



World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

Special Focus:

KEYSTONE IN THE ARCH: Aids and Ukraine

“A pestilence isn’t a thing made to man’s measure; therefore we tell ourselves that pestilence is a mere bogey of the mind, a bad dream that will pass away. But it always doesn’t pass away and, from one bad dream to another, it is men who pass away.”

Albert Camus

On the twentieth anniversary of the discovery of the AIDS virus Nelson Mandela observed that AIDS represents the worst health crisis in recorded history. At present, some 42 million persons world wide are infected with HIV. Twenty six million people have died and ninety five per cent of those deaths are in poor countries. Facts, however, do not contain lives, but they do represent the magnitude of loss that is absolute in each death and nearly unthinkable when collectively added up, life upon life, loss upon loss.

Ukraine—one of the founding member states of the United Nations—initiated a

as part of the AIDS epidemic. On one hundred meters of paper placed down the center of Khreshchatyk, the wide boulevard in the heart of Kyiv, persons made murals, wrote their reflections, named those who have died. One thousand 473 candles were lit that day, one for each person who up to that time had died of AIDS. Also in 2002, the 11th century monastery in Kyiv—the Lavra—established an AIDS hospice, in part through funds raised by the United Nations Country Team.

This May, approximately 50,000 persons marched down Khreshchatyk in honor of the nearly one per cent of the population

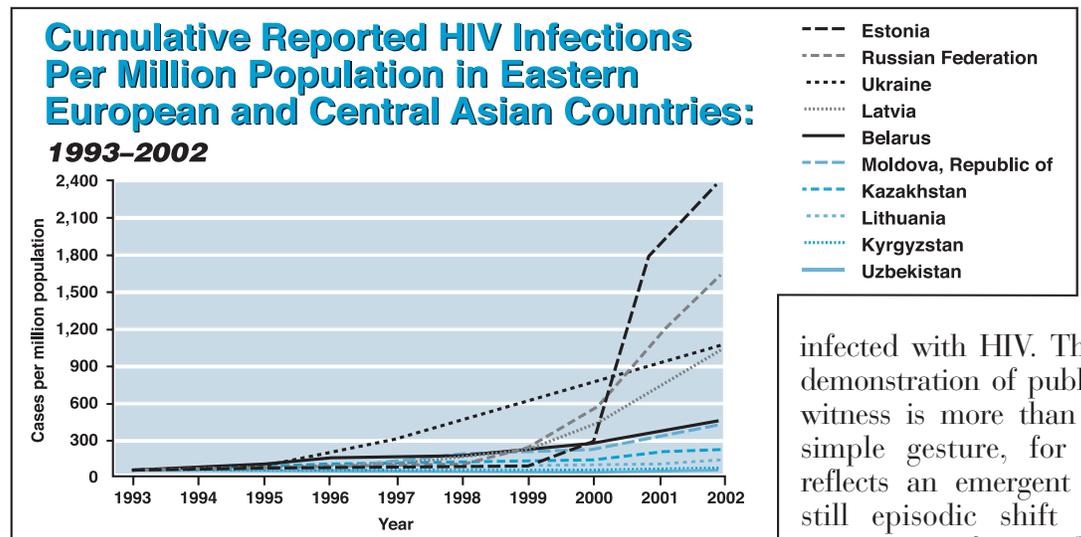
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National AIDS Programmes (2002). HIV/AIDS surveillance in Europe. End-of-year report. Data compiled by the European Centre for the Epidemiological Monitoring of AIDS



infected with HIV. This demonstration of public witness is more than a simple gesture, for it reflects an emergent if still episodic shift of awareness from the

Special Session of the United Nations General Assembly on HIV/AIDS in June 2001. The following year, the President of Ukraine, Lenoid Kuchma, designated 2002 as the Year for the Fight Against AIDS. In Kyiv, the capital city of Ukraine, the first Day of Memory was held in May 2002 commemorating those Ukrainians who died

emotions and strategies of repression—fear, apathy, denial, and dissociation—toward a more transparent cultural self-awareness of responsible interdependence. At present rates of infection and without further fundamental shifts of mind and policy, by 2008, 1.4 million Ukrainians will die from AIDS. The epicenter of the AIDS epidemic



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in the former Soviet Union and in Europe is Ukraine.

As an epidemic of untold proportions AIDS is also a crisis of human rights, a viewpoint expressed both by Nelson Mandela at the Paris AIDS conference July 2003 and by the United Nations Secretary General during his visit to Ukraine in 2002. Viewed from within the emerging security environment of Central and Eastern Europe, Ukraine has been called the “keystone in the arch” (Garnett, 1997). Viewed through the lens of Western psychology, the solidity and development of Ukraine’s future position and strategic potential in part depends on whether policies controlling the exponentially expanding AIDS epidemic can be formulated and applied.

In thinking about AIDS in Ukraine, we must situate this current crisis in the fabric of loss that has in part shaped the modern history of this recent sovereign state. Ukraine has been the epicenter of some of the twentieth century’s most profound tragedies (Merridale, 2001). Between 1917 and 1945, 22 million persons died. Of those deaths, 5 to 7 million (estimates vary) died of starvation between 1929 and 1933 in what officially is called the Great Famine. Whole villages simply disappeared. In many, mortality was as high as 70 to 75 percent. Starvation was a banned word in the Soviet Press. This history of loss shapes the collective mind, defines what can be thought, what can be felt, what becomes public knowledge, what even can be experienced. And so, in 1922, the poet Anna Akhmatova, wrote of the emerging psychology. “We are the people without tears...Straighter than you, more proud.” Memory, grief, loss, further subject to the suppressive work of state violence, fell under the spell of multiple silences into the space of a certain non-existence. Public expressions of the subjective are unthinkable in an atmosphere of pervasive state control.

And then there were the events of April 26, 1986. At the Chernobyl nuclear power plant what began as a misguided experiment ended in the world’s worst nuclear disaster. Only gradually did denial give way to truth. The Chernobyl crisis inspired Gorbachev’s policy known as *glasnost* (or “openness”) and, in the momentum of this development, on August 24, 1991 Ukraine became a sovereign state. The subsequent era—from 1991 to the present—is often thought of as a period of “transition” whose reality has been a trade off between what for many are the somewhat abstract freedoms of pluralist style democratic political process and the more personally urgent needs of basic security.

Since 1991, life in Ukraine has been subject to profound economic decline (for example, a 60% decrease in GDP and a 50% decline in inflation adjusted personal income), rising unemployment,

unpaid wages, unraveling of basic social services, and widespread insecurity about the future. As a recent UNDP report (2002) emphasizes, human development—the process of enlarging the field of choice in terms of healthy life styles, acquisition of knowledge, and adequate standard of living-- cannot advance when there is foundational damage to human security.

The most erosive affect impacting the perception of and behavior toward persons living with AIDS is shame. Shame is a subtle and complex affect. It expresses a depth of servitude and subjugation, the loss of self as a sovereign subject. Shame testifies to the self’s extreme passivity before the world of the living, who have—even under conditions of economic and social despair—some still extant hope of personal agency. The shamed become the ones who are shunned. Those who have been diagnosed as HIV positive in Ukraine (understanding that the political economy of AIDS testing also shapes reported incidence rates), are often treated in similar ways as the gypsy: as outcast, ridiculed, feared, isolated, neglected, hated, despised.

