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Critical Issues on Health and Environment

Available in English, Ukrainian/Russian, Chinese and Spanish

World Ecology Report

TABLE OF CONTENTS

Education brings choices.
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Challenges For A Changing Climate

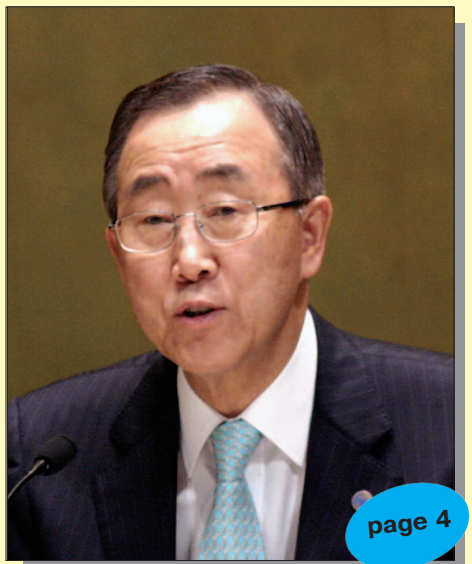
special Issue

19th International Conference on Health and Environment: Global Partners for Global Solutions

United Nations Headquarters, April 22, 2010

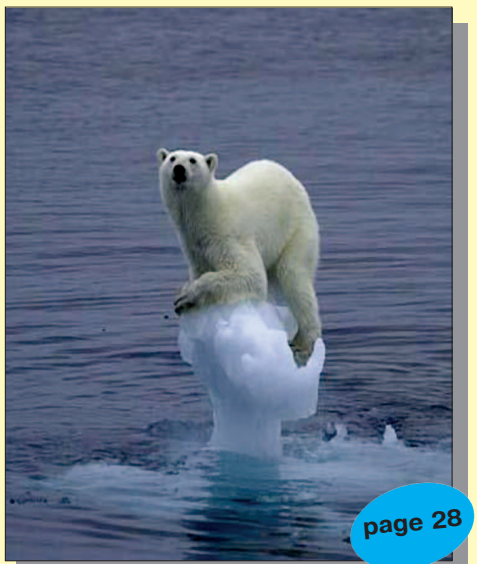
page 12

Child Health and Social Development: Combating Water Contamination in Rural African Villages



page 4

H.E. Mr. Ban Ki-moon
Message to 19th Conference



page 28

The Climate We Deserve
Guest Speaker - Mr. Jay Walker

MORNING SESSION - Mrs. Irena Zubcevic, Ms. Tania Valerie Raguz, H.E. Mr. Yuriy A. Sergeyev, Dr. Christine K. Durbak, Dr. Emily K. Shuman, Mr. Kurt Dahlin, Mr. Glenn Wiser.

Ms. Tania Valerie Raguz

UN-CSD 18 Vice-Chair, Eastern European States, Mission of Croatia to the United Nations

Moderator introduction

This year's theme is "Challenges for a Changing Climate". I have been given the great pleasure to be your moderator for the morning session. I have had the opportunity to work with the World Information Transfer through my dealings with the Commission on Sustainable Development here at the United Nations where I have been a member on the bureau both last year and this year representing the group of Eastern European States. Before I hand over the floor to the opening speaker for this morning, I just want to run through this morning's programme so that you are well aware what we are going to be discussing.

It would give me great pleasure to introduce Dr. Christine Durbak, the Chair and CEO of World Information Transfer. And then Dr. Durbak will be followed by his excellency Ambassador Yuriy Sergeyev who is the permanent representative of Ukraine to the United Nations and had been an active participant in this series of conferences. It's nice to see you back again Excellency. Then I will turn the microphone over to my dear colleague, Irena Zubcevic, who is the senior sustainable development officer from the United Nations Department for economic and social affairs and from the secretariat for sustainable development.

For the Keynote address we would like to welcome this year, Dr. Emily Shuman, who will be dealing with 'Global Climate Change and Children's Health' and then we will listen to Werner Obermeyer from the World Health Organization. After that presentation, we will watch a film screening entitled 'Silent Snow' which has been directed by Jan van den Berg. Then Glenn Wiser, senior Attorney for the Centre of International Environmental Law and Steering Committee, member of International POPs Elimination Network. Finally, we will have a presentation on 'Children's Health and Social Development combating water contamination in Rural African Villages who we will hear from representative from Water Wells for Africa, in particular founder and president Kurt Dahlin. With this I have the great pleasure to turn the microphone to Dr. Durbak for her introductory and welcoming remarks.

Dr. Christine K. Durbak

Founder and Chair of WIT

Opening Statement

Your Excellencies, Distinguished Delegates, Colleagues, Students and Ladies and Gentlemen, On behalf of World Information Transfer, I would like to give thanks to the Government of Ukraine for their continued co-sponsorship of our Conferences since 1992, the Government of Azerbaijan and the Mission of Belarus for their support of our 19th Conference.

Today's theme examines how we confront challenges – a topic each one of us knows from personal experience. Daily life, in fact, consists of a range of challenges, and our feelings of strength or weakness come, in part, from our success in handling the obstacles we confront. The impending climate change and the ramifications of chemicals and pesticides, particularly on children will test all of us in different ways. The manner in which we face and cope with these challenges will affect the way we and you will live in the forthcoming years.

From our work over the last 23 years, we have concluded that the fear of change confuses the understanding of complex challenges and slows down progress toward solutions. When people are afraid of something new, they fall back on superstition, old hatreds and unfounded beliefs. Our current global stage can be observed from that perspective: on the one hand are those afraid of knowing the problems because that would require them to do things differently; on the other are those who embrace the challenges because they want to do things differently. The first group embraces the status quo, the second group embraces change. The most creative minds are to be found in the second group. They are willing to face the inevitable change and thus conquer their fear of change.

However, there is also another category. Those who seek a fantasy life without challenges or problems. Those that make assumptions and come to conclusions without science based evidence. Some in this category change historical facts by removing names or even facts of history from text books. Those are the ones that disregard the facts of reality, for example the fact that the temperature of the earth's oceans has increased. They cannot tell the difference between evidence derived from scientific research and "evidence" derived from a dream. This group of individuals contributes the least to finding solutions to the planet's toughest challenges and adheres to regression by playing on people's fear of change.

Today we'll be hearing from scientists and experts on a few very important issues. This morning we'll learn that children face hazards today that were neither known nor suspected a few decades ago. They are at risk of exposure to over 85,000 synthetic chemicals. In the USA they are most likely exposed to 15,000 high production volume (HPV) chemicals which are widely dispersed in foods, household products and pesticides. Less than half of them have been tested for their potential human toxicity, particularly for children who are particularly vulnerable to chemicals in the environment because of their disproportionately heavy exposures and their inherent biological susceptibility. Moreover, because their organs are still undergoing development and maturation during exposure to environmental pollutants, children are more likely to sustain injuries with lifelong impacts.

Among all the organs potentially injured when children are exposed to environmental toxicants, it is the central nervous system that is most vulnerable. Children develop the brain that will serve them for the rest of their lives during the first 6 years of life. Consequently, exposure to environmental neurotoxicants during this period can produce permanent neurodevelopmental sequelae. Whereas the adult brain has a natural "barrier" to prevent many dangerous substances from entering the brain (so-called blood brain barrier), this barrier is underdeveloped in children resulting in greater entry of drugs and neurotoxicants. This physiologic difference between children and adults explains why children who are exposed to lead or mercury develop overt symptoms of permanent brain injury, at lower degrees of exposure than adults. According to estimates, as many as 17% of American children have a neurodevelopmental disorder and for autism and attention deficit-hyperactivity disorder (ADHD) there is evidence that the incidence has risen more than 10 fold in the last few decades. The progressive pollution of our planet indicates that the protection of children against environmental toxins is a major challenge to modern society.

"When people are afraid of something new, they fall back on superstition, old hatreds and unfounded beliefs - some change historical facts"

We will also examine the issues of nuclear energy, the after effects of Chornobyl on the Ukrainian and former Soviet Union society and the importance of continuous transparency of scientific findings in order to resolve or moderate some of the forthcoming issues of development. For the past 19 years we have dedicated a segment of our Conference to the ramifications of this manmade disaster. As with natural disasters the survivors mourn their losses as they clean up their environment. Their minds are preoccupied with images of death and destruction and some may exhibit what is known in psychiatry as "survivor's guilt," condemning themselves for having lived while others perished. Others develop post traumatic stress disorder (PTSD).

The impact of manmade disasters is much wider. The anxiety of individuals and societies following Chornobyl lasted for many years. Even to this day people consider themselves contaminated with radiation and fear continued birth defects. Humans are programmed to mourn their losses and changes in life and mourning allows us to accept that loss or a change has occurred. Without mourning a traumatized society has a tendency to remain fearful, helpless and victimized, which consequently complicates the "survivors" guilt, PTSD and prevents them from seeking change in their society.

