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### In this issue:

- 1 **Special Focus:  
Keynote Address  
by H.E. Ambassador  
Wibisono**
- 3 **An Overview Of  
Health and the  
Environment at  
the Beginning of  
the 21st Century  
by H. E. Ambassador  
Kiwanuka**
- 6 **An Approach  
Towards  
Decreasing  
Environmental  
Health Problems  
by Professor  
Uhmar Fahmi**
- 8 **Spirituality and  
Sustainable  
Human  
Development  
by Rosina Wiltshire**
- 9 **Chernobyl Update**
- 11 **Good News**
- 12 **Did You Know**
- 13 **Voices**
- 16 **Point of View**



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# World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

## SPECIAL FOCUS

### **Ninth International Conference on Health and Environment: Global Partners for Global Solutions**

**Special  
Issue**

The Ninth International Conference, *Health and Environment: Global Partners for Global Solutions* was held at the United Nations headquarters in New York from April 26-28, 2000. This year's conference on the theme *Solutions for the Millennium*, was organized by the World Information Transfer and co-sponsored by the Governments of Indonesia and Uganda.

The conference was held during the Eighth Session of the UN Commission on Sustainable Development (CSD 8). WIT offered hands-on Internet training workshops, supported by the UN Division on Economic and Social Affairs, (DESA) in the CSD 8 Learning Center. The Learning Center housed computers with Internet connections, several printers and was open to all CSD 8 participants. Workshop attendees had the opportunity to learn a range of Internet skills and to use the Humanities Development Library CD Rom, one of WIT's Health and Environment information communication technology (ICT) projects.

The Conference looked at solutions to health and the environment through four perspectives: spiritual, governmental, scientific and the media. The Conference found that the solutions to many of the health problems caused or exacerbated by environmental degradation are known, cost little to implement, that local problems tend to be global in their repercussions, and that new research findings further link a degraded environment to human illness. In the next issues of the *World Ecology Report*, summaries of the four main perspectives will be included. Complete papers are available upon request.



H. E. Ambassador Wibisono

*Keynote Address by H. E. Dr. Makarim Wibisono  
Ambassador, Permanent Representative of the Republic of Indonesia  
President of ECOSOC*

It is indeed a great privilege and honor for me on behalf of the government of the Republic of Indonesia to be a co-sponsor, together with the government of Uganda and the World Information Transfer, of this Ninth International Conference on Health and Environment. This timely conference on the theme "Solutions for the Millennium" will address the specific issue of Health and Environment and seek to identify global partnerships for global solutions on preventing the adverse impact of environmental degradation on human health. It is also a privilege for me, in my capacity as the President of the Economic and Social Council (ECOSOC), to address this august meeting on this critical issue, which I consider to be one of our greatest collective challenges as we enter the 21st Century.

As we enter the new millennium, we have come to a decisive crossroad, a truly defining moment in our history. We have a choice. We can continue to lose our grasp on our own destinies and our economic history or we can strive to reclaim them. Our overall challenge is



**WIT's hands-on interest training workshop at the Eighth Commission on Sustainable Development learning center.**  
 Standing: **Dr. Michel Loots and Dr. Nataliya Holovyna**  
 Sitting: **Patricia Szczerba, Coordinator of the Workshop**

to create a new vision for the South in its efforts to foster development and the eradication of poverty within the framework of globalization and interdependence. In addressing this challenge, I will briefly focus on the four themes of the Summit, namely: globalization; knowledge and technology; North-South relations as well as South-South Cooperation.

As to globalization, a phenomenon that has many subtexts, we should pose the question why globalization has not delivered the promised generalized prosperity for all. A prosperity that we so anxiously expected. We should seek to answer this in a coherent and concrete way. While it is true that globalization and liberalization have propelled many developed economies to new and spectacular heights and that they hold enormous potential for the developing countries, it is equally true that the majority of our countries have been unable to take full advantage of that promise, and many of our countries have been thus consigned to the sidelines of the global economy and to marginalization.

In the preamble of the United Nations Charter, the authors specifically call for the promotion of social progress and better standards of life for all in larger freedom. That directive was subsequently elaborated upon and expanded at the United Nations Conference on Environment and Development (UNCED Rio de Janeiro, 1992) when the environment and its sustainability became central to the global agenda and within that context, human and environmental health became mutually inclusive. As eloquently stated in a subsequent report of the Secretary-General, "healthy human beings can better combat poverty and care for the environment while a healthy environment is essential for a healthy human beings." That, I believe, is the crux of the question and it was comprehensively reflected in chapter 6 of Agenda 21, the blueprint for action of the Earth Summit titled, Protecting And Promoting Human Health.

It is, therefore, propitious that this Conference today takes place against the backdrop of the Eighth Session of the

Commission on Sustainable Development which over the years has been charged with following-up and reviewing the implementation of the Agenda 21 on various thematic issues. We are also at the threshold of the new millennium and in the process of preparing ourselves for the ten-year review of the implementation of UNCED. That review conference in 2002 will take stock of progress or lack of it and seek to inject the process of implementing Agenda 21 with renewed urgency and momentum.

The beginning of the new millennium is marked by significant milestones in human history, not least the rapid pace of globalization and the revolution in information technology. It is also a time when the six thousand millionth human inhabitant of this planet was born. Yet, regrettably, out of that population, over one billion people reside in absolute poverty with up to one thousand million homeless or living without adequate shelter. These millions are directly affected in terms of appalling health conditions by the impact of continuing degradation of environment quality. And, more ominously this figure will further increase without drastic change and adequate access to health services.

Since we live in an increasingly interdependent world, we cannot go it alone. We must forge new partnerships. Thus, the more we learn how the global environment impacts the health of the people and how our actions can best prevent the further suffering of those people particularly in the developing countries, the more we recognized that urgent global actions and programs in partnerships with all countries and relevant international organizations including non-governmental organizations, are crucially needed. Great natural disasters took place last year and the beginning of this year causing the deaths of hundreds of thousands of people and making further millions homeless and impoverished. We must act now.

Imbalances also continue to abound. As the century progresses, that proportion of the global population living under the poverty line and without adequate access to health services also increases. Meanwhile, the lion's share of the planet's resources are increasingly being concentrated within the affluent minority. It is no surprise that these issues of poverty and excessive and unsustainable patterns of consumption and production are the main causes of environmental degradation and consequently also contribute to adversely impact human health and on the welfare of the people.

In this regard, let me sincerely commend the efforts of the World Information Transfer for bringing this issue of health and environment to the agenda of the international community. We fully agree that the impact of environmental degradation on human health should be addressed as a matter of urgency and it should be central to the agenda of the international community. In this way, we are fulfilling the United Nations charter's mandate to achieve the betterment of the social and economic conditions of the interna-

tional community, particularly that of the developing countries. An in-depth discussion involving experts and our efforts to identify applicable solutions is an imperative part of the necessary global dialogue and should always be supported. Addressing the issue from different perspectives is of crucial importance in our efforts to identify comprehensive ways and means to successfully tackle the issue.

Before concluding, I should say that I sincerely hope that we will grasp the opportunity for greater global partnerships and cooperation between governments, non-governmental organizations, businesses and industries, community groups and individuals. Only in this way, I believe, can our efforts to take concrete steps to improve the quality of the environment be assured and at the same time help minimize the adverse impact of environment degradation on human health be successful. Having said that, I hope that the human race will be able to look forward to a better future of sustainable development where, even as our standards of living improve worldwide, so too will the health of the environment on which we all depend.