Language reflects and shapes perception. The Russian acronym for AIDS, “SPID,” (in Ukrainian the acronym is “SNID,” Syndrome Nabutoho Immunodefitsytu) for example, becomes “spidosmy” when expressing different levels of negativism toward AIDS patients. When speaking of HIV positive drug users, other negating identifications include “*tvarj konchennaya*” (which can be rendered, most gently, as “creature”) and “*zhivotnoje*” (whose translation suggests “animal”).

A sustained and building health crisis shapes both rates of mortality and those of morbidity. While the post-1991 economic loss has been profound (in 1999, for example, output fell to 40% of pre-1991 levels), there are some signs of renewal (the GDP showed the first positive growth rate of 6% beginning in 2000 which likely will be repeated again in 2003, though it will take a generation—according to some economists—to return to even pre-1991 levels). This is not the case with regard to health, however. Life expectancy continues to decline for both women and men but more so for men, from age 66 in 1990 to age 60 in 2000. Communicable disease such as tuberculosis and sexually transmitted disease is also on the increase. Since 1994, the decline in population has averaged 400,000 per year. Central to this crisis and symptomatic of basic insecurities is a rapid and proliferating increase in intravenous drug usage (IDU). The World Bank, as a result, views the general declining health status and the escalating AIDS epidemic in particular as a crisis further shaping the low levels of present economic security and the future for sustainable economic recovery. Building on a ten-

year partnership with Ukraine, in 2003 the World Bank approved a \$60 million loan earmarked to address both HIV/AIDS and tuberculosis.

Those communities most at risk for the spread of disease and addiction are those where persons have little control over their economic and social development. Human security—which is integral to both human rights and human development-- requires a mediating balance between a forward looking internal locus of control and the supportive environment of a state system whose agendas exceed those of singular self-interest. In the absence of human security and with the breakdown of social and economic development, cultures of despair proliferate; one pervasive symptom of which is the self-perpetuating numbing integral to addiction. At present, it is estimated that there are at a minimum 200,000 intravenous drug users in Ukraine (in Odessa alone, there are at least 40,000, a 600% increase over 1990 estimates). Through sharing needles, drug usage leads to other health problems, and

impervious reverie of false self-authority. He lived on the street, stole from his friends, hustled, despaired. He became, in his words, a cold and calculating machine, all spark of life evacuated. Sergiy found his way to one of the few residential treatment programs. He became clean of drugs. He began to feel again. He also learned that he was HIV positive. Now, however, Sergiy—still drug free—lives to be a beacon for others. Now, he says, he loves people and, at times, he loves himself. He wants now to help others, to save them in some small way from the fate that has marked his own life. Sergiy knows that his life will not be a long one. He knows that he will die from AIDS, yet he also knows that his life now has meaning. Sergiy says that he now feels most alive and best about himself when he can tell other young people who do not yet use drugs his own story. Even those from the village are not exempt from the impact of AIDS and its stigma. Vladimir, a farmer with eight children, had an accident while driving his tractor. His treatment required that he have a blood transfusion

some time after which he became further symptomatic, had a blood test, and discovered that he was HIV positive, the likely result of the blood transfusion. Vladimir lost his job as did his wife—a dairymaid—as word spread throughout the village of his infection. He and his family were shunned. Their only solution was to move to another part of the country and to erase their history,

Summary of ARV supply in Ukraine in March 2003

Drug Usage Form	Manufacturer Chosen	Supply Channel	Comments
d4T 40mg caps IDV 100mg caps	Ranbaxy	Import	Most Cipia and Ranbaxy products were registered in Ukraine in May 2003. All generic products were imported until June 2003.
ZDV 100, 300 mg tab ddl 200mg ZDV+3TC NVP 200mg	Cipia	Import	
NFV syrup NFV 250 mg caps	Roche	Import	In 2002 as the price of NFV was twice the price of NFV in Europe, MSF Imported.
EFV 200 mg cap EFV 600 mg cap	Merch & Co	Local Purchase Not available	Medicines are ordered at Merch & Co's local agent which imports the drugs on order from their regional office (in Russia).

once HIV enters the drug using population, as it has in Ukraine, there are then large and sustained HIV epidemics. Present estimates suggest between 50-90% of new HIV infections are IDUs that in turn spread HIV to their sexual partners and then to their children.

Oksanna, a 30-year-old AIDS patient who lives in the Crimean peninsula, is a typical instance of this tragedy. She said that she never thought she could get infected even though she used drugs and shared needles. She had heard of people getting infected in Sevastopol, but it all seemed to her abstract. A single mother, Oksanna has only a few years to live and her twelve-year-old handicapped son soon will be left without support on her death. Sergiy, from Odessa, became addicted to heroin when he was nineteen. A slight shy boy, Sergiy lived to get high, to feel the

to build their remaining life on a foundation without a public past.

International agencies working in conjunction with the government of Ukraine have largely focused their strategic interventions and funding initiatives on prevention. This focus is vital for there has been a 500% increase in the incidence of HIV/AIDS in Ukraine over the last five years. A policy solely devoted to prevention does not, however, address the immediacy of the present. Oksanna and Sergiy and Vladimir will die of AIDS. They will die sooner rather than later. Antiretroviral drug therapy (ARVT) could profoundly alter the duration and course of their lives. So could resources—also presently lacking—that would address the effective treatment of opportunistic infections and, in addition, provide palliative care. Medecins Sans

Frontieres (Doctors Without Borders) has been a global advocate for the importance of ARVTs in building a base of care whose beneficial effects are synergistic with those of prevention.

There is, however, a complex political economy to the pricing of ARVTs internationally. As of 2001 the price offered the Ukrainian government by major pharmaceutical companies for ARV drug combinations effectively used in other countries was \$9,500 per patient per year. Recent important advances in the provision of low cost generic ARV's, negotiated by Medicine Sans Frontieres, brought the price to US \$500.00 per year. However, as Ukraine is a Medium Human Development Country, only Merck and Roche have set differential pricing levels. As a result, the government is paying three times what is necessary for existing first line affordable ARV's, thus reinforcing stigmatization and mindsets embedded in learned helplessness.(1)

While there is public assent and recent leadership on the part of the President of Ukraine in addressing the AIDS epidemic, the implementation of prevention and treatment strategies also has included contributions from both local and international non-governmental organizations often working in collaboration with the United Nations System. The UN Theme Group on HIV/AIDS in Ukraine, for example, works in close collaboration with the multi-sectoral State Commission on HIV/AIDS and assisted by the Ministries of Health in determining strategic directions for Ukraine's AIDS policy. This level of United Nations-governmental collaboration shapes the network in which United Nations-NGO collaborations develop. A further instance of this collaboration synergy is the relationship between UNAIDS and the Ukrainian National Committee for the Prevention of AIDS and Drug Abuse for the provision of a harm reduction strategy for IDUs whose implementation, in turn, is provided by local NGOs.

Another instance of the synergistic effect of NGO cross collaboration in addressing AIDS in Ukraine is the very successful program Medecins Sans Frontieres (MSF) has established in Odessa to reduce HIV transmission rates from pregnant mothers to babies. MSF also provides counseling and support for patients and their families and runs needle exchange programs. In addition, Medecins Sans Frontieres has been instrumental in mass media campaigns (through ads, leaflets, posters, and the Internet). In 2001 the public information component of MSF became a new local public health NGO specializing in AIDS prevention, "AIDS Foundation East-West."