As we continue to examine problems and seeking solutions for a better future, I would like to give you an illustration of a creative solution derived from realistically confronting a challenge in the lovely island of Bali, Indonesia. I will refer you to a recent story* about a garbage clean-up on Bali. As the amount of garbage has grown, individual businesses and residents had to address their waste problem which interfered with the tourism industry. A guest in a hotel on Bali, a reporter for the Telegraph (UK) wanted to know what happened to the contents of his hotel room wastepaper basket. He found out that "Beneath the corrugated iron roof of an open-ended old pig shed...workers were painstakingly hand-separating paper, plastics, glass, aluminum, food scraps, vegetable matter and other material that can be used again, leaving only the remnants to go into the island's rudimentary waste disposal system. Every week, 140 lorry loads of waste arrive. Only 10 leave carrying real rubbish." Twelve years ago, Ms. Yuyun Ismawati, an environmental engineer started this business. "She found that a pig farmer was paying hotels for their

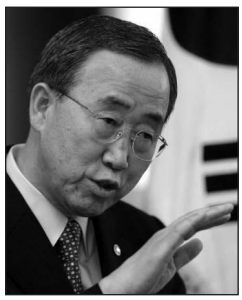
"Challenges posed by climate change offer a climate ripe for innovation"

waste and persuaded him that recycling it would be more profitable. Currently 25 hotels are involved. Almost everything is recycled: food scraps are bought by pig farmers and grass clippings and other vegetation is composted, and mostly returned to the hotels for flowerbeds. The operation supports over 400 people. Ms. Ismawati established six more centers on the neighboring island of Java. This year, Ismawati won a Goldman Award, the world's biggest prize for grassroots green activism.

The challenges posed by climate change offer a climate ripe for innovation. The coming years will be your moment in history. As you hear our speakers today, we hope our Conference inspires you to meet the challenges ahead. Each generation's future lies in their own hands and they are the ones that will benefit if they find the courage to live without fear.

I would like to end with a quote from Nelson Mandela, "We cannot waste our precious children. Not another one! It is long past time for us to act on their behalf." Thank you for your attention.

**Source: The Telegraph (UK), March 5, 2010, "How to make the most of rubbish, A rubbish revolution is under way in Bali," Geoffrey Lean*



H.E. Mr.Ban Ki-moon

The Secretary-General of the United Nations

Written Message to 19th International Conference on Health and Environment

Today we are here to commemorate the victims of the Chernobyl disaster, to honour the sacrifices made by those who died, and those who survived.

We remember the hundreds of emergency workers who responded to the accident; the more than 330,000 people who were uprooted from their homes; the thousands of children who later contracted thyroid cancer.

We commemorate the heroic efforts of those who took on the task of clearing up after the disaster; and the bravery of millions of people in the surrounding area, who have lived with a legacy of fear for their health and livelihoods for more than two decades.

The UN's strategy to address the lingering consequences of Chernobyl is aimed at fostering the region's long-term development and providing people with the information they need to lead safe and healthy lives. The United Nations remains committed to the Decade of Recovery and Sustainable Development for Chernobyl-affected regions proclaimed by the General Assembly, which began in 2006, and to the UN Chernobyl Action Plan.

I also welcome the initiative of Ukraine, co-sponsored by Belarus and the Russian Federation, to convene an international conference on the 25th anniversary of the accident in April 2011, to mark progress towards the goal of a return to normal life.

One of the global lessons of the Chernobyl disaster is the importance of strengthening the safety and security of nuclear material and facilities. I welcome the renewed commitment of world leaders to this issue, seen at the Nuclear Security Summit meeting in Washington DC last week.

Communities affected by Chernobyl are demonstrating resilience in coping with the consequences of the disaster, but they continue to need our support.

The UN stands ready to do everything in its power to further the region's revival. I call on the international community to support the full recovery of all those affected by the Chernobyl disaster.

I wish World Information Transfer every success at your conference.

H.E. Mr. Yuriy A. Sergeyev

Permanent Representative of Ukraine to the United Nations

Madame Chair, Excellencies, Ladies and gentlemen. It is not the first time I have the honor to welcome the participants of the International Conference on Health and Environment: Global Partners for Global Solutions. Since early 1992 the Government of Ukraine has been co-sponsoring this event. I would like to express my sincere gratitude to the President of the World Information Transfer, Dr. Christine Durbak, her right hand Dr. Claudia Strauss and the entire team for their devoted work in organizing such events.

It is my pleasure to welcome other co-sponsors and supporters of today's forum, as well as moderators, speakers, guests and all stakeholders for their contribution to today's deliberations.

The Conference itself provides us with a great possibility to discuss crucial environmental, social and cross-cutting issues, which are on the focus of Ukraine's and international agenda.

We have to remember that the nuclear energy is considered to be one of the cleanest sources of energy and viable solutions for meeting rising energy demands, reducing greenhouse gas emissions, mitigating climate change, and achieving sustainable development. It is the right time for the international community to benefit from the potential of the peaceful atom by applying modern technologies, which are safer, more stable and ecologically proven. Lessons learned from Chornobyl might be helpful in developing safe and environmentally clean nuclear energy.

The accident at the Unit 4 of the Chornobyl Nuclear Power Plant in April 26, 1986, caused long-lasting damage for the environment, and as a consequence we observe downward trends in population health and development of the affected territories. Numerically, a population of 5 million and the 145 sq. m. of the territories of Ukraine, Belarus and the Russian Federation – the countries most affected by Chornobyl – were directly damaged by nuclear fallout.

Nowadays, we observe increasing numbers of disabled persons in Ukraine from the Chornobyl-affected population. I would like to point out that in 1991 there were around 2 thousand disabled people, by the beginning of 2010 – over 110 thousand, and 2 600 of those are children.

By mentioning this, I would like to stress that full recovery and returning to normal life, as well the sustainable development of the affected territories, are highly important, and I believe that with the support of the international community this aim is realistic. We have already achieved great progress in Chornobyl recovery, but many challenges remain. The successful implementation of the Third Decade for Chornobyl "Decade of recovery and sustainable development of the affected regions" proclaimed by the General Assembly resolution, gives us more optimism in achieving our goals.

Let me remind you that just last week within the framework of the 43rd session of the Commission on Population and Development we discussed health issues, with a focus on the morbidity and mortality of the population. There is no need to underscore that many human diseases, in particular non-communicable diseases, involve environmental risk factors, including nuclear contamination. A healthy environment is key to a healthy population.

Ukraine attaches utmost importance to the role of the United Nations, particularly, the United Nations Development Programme in the strengthening of international cooperation in mitigating and minimizing the consequences of the Chornobyl disaster. The role of the UN agencies and NGOs is essential to the fulfillment of the UN Action Plan to 2016 aimed at the implementation of the Third Decade for Chornobyl, and in realization of the International Chernobyl Research Information Network (ICRIN project). Ukraine believes that all these activities will facilitate the implementation in an effective and timely manner of the United Nations Strategy on Chornobyl.

As I have previously mentioned, international assistance is highly important in addressing the Chornobyl consequences and rebuilding normal and safe living environment in the effected area. In particular, we rely on our partners in converting the nuclear power plant in an ecologically safe place. Further delays in the construction of a new safe confinement "Shelter" around the damaged Unit 4 of the Chornobyl Nuclear Power Plant can cost much more. The new Shelter – designed to contain the radioactive remains of Chornobyl Unit 4 for the next 100 years – is intended to replace the present containment structure, which was constructed under extreme conditions, with very high levels of radiation, and under extreme time constraints.

Ukraine is grateful to the donor countries to the Nuclear Safety Account and the Chornobyl Shelter Fund, which financed the construction of spent nuclear fuel storage and the transformation of the Chornobyl Shelter into

an environmentally safe system. Construction of a new safe confinement is ready to begin later this summer. We call on all partners to fully implement their commitments.

The Chornobyl catastrophe became a national tragedy for Ukrainians. We still feel its consequences today. It has created a number of social and economic problems that don't disappear with years. Only through a comprehensive approach and join efforts of the government, the international community, science, and non-governmental organizations can we solve the problems of Chornobyl and achieve sustainable development.

The 24th anniversary of the catastrophe is an occasion, once again, to draw attention to the magnitude and complexity of the tragedy that affected not only Ukraine. We must work together to overcome its serious consequences and prevent the minor possibility of such disasters in the future for the sake of life on the Earth. This is especially relevant today, when the world marks Earth Day.

I believe that opinions, ideas and proposals put forward during the conference will consolidate our efforts aimed at overcoming the challenges, which we are facing today.

I wish all the success to this Conference. I thank you.

Ms. Irena Zubcevic

Senior Sustainable Development Officer, Global Policy Branch, Division for Sustainable Development, DESA

Statement from UN Division for Sustainable Development on behalf of Mr. Tariq Banuri, Director of the Division for Sustainable Development

Madame Chair Dr. Durbak, Ambassador Sergeyev, Dr. Shuman, distinguished guests, colleagues, ladies and gentlemen. Let me say that it is an honor for me to be here at this traditional World Information Transfer Conference on health and environment representing the Director of the Division for Sustainable Development, Mr. Tariq Banuri, who sends his apologies for not being able to be here in person.

According to Agenda 21 (chapter 6) and JPOI (chapter 6), health and sustainable development are interconnected. Both insufficient development leading to poverty and inappropriate development resulting in over-consumption, coupled with an expanding world population, can result in severe health problems in both developing and developed nations.

The linkage of health, environmental and socio-economic improvements requires intersectoral efforts and involvement of civil society as well as private sector. It is very well seen in a new challenge of the climate change impact.

Overall, the effects of global climate change are predicted to be heavily concentrated in poorer populations at low latitudes, where the most important climate-sensitive health outcomes (malnutrition, diarrhea and malaria) are already common, and where vulnerability to climate effects is greatest.

The IPPC Synthesis Report 4 (2007) underlines that warm spells will increase risk of heat-related mortality, especially for the elderly, chronically sick, very young and socially isolated; heavy precipitation events will increase risk of deaths, injuries and infectious, respiratory and skin diseases; areas affected by drought increases will result in increased risk of food and water shortage, increased risk of malnutrition and increased risk of water-and food-borne diseases; intense tropical cyclone activity increases will result in increased risk of deaths, injuries, water- and food- borne diseases and post-traumatic stress disorders; increased incidence of extreme high sea level will increase risk of deaths and injuries by drowning in floods and migration-related health effects. However, there is one benefit and that is that warmer and more frequent hot days and nights will result in reduced human mortality from decreased cold exposure.

