information Transfer, Inc., (WIT) is a not-for-profit, non-governmental organization in consultative status with the United Nations, promoting environmental health and literacy.

In 1987, inspired by the Chernobyl nuclear tragedy, WIT was formed in recognition of the pressing need to provide accurate actionable information about our deteriorating global environment and its effect on human health to opinion leaders and concerned citizens around the world.

WIT exercises its mandate through:

1. The publication of the *World Ecology Report*, a quarterly digest of critical issues in health and environment, published in five languages and distributed to opinion leaders around the world, and for free in developing countries.

2. The annual international conference on *Health and the Environment: Global Partners for Global Solutions* held at United Nations headquarters in New York since 1992. The world's leading authorities in the field of environmental medicine and science share their latest findings and discuss possible solutions with leaders in governments, business, organizations, and the media.

3. Development and distribution of CD-ROM projects focusing on sustainable development and human health and research on health issues as they relate to the environment.

4. Providing humanitarian relief to areas devastated by environmental degradation. Supplies and equipment are sent to schools, hospitals and orphanages in areas contaminated by the Chernobyl fallout.

5. Centers for Health & Environment providing centralized specific scientific data pertaining to health and sustainability issues. The objective of the Centers is to promote ongoing research, education and implementation of corrective programs. The first center was opened in Kiev, Ukraine, in 1992 and moved to Lviv, Ukraine, in 1996 to K. Levyckoho 11a, #15, telephone/fax: 322-76 40 59. The second opened in Beirut, Lebanon, in 1997, at Bir Hasan, United Nations Street, Al-Salaam Building, telephone: 961-1-853657.

WIT currently operates from headquarters in New York City with regional offices in Australia, Belgium, Canada, Costa Rica, Egypt, France, Germany, Holland, India, Iraq, Israel, Lebanon, Nigeria, Russia, Switzerland, Ukraine and USA.

WIT is on the Board of Congo (Conference of Non-Governmental Organizations) in Consultative Relationship with the United Nations.

We have not inherited the world from our forefathers...we have borrowed it from our children. -Kashmiri Proverb

World Information Transfer
WORLD ECOLOGY REPORT

World Information Transfer, Inc.
(ISSN #1080-3092)

451 Park Avenue South, 6th Floor
New York, NY 10016

Telephone: (212) 686-1996

Fax: (212) 686-2172

E-Mail: wit@igc.org

E-Mail: wit@worldinfo.org

Electronic edition available on:

<http://www.worldinfo.org>

Founder &

Editor-in-Chief: Dr. Christine K. Durbak

Managing Editor: Dr. Claudia Strauss

Contributing Editors: Dr. Sophie Balk
John Bartram
Dr. Ruth Etzel
Britta Husack
Dora Rak
Dr. Mark Robson
Peter Sprague

Circulation Manager: Carolyn T. Comitta

Language Editors:

Dr. Mohamed El-Banna-Arabic
Taras Prytula-Russian
Lidia Garrido-Spanish
Taras Prytula-Ukrainian

Consultant: Dr. Andrew Tooziak

Video Production: Alan Geoghegan

WIT Regional Director-North America:

Carolyn T. Comitta
18 West Chestnut Street
West Chester, PA 19380
Tel: (610) 696-5896; Fax: (610) 450-3804
E-Mail: wit@dplus.net

WIT Regional Director-Eastern Europe:

Roma Hawryliuk
Dr. Lyuba Tuziak
K. Levyckoho 11a, # 15
Lviv, Ukraine
Tel/Fax: (580) 322 76-40-59 & 76-68-18
E-Mail: wit@post.com

WIT Regional Director-Latin America:

Carmen Camacho Rodriguez
Apdo. No. 15-3000
Heredia, Costa Rica
Tel: (506) 260-8655; Fax: (506) 257-7586
E-Mail: cmcamach@una.ac.cr

WIT Regional Director-Western Europe:

Dr. Michel Loots
Oosterveldlaan 196
B-2610 Antwerp, Belgium
Tel: 32-3-448-05-54; Fax: 32-3-449-75-74
E-Mail: mloots@humaninfo.org

WIT Regional Director-Middle East:

Farouk Mawlawi
Al-Salaam Building-United Nations St.
Bir Hasan-Beirut, Lebanon
Tel: (961) 1-853575; (961) 1-853657;
(961) 3-505854
E-Mail: fmawlawi@inco.com.lb

WIT Regional Director-Oceania:

Gerry Lynch
Unit 3, 55 William Street
Double Bay, NSW 2028, Australia
Tel: 61 (2) 9528-6543; Fax: 61 (2) 9528-0546

WIT Regional Director-Africa:

Dr. Mohamed El-Banna
74 Sawra St. Heliopolis, 11541
Cairo, Egypt
Tel: (202) 568-2887; Fax: (202) 365-0492
E-Mail: mbanna@starnet.com.eg