To conclude, I would like to once again take this opportunity to extend our appreciation to the Government of Uganda in joining our efforts to bring this important issue to the agenda of the international community and to extend my sincere gratitude to the World Information Transfer for their fruitful cooperation in organizing this important meeting. I wish you all success in your deliberations for the next three days and I certainly hope that we will be able to produce a fruitful, practical and concrete outcome.

Thank you.



H. E. Ambassador Kiwanuka

*"An Overview Of Health And The Environment At The Beginning Of The 21st Century"*

Keynote Address by  
H.E. Prof. Semakula Kiwanuka  
Ambassador and Permanent  
Representative of Uganda

### Sustaining the Future

The environment became an international issue in 1972, with the United Nations Conference on the Human Environment, held in Stockholm, Sweden. In the following years, only limited results were achieved in making the environment part of national development plans and decision-making. While some progress was made on scientific and technical issues, politically, the environment continued to be neglected, with ozone depletion, global warming, forest degradation and other environmental problems becoming more serious.

When the UN set up the World Commission on

Environment and Development in 1983, environmental preservation was clearly becoming a matter of survival for everyone. Led by Gro Harlem Brundtland of Norway, the Commission concluded that to meet "the needs of the present without compromising the ability of future generations to meet their own needs", environmental protection and economic growth would have to be tackled as one issue. As a result of the Brundtland report, the UN General Assembly convened the UN Conference on Environment and Development (UNCED) known as the Earth Summit—which took place in Rio de Janeiro from 3 to 14 June 1992. It was a turning-point in international negotiations on issues of environment and development.

The primary goal of the Summit was to find an equitable balance between the economic, social and environmental needs of present and future generations and to lay the foundation for a global partnership between the economic, social and environmental needs. A partnership between developed and developing countries as well as between Governments and sectors of civil society based on common understanding of shared needs and interests.

In 1992, the WHO Commission on Health and the Environment published a Report under the title *Our Planet, Our Earth* (Geneva 1992). The WHO Seminal Commission was charged to assess the impact of the environment on human health. It is fitting therefore that World Information Transfer Inc. annually organizes a conference on Health and Environment.

Have we made good progress since Rio and since WHO Commission published its report on Health and Environment? Yes. But there is still a long way to go before government and societies have control of the complex environmental problems that beset the earth. Ozone depletion, poor nutrition, global warming, poor sanitation, forest degradation, desertification and other serious issues continue to worsen.

Our topic, *Solutions for the New Millennium* must address the critical challenges of the world today especially those of the developing world. Solutions to health and environment must have as their objective goal sustainable development which depends on integrating, economic and social development together with environmental protection within a democratic framework. The latter empowers all sectors. The eradication of poverty is fundamental towards sustainable development and sustainable health. Given the breadth of the topic, I can only give an overview, focusing on water and sanitation, industry, food and agriculture, poverty eradication and urbanization.

### Environment, Health and Urbanization: The Emergence of the Megacities

We are living in an increasingly urbanized world. It is estimated that by the year 2015, 55% of the world's population will live in urban areas. In some regions, such as Europe, North America and Latin America, over three-quarter

ters of the population is already urban.

Cities and towns have been engines of growth and incubators of civilization and have facilitated the evolution of knowledge, culture and tradition as well as of industry and commerce. The diversity of groups living in the city exacerbates the need to address social development as a priority area. This situation is particularly true in the urban centres of developing countries where the majority of the newly urbanized and urbanizing populations live.

However as the size of the city gets larger, social, economic and health issues get more complex. WHO has urged action now to avert megacity health threat, warning that the growth of the megacities will become the biggest threat to health in the 21st century.

**Gender Sensitive Urban Planning:** According to United Nations estimates, over half the urban population in most developing countries lives in informal settlements which are neither recognized nor serviced by city authorities. "The urban poor are the most excluded group in cities!" says Klaus Toepfer, the Acting Executive Director of Habitat. "They live in constant fear of eviction and most do not have access to formal finance and loan schemes which could enable them to improve their living conditions.

**Urbanization and Children: Towards Child-Friendly Cities:** The well being of children is a critical indicator of a healthy society. UNICEF estimates that by 2025, six out of every ten children in developing countries will live in cities, and more than half of them will be poor. The future of the world will inevitably be urban, and the well-being of the children will continue to be linked to that of the cities in which they live. Hence the need for child-centred human settlements development. UNCHS (Habitat) is strategically targeting its activities to making human settlement development more child-centered.

### Cities and Urban Transport

Unsustainable urban transport systems are having a devastating environmental impact on the health of urban dwellers. Mather Nicholas has described current developments as "driving ourselves to death".

Today there are 600 million cars and trucks in the world, and this number is growing by about 35 million per year—more than one every second, or 100,000 a day.

Air pollution profoundly harms the quality of life in our communities and creates huge costs to individuals, businesses and governments for health care, impaired economic activity, and reduced property values. Worldwide, more than 1.1 billion people live in urban areas with unhealthy air. And while there are numerous sources of airborne pollution, in most urban areas motor vehicles have become the single largest source of local air pollution. Motor vehicles are responsible for nearly 50% of the emissions of smog-precursors worldwide.

**Kyoto Protocol and Climate Change:** The debate over global climate policy reached a crescendo with the con-

vening of delegates from 150 parties to the Convention on Climate Change in Kyoto, Japan. The World Resource Institute pointed out in December 1997 that much of the debate missed a salient point: **The very same activities that are threatening Earth's climate also threaten human health.** When fossil fumes are burned, carbon dioxide and other toxic gases are released, along with fine airborne particles that pollute the area both locally and globally.

### Industry

Industrial pollution of the atmosphere and of the world's water systems is still a major environmental health hazard. I remember as a young man when I went to England in the early 1960s to study for a Ph.D. Those were the days of the smog. When you blew your nose it was full of soot. Time was when the Mediterranean Sea as well as the River Rhine were so heavily polluted that they had to be rescued through massive environmental cleaning. More recently we have seen the deadly effects of industrial pollution in the River Danube.

### Water and Sanitation

Water and Sanitation, have perhaps the greatest impact on human health. Since the Alma-Ata Declaration in 1978, further reinforced at the World Summit for Children in 1990 and through ratification of the Convention on the Rights of the child, numerous international fora have called for universal access to safe water and sanitation.

While the world should rejoice at the achievements of the UN Decade for Safe Water and Sanitation 1980-1990, when 1.2 billion people gained access to safe water and whereas the trend continued through the 1990s when over 800 million people were added, thus bringing the world total of 3.3 billion, global access to adequate sanitation has declined. Numbers of people without access or with inadequate access has risen from 2.6 billion in 1990 to 2.9 billion in 1997. Current figures might even be higher. That is nearly 50% of humanity.

**What Needs to be Done:** There is need for a policy framework whereby water should be recognized as both a social and an economic good, vital for meeting basic human needs, food security, poverty alleviation and the protection of vital ecosystems. Policies for water management should be based on an integrated approach, taking into account the full range of ecological, economic and social factors and needs. Strategies should be based on the catchment as the unit of management, include demand management and conservation measures, aim to increase access to drinking water and sanitation, and to improve pollution prevention and control.