Other recent programs in Kyiv have begun to address the negative stereotypes attributed to people living with AIDS. These include the use of personal testimony and

information dissemination through television and radio commercials and posters in the Kyiv Metro. Prevention, which has been at the center of AIDS policy in Ukraine, in part depends on information and until recently access to information about AIDS in Ukraine was not widespread or easily available.

The NGO, World Information Transfer (WIT), which has General Consultative Status with ECOSOC, recently developed a series of CD-ROMs providing information on AIDS and many other health related topics for use in all the school systems in Ukraine. This program has the support of the Ministries of Health and Education in the Ukrainian government.

The government of Ukraine is also showing initiative in collaboration with the local UNDP office. One recent outcome of this collaboration is that in June 2003 an official delegation from Ukraine made a visit to Brazil to become acquainted with Brazil's successful experience in responding to the AIDS epidemic. As of 2001, 25% fewer Brazilians contracted HIV than in the previous year through a policy of free anti-retroviral drugs, safe sex campaigns, and the treatment of drug addicts. Of particular interest to the Ukrainian delegation was the development of coordinated country-wide responses to the AIDS crisis with particular emphasis on establishing fruitful collaboration between the government and the NGO network. This is a further hopeful development as it links vertical strategies—policies flowing from sovereign states to people—with horizontal strategies—networks of civil society care givers touching, ameliorating, and potentially transforming one by one lives otherwise threatened, unraveled and subject to the dislocations of foundational insecurities.

A recent review of the prevention strategies in Uganda is also relevant in considering current prevention efforts and the future of Ukraine. One study (Kamali, et.al. 2003), which appeared in the medical journal *Lancet*, suggests that the decline in HIV transmission rates that began in Uganda in the 1990's may not be directly or solely attributable to programs that encourage either safer sexual behavior, abstinence, or condom use. In Uganda, by 1997, there were more than one thousand Ugandan non-governmental organizations caring for people with AIDS and their families. In the absence of a health care system destroyed during the war, these indigenous NGOs fed and nursed patients and brought dignity to despair. This systemic provision of care in turn helped inspire public narratives that represented to the wider community the lived reality of AIDS. Through public portrayals of the effects of AIDS on personal lives, AIDS in Uganda came further into the open. Speakers and performers narrated and enacted the impact of AIDS on

their own lives. Their stories became part of the public and civic narrative. AIDS became close at hand, a shared reality.

Between the hospice care provided by NGOs and the dramatic public portrayal of the impact of HIV on personal lives, there formed something like a concerted synchrony of action whose powerful effect was to raise public awareness of what it means to live with and to die from AIDS. The impact of such an approach has been further subject to more systematic study. One study (Low-Beer and Stoneburner, 2003) found that it was precisely this willingness to talk about the reality of dying from AIDS and the reality of the kind of death that AIDS is that often decisively shifted personal awareness toward safer sexual practices. Public transparency of loss lifts the shrouds covering AIDS victims. Witnessed mourning is also informational as it transmits the affects of care, interdependency, and vulnerability from which no one is ultimately exempt and out of which the matrix of security is woven.

Once spoken, once narrated as a personal symbol in civic space, AIDS becomes for the one not yet infected more than Camus' "a bogey of the mind or a dream to be dismissed." Public narration of loss shapes a newly shared psychic space, one that transforms the private occlusions of shame and the fearful accusations that demonize the diseased. These stories of longing and illness and death and life lived as best as it could be softens the shell of denial and dissociation and repression. A new kind of internalization becomes possible, one less subject to splitting the world up into the categories of me and not-me, the good and the bad. In the environment of AIDS, internalizing the other's death as informing my own possibility shapes social networks of care and self-understanding. In Anna Akhmatova's phrase, the intention to "remember each one of them by name," takes on a new personal urgency.

There is some evidence that Ukraine is making significant steps toward this end. The Day of Memory in May 2002 was a first important step. Public access to factual information is another. The on-going public testimony on the part of People Living With AIDS is still another. Each step taken in this direction ameliorates denial as self-responsibility, expands the consciousness of care to include a building sense of control over one's life, even in the face of other co-existing collective obstacles that otherwise work toward numbing and isolation.

The United Nations' Millennium Declaration's goal of attaining freedom from fear and from want set the tone for a normative shift in the security discourse from state security to human security

(Ogata and Cells, 2003). The subsequent Commission on Human Security (www.humansecurity-chs.org/doc/outline.html) further catalyzed the emphasis on human security in relation to conflict, post-conflict situations, economic insecurity, poverty, health, and human services. The commission report places HIV/AIDS as among the most pervasive and critical of human insecurities. AIDS in Ukraine is the nodal point where issues of both human and regional security intersect. On a structural level, NGOs working in collaboration with both governmental Ministries and the United Nations play a central role in shaping the container in which responsible self-empowerment and transformational self-understanding is possible. It could be said that the building alliance between local and international NGOs, governmental Ministries and the United Nations is, in another sense, the keystone in the arch when facing AIDS in Ukraine.

(1) According to a recently released joint report by the WHO and MSF, the government of Ukraine has negotiated prices for ARVs exclusively with originator companies. As a result, the government is paying three times what is necessary for existing first line therapy.

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Health and Environment

Green Architecture in the Developed and Developing World

Although the world's economies continue to depend on oil and coal, the growing interest and lowered cost of alternative fuels suggest good news for commercial and residential building in the future. Building within the context of sustainable development remains a young idea and in many respects is still in the experimental phase. Examples of what is sometimes called, "green architecture" can be found in key cities in the industrialized countries, such as the Conde-Nast building in New York. In a rapidly urbanizing world where half of the global population live in cities, at least 1 billion people suffer from the dangers and indignities associated with the lack of appropriate housing. Applying the perspective of green design in solving the complex problems of housing would open creative opportunities for energy use.

In the United States, there are more than 76 million residential buildings. These buildings together use one-third of all the energy consumed in the U.S. and two-thirds of all electricity. Furthermore, buildings are a major source of the pollution that degrades urban air and contributes to climate change. They account for 40 percent of sulfur dioxide emissions, 25 percent of nitrous oxide emissions, and 10 percent of particulate emissions, of all which damage urban air quality. Buildings produce 35 percent of America's carbon dioxide emissions – the chief pollutant blamed for climate change. By the year 2010, another 38 million buildings are expected to be constructed. The challenge will be to build them smart, so they use a minimum of nonrenewable energy supplies, produce a minimum of pollution and cost a minimum of energy dollars, while increasing the comfort, health and safety of the people who live and work in them. Common building practices often overlook the interrelationships between a building, its surroundings, and its occupants. The design, construction and maintenance of buildings have a tremendous impact on people's health, their environment and natural resources in the developed world as well as in developing countries.