WIT Regional Director-Asia

Dr. Limb
Manhattan I/D - 35 Tai Tam Rd.
Tai Tam, Hong Kong, SAR, China
Tel: 852 2524 9065; Fax: 852 2524 6056
E-Mail: harismcb@netvigator.com

WIT MEMBERSHIP

Individuals and/or organizations can become WIT members and receive four issues of *WIT's World Ecology Report* and other membership benefits for a tax deductible annual fee as follows:

- Student \$15.00
- Individual \$25.00
- Organization \$50.00
- Supporter \$100.00

Life membership:

- Individual \$250.00
- Organization \$500.00

Membership is "FREE" in developing countries.

- Renewal
- Amt. Enclosed \$ _____

MEMBER INFORMATION

Date _____

Name _____

Affiliation _____

Mailing Address _____

Tel _____ Fax _____ E-mail _____

GIFT MEMBERSHIP INFORMATION

Date _____

Name _____

Affiliation _____

Mailing Address _____

Tel _____ Fax _____ E-mail _____

Please return this form along with a check made payable to:

World Ecology Report
451 Park Avenue South, 6th Floor, New York, NY 10016 USA

Point of View: Faith, Women and Health

International organizations serving women's health, especially the health needs of poor women, have lost funding because of a revival of the belief that aiding and advising poor women about their health—including reproductive health—violates the will of God. Helping poor women to plan their families—the thinking goes—promotes the killing of babies unborn.

Given this line of thought, how is it moral to promote the killing of the already born? Some family planning averse nations execute criminals and traitors. Nations practicing a fundamentalist interpretation of Islamic Sharia law sanction the public murder of women who have pre or extra marital sex. Their male partners suffer no comparable punishment. In the US, Texas is one of the states that allows the death penalty. A nation sending its youth to war will certainly send some of its young citizens to their death. Is the life of the living less sacred than the life of the prenatal?

The supporters of this view would agree that embryonic human life afloat in a woman's womb is more sacred than the life of the woman carrying the embryo because if she cannot afford to raise her child, if she is not mentally fit for mothering, if the birth of another child will throw her other children out of school and into poverty, that is just too bad. The unborn must live regardless of the circumstances into which it will be born and regardless of its mother's capacity to make choices benefiting herself and the welfare of her family. Too bad for everyone except the unborn awash in amniotic bliss. And what happens when it is born?

It needs to eat, to be dressed and housed and educated. Yet, its birth overburdened a poor family whose mother and sister now walk further and stay away longer to gather fire-

wood and water and to try to grow more food on poor soils. Once born, does this newborn lose the special sacredness it enjoyed while unborn? This burdensome newborn ultimately causes the family to move because the impoverished land cannot grow enough food. The mother and sister turn into beggars. The sister quits school because the money once used to pay for her education goes to support the infant.

The details of this imaginary family's life could continue, but the point is already becoming clear that as a new child increases

family expenses, its birth can push a poor family further into poverty. The sister in this family lost her chance to get out of poverty through education. Faith based groups have worked tirelessly all over the globe to help the neediest, but given the wealth of evidence linking women's education to smaller families and therefore to improved standards of living, what maintains the faith in the sacredness of the unborn over the sacredness of the small family where a newborn might have a decent life with hope and opportunity.

Recent research demonstrates the role smaller families played in the economic success of East Asia. In 1950 the average woman in the region had six children, but currently she has two. As life expectancy increased and parents realized that their children had better survival rates, women had fewer offspring leading to a higher ratio of working adults to dependants. Between 1965 and 1990, the working age population rose four times faster than the number of dependants. Parents of smaller families save and invest more in each child's education and health which leads to a healthy, competent adult labor force. The demographic transition which

Point of View continued on page 14

When culture affects one's human integrity, when it violates it in terms of gender, that culture should be condemned because whenever one individual is affected... denied of their integrity and human right, we're diminished as people wherever we are."

Bogaletch Gebre, founder and director of the Kembatta, Ethiopia Woman's Self-Help Center.



HOW YOU CAN HELP:

WIT is a non-profit, international, non-governmental organization, in consultative status with the United Nations, dedicated to forging understanding of the relationship between health and environment among opinion leaders and concerned citizens around the world. You can help us with your letters, your time, and/or your donations.

World Information Transfer **WORLD ECOLOGY REPORT**

451 Park Avenue South, 6th Floor
New York, NY 10016

"Never doubt that a small group of thoughtful committed citizens can change the world. Indeed it's the only thing that ever has."

Margaret Mead

NON-PROFIT
ORGANIZATION
U. S. POSTAGE PAID
FORT DODGE, IA 50501
PERMIT NO. 4