Over 250 million people—half of Africa's population—are without access to safe drinking water and almost 300 million do not have adequate sanitation. With the current rate of population growth and extension of water and sanitation services, a "business as usual" approach would result in over

500 million without water and sanitation by the year 2020. Much of Sub-Saharan Africa is threatened by growing water scarcity and deteriorating water quality, increasing water costs as well as conflicts among users. The human impact especially on the poor and most particularly on women and children will be unprecedented, as will the environmental impact in cities where almost half the population live. Primary areas for collaboration between UNICEF and the World Bank will be in the development and implementation of water, environmental sanitation and hygiene education programmes in villages, small towns and poor urban neighborhoods and in extending sustainable services to the poor.

### Hunger and Health

As we enter the 21st century, one scourge still afflicts millions of people—hunger. Whereas mankind may pride itself of having walked on the moon, mastered the atom and stretched the boundaries of science even further, it must concede the war against hunger is not yet won. Everyday on television screens we see children dying in their hundreds because of hunger. What can be done to overcome this silent tragedy afflicting over 800 million people which constantly haunts our conscience. Because of the persistence of hunger, the United Nations Secretary-General, Mr Kofi Annan in a World Food Day Message (29 September 1999) lamented, “Every year, World Food Day is a sad reminder that millions of people in the world do not have enough to eat.” The statistics are depressing. Roughly 830 million people suffer from hunger today. The statistics for children are particularly horrifying. An estimated 192 million children below the age of five suffer from protein and calorie deficiencies. Each day, malnutrition is a significant factor in the deaths of 11,000 of them. That is one child dying every eight seconds for lack of food.

**Land Management:** There is a linkage between food insecurity and environmental mismanagement and lack of environmental protection as well as poor and short-sighted national policies. Overgrazing, soil erosion, deforestation, outmoded cultivation practices, have had a heavy toll on the African environment. The result is that the continent cannot produce enough to feed itself.

### Poverty and Debt

It is not an exaggeration to say that the persistence of poverty in the world and in Africa in particular, is the root cause of environmental bankruptcy. Poor people cannot protect forests. Poor soils cannot sustain healthy populations. Poor people cannot feed their children. Poverty denies people the basic needs of life. By and large, African economies have grown more slowly than those in East Asia and Latin America. The persistence of poverty is compounded by the debt burden whereby some countries spend as much as 35% of their export earnings on debt servicing. Conflicts and the lack of democracy have militated



**Thomas Comitta, James Van Der Beek, and Dr. Christine K. Durbak at the Health and Environment Conference on April 28, 2000**

against sustainable development.

**Poverty Eradication:** The international community has at the end of the 20th century come out boldly and is addressing the urgent need for poverty eradication. The UNDP, the Breton Woods Institutions, the Commonwealth and the European Union have all agreed that the eradication of poverty should be at the top of their agendas. To achieve this objective sustainable peace and the strengthening of democratic institutions are prerequisites. These will attract investment and promote trade. Only then will the poor countries have sustained economic growth, without which poverty will persist and so will environmental damage.

**The Threat of Global Warming:** During the mid-1980s when I worked with UNEP at its headquarters in Nairobi, my view about global warming was that it was not a problem for Africa. I used to argue that Africa's environment concerns were water, soils, forests and energy. This was probably because unlike polluted air and contaminated water, global warming is not a local problem that can be seen or felt. Today, I as well as many others know better that its impact on every region on earth could be devastating. Most scientists agree that the earth's climate is warming, due at least partly to the accumulation of greenhouse gases such as carbon dioxide that trap the sun's energy. Although the effect may be gradual, the consequences could be catastrophic, with increased floods and droughts, rising sea levels and destruction of ecosystems caused by climate change.

In 1997 more than 150 nations, including the United States, signed the Kyoto Protocol to limit the amount of greenhouse gases released into the atmosphere through the burning of fossil fuels. The agreement calls for industrialized nations to cut their emissions by 2010. But few nations have moved to carry out the agreement. The United States is the largest greenhouse gas emitter, but the Senate is opposed to ratification of the Kyoto agreement and the policies needed to carry it out. This is one of the challenges of the 21st century.

IN CONCLUSION, on the 30th anniversary of the first Earth Day there is much to celebrate. People are living longer and leading healthier lives. The world is far more aware of the linkages between health and the environment. But we must also remind ourselves of the unfinished business of the continuing need to protect the planet. As the *New York Times* wrote: "While the job of cleaning the water, air and land continues, the world must begin tackling the less visible threat of global warming, an issue largely unknown 30 years ago. This new threat is less immediate and less easily solved, and therefore will require an even stronger commitment in the years ahead".

This was essentially the message of the organizers of Earth Day 2000 on April 21. It is the message of this Conference.

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### *An Approach Towards Decreasing Environmental Health Problems*

*Keynote Address by Professor Uhmar Fahmi, Director-General, Communicable Disease Control and Environmental Health, Government of Indonesia*

Indonesia is a vast country comprising around 13,000 islands spread over three different time zones. It has witnessed three phases of health and environment problems. The first phase was during the pre-industrialization era, followed by industrialization era and post-industrialization era sequentially. While effects of most of these phases were locally based, quite a large number of areas had all of these phases, at the same time.

The unique features of Indonesia, especially in view of its spatial geography, diverse population pattern and abrupt economic crisis make its development activities, particularly in the areas of health and environment most challenging. In this paper, some thoughts have been provided for addressing common environmental problems that effect human health.

### **Health and Environment Issues**

The word *environment* refers to whatever surrounds an object or some other entity. Humans experience the environment in which they live as assemblage of physical, chemical, biological, social, cultural and economic conditions. These parameters largely depend on local geography, infrastructure, time and past activities, which limit the living environment for human development.

Like many developing countries, Indonesia, is facing the double burden of both traditional and nontraditional health hazards due to environmental deterioration. Traditional hazards are related to population density, poverty and insufficient development such as, lack of access to safe drinking water, inadequate basic sanitation, food and soil contamination, indoor air pollution, inadequate solid waste disposal, occupational hazards, natural disasters such as floods, droughts, cyclones, earthquakes, disease vectors,

mainly insects and rodents.

Nontraditional or in other words, modern hazards of recent origin are related to rapid development that lacks health-and-environment safeguards and to unsustainable consumption of natural resources. These include: water pollution, ambient air pollution, solid and hazardous waste accumulation, chemical and radiation hazards, emerging and reemerging infectious diseases, deforestation, land degradation and other ecological changes including climate change, ozone depletion and haze problems. Indonesia confronts most of the above-mentioned major issues related to health and environment. A few of them are discussed below:

### **Water Supply and Sanitation**

An adequate supply of safe drinking water still remains a challenge in Indonesia. More than 10% of urban and 35% of rural people do not have easy access to an adequate and safe water supply. Besides, a variety of physical, chemical and biological agents render many water sources less than wholesome and healthy. Poorly managed excreta, liquid and solid wastes from households, community and industries, pose serious health threats. In 1997, Indonesian households which did not utilize latrines were reported to be about 32.6%, while the incidence of diarrhoeal diseases was reported to be between 230-330 per 1000 population, ranking it one of the highest prevalent diseases.