Public health is interconnected with the built environment: In California schools, a "portable" is shorthand for the portable classroom that sprouts as some schools cope with rapidly growing population. Kids that spent several

hours a day in portables can be exposed to airborne chemicals known to cause cancer, asthma and other illnesses. A San Francisco based environmental group sued makers and suppliers of the portables under a state law that requires products containing chemicals that cause cancer or reproductive harm to carry warning labels. In 1999, the Environmental Working Group published a report that claimed more than two million school children were potentially exposed to harmful levels of formaldehyde, benzene and other chemicals inside portables. Another example can be found in the use of Polyvinyl Chloride a.k.a. PVC, or "vinyl". This chemical has had negative consequences for the workers and inhabitants. Thus, actions

in specifying and using green materials do have a long term effect on the population of every country.

With increasing urgency since the Earth Summit in Rio in 1992, responsible and conscientious leaders in the building industry have been searching for new standards and practical solutions in low and efficient energy design. The RICS Foundation, a global research based non-profit organization, has developed Global Alliance for Building

Sustainability (GABS) a collaboration of international professional institutions. Their aim is to seek out and showcase built-environment case studies from around the world that demonstrate how practitioners can achieve sustainable development. There are many ways to make buildings cleaner and healthier. If only 10 percent of homes in the U.S. used solar water heating systems, we would avoid 8.4 million tons of carbon emissions per year. There are indeed efforts in the developed world to minimize building's impact on the environment. The New York State Department of Environmental Conservation (DEC) has the lead on developing regulations that will govern New York State's Green Building Tax Credit. New York will be among the first states in the nation to offer a tax incentive program for developers of environmentally friendly buildings.

In the past, research into isolated building components did not take into account how individual systems affect other systems. A new approach in the field of green architecture is known as the "New Urbanism", which identifies projects that are in compliance with healthy and sustainable architecture



Museum of Islamic Arts, Qatar

and community development. Design publications have begun to highlight green buildings more frequently. Renzo Piano and Norman Foster, in receiving the Pritzker Architecture Prize, were recognized for their completely integrated design solutions, often called high-performance buildings or green design. For example, a building that uses extensive daylight techniques will reduce the amount of electricity needed and also the amount of heat given off by light fixtures, thus allowing a smaller air conditioning system to be used.

A way to evaluate more sustainable types of architecture is to use a comprehensive building rating system such as U.S. Green Building Council's LEED™ Green Building Rating System. This assessment model also takes into consideration that placing green building projects within easy access of public transportation, medical facilities, shopping areas, and recreational facilities decreases the need for cars and encourages bicycling and walking. These are crucial components of sustainable neighborhood development. Well-designed landscaping can also help reduce energy use from heating and air-conditioning energy. Xeriscape™ is a new program that refers to landscaping concepts which reduce water needs. Deciduous trees for example can provide shading during the summer without preventing solar gain during the winter.

The idea of green buildings in the less developed world is accompanied by the concept of "permaculture", which was first developed in 1974 by Bill Mollison and David Holmgren in Tasmania. Permaculture presents an approach to designing environments that have the density, stability and resilience of natural ecosystems. A holistic approach, permaculture encompasses energy-efficient buildings, waste water treatment, recycling and land stewardship in general. In the South African context, it is an efficient model for developing the rural areas. Since the late seventies, tens of thousands of people world wide have graduated from permaculture design courses and are continuing the development of permaculture practices in their local bioregions and communities, especially in developing countries. Most recently, permaculture has expanded its range to include co-housing projects and eco-villages. Key to efficient design is observation and replication of natural ecosystems, where traditional knowledge and experience are validated. As such, permaculture design concepts are applicable to urban as well as rural settings. Selecting local building materials helps strengthen the local economy, as well as eliminating the need for transporting materials, which in turn reduces pollution, fuel consumption, and other transportation-related environmental impacts. Some materials have more of an impact on the environment than others. Virgin materials have a higher level of embodied energy (energy required to harvest, manufacture, and transport the materials) than recycled materials.

A political incentive for greener architecture is provided by the United Nations Human Settlements section of the UN-



Jean Marie Tjibaou Cultural Center, New Caledonia

Habitat Programme. It awards an annual Habitat Scroll of Honour to outstanding contributions in building and settlement development. One of the winners in 2003 was His Majesty Bhumipol Adulyadej, the King of Thailand for his achievements in sustaining habitats and improving the quality of life of the people in cities and communities in his country. When Thailand became greatly deforested, expensive industrial concrete was replacing the natural materials. Recent projects that use self produced adobe bricks have introduced an independent and low-cost way of building houses for local communities.

Thailand's old forests of hardwood and bamboo are gone forever. Using other natural materials for housing is clearly a sensible and creative solution to housing needs of various populations. Yet, recognizing the benefit of balance between the built environment, the natural resource base, ecological beauty and human health is a more difficult route to solving today's housing demands. The easier way would ignore the finite nature our coal and oil reserves and the long term toxic effect of building as usual.

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Food for Thought

Ecological Bioterrorism and The Biosecurity Strategy

“An ounce of prevention is worth a pound of cures.”

Antiquity

Since the successful dissemination of anthrax within the American postal system in 2001-2002, one of the biggest threats to U.S. homeland security continues to be a potential terrorist attack using biological agents. Bio-terrorism has been defined as the intentional use of microorganisms or toxins derived from living organisms to cause death or disease in humans, animals, or plants on which we depend, [Ashford et. al. (2003)]. Bio-terrorism has also been described as the threat to use biological agents by individuals or groups motivated by political, religious, ecological, or other ideological objectives, [Carus (2001)].

While Bio-security has been defined as the vital work of strategy, efforts, and planning to protect human, animal, and environmental health against biological threats, [Meyerson et al. (2002)].

Well before the bio-terrorism threat became apparent, the United States' environment and economy had been severely impacted by unintentionally introduced harmful biological organisms. During the last 100 years and continuing into the present, natural ecosystems and biological reserves of conservation importance are regularly invaded by nonindigenous plant and animal species.

The National Invasive Species Council defines an invasive non-indigenous species as one that is:

- i) Non-native (or alien) to the ecosystem under consideration.
- ii) Whose introduction causes or is likely to cause economic or environmental harm or harm to human health. (NISC, 2001).

It is estimated that approximately 50,000 non-indigenous species have been introduced in the United States. It has been suggested that economic damage associated with invasive species and the control of them amounts to approximately \$137 billion dollars per year.

One example of an invasive alien species that has established a niche within the United States is *Lythrum salicaria*, or purple loosestrife. The plant was introduced by

contaminated European ship ballast and as a medicinal herb for treatment of such things as diarrhea, dysentery, and bleeding. *Lythrum salicaria* has created ecological backlash in both aquatic and wetland ecosystems. Also, *Lythrum salicaria* jeopardizes various threatened and endangered native wetland plants and wildlife. Without any native natural enemies, purple loosestrife has been able to out-compete many native plants and animals present in the United States. Stands of purple loosestrife have reduced the biomass of 44 native plants and endangered wildlife,