A harmonized and evidence-based information system on environment and health to support public health and environmental policies is crucial in order to mitigate and adapt to climate change. It needs to be said that the proliferation of information sources and the ease of information access have rendered this task both difficult and urgent. While a significant body of knowledge has emerged on health-related issues, much of this information is fragmented and is often not available in a form that is convenient for policy makers and practitioners.

Overcoming these barriers would require, in addition to addressing institutional issues, advances in several directions. Here are some for your consideration:

- the web-based information needs to be organized and made available to the policy-making and other communities in coherent and user-friendly forms;
- it is necessary to build relations among existing networks and make their activities more visible to policy-makers;
- success stories, best practices, evaluations of policies and programmes should be documented and make them available in web-based, user-friendly form.

This takes us back to the beginning of my remarks about the linkages of health, environment and socio-economic improvements and this can be done only within the framework of sustainable development, where all these agendas converge.

Sustainable development promises not only the harmonization between economic, social, and environmen-

tal dimensions, but also a reasoned basis for international cooperation, a mechanism to engage the private sector and civil society, a means of placing scientific knowledge in the hands of policy makers and local communities, and a way of expressing our responsibility towards future generations.

Therefore, establishing a more conducive international environment for a more central role of health in the sustainable development is essential in order to enable better coordination and coherence at national and regional levels in order to integrate health concerns, including those of the most vulnerable populations, into strategies, policies and programmes for poverty eradication and sustainable development. Mechanisms to improve intersectoral action, including institutional strengthening for health impact assessment by its integration into mainstream policy-making should be addressed as well as new partnerships and alliances put in place for health and sustainable development.

Therefore, conferences like this one that bring together scientists, practitioners and policy-makers help move the agenda forward and raise awareness of the need for more holistic approach to health within sustainable development in order to achieve Millennium Development Goals and make a better living for all.

Our support goes to all of you who are organizing this valuable conference year after year, especially Dr. Durbak, CEO of WIT and Dr. Strauss and her team, the speakers as well as participants.

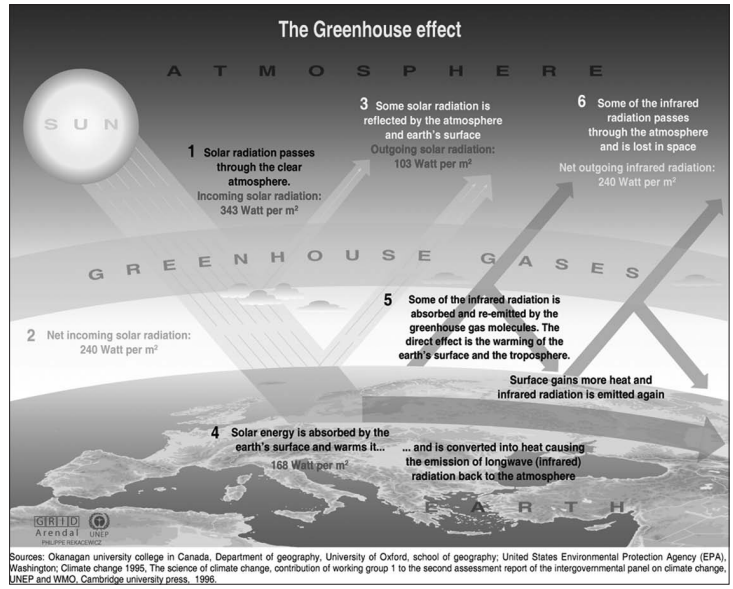
Thank you for your attention.

Dr. Emily K. Shuman

MD, Dept. of Internal Medicine,
Div. of Infectious Diseases,
U of Michigan

Global Climate Change and Children's Health

Global climate change is expected to have enormous implications for human health. Severe weather events such as heat waves, storms, floods, and droughts will directly impact human health, resulting in death, injury, disability, and displacement of populations. Climate change will also have many indirect effects on human health. The burden of vectorborne and waterborne infectious diseases is expected to increase, as insect vectors are more active at higher temperatures, and contamination of community water supplies occurs commonly in the setting of flooding or drought. Climate change may also result in worsening air pollution with ozone and particulate matter, which will increase the burden



Why is climate change occurring?

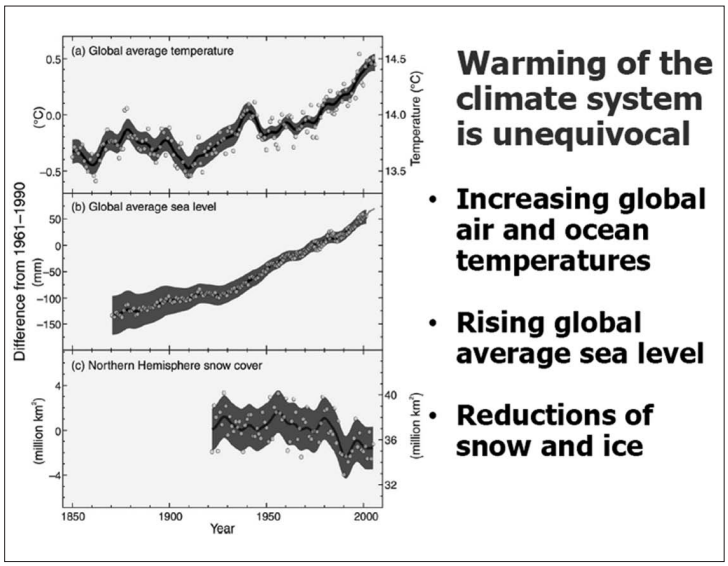
of respiratory and cardiovascular diseases in susceptible populations. Due to their unique characteristics, children will be especially vulnerable to the health impacts of climate change. In order to tackle the problem of climate change, there must be a global commitment to reduce greenhouse gas emissions and deforestation. However, because climate change is already occurring, we must also increase our understanding of how to protect vulnerable populations, including children, from its effects.

Greenhouse gases

- **Emissions**
  - Carbon dioxide (CO_2)
    - *Combustion of fossil fuels*
  - Methane (CH4) (10%)
    - *Landfills*
    - *Coal mines*
    - *Oil/natural gas operations*
    - *Agriculture*
  - Nitrous oxide (N2O) (5%)
    - *Fertilizers*
    - *Combustion of fossil fuels*
    - *Industrial/waste management practices*
- **Deforestation (15-20%)**
- **Since preindustrial era, mean CO_2 concentrations in atmosphere have increased from 280 ppm to over 380 ppm**

Predictions for the future

- **If CO_2 emissions remain at current or projected levels:**
  - Average global temperature will increase 1.8-5.8ºC by the end of the 21st century
  - Sea levels will rise by 9-88 cm as sea ice melts



Climate change, not just "global warming"

- **Hydrologic cycle altered as warmer air able to retain more moisture**
  - More rainfall in some areas, drought in others
  - More severe weather events
  - Between 1951 and 2000, 3.3% of earth's surface changed from one climate category to another
- **Less polar and boreal climates, more arid climates**

Climate change and human health

- **Thermal stress**
- **Floods, droughts, extreme storms**
- **Worsening air pollution**
- **Infectious diseases**
  - Water- and vectorborne diseases

Weather extremes

- **Thermal stress**
  - Can lead to cardiovascular and respiratory failure
  - Heat waves in US more deadly than hurricanes, floods, and tornadoes combined
  - 2003 heat wave in Europe caused 22,000 deaths in 2 weeks
  - Increased risk of death in urban areas (urban heat islands) and with poor housing
- **Severe storms**
  - Death, disability, property loss (e.g., in 1998 Hurricane Mitch resulted in >19,000 deaths, 2.7 million homeless, and $6 billion damages in Central America)
  - Sea surface warming of slightly over 2°C would intensify hurricane wind speeds and may increase number of hurricanes
  - Concentration of populations in coastal areas and environmental degradation increase vulnerability
- **Floods**
  - Sea surface warming will cause rise in sea level with increased flooding of coastal areas
  - 13/20 of world's megacities are at sea-level
  - Large-scale population displacement possible with 1 meter rise in sea level (18.6 million in China, 13 million in Bangladesh)
  - Salination of fresh-water aquifers, disruption of storm-water drainage and sewage disposal
- **Drought**
  - 1.7 billion people live in water-stressed areas, expected to increase to 5 billion by 2025
  - Reduced food production, increased wildfires, infectious diseases associated with poor hygiene

Air pollution

- **Ozone concentration may increase as a result of warmer temperatures**
  - Asthma
- **Pollen concentrations may also increase**
- **Warmer air may disperse air pollution over larger areas**

Climate and infectious diseases: vectorborne diseases

- **Higher diversity of insect vectors in the tropics**
- **Insect vectors more active at higher temperatures**
- **Anopheles mosquitoes require temperatures >16ºC to complete their life cycles**
  - And Plasmodium sp develop more rapidly at temperatures >20ºC
  - One mosquito can infect 200 people with P. falciparum
- **Mosquitoes tend to thrive in aquatic habitats**
  - Epidemics of malaria and dengue fever occur during rainy seasons in the tropics, and interannually with weather events associated with El Nino-Southern Oscillation
- **But epidemics of West Nile virus occur during droughts**
  - Mosquitoes and birds brought into close proximity at scarce water sources
  - Fewer natural predators of mosquitoes as wetlands dry up

Climate and infectious diseases: waterborne diseases

- **Drought**
  - Water scarcity leads to poor sanitation
  - Much of population can be exposed to potentially contaminated water
  - Example: recent cholera epidemic in Kenya
    - *As of 12/5/09, 4,700 cases and 119 deaths*