### **Water Pollution**

Discharge of untreated sewage into rivers and lakes, dumping of industrial waste, and run-off from agricultural fields treated with herbicides and pesticides are the main sources of fresh water pollution. Industrial development, the exponential growth of human settlements and ever increasing use of synthetic organics, are also posing serious adverse effects on fresh water bodies. Many surface and ground water sources are now contaminated with heavy metals, persistent organic pollutants. The amounts of pollutants that are discharged into watercourses often far exceeded waste-assimilation capacity. Therefore, in many parts of Indonesia, pollution of surface water and ground water is significantly limiting the useable part of available freshwater. Furthermore, serious health problems have been encountered due to drinking, bathing, washing and food processing with polluted water. There are evidences of some rivers containing heavy metals from industrial, mining and agricultural discharge. Heavy metals were also detected on higher concentration in river sediments, river fish, rice fields and even in the rice itself. Besides, the death of fish and aquatic life in rivers also occurs occasionally due to the sudden fall of dissolved oxygen, an outcome of water pollution.

### **Food**

Food, essential to a healthy life, is susceptible to pathogenic and toxic contamination. The contaminants may be

introduced into food during cultivation, harvesting, processing, storage, transportation and preparation. Food-borne disease is now a widespread and growing threat to human health, and a major cause of reduced economic productivity. The people, who are most affected by unsafe food are the poor, who are already vulnerable due to lack of food and malnutrition. Biological and chemical agents in food represent the two major types of food-borne hazards. Biological agents pose acute hazards with varied incubation periods from a few hours to several weeks, whereas chemical hazards usually involve low-level exposures for longer time. Nevertheless, acute poisonings have been reported for many chemicals.

### Vector born diseases

Malaria and Dengue Fever top the list amongst the vector born diseases, which are prevalent in Indonesia. Malaria is on the increase in recent years especially in the islands of Java and Bali.

Dengue is also on the increase, both in terms of geographical distribution and case incidence. Out of 306 districts of Indonesia, 288 are reporting dengue cases. Other vector born diseases like Filariasis, Schistosomiasis, Rabies, and Anthrax are also prevalent in Indonesia with varied degrees of incidence rate at different locations.

### Air pollution

Air pollution is a major environmental health problem affecting developed and developing countries. Concern now focuses not only on the ambient air quality of cities but also on indoor air quality, in both rural and urban areas. In fact, the highest air pollution exposures occur in the indoor environment in developing countries (WHO, 1997).

The largest sources of human-created air pollution are transportation, energy generation and energy-intensive industrial operations. Air pollutants consist of SPM (dust, fumes, mist and smoke), gaseous pollutants and odors. Other health-damaging pollutants include gaseous inorganic pollutants such as sulfur dioxide, carbon monoxide, nitrogen dioxide as well as hydrocarbons. The major source of indoor air pollution is due to the use of biomass and coal for heating and cooking without proper chimneys. Indoor air pollution enhances the risk of acute respiratory infections in childhood, a major killer of young children in the developing countries. The women, therefore, have to take the double burden of exposing themselves to this risk and caring for the infected children.

### Haze

Haze problems in Indonesia and in other ASEAN countries have intensified in recent years. The episode of 1997-98 is still fresh in our memory when for several months the smoke disaster in South-east Asia affected tens of millions of people in the region in several countries including Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, and

Thailand. Authorities of these countries have realized the necessity of mitigating the effects of smoke on health and through the control of forest fires. This was particularly the case for Indonesia, which officially requested UN assistance. These fires threatened to evolve into a more complex emergency, through the potential of causing voluntary or planned population movement due to evacuation and through effects on health, economy and security. During early March 2000, there has been another incidence of haze problem in Indonesia. However, this problem was managed by undertaking timely interventions. Nevertheless, forest fires continue to be a major threat in ASEAN countries.

Uncontrolled forest fires, a substantial source of air pollution in urban and rural areas, affect health delivery systems, access to health care as well as rapid environmental change and degradation. Poverty, which leads to land clearing by burning, is at the center of the challenge to control forest fires. The challenge is to ensure sustainable development and healthy living conditions.

### Indonesia Sehat 2010

As a result of an affected economy, alarming environment-health related issues and ongoing socio political process Indonesia commissioned a new development policy effective March 1, 1999. The President declared the "Movement for Health-Oriented National Development as the strategy for National Development" and envisioned an Indonesia SEHAT 2010 (Healthy Indonesia 2010).

Health-oriented national development means that the National Health Development Programs (NHDP) serve as the prime driver for implementation and achievement of national development goals, based on health as the primary and measurable outcome of development. For maintaining and enhancing individual, family and public health along with their environment, it is mandatory that the National Health Development Program rather than concentrating only on curative and rehabilitative services should direct its attention and initiatives for health development more on the promotion and preservation aspects with close linkages with environment perspective.

Indonesia SEHAT 2010 forces the Ministry of Health to forge collaborative relationships with other development partners, related government departments and contributing private sector. In the effort to achieve "Healthy Indonesia 2010", the Ministry of Health must also be proactive and forward thinking, without neglecting consistency and losing sustainability.

The vision of health as the foundation of NHDP is complicated and involves various aspects of life. The solutions to health problems cannot be separated from non-health factors. In the context of national development, health is considered as a foundation against which progress should be measured. All aspects of development, including public and infrastructure development such as urban development, industrialization and so-forth could be measured

by their positive or negative impacts on overall public health. Decentralization, conducive inter-sectoral infrastructure, effective control mechanisms, spatial strategy development and community empowerment are amongst the other key elements of the SEHAT 2010, which make it the most powerful tool to deal with health and environment issues that Indonesia ever had before.

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### *Spirituality and Sustainable Human Development*

Rosina Wiltshire, Ph.D

Chief of Learning Resources, UN Development Programme

Human beings are physical, mental, emotional, social, and spiritual beings. We have focused on the development of our physical and mental intelligence and have largely ignored the development of the emotional, social and spiritual planes. It is no accident that at present we use less than 5% of our present potential for learning. The spiritual at the most subtle level connects, expands and enlivens all the other spheres. Spiritual development promotes an understanding of our connection to one another and the earth. It thus enables more holistic thinking and living.

The present underlying value system emphasizes physical prowess and material success with money and power promoted as the ultimate success. Our economics, ecology, society and governance systems are thus informed by a distorted value system in which exploitation of "weaker" people and the earth are considered acceptable means for achieving development. It is not a coincidence that in our global community women and children are at greatest risk and the environment degraded.

The United Nations Development Programme (UNDP) Human Development Report statistics highlight the distortions and global challenges. World trade in goods and services tripled between the 1970s and 1990s. World exports are now over \$7 trillion. Material wealth came at very high human and environmental costs. The illegal drug trade in 1995 was estimated at 8% of world trade (\$400billion), more than the share of motor vehicles and roughly the same as textiles (7.5%) and gas and oil (8.6%). Drug use in our schools and communities contributes to this 'wealth'. In the past decade the production of opium more than tripled and that of the coca leaf more than doubled. Illegal trafficking in weapons fuels the trade expansion and the violence and civil conflict in homes, schools and communities. Approximately five hundred thousand women and girls are traded from developing countries and the transition countries to Western Europe alone each year. Trade in children is growing at a rapid pace.

In spite of great gains in global trade and global wealth, the gains have been skewed. In the last two decades there has been a cumulative decline of 50% in the terms of trade of the least developed countries. With declining terms of trade for their commodities, Sub-Saharan Africa, despite its

high export ratio to GDP, continues to experience declining per-capita incomes. On the other hand, OECD countries with 19% of the global population enjoy 71% of the global trade in goods and services, 58% of foreign direct investment and 91% of all Internet users. The assets of the three top billionaires are more than the combined GNP of all the least developed countries and their 600 million people.