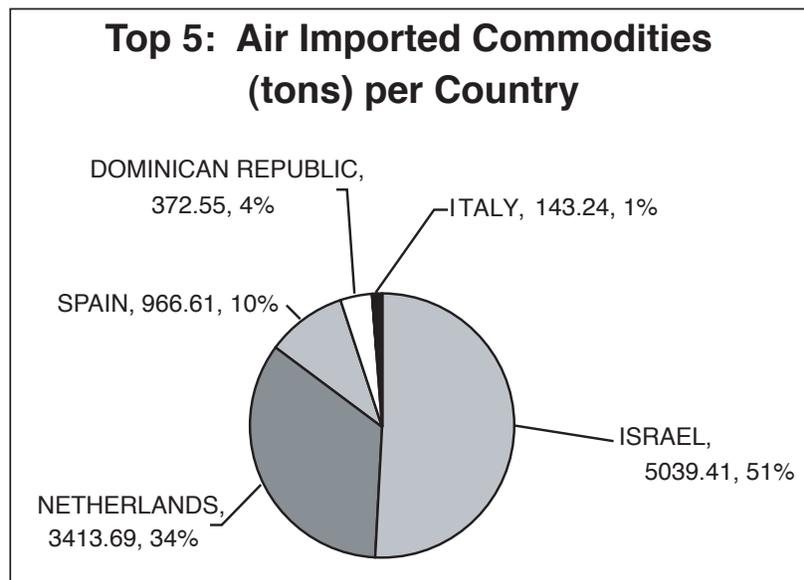
including the bog turtle and several duck species that depend on these native plants. Loosestrife now occurs in 48 states and costs \$45 million per year in control costs and forage losses.

Another example is the introduction of the zebra mussel into the Ohio River Basin. Zebra mussels, like purple loosestrife, have been successful in establishing and reproducing within a foreign environment but at a much faster rate. These brownish-drab creatures with

distinctive stripes on their shells were accidentally introduced to the Great Lakes in the late 1980's in ballast water of ships from Europe. They have been spreading through the major waterways of the eastern United States at a tremendous pace ever since. Large zebra mussel populations currently threaten the survival of native mussels, clams and snails. Infrared light treatment and stiffer ballast water regulations for maritime transporters have been two actions taken to prevent any further importation of zebra mussel larvae or other aquatic species.

Other examples of invasive species that have established in the U.S. are the Fire Ant, Africanized Honey Bees, Northern Snakehead, Brown Marmorated Stink Bug, and the Asian Long Horn Beetle.

Globalization is a driving factor that has further increased the risk of invasive alien species in the past 50 years. Van Driesche (2000) believes that while the global gross domestic output is only five and a half times as big in 1997 as it was in 1950, the total volume of world trade increased sixteen fold in the same period. The gross imported commodities are



vastly greater than in 1950 mainly due increased technologies in air and maritime vessels, decreased time of travel, and a growing global economy. The increase in sheer numbers of foreign commodities imported into the U.S. make it nearly impossible to prevent the introduction of all alien species. In creating a comprehensive approach to biosecurity, it is extremely important to follow "ICU":

- Investigate the biology of exotic, non-indigenous species that are affecting foreign countries by monitoring movement.
- Create state-specific lists with ecological risk assessments for possible introductions of invasive alien species.
- Understand the biological mechanisms that have allowed invasive alien species to enter and become established in the United States.

Taking "ICU" initiatives would better prepare federal agencies, port inspectors, veterinarians, plant pathologists, and entomologists to counteract a bioterrorist attack using non-indigenous species

In the United States, legislative efforts by National Environmental Protection Agency (NEPA) to require environmental impact statements (EIS) for all imported goods are currently being debated. Additional regulatory legislature enacted by the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA) have arisen. The prevention of ecological bioterrorist attacks should be considered the most cost-effective way to minimize ecological impacts and control costs in the United States. Better knowledge and improved technologies such as biosensors and pathogen gene screening are being researched and developed to improve this important line of defense.

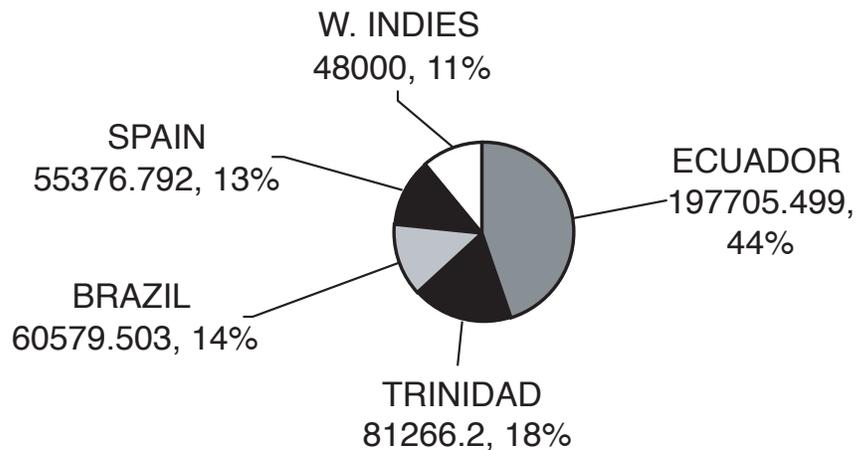
The International Plant Protection Convention (IPPC) is an international treaty whose purpose is to secure a common and effective action to prevent the spread and introduction of pests of plants and plant products. In addition, the IPPC promotes appropriate measures for their control. The Interim Commission on Phytosanitary Measures (ICPM) has organized annual meetings since 1998 in Rome that govern the implementation of the IPCC and provide a forum to discuss international plant protection issues. The Center for Disease Control's ProMed forum provides updated international plant pest quarantine interceptions that occur globally.

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Special Report

A biotechnology firm in Copenhagen (Aresa Biodetection) has modified a common garden weed to detect unexploded land mines, estimated at about 110 million in 64 countries, killing and maiming 26,000 people annually. The roots of the weed are modified to detect chemicals common to explosives, such as nitrogen dioxide that leak out as the mines corrode, and change from green to red in three to six weeks.

Source: *Scientific American*, April-2004

THE SIXTH GREAT EXTINCTION: A Status Report

Author: Janet Larsen

Almost 440 million years ago, some 85 percent of marine animal species were wiped out in the earth's first known mass extinction. Roughly 367 million years ago, once again many species of fish and 70 percent of marine invertebrates perished in a major extinction event. Then about 245 million years ago, up to 95 percent of all animals—nearly the entire animal kingdom—were lost in what is thought to be the worst extinction in history.

Some 208 million years ago, another mass extinction took a toll primarily on sea creatures, but also some land animals. And 65 million years ago, three quarters of all species—including the dinosaurs—were eliminated.

Among the possible causes of these mass extinctions are volcanic eruptions, meteorites colliding with the earth, and a changing climate. After each extinction, it took upwards of 10 million years for biological richness to recover. Yet once a species is gone, it is gone forever.

The consensus among biologists is that we now are moving toward another mass extinction that could rival the past big five. This potential sixth great extinction is unique in that it is caused largely by the activities of a single species. It is the first mass extinction that humans will witness firsthand—and not just as innocent bystanders.

While scientists are not sure how many species inhabit the planet today, their estimates top 10 million. Yet each year thousands of species, ranging from the smallest microorganisms to larger mammals, are lost for good. Some disappear even before we know of their existence.

The average extinction rate is now some 1,000 to 10,000 times faster than the rate that prevailed over the past 60 million years. Throughout most of geological history, new species evolved faster than existing species disappeared, thus continuously increasing the planet's biological diversity. Now evolution is falling behind.

Only a small fraction of the world's plant species has been studied in detail, but as many as half are threatened with extinction. South and Central America, Central and West Africa, and Southeast Asia—all home to diverse tropical forests—are losing plants most rapidly.