Current burden of important infectious diseases that may be impacted by climate change

- **Vectorborne diseases**
  - Malaria
  - *45% of world population at risk*
  - *300-500 million people infected annually with 1 million deaths*
  - *90% of deaths occur in Sub-Saharan Africa, causes 1/5 of childhood deaths in Africa*
  - Dengue fever
  - *40% of world population at risk*
  - *50-100 million people infected annually with 22,000 deaths (mostly children)*
- **Waterborne diseases**
  - Diarrheal disease is the 2nd leading cause of death among children under age 5 worldwide

Current impact of climate change on infectious diseases

- **Difficult to separate impact of climate change from other human factors**
  - Extensive migration and travel of human populations
  - Drug and pesticide resistance
  - Urbanization/increased population density
  - Availability of health services
  - Population immunity
  - HIV

Future impact of climate change on infectious diseases

- **Shift in suitability for malaria and increase in suitability for dengue fever (50% of world population at risk by 2050)**
- **WHO estimates**
  - 10% more diarrheal disease by 2030 than if climate change did not occur
  - If average global temperature increases by 2-3ºC, population at risk for malaria will increase by 3-5%

Climate change and children's health

- **Children are especially vulnerable to the potential adverse health effects of climate change**
  - More likely to live in poverty (20% of children in US, 50% worldwide)
  - Kilogram for kilogram drink more water, eat more food, and breathe more air
  - Rapidly developing with immature immune systems
- **Vectorborne diseases**
  - An African child has on average 1.6-5.4 episodes of malaria each year, and one child dies of malaria every 30 seconds
  - Malaria during pregnancy results in up to 200,000 newborn deaths each year
  - Dengue fever is a leading cause of hospitalization and death among children in Asia
- **Waterborne diseases: diarrheal diseases**
  - 2 billion episodes each year with an average of 3 episodes annually for each child living in the developing world
  - 1.5 million deaths among children under 5 annually (80% occur in Africa, 80% occur in children under 2)
  - A leading cause of malnutrition and impaired growth

Conclusions

- **Climate change is occurring because of emissions of greenhouse gases and deforestation.**
- **Climate change will impact human health directly through adverse weather events and indirectly in many ways including increased air pollution and increased burden of infectious diseases.**
- **Children are especially vulnerable to the potential adverse health effects related to climate change.**

References:

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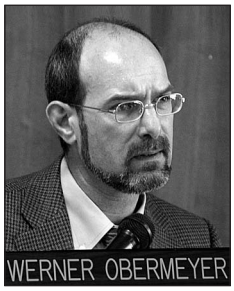
Intergovernmental Panel on Climate Change, www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf;
World Health Organization, www.who.int/globalchange/en

Region	Total DALYs (1000s)	DALYs / million population
Africa region	1894	3071.5
Eastern Mediterranean region	768	1586.5
Latin America and Caribbean region	92	188.5
South-East Asian region	2572	1703.5
Western Pacific region*	169	111.4
Developed countries**	8	8.9
WORLD	5517	920.3

* without developed countries; ** and Cuba



Mr. Werner Obermeyer

Deputy to the Executive Director, WHO

Why We Should Take More Concrete Action to Protect Children from Environmental Disease Burdens

Excellencies, Distinguished Delegates, Ladies and Gentlemen. Let me from the outset thank WIT, and Dr. Christine Durbak in person, for their tireless work to ensure that environmental risks remain in the forefront of public discourse, here at the United Nations and elsewhere. The magnitude of this challenge is very clear – more than 13 million deaths a year are caused by preventable environmental factors – and one third of these deaths in the world's poorest regions.

In fact one quarter of the global disease burden in adults is related to environmental risk factors. In the case of children, environmental factors are involved in more than one third of the disease burden – and in developing countries there are 12 times more deaths of children caused by environmental exposures, often in workplaces, than there are in rich countries. This is all the more shocking if one bears in mind that the poorest countries spend $10 per person per public health year, while in rich countries this figure averages $3000.

"Chemicals, persistent organic pollutans and toxins often have a lifespan that can affect several generations"

These environmental disease burdens can be addressed through many interventions, most of which are not costly and are readily available. They include reducing air pollution, indoors and outdoors, improving access to clean water, preventing chronic acute respiratory infections though better use of fuels, and preventing some non-communicable diseases such as cancer by limiting exposure to certain chemicals.

Chemicals, persistent organic pollutants and toxins often have a lifespan that can affect several generations of humans, through altering hormonal balance and damaging reproductive and immune systems. It also has negative developmental impacts and carcinogenic effects. Among sensitive populations, in particular the elderly and children, immune systems are typically more susceptible to many of these pollutants.

Some recent data released by the Stockholm and Basel Convention Secretariats suggest that higher temperatures not only expose wildlife more to certain pollutants, but also increases the long range atmospheric and oceanographic transport of these pollutants – through new migratory patterns of mammals such as seals or polar bears, and of course melting of ice caps.

If we note that the 5 warmest years on record occurred since 2000, it is no wonder that the levels of pollutants and toxins released in air and water, through melting ice and snow, have increased alarmingly. Not only has this climatic change caused greater exposure to a wider range of disease vectors, but it has also exposed humans directly – or indirectly through the food chain - to more toxicity. Many pesticides that have been banned or severely restricted for use in industrialized countries are still traded and used in developing countries. They are sold to farmers who lack both equipment and knowledge and result in injuries and even death particularly of children who till the land..

Similarly, industrial chemicals, such as lead additives to boost octane levels in gasoline, are still used in some areas of he world, resulting in a build up of lead in the environment, causing adverse health impacts, especially the intellectual development of children. Unfortunately asbestos, used in building materials and packaging, is also prevalent in these regions.

Melting ice caps are contributing to the spread of toxins through ocean flows, and as temperatures of sea water increase, the exposure to humans of fish stocks contaminated with mercury also rises.

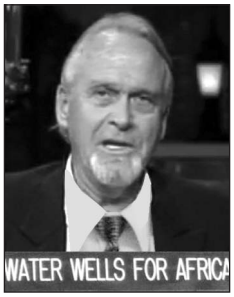
Children are of course at increased risk as they are constantly growing and therefore need to consume more food, breathe more air and drink more water. Young children may crawl and play in areas where they are exposed to dust or dirt that are contaminated by chemicals and as their central nervous, immune, reproductive and digestive systems are still developing, exposure to toxins, pollutants and chemicals can lead to irreversible damage.

When we look at climate modeling predictions, it appears clear that sea level rise will displace millions of people in low lying coastal areas, will flood agricultural lands, resulting in fertilizer run-off and chemical contamination of groundwater supplies. Drought and flooding will severely impact our food production and protein intake, and increases the risk of contaminants spreading to humans through the food chain.

At WHO we have been working closely with UNEP and particularly UNICEF on children's environmental health issues, and have also increased our partnership with the three chemicals conventions, the Stockholm and Basel that I have mentioned, as well as the Rotterdam Convention. Although we have made good progress in developed countries, the implementation of legal instruments in developing countries always suffers from capacity challenges and financial restraints.

If we add the projections of climate change to this scenario the challenge becomes all the more daunting. So, let me again emphasize the benefit of having forums such as this one, where advocacy and information exchange is of tremendous value in informing decision makers and the leaders of tomorrow of the dangers of today.

Thank you.



Mr. Kurt Dahlin

Founder and President
of Water Wells for Africa

Child Health and Social Development: Combating Water Contamination in Rural African Villages

Our efforts have grown to bring water to more than 200,000 people each day.

Sick Water Kills

More Than 9-11, More Than Viet Nam, More Than Hitler, More Than War.

"MadziNdiMoyo" - Water is LIFE
"Water gives life to everything, including human development and human freedom."
- UNDP 2006 REPORT: Beyond Scarcity

War for Clean Water

- *In the past 10 years, diarrhea from bad water has killed more children than all the people lost to armed conflict since World War II.*
- *Diarrhea kills more than malaria each year.*

Sick Water Kills A Child Every 15 Seconds

- *Before the sun sets today 5,000 children will die from diarrhea caused by bad water, inadequate sanitation and poor hygiene.*
- *That is the equivalent to ten 747 jets full of kids crashing every day.*

The free access to safe drinking water should be considered the most basic human right.Water is essential for the well being of humankind and for any sustainable community development.

All surface water is unsafe in Malawi.Mainly, due to lack of flow and shared sources with animals.

Improvement of drinking water supply is a core element of poverty reduction and community development.No water. No development.

Contamination

Biological contamination that comes from fecal waste endangers children and stands in the way of all social and economic development.

The issue in Malawi andin like-communities worldwide can be reduced to 2 problem categories:

- *The biological contamination of surface water*
- *The biological contamination of water from pure ground sources (boreholes) after it is taken from that source.*

Contamination after collection, during transportation and storage is increasingly being recognized as a worldwide issue of public healthIn most villages, women and young girls are the primary collectors of drinking water.