Disparities are also widening within countries. In China inequalities are widening between export-oriented coastal zones and the interior. The Human Poverty Index is under 20% in coastal provinces and over 50% in the inland province of Guizhou. In industrial countries one in eight is affected by human poverty.

Love is an essential spiritual principle. Bringing love and respect into our classrooms and our workplaces is an important first step. Gratitude would also be an important principle nurtured and rewarded in the individual at every level. In bringing the spiritual intelligence into balance with the mental and physical, important lessons would be brought into play to complement the present focus on external power. It would become clear that power is both external and internal. The foundation of effective power is power over ones wants or desires. Without self-discipline, the individual is weakened and cannot lead by example. A leader without self-control is likely to be abusive of self and others and abuses power. Self-discipline engenders confidence and leadership by example. Our search for good governance has therefore to recognize the spiritual source of the solution.

Another important element of spiritual training is the lesson that external reality is linked to internal consciousness. The consciousness of separation and fear breeds insecurity, violence and war. The consciousness of correction and love breed harmony and a sense of security. The consciousness of scarcity breeds abuse of natural resources, hoarding and poverty. The extremes of wealth and poverty and the environmental degradation are not coincidences. They are the products of the dominant teaching and thinking of this era.

We must search for solutions to the present global challenges of violence, extremes of wealth and poverty and environmental degradation beyond the thought processes which led to these problems. It is in bringing into play the spiritual intelligence that sustainable solutions are most likely to be found. Our criteria of success and indicators by which we measure success and development must reflect this balance of the spiritual and material.

*"When you are right you cannot be too radical; when you are wrong, you cannot be too conservative. ... We must combine the toughness of the serpent with the softness of the dove, a tough mind and a tender heart.*

*Rev. Dr. Martin Luther King, Jr.*

## CHERNOBYL UPDATE

# Health and Environment in Ukraine: 14 Years After Chernobyl

*Statement by Natalia Holovyna, M. D.  
WIT Representative from Ukraine*

Thank you, Madam Chairperson, for giving me this unique opportunity to describe the current health and environmental situation in my country, Ukraine, 14 years after Chernobyl. Mine is an eyewitness report of someone who actually lives there and, by virtue of my medical profession and participation in grass-root environmental movement, really knows the situation on the ground.

Ladies and Gentlemen,

The accident at the 4th reactor of the Chernobyl Nuclear Power Plant is justifiably considered to be the worst ever man-made disaster in the history of mankind. This perception is dictated by the scale of its negative social, environmental and economic consequences, as well as by its influence on the Earth's biosphere and on the human understanding of many aspects of our modern civilization in its development, scientific and technical, social and economic, and of course political.

The Chernobyl nuclear disaster caused massive radioactive pollution of the global biosphere in a densely populated part of Europe. In Ukraine, 74 districts in 12 regions are polluted by cesium-137 at a level of more than 1 curie per square km. This area is populated by 5 million people, who are subjected to additional radioactive irradiation day by day. The total area of radioactively polluted agricultural lands in Ukraine amounts to 4.2 million hectares. Severe pollution with strontium-90 and cesium-137 is observed in an area of more than 340,000 hectares, i.e. 0.6 % of the Ukrainian territory. Some 180,000 hectares of arable lands were lost, 157,000 hectares of forests are massively polluted and cannot be used by people. One third of the Ukrainian territory contains a considerable increase of radioactive background against natural levels. Almost all branches of the Ukrainian economy are severely damaged by the disaster. In general, the total monetary value of socio-demographic and purely economic damage before the year 2000 is estimated as USD 125 billion. 44% of this amount represents direct damage to the population in terms of poor health, low productivity and early deaths.

The Ukrainian Institute of Sociology polled some 10,000 victims of the disaster. 60% of the respondents raised concerns about safety of their daily food and reported frequent panic attacks, feelings of helplessness, insomnia and irritation. 30% responded that they lost interest in their lives. Every second respondent suffered from low spirits, hypoactivity and general anxiety. When asked what they were going to do in order to get back to normal life, 45%

answered "Nothing". The disaster is still being perceived by the victims as a personal tragedy: a destruction of customary axioms of life, habitual daily routines, plans for the future, and, instead, a spread of pessimistic perception of their lives as irrevocably destined to eternal suffering. All victims show a very low level of activity, initiative, enterprise, willingness to have contacts with other people, readiness to change. In this context, a community of the doomed is taking shape—those whose only hope is God and a lifetime of state welfare. Ninety percent of the victims are obsessed with their own health and the health of their families.

Children, who were victimized by Chernobyl, show increases in morbidity and mortality, personal problems and conflicts, lack of energy, depression and unwillingness to work. Schoolchildren in polluted areas rate initiative, career development, education and professionalism as 5th-7th among other priorities.

Relocated populations suffer from distorted social, cultural and spatial cognition, they have difficulties with orientation



**A sacrophagus covers the reactor from the world's worst radiation accident at Chernobyl, where a gardener tried to make flowers grow.**

**SOURCE:** *New York Times*, June 4, 2000



**Thousands of people still go to work every day at Chernobyl**

**SOURCE:** *New York Times*, June 4, 2000

and adaptation in a new environment. Half of them would like to return, if permitted, to non contaminated areas, where they lived before the disaster. Economic well-being of the relocated groups also dramatically dropped in comparison with other populations, as a result of forced relocation and lack of suitable employment. But the most unexpected result of the survey relates to the fact that the victims' relations with their co-workers and family members became 6-7 times worse than they used to be before the accident. Relocated groups often develop tensions with local populations, explaining these difficulties by their own psychological state and by the locals fear to get contaminated by the newcomers and fall sick. Every third relocated victim of Chernobyl experiences psychological discomfort in his/her relations with locals. Members of this group frequently suffer from depression, anxiety and physical weakness leading to a feeling of inner inadequacy, unreality and being on the verge of a nervous breakdown. As time passes, these crises of the victims' identity become only more severe and develop into chronic, pathologic and irreversible conditions.

Data collated by the Ukrainian Ministry for Chernobyl Affairs shows a doubling in morbidity among populations of the contaminated areas. Thyroid disorders increased almost 7 times. Only 27% among children under 7 years of age are free from chronic conditions, and 65% among children and 60% among young adults are considered practically healthy. There is also an exponential increase in systemic endocrine, digestive and skeletal disorders (the latter increased almost 4 times). Mental disorders increased 1.4 times, while prevalence of them among those who work in the evacuated zone is more than 5 times higher than

among the Ukrainian population in general.

How do the victims express their tragedy? Basically with fear and alienation.

As a medical doctor-obstetrician-gynecologist-I would like to point out a major impact of Chernobyl on the psychological, intellectual and emotional lives of women. Women link Chernobyl with God's punishment for their past deeds and the deeds and behavior of their political leaders, parents and earlier ancestors. Future mothers and grandmothers pray for healthy children to be born and ask God to spare their children and grandchildren from the deadly effects of Chernobyl.

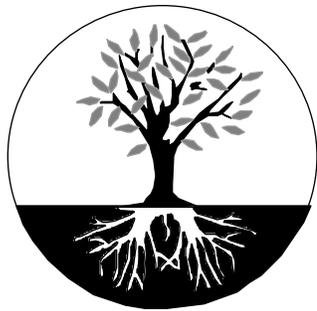
Being uncertain about the future of their children, many women, who have been in close proximity to Chernobyl when the accident happened, or worked there, opt for early abortion and explain their decision as fear of having a sick child, or as fear of God's vengeance striking their descendants.