Today nearly 5,500 animal species are known to be threatened with extinction. The IUCN—World Conservation Union's 2003 Red List survey of the world's flora and fauna shows that almost one in every four mammal species and one in eight bird species are threatened with extinction within the next several decades. (For access to IUCN's Red List of Threatened Species database, see www.redlist.org).

Of 1,130 threatened mammal species, 16 percent are critically endangered—the highest threat level. This means that 184 mammal species have suffered extreme and rapid reduction in population or habitat and may not survive this decade. Their remaining numbers range from under a few hundred to, at most, a few thousand individuals. For birds, 182 of the 1,194 threatened species are critically endangered.

Although the status of most of the world's mammals and birds is fairly well documented, we know relatively little about the rest of the world's fauna. Only 5 percent of fish, 6 percent of reptiles, and 7 percent of amphibians have been evaluated. Of those studied, at least 750 fish species, 290 reptiles, and 150 amphibians are at risk. Worrisome signs—like the mysterious disappearance of entire amphibian populations and fishers' nets that come up empty more frequently—reveal that there may be more species in trouble. Of invertebrates, including insects, mollusks, and crustaceans, we know the least. But what is known is far from reassuring.

At the advent of agriculture some 11,000 years ago, the world was home to 6 million people. Since then our ranks have grown a thousandfold. Yet the increase in our numbers has come at the expense of many other species.

The greatest threat to the world's living creatures is the degradation and destruction of habitat, affecting 9 out of 10 threatened species. Humans have transformed nearly half of the planet's ice-free land areas, with serious effects on the rest of nature. We have made agricultural fields out of prairies and forests. We have dammed rivers and drained wetlands. We have paved over soil to build cities and roads.

Each year the earth's forest cover shrinks by 16 million hectares (40 million acres), with most of the loss occurring in tropical forests, where levels of biodiversity are high. Ecologically rich wetlands have been cut in half over the past century. Other freshwater and terrestrial ecosystems have been degraded by pollution. Deserts have expanded to overtake previously vegetated areas, accelerated in some cases by overgrazing of domesticated animals.

A recent study of 173 species of mammals from around the world showed that their collective geographical ranges have been halved over the past several decades, signifying a loss of breeding and foraging area. Overall, between 2 and 10 percent of mammal populations (groups of a single species in a specific geographical location) are thought to have disappeared along with their habitat.

Direct human exploitation of organisms, such as through hunting and harvesting, threatens more than a third of the listed birds and mammals. Other threats to biodiversity include exotic species, often transported by humans, which can out compete and displace native species.

A recent survey of some 1,100 animal and plant species found that climate change could wipe out between 15 and 37 percent of them by 2050. Yet the actual losses may be greater because of the complexity of natural systems. The extinction of key species could have cascading effects throughout the food web. As John Donne wrote, "no man is an island." The same is true for the other species we share this planet with: the loss of any single species from the web of life can affect many others.

Healthy ecosystems support us with many services—most fundamentally by supplying the air we breathe and filtering the water we drink. They provide us with food, medicine, and shelter. When ecosystems lose biological richness, they also lose resilience, becoming more susceptible to the effects of climate change, invasions of alien species, and other disturbances.

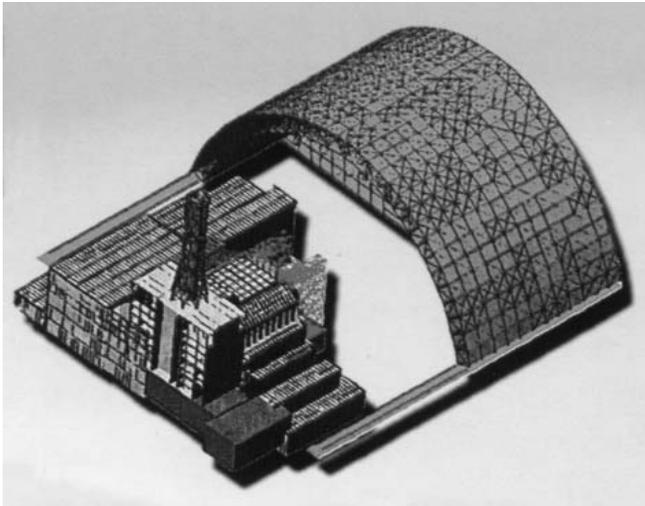
The 1992 Convention on Biological Diversity provides a framework for countries to conserve biological diversity and promote sustainable development. It has been signed by 168 countries, notably excluding the United States. The parties, which recently held their seventh conference in February 2004 in Kuala Lumpur, have set a target of substantially reducing biodiversity loss by 2010. Yet the convention lacks mechanisms for action and enforcement, which may make it difficult to achieve the target.

Consciously avoiding habitat destruction and mitigating the effects of land use change, reducing the direct exploitation of plants and wildlife, and slowing climate change can help us stop weakening the very life-support systems we depend on. While this may be the first time in history that a single species can precipitate a mass extinction event, it is also the first time in history that a single species can act to prevent it.

Chornobyl Update: The Sarcophagus

In a recent statement to the UN Security Council, H. E. Mr. Valeriy Kuchinsky, Ambassador of Ukraine to the United Nations, stated:

"The Counter-Terrorism Committee of the Security Council should extend the scope of its work on the question of technical assistance.....to the problem of the Chornobyl Exclusion Zone in Ukraine. This Zone surrounding the Chornobyl Nuclear Power Plant comprises 76 abandoned settlements, including the towns of Prypyat and Chornobyl as well as 800 sites where nuclear waste and contaminated materials have been dumped. There is still a great risk of unauthorized penetration in the Zone and the removal of the said materials, which, inter alia,



Proposed Sarcophagus

could be used by potential terrorists for their purposes. To secure the Exclusion Zone and to ensure that such radioactive materials are kept out of reach of unauthorized persons, the Government of Ukraine has been working on several projects. ...I would like to draw your attention to the possibility of using the Chornobyl Exclusion Zone and abandoned settlements within its territory for working out practical measures on prevention of nuclear terrorism acts as well as for the training of appropriate personnel."

Throughout the world 523 nuclear reactors have been built of which 82 have been closed. Of the 441 reactors operating, almost half will be permanently closed within the next twenty years.

Source: *Insight*, # 11, 2003

The Chornobyl Exclusion Zone contains a total area of more than 10 million square meters that are contaminated.

In the middle stands the current sarcophagus where scientists are continually evaluating data of the stability of Unit 4. A 1995 report submitted regarding the state of the sarcophagus stated that it was not stable or seismically reliable and urged the construction of a new safety enclosure due to the high level of radiation and the actual state of



Dr. Durbak and Ambassador Nina Kovalska in front of Reactor #3 and 4 Sarcophagus

existing constructions. However, the project which could provide an ecologically safe system and contain the radioactive waste and fuel which will enable the dismantling of Unit 4 is still on the drawing boards.

In 1998, the largest international ecological project started at the Chornobyl Nuclear Power Plant. The project is based on a memorandum of understanding signed in 1995 between the Government of Ukraine, the Governments of the G-7 countries, and the Commission of the European Community regarding the Chornobyl shut down. The projects' main functions are to provide for:

1. limit of radiation impact on population and environment to the levels established for normal operation;
2. limit spread of ionizing irradiation and radioactive materials accumulated inside the sarcophagus;
3. monitoring functions, including radiological and seismic conditions;
4. safety confinement with a life time of 100+ years.