Hygiene and Hands

- *The hygienic standards of women's hands were examined in 2 villages in Chickwawa, Southern Malawi.*
- *In both locations over 55% of the primary collectors tested positive for E. Coli on their hands.*
- *These percentages proved even higher on the hands of primary school children.*

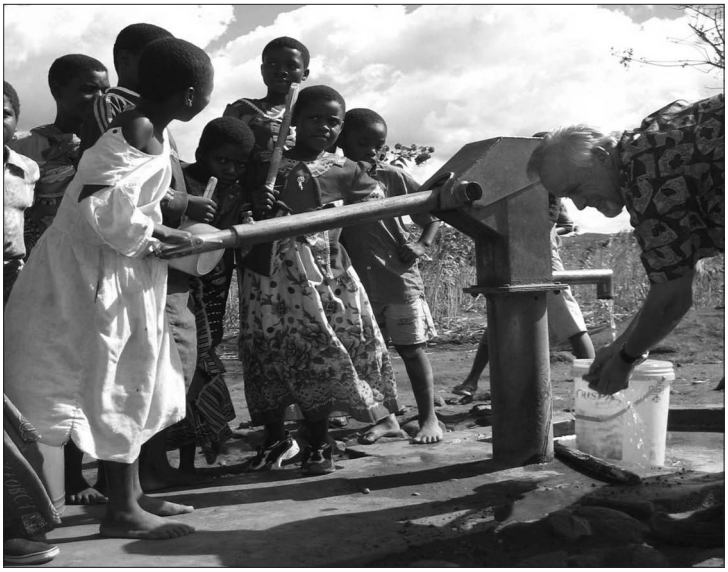
"Across much of the developing world, unclean water is an immeasurably greater threat to human security than violent conflict."
- UNDP 2006 REPORT: Beyond Scarcity

E. Coli Contamination

The presence of E. coli in their drinking water indicates that the water has been contaminated by fecal matter and therefore presented a risk of all diseases related to waste discharge, especially from feces and urine.

Hand-to-Water Contact

- *We have realized that hand-to-water contact or "finger dipping" is the primary cause of the deterioration of their water quality.*
- *It is important to note that these villages have open latrines, no toilet paper, little or no use of soap, and shared living areas with livestock among other unsanitary practices.*
- *The majority of diseases in developing countries are infectious diseases in nature caused by bacteria, viruses and other microbes, which are shed in feces.*



Top 3 Health Concerns

- Diarrhea, fever, and dehydration rank as the greatest threats concerning their children even in areas where boreholes exist.

- All 3 of these top concerns directly relate to biologically contaminated water, and could be treated without medication if safe water were available.

Disease Reduction

The WHO (2004) estimates that if improvements were made with sanitation in sub-Saharan Africa alone, 434,000 child deaths due to diarrhea would be averted annually.

Our Outlook

As long as the issue persists, our challenge persists. The primary avenue for water contaminated in a village is dirty hands. Research from a water quality test conducted in Balaka, Southern Malawi, demonstrated that 31% of diarrheal disease was reduced in children under 5 when water collectors were given buckets that did not allow them to touch the water

Impact of Sanitation

In the area of sanitation we seek to teach simple hygiene practices that reach the core of each problem with the littlest upset to the villagers' daily routine. Our goal is not only to promote health, but rather, in reducing disease we seek to:

- to increase opportunity for education
- small-scale agriculture
- social independence/personal choice
- internal community development.

Our Strategies

The strategies that we have implemented alleviate the burden of disease in such a way that we have seen advancement in these Millennium Development Goals:

- More time for primary education
- Reduction in child mortality
- Improved maternal health, combating disease
- Partnerships for global development.

Strategy: Partnership

WWFA has always partnered with indigenous leaders (of any kind: religious, tribal, political, school teachers, etc.) and local networks, groups, businesses, and so on. We seek to align our health hopes with local people who are able to combat and replace unsanitary practices in their own ways for their own communities.

Strategy: Mothers

We know that they influence the cleanliness of each home as water collectors and homemakers. Rallying and educating them has been a direct way to impact child health.

> ***"Ground water sources are being considered as safe sources of water supply in rural areas of Malawi … Boreholes properly sited are safe water sources."***
> Mr. Owen Lin-Phiri. The Regional Water Development Officer in Blantyre, Malawi

Basic Soultions

- Personal Hygiene: The proper mixture of wood ash, oil of any kind and water makes soap
- Environmental Hygiene: Lye, which is an active ingredient in soap. Can be leached from wood ash and used to kill fly larva if poured in latrines.

More Benefits of Ash

- Washing hands with wood ash has proved to be as effective to remove bacteria and virus as washing with soap.
- Beyond hand washing, a mixture of ash, grease and water washes dishes well.
- Carry ash in the bucket to the borehole and washing hands prior to filling the bucket

We have seen and can attest to the power of clean water, hygiene, and the power of partnership.

Solutions to Scale

We do not feel that there will ever be a macro strategy that can solve the rural crisis, but what we do know is that micro solutions can be done and should be done on a tremendous scale in order to combat the enormous challenge before us, the challenge known as the world water crisis.

Mr. Glenn Wiser

Senior Attorney
Center for International
Environmental Law

International Law and Chemicals

I would like to speak today about international law and chemicals management. First, I will describe a few of the risks that chemicals pollution pose to human health, including why chemicals such as mercury present an issue of global concern. Second, I will provide a very brief overview of some of the ways the United Nations system is responding to this concern.

1. The Challenge

The global chemicals industry is a huge economic force that impacts all of us in many positive ways. Chemicals are used in nearly every aspect of our lives, and we rely on them for many essential and beneficial goods.

Unfortunately, some chemicals have properties that we wish they did not. The properties that make chemicals so attractive in products are sometimes detrimental when chemicals are released into the environment. For instance, DDT can be an effective treatment for killing mosquitoes that carry malaria because its toxicity lasts for such a long time. Yet because of its persistence, DDT released in the environment has an unfortunate tendency to move northwards over time through air and water currents, and even in migrating animals like fish and marine mammals. This can be a serious problem if you are an Inuit living in Alaska and surviving off of seal, walrus, or fish – "country foods" – which have become contaminated with industrial chemicals from far away. Other chemicals can follow a similar trajectory, such as dioxins that are unintentionally released into the atmosphere during industrial combustion processes and ultimately end up in food. These also persist in the environment, move north through long-distance environmental transport, and bioaccumulate and biomagnify in the food chain.

Another pervasive but lesser known class of persistent chemicals is brominated flame retardants. Flame retardants play an important role in preventing fires and fire-related deaths. Unfortunately, brominated flame retardants can outlast their usefulness and eventually fail to adhere to products such as electronics, carpets, and curtains. Dust from these products can migrate into our food or we inhale it into our lungs, allowing these chemicals to accumulate in our bodies.

As a result of these kinds of processes, all of us everyone in this room have dozens of synthetic chemicals in our bodies. Yet our knowledge of many chemicals is incomplete. What we do know is that they can affect children and unborn children to a much greater extent than they do adults.

Dangers also arise from non-synthetic elements, such as mercury. Mercury is not something we make, but something that we may mine for use in various products. Mercury is used in compact fluorescent bulbs, for example, which are less energy intensive than incandescent bulbs and can therefore help reduce greenhouse gas emissions related to electricity production.

Unfortunately, mercury is also very harmful to human health. Mercury is not just persistent; it is an element of the earth. Once we bring mercury out of the earth's crust and introduce it into the biosphere, it stays around forever. Small amounts of mercury in the atmosphere may not introduce substantial harms. But when mercury enters the atmosphere from broken light bulbs or, more importantly, from emissions of coal-fired power plants, it moves around and eventually settles on the ground or water. Coal inevitably contains some level of mercury, and even small percentages produce large effects in the aggregate when thousands or millions of tons of coal are burned over time. Some mercury settles in places like wetlands, where it turns into methylmercury. Methylmercury is more pernicious than other forms because it can be readily absorbed by living things. When a little fish eats some plankton that contains methylmercury, it retains the methylmercury in its own body. When that small fish is eaten by a larger fish, the methylmercury accumulates again, thus biomagnifying as it moves further up the food chain. Organisms at the top of the food chain, such as swordfish, seals, or humans, often have levels of methylmercury that are far, far higher than the background levels in water.

Why does this matter? Mercury is a potent neurological toxin. There is no safe threshold for mercury: it is always bad for you. If someone like me gets exposed to a little methylmercury in fish, I will not worry about it much. I am not going to eat tuna fish every day, because that could actually lead to acute symptoms like tremors. But for a small child whose brain and organs are growing, or for an unborn child, exposure to mercury can change forever how that person develops.

Like many toxic chemicals, mercury exposure is a global problem. In the United States exposure is typically through fish consumption. In parts of China, scientists are now finding high exposure to methylmercury even where people do not eat fish, because mercury is in the rice. Rice is grown in wet patties where mercury can methylize. Mercury and other toxic chemicals are also a

transboundary problem. Inuit who have nothing to do with the production or use of mercury are still exposed to it because, like DDT and dioxins, mercury can travel great distances through air and water currents.

2. International Solutions

In the search for solutions to chemical contamination, international cooperation is essential. Why? As I noted earlier, many old chemicals such as DDT, newer ones like brominated flame retardants, and even elemental chemicals like mercury all share the unfortunate quality of long range environmental transport. Individual countries cannot always reduce chemical exposure by reducing their chemical production and use, because many chemicals are dispersed so widely from their sources. For example, the Inuit cannot protect themselves from industrial chemicals, because they do not have a hand in chemicals production. The United States could eliminate mercury releases by shutting down all of its coal-fired power plants or by developing and implementing technologies to filter out the mercury emissions. Yet this would not solve the exposure problem because of the long-range environmental transport of mercury from other countries. China and India, for example, burn a lot of coal and their strategy for development relies on burning a lot more.

"Mercury does not go away and in this respect it is even worse than nuclear waste"

A number of global treaties have been negotiated in response to the transboundary problems that chemicals cause. The Inuit people became an important spiritual force in United Nations negotiations that resulted in the Stockholm Convention on Persistent Organic Pollutants. A related agreement is the Rotterdam Convention on Prior Informed Consent, which requires countries to obtain permission before exporting extremely toxic chemicals to other countries. The Basel Convention on Transboundary Movement of Hazardous Wastes seeks to prevent the export of waste that can expose children and adults to many toxic chemicals. The Strategic Approach to International Chemicals Management is a voluntary process to help countries use chemicals sensibly and deal with chemical pollution.