More than half of the Ukrainian population are religious people. Each year, on the day of Chernobyl's anniversary, they pray God to spare their children from such a terrible experience as they had to endure in connection with Chernobyl. Also, many people explain the tragedy by God's vengeance for their involuntary division from the Church during 72 years of the Soviet regime in Ukraine, for ruining churches, religious symbols and suppression of religious spirituality which was incompatible with the atheist communist ideology. People, who are left without adequate financial and community support, address their thoughts, dreams and miseries to God and ask for His forgiveness.

Among the most important lessons learned from Chernobyl for the world are the following:

- Continuous exposure to low intensity ionizing radiation caused by nuclear accidents presents a real and serious threat to human health and to the future of the human species;
- Data analysis allows forecasting of a high probability of destructive consequences of industrial accidents for the health of nuclear plant workers, such as shorter life-span, cataracts, leucosis and solid tumors;
- One of the most overlooked types of health problems among victims of nuclear accidents might be mental disorders leading to chronic conditions.
- The experience of Chernobyl, including medical aspects, will, no doubt, command the attention of the health professional community for many years to come. So far, Ukrainian doctors and scientists bear this overwhelming burden almost all by themselves. We sincerely hope that international NGOs of more affluent countries and our colleagues in the medical profession will show more interest and willingness to share this load with Ukraine, whose economy is struggling now. I would be happy if this statement helps to remind the distinguished participants about Chernobyl and to draw their attention once again to the fact that the problems of Chernobyl are global and should be dealt with at the global level.

Thank you for your attention.



**GOOD NEWS!**

■ Five major pharmaceutical companies announced last month that they would make sharp cuts in the cost of AIDS drugs for Africa and other poor regions affected by the disease. The announcement came after negotiations held with the World Health Organization (WHO) and followed mounting pressure on the companies to

make the prices for AIDS treatment more affordable in Africa and other least developed areas. By the end of 1999, more than 33 million people worldwide were living with H.I.V. the virus that causes AIDS though few of them have ever been tested. Some ninety-five percent of the AIDS infected live in developing countries, including 23 million in sub-Saharan Africa. Yet in most of these countries, treatment of the disease is negligible. This initiative which could slash the cost by up to eighty percent is not the quick fix. It must be coupled with improved health-care systems lacking in many third world countries. The five companies are Bristol-Meyers Squibb and Merck & Company, both of the U.S., Glaxo Wellcome of Britain, Boehringer Ingelheim of Germany and Hoffmann-La Roche of Switzerland. The companies will work through five international agencies: WHO, the World Bank, UNAIDS, United Nations Children Fund and the UN Population Fund.

**SOURCE:** *New York Times*, May 12, 2000

■ At the conclusion of a two-day oral proceeding, the opposition division of the European Patent Office (EPO) meeting in Munich, Germany in May completely revoked a controversial patent which had been granted to the United States of America and the multinational corporation W.R. Grace for a fungicide derived from seeds of the Neem tree. The legal opposition to the patent had been lodged five years ago by the Research Foundation for Science, Technology and Natural Resource Policy directed by the Indian scientist Vandana Shiva, IFOAM (International Federation of Organic Agriculture Movements), and Magda Aelvoet, former Green Member of the European Parliament and current Environment Minister of Belgium. For further information on the Neem Patent Challenge go to: [www.ifoam.org](http://www.ifoam.org)

**SOURCE:** *Press release*, May 10, Munich, IFOAM

■ The International Chamber of Commerce (ICC), in collaboration with the United Nations Environment Programme (UNEP), have presented the "Millennium

Business Award for Environmental Achievement" to 12 companies, thereby recognizing them as some of the "hidden gems" of corporate environmental management. The winners are: Aluminium Bahrain (Bahrain), Bahia Sul Cellulose S.A. (Brazil), International Forest Products Ltd (Canada), HIPP (Germany), BSES (India), Neshers-Israel Cement Enterprises Ltd (Israel), Tokyo Electric Power Company (Japan), Altos Homos de Mexico S.A. (Mexico), Cervesur (Peru), Rohner Textile AG (Switzerland), Siam Compressor Industry Co. Ltd (Thailand), and The Beacon Press (United Kingdom). The aim of the award is to recognize companies that have taken important steps to promote excellence in corporate environmental management. Some 100 entries were received by the 21 ICC national committees which participated in the competition. A total of 38 company entries were submitted to the international selection committee, chaired by Lord Richard Holme. UNEP sees this initiative as a key building stone in promoting the values that United Nations Secretary-General Kofi Annan envisions that the business community advance in terms of his Global Compact initiative.

**SOURCE:** *UNEP Press Release "UNEP and ICC Sponsor Millennium Business Awards for Environmental Performance" 5 May 2000, [unep@un.org](mailto:unep@un.org)*

■ The recent study by Worldwatch Institute, *Vital Signs, 2000: The Environmental Trends That Are Shaping Our Future*, indicates several positive trends in energy and land use.

1-Worldwide, climate-altering carbon emissions from fossil fuel burning fell 0.2 percent in 1999, marking a second consecutive year of decline. However, consumption in rich countries is hindering progress. Growth in motor vehicle production, and the popularity of sports utility vehicles (SUVs), thwart a more substantial decline.

2-1999 saw wind power, the world's fastest-growing energy source, surge by 39 percent, production of solar cells expand by 30 percent, and sales of energy-efficient compact fluorescent lamps (CFLs) grow by 11 percent. As these energy alternatives are scaled up and take root in developing countries as well, they will make a serious dent in carbon output and help stabilize the climate.

3-Sales of organic products are growing by more than 20 percent a year. Organic farmers replace agrochemicals with a greater diversity of crops, rotations, and sophisticated pest control strategies. As a result, organic farming can reduce groundwater pollution, threats to wildlife, and consumer exposure to pesticides. Farmers in Europe have doubled the area cultivated with organic methods to 4 million hectares in only 3 years. In Italy and Austria, the share of agricultural land certified organic topped 10 percent in 1999.

**SOURCE:** *Worldwatch Institute, Vital Signs 2000*



**DID YOU KNOW?**

■ Existing US federal rules for safe levels of exposure to pesticides focus only on adults: A new study in the US of pesticide levels among children suggests that children in agricultural communities are being exposed to pesticides at higher amounts than US regulators consider safe. The University of Washington study measured pesticides in urine tests and found that more than half the preschool children of farm workers repeatedly showed evidence of exposure to unsafe levels during the spraying season, even though none of the children in the study was engaged in farm work. The children were exposed through pesticide residue in their homes, from food consumption as well as directly from the spraying. This study of 109 children in Chelan and Douglas counties is the first using biological measurements, on urine samples, to show children are being exposed to possibly unsafe levels of pesticides. The researchers examined the children's exposure during 1995 to two pesticides commonly used to fight codling moths in apples: azinphos-methyl and phosmet, both of them chemicals called organophosphates. Metabolites, or broken-down derivatives, of the pesticides were measured in two urine samples from each child. Of 91 children of farm workers, 56 percent showed exposures to azinphos-methyl beyond federal limits. Of 18 non-farm worker children who lived more than a quarter-mile from an orchard, 44 percent had exposures over the limits. The exposure levels were measured during the spring spraying only. The study is expected to be published in the June issue of *Environmental Health Perspectives*, a journal of the US National Institutes of Health. The University of Washington is conducting extensive research in pesticide exposure and its effects on children including year-round pesticide exposures, how farm work-

ers bring pesticide residues into their homes, and children's genetic susceptibility to the chemicals used in pesticides