The construction of the new sarcophagus is planned for spring 2004. The project is expected to provide an ecologically safe system which will allow for the removal and burial of fuel containing radioactive material and radioactive waste in accordance with national and international standards.



Sources for the 2 photos:
World Information Transfer

Leaving Chornobyl city



Climate Change & Health

Climate change is responsible for 2.4 per cent of all cases of diarrhea worldwide and for 2 per cent of all cases of malaria, according to the World Health Organization. An estimated 150,000 deaths and 5.5 million Disability-Adjusted Life Years were caused in the year 2000 due to climate change. Rain can also have a major impact on health. When rainfall rises above normal levels, it can collect and stagnate, and the still water provides additional breeding grounds for mosquitoes and other vectors which transmit diseases such as malaria and dengue fever.

Source: Climate Change and Human Health – Risks and Response, WHO press release, 11 December 2003 | GENEVA

Mercury Pollution in India

India's Centre for Science and Environment reports that India, which has some of the worst rural and urban soil, air, and water pollution in the world, is rapidly becoming the site of choice for those looking to offload large stores of mercury. India is among the world's largest importers of substances for recycling purposes, and many of those imports, such

as ships to be broken down, are contributing to a mercury pollution crisis. Imports of mercury and mercury compounds have increased almost six fold over the past seven years. Methylmercury, the most commonly found form of mercury in the environment, can permanently damage the central nervous system, lungs, and kidneys, and can cause fetal brain damage with no symptoms in the expecting mother.

Extinctions

Today nearly 5,500 animal species are known to be threatened with extinction. The IUCN—World Conservation Union's 2003 Red List survey of the world's flora and fauna shows that almost one in every four mammal species and one in eight bird species are threatened with extinction within the next several decades. (For access to IUCN's Red List of Threatened Species database, see www.redlist.org).

Of 1,130 threatened mammal species, 16 percent are critically endangered—the highest threat level. This means that 184 mammal species have suffered



Boyd's Endangered Forest Dragon

extreme and rapid reduction in population or habitat and may not survive this decade. Their remaining numbers range from under a few hundred to, at most, a few thousand individuals. For birds, 182 of the 1,194 threatened species are critically endangered.

Source: 2004 Earth Policy Institute



GOOD NEWS!



Attwater's Endangered Prairie Chicken

HIV/AIDS: Treating 3 million by 2005: Making it happen

The United Nations' 3 by 5 Initiative was created because currently, six million people infected with HIV in the developing world need access to antiretroviral therapy (ART) to survive. Only 400 000 have this access. The failure to deliver ART to the millions of people who need it is a global health emergency. To address this emergency, WHO is fully committed to achieving the 3 by 5 target - getting three million people on ART by the end of 2005. Treating 3 million people by the end of 2005 will require concerted, sustained action by many partners. To chart the direction and to show what WHO itself will be doing to accelerate action, WHO has developed an initial strategic framework. Further information can be found at www.who.int/3by5/publications/documents/isbn9241591129/en/

Humanitarian Award

Winners of the Ninth Annual LATIN TRADE Bravo Business Awards include Dr. Paulo Roberto Teixeira, Director of WHO's HIV/AIDS department, who became Humanitarian of the year for 2003. Among the accomplishments cited are his persistent fight against AIDS. Before joining the World Health Organization in the summer of 2003, Paulo Roberto Teixeira led the Brazilian government's HIV/AIDS programme. From 1996-2001, the programme reduced the mortality rate by half and helped some 358 000 people avoid hospitalization, saving the government an estimated

US\$1.1 billion in treatment costs. In the past three years, 31 developing countries have adopted Brazil's guidelines for prevention and treatment.

Dr Paulo Teixeira insists that people with HIV/AIDS must be treated like everybody else and joined WHO to achieve its goal to treat 3 million people with HIV/AIDS in the developing world by the end of 2005.

Source: World Health Organization, 20 November 2003, www.who.org



VOICES

Scientific Integrity in Policymaking : An Investigation into the Bush Administration's Misuse of Science,

Published by the Union of Concerned Scientists.

This book argues that the current American President and his administration have engaged in the manipulation, suppression, and misrepresentation of science to a degree that is unprecedented. Incidents involve air pollutants, heat-trapping emissions, reproductive health, drug resistant bacteria, endangered species, forest health, and military intelligence. According to the authors, this administration has also engaged in a wide ranging effort to manipulate the government's scientific advisory system to prevent

Global Mobile Phone Usage

In 1992, only one in 237 people worldwide used a mobile phone. A decade later, by 2002, this had soared to one in five. Cellular phones are helping to bridge the telephonic divide between rich and poor. Building cell phone towers is cheaper than stringing traditional wires. As a result, mobile service has dramatically boosted phone access in Africa. In 1999, Uganda became the first African nation to have more mobile than fixed-line customers. Thirty other African nations have since followed.

Source: Communications Networks Expand, Vital Signs 2003, pp. 60-61.

the appearance of advice that might run counter to the administration's political agenda. Further information is available at the website of the Union of Concerned Scientists, www.ucsusa.org

State of the World 2004, Special Focus: The Consumer Society. January 2004

On the Worldwatch Institute's thirtieth anniversary, this special edition of State of the World examines how we consume, why we consume, and what impact our consumption choices have on the Earth and our fellow human beings. The report shows it is essential and possible for businesses, governments, and concerned citizens to harness purchasing power to build markets for less-hazardous products, including fair-traded foods, green power, and fuel-cell vehicles. The report contains chapters on food, water, energy, the politics of consumption, and a redefinition of the good life. Further information can be found at www.worldwatch.org/pubs/sow/2004/

FAO Documents Webpage

The annotated list of on-line documents available on the UN Food and Agricultural Organization (FAO) Biotechnology website has recently been updated. It currently provides web links to 90 articles, books, meeting reports, proceedings and studies published by FAO, or prepared in collaboration with FAO, in recent years concerning biotechnology in food and agriculture. The webpage (<http://www.fao.org/biotech>

[h/doc.asp](http://www.fao.org/biotech/doc.asp)) is available in Arabic, Chinese, English, French and Spanish and many of the documents are available in several languages. For more information, contact biotech-website@fao.org

Blue Vinyl.

Blue Vinyl is a documentary film with a comic edge. When writer, director and activist Judith Helfand learned that her parents added blue vinyl siding to their home, she and co-director Daniel B. Gold set out to discover the truth about PVC or polyvinyl chloride. The two film makers visit the vinyl-producing capitals of Lake Charles, Louisiana (USA) and Venice, Italy, interview scientists, workers, activists and industrialists and show that the highly lethal carcinogens released in the manufacture and disposal of PVC are linked to neurological damage, respiratory problems, liver and kidney failure, birth defects and cancer. Despite the hundreds of documented cases of illness and death among factory workers and residents of fence-lined communities affected by contaminated air and water, the global vinyl industry steadfastly ignores the warnings of scientists, health workers and environmentalists. Though the film is called a "toxic comedy," the skilled inter-weaving of the writer/director's comical personal story with scientific documentation and the technique of the interview make this a powerful film. The documentary has won many awards including the Documentary Award for Excellence in Cinematography at the 2002 Sundance Film Festival.