These agreements go a long a way toward addressing international chemicals management problems. They also present challenges in their own right, however. An overabundance of treaties and voluntary processes makes it hard for developing countries to administer all of them. In many developing countries, only one or two people may be in charge of dealing with chemicals regulation in their government, as well as with negotiating and administering these treaties. It is also difficult to deal with numerous interrelated treaties in a coherent fashion. One reason is because the same countries are not always parties to the same agreements. The United States is notorious for failing to join environmental treaties. Even if combining two chemicals treaties would be more efficient, some countries might not support doing so, to avoid complications that could arise from trying to deal with different membership in each treaty.

Last year the Governing Council of the United Nations Environment Programme decided to launch negotiations on a mercury treaty, after ten years of discussion on the issue. The negotiations will begin in June in Stockholm. This is a welcome development, because mercury contamination is a crucial issue that individual countries cannot deal with on their own. On the other hand, an additional treaty will compound the challenges of administration and coherence.

To be successful, the mercury treaty must accomplish a number of goals. Most important, it needs to address the supply issue. As I mentioned earlier, mercury never goes away. Thus, what we need to do first and foremost is prevent new mercury from being mined and released into the environment. Manufacturers can use recycled mercury for all essential mercury uses.

The treaty must also regulate international trade in mercury. Many mercury uses, for instance in dental amalgam for filling cavities, are still prevalent throughout the world. Vast amounts of mercury are sold ostensibly as dental mercury in India, enough to fill the cavities of billions of people. But this is not for what the mercury is actually used. Instead, the mercury is illegally shipped for use in artisanal small scale gold mining. This is an economically important activity throughout much of the world, but a terribly polluting one.

Finally, the treaty must address what to do with all the mercury that has been released. Mercury does not go away and in this respect it is even worse than nuclear waste. At least nuclear waste might have a half-life of thousands of years, but mercury must be stored forever once it is released. Sound, permanent storage is therefore one of the challenges the treaty must resolve. The mercury treaty will also have to answer questions that any treaty must deal with, including how to pay for these improvements, who should pay, what technologies can be used, and how to assist developing countries so that they can join in the common effort.

For those of you who are interested in environmental protection, sustainable development, and United Nations treaty negotiations, international chemicals management provides a great case study and opportunity to learn and make an important contribution. I hope that my talk has piqued your interest to consider what you can do.

Mr. Ryan M. Powers

AidData Tracking Development Finance

A New Way to Explore Development Finance

Goals to be achieved by locating a New Avenue to Explore Development Finance are as follows:

1. To Increase the Breadth of Development Finance Data by augmenting traditional sources of Foreign Aid Data

a. By Adding multilateral and bilateral donors not reporting at project-level to OECD Creditor Reporting System

b. By Adding additional years data for donors that do report to CRS (e.g. IDA)

c. By Adding more types of development finance that have not historically been tracked by foreign aid databases

d. Several Examples:

i. Non-DAC (Development Assistance Committee) Bilateral Donors in AidData[1]

ii. Average Yearly Commitments in AidData from Non-DAC Donors: Kuwait with 535.52 millions USD in 2000, being the top donor

iii. Non-DAC (Development Assistance Committee) in AidData.[2]

iv. Total Flows in AidData by Source: from less than $5000 millions of USD in 1947 to approximately $180000 millions of USD in 2007

2.Improve the Quality of Development Finance Data

a.By Finding More Detailed Sources of Data

i. CRS Reporting Donors with Alternative and Higher Quality Data Sources.[3]

b. More Specific Categorization of Aid flows

i. According to the Aid Flow's Overall Purpose, similar to OECD CRS

ii. According to the specific activities funded by using a new and more detailed coding scheme and a given aid flow can be assigned multiple activity codes, based on OECD sector codes

c. All records are independently double coded by trained researchers. Disagreements are arbitrated by a senior researcher

3. Improve Access to Development Finance Data

a.Introduction on how to use the search engine in AidData Website

i. Go to AidData Website

ii. Press Search AidData

iii. Three Selections.[4]

iv. Press the 'Search Button' at the bottom and begin the search

v. Details of a donation, including the Year, Donor, Recipient, Title, Commitment, Purposes can be then be found

vi. Currency Units can be modified on the top right hand corner of the page

vii. Aggregate Financial Flows can also be found on the top of the page

viii. The data can be exported by pressing the to a CSV File

ix. For details, press the 'View Details' button

x. Details can then be viewed. Should there be an error, press 'Report an Error in this Record'

xi. Glossary can be located by pressing the 'Field Glossary' button

xii. The page can be printed by pressing 'Print Record'

xiii. The page can be shared via e-mail, facebook or twitter

Conclusion

A glance on the AidData Website

a. About: Explanation of AidData, its origins and its future goals

b. Blog: Use of the data to inform the public discourse on development finance in real time

c. Research: Assembling public research that makes use of our dataset

d. Help: A comprehensive User's Guide to AidData.org.

1. All include: Brazil, Chile, Colombia, Estonia, Hungary, Iceland, India, Israel, Kuwait, Latvia, Liechtenstein, Lithuania, Monaco, Poland, Qatar, Saudi Arabia, Slovakia, South Africa, Taiwan, Thailand, United Arab Emirates

2. All include: African Capacity Building Foundation, BADEA, AFESD, CAF, CDB, CERF, EBRD, UNDEF, IFC, ISDB, IMF, NDF, NADB, Montreal Protocol Fund, OPEC

3. All include: African Development Bank Group (AFDB, AFDF, NTF), Asian Development Bank (ASDF, ASDB), Global Environment Facility, Global Fund, Inter-American Development Bank, International Fund for Agricultural Development World Bank Group (IBRD, IDA), South Korea

4. The three selections are: 1. In the 'Select donor by name', type the donor name, e.g. United States; 2.In the 'Select a group of donors', select a box, e.g. Non-DAC Bilateral; 3.In the 'Select donor(s) by region', Select a region, e.g. Africa

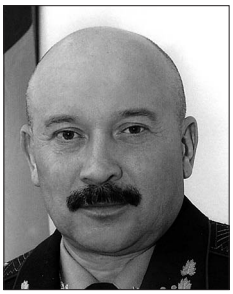
Nuclear Energy Update – Chornobyl Review

AFTERNOON SESSION - Dr. Hanna Kapustyan, Mr. Denis Zdorov, H.E. Mr. Valeriy Kuchinsky, Dr. Christine K. Durbak, Prof. Karl Grossman, Ms. Jessica Williamson, Ms. Bahar Shahpar, Mr. Remy Chevalier

H.E. Mr. Valeriy Kuchinsky

Former Permanent Representative of Ukraine to the United Nations

Your Excellencies, Distinguished Delegates, students, Ladies and Gentlemen, I think that by holding today's conference, we are marking the 24th anniversary of the Chernobyl nuclear power plant disaster, the worst nuclear accident in the history of mankind. We are remembering numerous victims of this terrible catastrophe and are paying tribute to the governments of Ukraine, Belarus, and Russia, the most severely affected countries, and in fact to the whole international community for their strenuous efforts in minimizing the after effects of this terrible tragedy. There is yet another opportunity for me to express our sincere gratitude to the World Information Transfer, its chair and CEO Dr. Christine Durbak, and her staff, for keeping the Chernobyl issue alive and for disseminating for many years expertise and profound knowledge of the subject worldwide and for educating the younger generation.



H. E. Mr. Mykhajlo Bolotskyh

Acting Minister of Emergency of the Government of Ukraine

Distinguished Participants, on behalf of the Government of Ukraine, let me forward the most sincere greetings to you. I would like to remind you that on the 26th of April we will mark the twenty-fourth anniversary of the Chernobyl disaster. The destroyed reactor of the Chernobyl power plant cast a bleak shadow on the entire civilization. This technological disaster joined a list of huge devastating tragedies; consequently the words "Chernobyl NPP" illustrate an unprecedented phenomenon: nuclear energy that got out of man's control.

What does Chernobyl mean for Ukraine? It is about more than 2 million people affected by the catastrophe and its consequences; almost 10 percent of the territory is directly contaminated by the radiation; 160,000 people were forced to move from their homes and to other cities. The Chernobyl disaster became a national tragedy, the consequences of which are still visible. It has created social and economic problems that have not diminished; they could be solved only by a complex approach and through the joint effort of the state, science, NGOs, and of the people affected by Chernobyl, and the whole society, with the involvement of international assistance.

Ukraine is grateful to all donor states of the Nuclear Safety Account and the Chernobyl Shelter Fund that are providing financial assistance for the construction of storage facilities for spent nuclear fuel and the transformation of the Chernobyl Nuclear Power Plant Shelter to an environmentally safe system. The construction of the new safe confinement structure is ready to be started this summer. It is also important to finalize the project on the construction of the storage for spent nuclear fuel as well.

The President of Ukraine, during his visit to the United States, appealed to the leaders of the G8 and the European Union, with a proposal to renew the support in dealing with Chernobyl related issues in such a difficult time for Ukraine, and to put forward efforts to ensure continuous progress in the completion of necessary projects. We believe that the solidarity of nations and states and the humanism of modern civilization will not leave Ukraine alone without international aid. By common effort, we have to overcome horrible consequences of the disaster and to make sure that this will never happen again.