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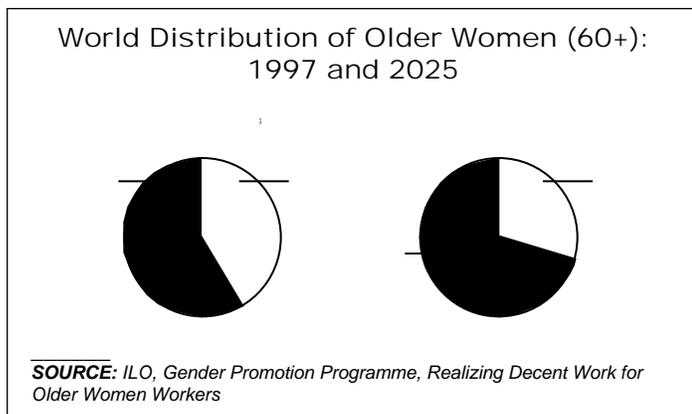
**SOURCE:** "Kids' pesticide levels unsafe," *Seattle Times* medical reporter, April 25, 2000, The Seattle Times Company

■ In 1999 the water table under Beijing fell by 2.5 meters (8 feet). Since 1965, the water table under the city has fallen by some 59 meters or nearly 200 feet, warning China's leaders of the shortages that lie ahead as the country's aquifers are depleted. Under the North China Plain, a region that stretches from just north of Shanghai to well north of Beijing and that produces 40 percent of China's grain, the water table is dropping by an average of 1.5 meters per year.

**SOURCE:** *Worldwatch* Issue Alert, 2 May 2000

■ According to a joint report released today by the UN Food and Agriculture Organization (FAO) and the World Food Programme (WFP), millions of Afghans have little or no access to food and the situation is expected to worsen in the coming months without additional food aid. The report, a result of a joint FAO/WFP mission that visited 17 Afghan provinces in different regions of the country, said that rain-fed crops, wheat and barley, had almost totally failed, except in a few pockets in different regions. The purchasing power of most Afghans has been seriously eroded by the absence of employment opportunities in almost all fields of work. Production of cash crops has declined and most livestock are in poor condition, suffering high rates of mortality.

**SOURCE:** Food and Agriculture Organization (FAO) Press Release June 12, 2000



■ Half of the world's wetlands were lost last century. Logging and conversion have shrunk the world's forests by as much as half. Nine percent of the world's tree species are at risk of extinction. Fishing fleets are 40 percent larger than the ocean can sustain. Nearly 70 percent of the world's major marine fish stocks are over fished or are being fished at their biological limit. Soil degradation has affected two-thirds of the world's agricultural lands in the last 50 years. 30 percent of the world's original forests have been con-

verted to agriculture. Since 1980, the global economy has tripled in size and population has grown by 30 percent to 6 billion people. Dams, diversions or canals fragment almost 60 percent of the world's largest rivers. Twenty percent of the world's freshwater fish are extinct, threatened or endangered. The information above comes from *The Guide to the World Resources 2000-2001: People and Ecosystems: The Fraying Web of Life* to be released in September 2000, published by the United Nations Development Programme, the UN Environment Programme, the World Bank and the World Resources Institute. The report describes most of the world's ecosystems in fair, but declining conditions. Copies of the Guide can be downloaded at [www.wri.org/wri/wrr2000](http://www.wri.org/wri/wrr2000). The full report will be available in September.

**SOURCE:** NAIROBI, April 18, 2000, UNEP News Release, 2000/47

■ Labor News from the ILO: In Africa, close to 80 million children work often in dangerous conditions and in extreme forms of exploitation. 40 per cent of all African children between the ages of 5 and 14 are forced to work. This figure accounts for 32 per cent of the world's working children. According to the Moroccan Ministry of labor, more than 156,000 children under the age of 15 are working, 90 per cent between the ages of 10 and 14, 80 per cent of these children do not attend school. Spain boasts the lowest fertility rate in the world, 1.07 children per woman. To maintain a sufficient working population it will need approximately 240,000 immigrants per year to 2050.

**SOURCE:** World of Work, International Labor Office, No. 33, February 2000

Country (year)	15-24 years	25 years	Ratio (1)/(2)
	(1)	(2)	(3)
Australia (1997)	15.9	6.6	2.4
Brazil (1996)	12.6	4.6	2.7
Canada (1997)	16.7	7.8	2.1
Egypt (1995)	34.4	4.4	7.8
France (1997)	28.1	10.9	2.6
Germany (1997)	10.0	9.7	1.0
Italy (1997)	33.6	9.1	3.7
Japan (1997)	6.6	2.9	2.3
Rep. of Korea (1997)	7.7	1.9	4.1
Mexico (1997)	6.6	2.4	2.8
Pakistan (1995)	9.0	3.7	2.4
Philippines (1997)	15.7	5.5	2.9
Russian Fed. (1996)	16.6	6.9	2.4
Sweden (1997)	15.4	7.0	2.2
UK (1997)	13.5	5.9	2.3
USA (1997)	11.3	3.8	3.0

**SOURCE:** World of Work, International Labor Office, No. 33, February 2000



## VOICES

■ **Training for the Promotion of Sustainable Development:** An international meeting is being planned in Cracow, Poland, on 15-16 September 2000 for the promotion of sustainable development in the Baltic region. A key issue to be addressed is the training of experts in an integrated, trans-disciplinary way. The gathering aims to allow an exchange of up-to-date knowledge and information among scholars

and to recommend new approaches towards sustainability, where training can play a key role. The Conference will continue the series of interdisciplinary and international meetings of experts organised in Cracow, Poland in 1989, 1992, 1993, 1995 and 1997. For further information, please contact: Dr. Aleksandra Wagner: [awagner@uci.agh.edu.pl](mailto:awagner@uci.agh.edu.pl) Prof. Dr. Jan W. Dobrowolski: [dobrowol@uci.agh.edu.pl](mailto:dobrowol@uci.agh.edu.pl)

■ **Canadian Journal of Environmental Education:** Call for Papers for Volume 6, Spring 2001. The theme of this volume is: Climate Change: What are Educators to Do About Important Global Issues? The *Canadian Journal of Environmental Education* is including a selection of articles on the topic of climate change in each of Volumes 5 & 6. Volume 5 is out this spring. Volume 6 is planned for the spring of 2001. The Journal invites you to submit papers between September 1 and November 15, 2000. To be posted on our website, [www.yukoncollege.yk.ca/programs/cjee.htm](http://www.yukoncollege.yk.ca/programs/cjee.htm), The *Canadian Journal of Environmental Education* is a refereed journal published once a year.

■ **Environmental Management and Health and an International Journal of Sustainability in Higher Education:** People are invited to send in entries to register their projects on a new, on-line register of research projects on the areas of environment and sustainability. This service is free of charge. For further details please visit: [www.mcbup.com/research\\_registers/emh/sponsors.asp](http://www.mcbup.com/research_registers/emh/sponsors.asp)

■ *Pachamama (Mother Earth) Bulletin* is a periodic, electronic international publication on environmental adult education and related areas of the Learning for Environmental Action Programme (LEAP) of the International Council for Adult Education (ICAE). The *Bulletin* includes announcements of publications, conferences and projects that include the issues of health and environment. For further information contact the LEAP International Coordinator and Pachamama Editor. email: [dclover@oise.utoronto.ca](mailto:dclover@oise.utoronto.ca); Post: OISE/UT Room 7-115, 252 Floor Street West, Toronto, Ontario, Canada, M5S 1V6; Fax: (416) 926-4749.