Source: Gado/Daily Nation/Nairobi, Kenya

Continued from page 16

information and ideas, and what repressive regime will want to do that? According to the latest study of democracy levels by Freedom House, the non-governmental organization which annually assesses citizens' liberties by country, the last seven years have seen a period of growth for elected democracies. But not all elected democracies are liberal ones, that is, democracies protecting the liberties of citizens. According to Freedom House, there are 117 "electoral democracies" in the world of which 88 are liberal democracies. With the exception of Haiti and Cuba, the Eastern Hemisphere houses all of the countries which are not liberal democracies. Another way to look at the discrepancies between free and not-free countries is from the perspective of world population; 56% of the people in the world do not live in liberal democracies.

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

— Benjamin Franklin (1759)

How then, can the members of the United Nations agree to promote one of the bedrock conditions of liberal democracy, namely, the free flow of information and ideas? If the "brain drains" of past repressive regimes - that is the loss of highly intelligent, creative people - offer any lessons to the WSIS, its members might recall the pattern of arrested economic, scientific, and social development in the most repressive countries including Nazi Germany and occupied Europe, the former USSR, and several African nations. It is also hardly a coincidence that an impoverished population (but not government) and political repression so often occur together.

The Freedom House study shows another striking trend since September 12, 2001. States in the Arab Region and Asia have become more repressive, and in 2003, four countries that had been identified as elected democracies lost that designation (The nations are Fiji, Guinea-Bissau, Armenia and Georgia). Freedom House suggests that the regimes in the respective regions used the threat of terrorism to clamp down on criticism. There is also growing alarm in the well established liberal democracy of the United States over the "Patriot Act," the legislation which enables government to ignore civil liberties of citizens suspected of terrorism. But because the American press remains uncontrolled by the government, and its citizens enjoy open access to information and ideas on the internet and email, the troubling legislation triggers public discussion, review and possible revocation.

The WSIS is a bold move on the part of the United Nations because it exposes a fundamental flaw in authoritarian political systems. When governments have attempted to control information and ideas they have done so at their own peril.

Important News

Stockholm Convention on POPs to enter into force on 17 May 2004

Geneva/Nairobi, 18 Feb. 2004 - The 2001 Stockholm Convention on Persistent Organic Pollutants (POPs) will become legally binding on 17 May 2004, the United Nations Environment Programme (UNEP) announced today. The 90-day countdown to the treaty's entry into force was triggered on 17 February 2004 when France became the 50th state to ratify the agreement. Governments will pursue a rapid start to action under the treaty when they meet for the first session of the Conference of the Parties to the Convention (COP 1) in Punta del Este, Uruguay in early 2005. One of this meeting's priorities will be to assist countries to combat malaria by replacing DDT with the increasingly safe and effective alternatives. The COP will also establish a Committee for evaluating other chemicals and pesticides that could be added to the initial target list of 12 POPs (these are aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, polychlorinated biphenols or PCBs, hexachlorobenzene, dioxins and furans). Every human in the world carries traces of these chemicals in their bodies. POPs are highly stable compounds that can last for years or decades before breaking down. They circulate globally through a process known as the "grasshopper effect". POPs released in one part of the world can, through a repeated process of evaporation and deposit, be transported through the atmosphere to regions far away from the original source. In addition, POPs concentrate in living organisms through another process called bioaccumulation. Though not soluble in water, POPs are readily absorbed in fatty tissue, where concentrations can become magnified by up to 70,000 times the background levels. Fish, predatory birds, mammals, and humans are high up the food chain and so absorb the greatest concentrations. And when they travel, the POPs travel with them. Most of the 12 chemicals will be banned immediately. However, the use of DDT for disease vector control under World Health Organization guidelines is considered an acceptable purpose because it is still essential in many countries to control malaria transmission by mosquitoes. This will permit governments to protect their citizens from malaria - a major killer in many tropical regions - until they are able to replace DDT with chemical and non-chemical alternatives that are cost-effective and environmentally friendly. So, contrary to some claims, no one will die of malaria because of the Stockholm Convention. In addition to banning uses, the treaty focuses on cleaning up the growing accumulation of unwanted and obsolete stockpiles of pesticides and toxic chemicals. Dump sites and toxic drums from the 1950s, '60s, and '70s are now decaying and leaching chemicals into the soil and poisoning water resources, wildlife, and people.

Source: UNEP press release, February 2004
<http://www.unep.org/Documents>

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

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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 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 the implementation of corrective programs. The first center was opened in Kiev, Ukraine, in 1992 and in 1996 moved to Lviv, Ukraine, at K. Levyckoho 11a, #15, telephone/fax: 322-76 40 39. 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, Switzerland, Ukraine and USA.

WIT has General 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 Ecology Report

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Point of View

Promoting The Information Society Promotes Liberal Democracy

If the political leaders of the world truly want to create a non-terrorist Information Society and bridge the so-called "digital divide," then all nations will have to eventually become liberal democracies with continuously expanding civil and political rights - something that is unlikely to happen soon.

The first phase of the United Nations World Summit on the Information Society (WSIS) took place in Geneva, (December 9-12, 2003), after the preparatory meetings made it clear that consensus was improbable on the two most basic concepts for an equitable Information Society to come into existence. These concepts are: (1) the free flow of ideas; and (2) freedom to access information. The key stumbling bloc to consensus is the difference between a democracy where citizen's rights are protected by law from the state's power (and the law continues to expand in favor of citizens' rights rather than

public and private sector players to forge an inclusive dialogue based on the interests of all. In these two respects, the Summit has been heralded a success." Kofi Annan, UN Secretary-General, said, "technology has given birth to the information age. Now it is up to all of us to build an information society from trade to tele-medicine, from education to environmental protection, we have in our hands, on our desktops and in the skies above, the ability to improve standards of living for millions upon millions of people." The most important specific Summit targets include: connecting all schools, villages, governments and hospitals; and bringing half the world's population within ICT reach, all by the year 2015.

However, meeting these targets means increasing the freedom of

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"It would indeed be ironic if, in the name of national defense, we would sanction the subversion of one of those liberties. . .which make the defense of the Nation worthwhile."

— Justice Earl Warren, Chief Justice of the US. Supreme Court

government's rights) and authoritarian regimes where the law represses citizens.

The political differences have been apparent since the Summit was conceived, but because its overarching goal was vague and high minded, it offered hope and another means to try to fix the world's most egregious problem: severe poverty. According to its final press release, the Summit sought to, "gain the will and commitment of policy-makers to make ICTs [information communication technologies] a top priority, and to bring together

The Freedom House list of the "world's most repressive regimes."

Burma (*Myanmar*) - military dictatorship
Cuba - Communist dictatorship
Iraq - personal dictatorship until April 2003
Libya - personal dictatorship
North Korea - Communist dictatorship
Saudi Arabia - monarchy
Sudan - military dictatorship
Syria - military dictatorship
Turkmenistan - personal dictatorship
China - Communist dictatorship
Equatorial Guinea - military dictatorship
Eritrea - party dictatorship
Laos - Communist dictatorship
Somalia - anarchy
Uzbekistan - party dictatorship
Vietnam - Communist dictatorship



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"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

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