Mr. Denis Zdorov

Belarus Counsellor, Economic and environmental issues, ECOSOC, UNDP, Second Committee

Statement of the Mission of the Republic of Belarus

Madame, Chairman, Excellencies, Delegates, Colleagues, Students, Ladies and Gentlemen, allow me to begin by thanking Dr. Christine Durbak and her team for her efforts to keep international attention focused on the Chernobyl issues. Almost 24 years have passed since the worst manmade disaster of last century, the catastrophe at the Chernobyl power plant. But to this day, thousands of citizens of Belarus, the Russian federation, and Ukraine, still suffer from its consequences. The 26 April 1986 became a tragic day for the whole international community. From that very day, a new era has begun: the post-Chernobyl Period.

Thanks to the efforts of the Government of the Republic of Belarus and the assistance of our international partners, we have made considerable progress in solving the most urgent issues of emergency assistance to the affected population of Belarus during the past two decades. Nevertheless, there are still a number of factors that impede quick and full-scale transition to normal life and determine the necessity for further international cooperation. During the past few years, Belarus has implemented a number of state and private programs designed to eliminate the consequences of the Chernobyl catastrophe. Their implementation has allowed Belarus to move forward from the stage of minimization of the effects of Chernobyl catastrophe to the stage of sustainable development of the affected territories. In this regard, cooperation with foreign partners, especially in fields such as health care, socioeconomic development, and scientific study of the effects of the atomic radiation, acquires additional importance.

Belarus has made considerable progress in protecting the health of 1.3 million of its citizens, who continue to live in the contaminated areas amongst 115,000 liquidators. To achieve this goal, Belarus is persistently implementing a wide range of measures aimed at improving the quality of health services. The government of Belarus allocated considerable funds to construct hospitals and medical centers equipped with modern medical equipment. The improvement of the national health care system was accompanied by regular prolific examination of the affected population. One of the visible results of these measures is the stabilization of the mobility rate of the affected populations, and, starting from 1999, the decrease of primary mobility rate between both adult and children populations.

To improve the health of people from the affected territories, Belarusian authorities took vigorous measures to arrange adequate nutrition and health rehabilitation for more than 200,000 school students. The renaissance of the Belarusian economy and its provisions in sustainable development of the affected territories is one of the priorities of Belarusian state policy. Presently, the government of Belarus has focused its main efforts on providing normal conditions for life and work for the affected population. Therefore, in recent years, particular attention in the Chernobyl-affected territories was paid when supplying gasoline, quality drinking water, constructed preschool institutions, schools, hospitals, and other socio-cultural facilities. A generation of clean products that meet generally accepted standards is a necessary requirement for sustainable development in the affected territories. To this end, a number of comprehensive programs for the recapitalization of agricultural and forest enterprises in the affected Gomil and Mogulov regions were carried out. Procurement of dosimeters of livestock and fertilizers for crops has been arranged. Several steps have been taken to provide treatment and establishment of cultivated lands for raising livestock at an area of almost 40,000 hectares.

Sustainable development is a long-term process, which requires considerable investments. It is connected not only to the economic development, but also to the social and psychological adaptation of people to new conditions of life. At the same time, the sustainable development of affected territories, with their unique specificities, is impossible without serious international assistance. Such assistance should be comprehensive, and the financially and scientifically grounded methodological assistance becomes of great importance. In this context, we highly appreciate the work on atomic radiation effects by the United Nations Scientific Committee, a project aimed at the scientific systematization of experienced gained and of recommendations given to rehabilitate and provide sustainable development in the affected territories surrounding Chernobyl.

We are convinced that participation in this committee of full-fledged members and representatives from Belarus and Ukraine will increase its efficiency, especially in the "Chernobyl Direction." Belarus, together with the Ukraine, the Russian Federation, and other UN member-states and agencies involved, stands for keeping Chernobyl towards the top of the UN agenda. The Republic of Belarus intends to continue close cooperation with foreign partners on the whole spectrum of prevalent Chernobyl issues.

Thank you for your attention.

Dr. Hanna Kapustyan

Professor Kremenchuk State Polytechnic University, Ukraine

Chornobyl: Power and Society

Your Excellencies, dear colleagues and welcomed guests, I would like to thank World International Transfer and its President Dr. Christine Durbak for inviting me to present our Project at this respected international forum!

The Ukrainians paid an incredibly high price for that mindless experiment and incident at the Chornobyl Nuclear Power Station. This disaster revealed the continued disregard for human lives by the Soviet government and the Communist leadership. They tried, similar to the 1941-1945 Soviet-German battles to eliminate the radioactive problem by manipulating human lives. The Chornobyl disaster is a very complicated and prolonged phenomenon. The National Report «20 years of the Chornobyl disaster: view into the future» stated that 2,307,000 people in Ukraine have victim status, among them there are nearly 267,000 of direct participants of the disaster after-effects liquidation, among the victims more than half a million are children. The Chornobyl problem demands constant prolonged attention from the government, cooperation with other states and the international community.

In 2009 during the Parliamentary hearings the government declared that 23 years after the Chornobyl disaster the state hadn't provided the fulfillment of social guarantees, the complex solution of ecological and technical problems, and the transformation of the Shelter object into an ecologically safety system. The reason for this is the absence of concrete responsibility in the system of organization and fulfillment of the adopted decisions at the state level. The present condition demands a new, more efficient policy to cope with the after-effects of the Chornobyl disaster concerning health care, environment, employment, and economic reforms. While trying to solve these complex problems, the individual's health and future life were ignored.

Chornobyl emphasized another significant problem which is prevalent in Ukraine, a total distrust of citizens of its political system. The unprecedented blockade of information by the Communist regime regarding the situation on the Chornobyl station, the nearby districts and the misinformation of society resulted in loss of trust from the citizen's side towards the Soviet Communist social and political system. It had become one of the fundamental reasons of the Soviet Union disintegration.

A small untruth makes a big lie. A big lie turns into a big tragedy. The lie of the period of the Soviet Communist construction hid the truth about the 1932-1933 Genocide-Famine of the Ukrainian people, about political repressions, about ungrounded numerous war losses during the 1941-1945 Soviet - German battles, and about the dangerous Chornobyl explosion. Disregard of human values inevitably results in social tragedy. To eliminate global social defects is an arduous task which requires discipline and dedication.

The Chornobyl disaster stimulated the formation of civil society in Ukraine, which demanded the truth from the state. The substantial role of the civil society in the 21st century raised the questions about trust and cooperation between the state institutions and public organizations. The many-sided international activity of WIT in spreading the information about the real state of environment and questions connected with the Chernobyl disaster and its after-effects deserves much worth attention and commendation.

The Chornobyl disaster summed up the proletarian policy of the Soviet political regime formed by Stalin

Ukraine's breaking from the Soviet society and the atmosphere of horror and anxiety it created is a complicated process. On one hand it was an objective demand of the progressive part of society to live in a European community, where the roots and traditions of legal and democratic state of Ukraine began. I remind you that in the Middle Ages many Ukrainian cities were ruled under the Magdeburg Law. (Magdeburg Law is a culture of social government with feudal power restriction, the participation of different social categories of population in social, economical and political life of a city.) Then in 1710 Hetman of Ukraine Pylyp Orlyk wrote the first, in the existing world, Constitution and it was written for Ukraine. The Pylyp Orlyk's Constitution defined the principles of various power branches: legislative, executive and judicial. By the way, the Orly airport in Paris was named after our compatriot Pylyp Orlyk.

Historical traditions of democracy and public participation favor the European political system for Ukraine. However the great obstacle is the Ukrainian politicians. They consideration only the material aspects of the West, such as cars, life styles, villas, and clothes. They absolutely ignore the intellectual and moral heritage of Europe from ancient times to the present. That was the factor that formed Europe as a unique civilization focusing on human values. That is another reason «Why has Chornobyl happened? » The Chornobyl disaster summed up the proletarian policy of the Soviet political regime formed by Stalin; a civilization, unique in its cruelty to destroy all human values and morals and focus only on its own elite.

After the Soviet Union disintegrated, Ukraine revived its independent state; but it didn't cope with the national bureaucracy, which impedes any progressive projects from realization. For example, the international public organization WIT, its founder and head, Dr. Christine K. Durbak authorized me to appeal to the representatives of the Ukrainian authority with the proposal of carrying out the «Children's Recovery» Project in Ukraine. The group of

highly qualified American doctors were to give free medical aid to sick Ukrainian children with modern medical equipment that was to be left in Ukraine. The Governor of Poltava region, Mr Valeriy Asadchev, was interested in this Project, which was to be held in the Poltava regional children's hospital. He applied with a petition to the appropriate state authorities to get permission for American doctors to give medical services to Ukrainian children. However, the Ministry of Health Care of Ukraine demanded that the American doctors to validate their educational certificates in Ukraine. Finally the Ministry officials refused to carry out the procedures saying that they are too busy! This type of bureaucracy, which was originated by the Soviet system impedes the realization of progressive ideas in any society. Sick children can not wait. They need medical aid. This is verified by statistics. However, currently the Ukrainian bureaucracy is not interested in the health of future Ukrainian nation.

How can we progress? First, we should stop thinking that all obligations depend on politicians. In reality, everything begins and finishes with a particular person or group as is mentioned in the issues of the «World Ecology Report» journal with the words of Margaret Mead «Never doubt that a small group of thoughtful committed citizens can change the world; indeed, it's the only thing that ever has».

It is vitally important for the current Ukrainians and for the future Ukrainian youth to realize the importance of respect for human values and morals which were the characteristics of the Ukrainian people since its founding in the 9th century. One part of the national educational system is to learn the historical experience of previous generations, and the formation and upholding of Ukrainian state system for the future.