SOURCE: World Press Review, July 2000

## VOICES *(continued from page 13)*

### ■ Information Communication Technology (ICT) Initiatives:

Bushmail Network—Central & Southern Africa: e-mail via radio. An e-mail system and radio patches reaches clients in areas where there are no telecommunications or computer facilities. [www.bushmail.co.za](http://www.bushmail.co.za) Contact Justice Malanot [info@bushmail.co.za](mailto:info@bushmail.co.za)

International Executive Media and Television Workshops will be held in: Casablanca, Morocco 18-20 July; Tunis, Tunisia 12-14 Sept.; and Beirut, Lebanon 26-8 Nov. The Beirut workshop is specifically targeted to officials from outside the region, with an interest in networking with media in the region. Contact Moncef M. Bouhafa [mbouhafa@cendevcom.org](mailto:mbouhafa@cendevcom.org)

## POINT OF VIEW *(continued from back page)*

death". Add the political controversy that without justification links abortion with family planning and one has a toxic stew.

Yet the mathematics are simple and indisputable—the very young populations in developing countries will continue to fuel rapid population growth for at least 50 years. Reflect on these numbers with the knowledge that most economists and demographers believe that our Earth's "carrying capacity" is 4 billion, maximum. What will happen to our habitat with 8 to 12 billion people?

Consider the following examples:

Every year, an estimated 39 to 49 million acres of tropical forests and woodlands are lost, cleared for development or agriculture.

An additional 12 to 17 million acres of agricultural land falls victim to erosion and developers' bulldozers, while freshwater scarcity now affects 20 countries.

Unsustainable population growth forces continued burning of forests, land depletion through intensive use, over pumping of ground water, and pollution of our air and atmosphere.

Today, however, I would like to focus on a possible solution to the problem of runaway population, which at the end of the day, is the "mother" of all of our habitat's most pressing environmental challenges. Speaking of "mothers" the one most compelling, and I might add efficient, weapon we have against runaway population, and the human misery it causes, is the empowerment and education of women. In the so-called "developed countries" (a peculiar turn of phrase if one considers that the average New Yorker uses 120 times more of the Earth's resources in his or her lifetime than does an inhabitant of Madagascar), women tend to be educated and increasingly empowered. Thus, the population of the developed countries has stabilized at about 1.2 billion.

It is in the developing world, where women remain undereducated and politically, economically and socially

deprived, that population levels are projected to reach 8 billion in the next 50 years. A recent study released by the Rand Organization reported that over 350 million women in developing countries would prefer to postpone or avoid pregnancy. Prominent among the obstacles cited to satisfying these unmet needs for family planning were the following:

**LACK OF KNOWLEDGE**—about contraception, its use, and its availability, especially where education programs were unavailable.

**HEALTH CONCERNS**—in developing countries, moral condemnation of an unintended pregnancy is 20 times greater than carrying an unwanted child.

**HIGH COSTS**—the retail price of an annual supply of contraceptive pills exceeds \$100 in some developing countries and costs reach 20 percent of income in some Sub-Saharan countries.

**CULTURAL/RELIGIOUS OBJECTIONS**—influence a woman's decision to use contraception. Such objections may reflect informational or access issues or health concerns. Use may also be based on religious or cultural grounds or objections from the male partner.

Over the next several days we will be discussing the solutions to our deteriorating health and habitat. While many political, economic and technological measures are available to partially mitigate the impact of continued population growth on our environment, we would do well to remember that the funding and successful implementation of world wide family planning and reproductive health programs are both the surest and the soundest investment we can make in the future of our children and our children's children. As ancient wisdom cautions, every choice needs to be made in the context of how that choice will affect the Seventh Generation.

In conclusion, I would like to take a moment of silence for the past, current and future victims of the worst man-made catastrophe the world has ever known—Chernobyl.

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

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

World Information Transfer, Inc. (WIT) is a not-for-profit (501c3) 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. Our annual 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 share their latest findings and discuss possible solutions with leaders in governments, business, organizations and the media.

3. Since 1995, WIT has been providing and promoting humanitarian relief to areas devastated by environmental degradation. Supplies and equipment have been sent to schools, hospitals and orphanages and assistance programs developed in areas contaminated by the Chernobyl fallout. These programs have been rapidly expanding since their inception.

4. Centers for Health & Environment providing centralized scientific data pertaining to health and sustainability issues. The objective of the Centers is to provide continuous monitoring, ongoing research, education and implementation of corrective programs. The first center was opened in Kiev in 1992 and moved to Lviv in 1996. The second center opened in Beirut, Lebanon in 1997.

WIT currently operates from headquarters in New York City with regional representative offices in Australia, Austria, Canada, China, Colombia, Egypt, Germany, Holland, Honduras, India, Iran, Israel, Lebanon, Nigeria, Pakistan, Philippines, Russia, Switzerland, Ukraine.

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

## POINT OF VIEW: **Solutions for the Millennium**

Statement by Dr. Christine K. Durbak  
Chair and Founder, World Information Transfer

World Information Transfer began its work in 1987, following the aftermath of Chernobyl and in 1992, WIT participated in the Earth Summit in Rio, the 2nd time the world's governments met together in broad recognition of our shared environmental challenges.

Since Rio, a growing body of actors including governments, non-governmental organizations, the private sector, non-profit organizations and the scientific and research community have responded to environmental problems in a variety of ways and have taken great strides towards incorporating environmental challenges in their day-to-day activities.

Groups such as the World Business Council for Sustainable Development, the Earth Council, and the International Council for Local Environment Initiatives provide effective non-governmental fora for worldwide cooperation and information sharing. Increasingly, governments are also called on to take environmental considerations into account, and consequently environment plays a more important role in international relations, agreements, codes of conduct and guidelines all exemplifying an encouraging trend.

Nevertheless, despite this progress on several fronts, from a global perspective the environment has continued to degrade and significant environmental problems remain deeply embedded in the socio-economic fabric of nations in all regions. Progress towards a global sustainable future is too slow. A sense of urgency is lacking. Internationally and

nationally, the funds and political will are insufficient to halt further global environmental degradation and to address the most pressing environmental issues. The general lack of sustained interest in global and long-term environmental issues remains a major impediment to environmental progress internationally.

We are gathered to hear from many international

experts on what is happening in the four areas of the human dimension—spiritual, governmental, scientific and the media—and what are the possible solutions to the gap that has been widening, instead of diminishing, since the Earth Summit in 1992.

While the issue of environmental degradation is a matter of enormous complexity, I would like to focus on one single engine, a “driver” if you will, that is threatening the future of our children and grandchildren more than any other—that is runaway population growth.

How powerful is this engine? We’ve been convening here for nine years, but in the last 12 years the global population has increased by 1 billion people—we passed the 6 billion mark last October—1,988 years to get to 5 billion people and just 12 years to increase the global community by 20%.

Almost unbelievably many observers and the media in general, seem to be ignoring this genuine crisis of numbers. Declining fertility rates, which have been falling since 1965, have created the false impression that we face a “birth

POINT OF VIEW *continued on page 14*

*“America has a profound interest in safe, voluntary family planning; a moral interest in saving human lives, a practical interest in building a world of healthy children and strong societies.”*  
President William J. Clinton, USA



**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.

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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