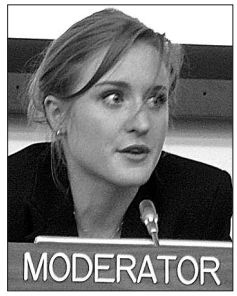
The Chornobyl disaster stimulated the formation of civil society in Ukraine, which demanded the truth from the state.

The educational project «The stages of Ukrainian state system» which is a project of the Mykhailo Ostrogradsky Kremenchuk State University includes the the areas of Kremenchuk – Chyhyryn - the village of Subbotov – Holodnyi Yar. It reviews the stereotypes born during the soviet regime and focuses of the value of democracy in the Ukrainian society. The details of this project are in the former issue of the World Ecology Report. As the head of this Project, I would like to give thanks to the Board of Directors of the journal and to Dr. Christine K. Durbak for the opportunity to inform the public about this Project.

Dear colleagues, I wish you good health and happiness. I wish your impression of Ukraine will extend past the disaster in Chornobyl and include with the future Holodnyi Yar, which is one of the most beautiful places in Ukraine. I am sure this project will help us become better Ukrainians. Thank you for your attention.

PANEL DISCUSSION

Nuclear Energy, Media, and Activism: Shaping the Opinion of Youth, Government, and Society.



Ms. Jessica Williamson

Moderator

Leader in Green Media Movement, host of "ZapRoot", and New Filmmakers Series in Hollywood

I'm going to start with a story of the Rainbow Warrior. In 1985, the Rainbow Warrior, the flagship boat for the Greenpeace fleet sailed into Auckland Harbor. The ship was in Auckland, New Zealand, preparing to visit Muroroa Atoll for a major campaign against French nuclear testing in the South Pacific. But the voyage was not to be. Since April 29th, 1978, the Rainbow Warrior sailed all around the world drawing attention to the destructive horrors of waling, seal clubbing, nuclear testing and other environmentally unfriendly issues. While igniting enthusiastic activism against these atrocities, the Rainbow Warrior had not previously visited New Zealand but decided to launch its journey to French Polynesia from there.

At the time, New Zealand was massively anti-nuclear. America threatened to suspend their obligations to the ANZUS Treaty, which basically provided the tiny country of New Zealand with American military support and military intelligence, in order to allow nuclear ships into New Zealand waters. The code name for this was "Operation Satanic." In April of 1985, a French, woman known as Frederique Bonlieu was helping out in the Greenpeace office in Auckland. Her real name was Christine Cabon and she was, in fact, a secret service agent. Her mission was to infiltrate Greenpeace and lay the groundwork for the French saboteurs who were planning to bomb the Rainbow Warrior. The first bomb exploded at 11:38 PM. Everyone was ordered off the ship but some dashed back to save their possessions and drowned.

The story swept the headlines. New Zealanders mourned the deaths of their fellow countrymen and the New Zealand government declared the bombing an act of terrorism. The French government denied all knowledge but, as the evidence mounted, acknowledged their role. The French government ceased all nuclear testing in the South Pacific.

The sinking of the Rainbow Warrior became the crucial tipping point in New Zealand's nuclear-free policy. The onslaught of media attention from the story that would not go away combined with ensuing public outrage helped to transform New Zealand's nuclear-free policy from a minority position to a national policy. Be-

cause the stories maintained staying power, New Zealand's three-decade anti-nuclear campaign is the only successful movement of its kind in the world.

The Rainbow Warrior is not the only story of this kind. Three Mile Island, Chornobyl and the Cuban Missile Crisis are all stories that wouldn't go away and linger as cautionary collective tales. They caused so much panic and outrage amongst the people, particularly young people, that they protested, marched, made music, formed alliances and created organizations that ultimately succeeded in taking down the nuclear industry towards the end of the 20th century. That is, until now. These stories that everybody expected to last are practically gone.

Let's go back to mid 20thcentury for a bit of history. On August 6, 1945, the US dropped an atomic bomb on Hiroshima and three days later on Nagasaki. Then on August 1, 1946, Harry S. Truman signed the Atomic Energy Act. On October 6, 1947, the atomic energy commission investigated the possibility of peaceful use of atomic energy. Ironically, the same year that nuclear energy was being birthed, Einstein referred to what he called "the chain reaction to awareness...we must carry the facts of atomic energy. From there must come America's voice." At this point, America's voice was cloaked in secrecy, concealed by war, and hidden very deeply within the darkest wells of the Pentagon so that the ordinary citizen had no idea what was going on.

America's voice was only coming from the media. William Laurence was a New York Times reporter and one of the first people to present the facts on atomic energy. Leslie Groves, head of the Manhattan Project, invited Lawrence to join. So while Laurence was one of the first journalists to present the facts on safety and reliability of atomic energy, he was also a member of the Manhattan Project at the time. During the Manhattan Project, Westinghouse and GE became contractors. Later on, Westinghouse became owners of the two largest television networks, CBS and NBC. June 14, 1952, the Nautilus, which was the world's first nuclear powered sub, was put to sea and signaled the next nuclear era.

During this period of time, the public had started to develop a negative opinion towards atomic bombs. We were in the middle of an already out of control arms race and tensions between the United States and the Soviet Union were only escalating. At the same time, certain people were becoming concerned about the health and environmental impacts of radioactive fallout from atmospheric testing in the Marshall Islands. On November 2,1957, New Statesman magazine published an article by JB Priestley on Britain and nuclear bombs. This article led to the formation of the CND, the Campaign for Nuclear Disarmament. Since its formation, the CND has sporadically headed the forefront of the anti-nuclear and peace movements.

In 1958, the CND created an iconic image aimed at capturing young people's attention – the peace sign. The peace sign was initially an anti-nuclear logo designed by Gerlad Holtom. A decade later, the logo became an international symbol for peace. Then on Easter Sunday, in 1958, the CND supported the first protest on nuclear energy, the Aldermaston Marches. Over 200 people marched from Aldermaston into London. Aldermaston songs also came from the movement. This first spoke to the difference in attitude between the CND leaders who wanted to march in silence and the youth in the march who wanted to sing and play guitar. John Brunner's song, "The H-bomb Thunder" became the unofficial anthem.

In 1962, the Cuban Missile Crisis took place and the CND immediately organized protests to demonstrate on the issue. The heightened tension from the Cuban Missile Crisis combined with the public outcry ultimately convinced US President John Kennedy to sign the Partial Nuclear Test Ban Treaty in 1963, which prohibited all tests in nations except for those underground. This era marked the beginning of the war against the nuclear industry, and the Cuban Missile Crisis was the catalyst that won the battle against atmospheric testing. At this point, CND numbers began to dissipate and people focused on what was happening in Vietnam.

This next chapter marked the most powerful activist movement. This movement was largely driven by the youth and occurred as the environmental movement was being formed. Today marks the anniversary of the first Earth Day. Earth Day was designed to inspire awareness and appreciation for the Earth's environment, founded and created by peace activist John McConnell. At this time, the nuclear power industry combined with protection and support from the government established during the previous era had very high ambitions. The nuclear power industry had plans to build reactors and power plants all over the United States and around the globe. In 1973, the US utilities ordered 41 power plants, which was a one year record. By the end of this period, installed nuclear power rose from less than one gigawatt to over 100 gigawatts in the late 70s and over 300 in the late 1980s.

During the same time, Hollywood filmmakers offered films with a distinctive anti-nuclear persuasion, ,beginning with two films about the atomic crisis: Fail Safe and Dr. Strangelove. Then The China Syndrome came out, which was arguably one of the most influential films ever made. Twelve days before the Three Mile accident, on March 16, 1969, The China Syndrome was released. Directed by James Bridges and starring Jane Fonda, The China Syndrome refers to a then popular theory that if an American power plants melts down, the core will flow straight to the center of the world until it reaches China. The film tells a story of a reporter and a cameraman who discover a series of safety cover-ups at a nuclear power plant. There was also a film released called Silkwood, which was the story of Karen Silkwood who died in a very suspicious car accident while investigating a series of wrongdoings in a nuclear power plant.

In a very strange and eerie coincidence, catastrophe struck just days after the movie, The China Syndrome was released. On March 28, 1979, a calling system malfunctioned at the Three Mile Island Nuclear pPower Plant in Pennsylvania, causing a partial meltdown of the reactor core. The malfunction released a significant amount of radioactivity into the surrounding areas.

While storytellers in Hollywood were starting to tell stories of their own, musicians started to make anti-nuclear music. MUSE was a musical group founded in 1979 by Jackson Browne, Graham Nash, Bonnie Raitt, and John Hall following the Three Mile Island nuclear mishap. The Musicians United for Safe Energy group organized a series of five No Nukes concerts held in Madison Square Garden in New York City on September of 1979.

Then came Chornobyl. Chornobyl was the worst nuclear disaster the world has ever seen. Public opinion towards nuclear energy at this time shifted from ambivalence to complete outrage. By the end of this period, over 100 reactor orders were cancelled and it was very clear that the overwhelming anti-nuclear sentiment combined with activism led directly to legislative shifts on nuclear power. At this time, New Zealand also became the world's only nuclear-free country.

Going back to Einstein's chain reaction of awareness, we have found that America's voice is greatly influenced by the media. The Simpsons hit television with a big bang 20 years ago and continues to set trends and guide opinion for today's youth. Homer Simpson acts as an incompetent worker in a nuclear reactor for an evil Mr. Burns who owns the power plant. Yet in 2006, when An Inconvenient Truth was released, about global warming, the nuclear power industry used the film's scary images as an opportunity to rebrand themselves as a clean and green alternative fuel source. The youth of today need to know these stories to stay aware of the facts of nuclear energy.

Thank you.

Prof. Karl Grossman

Professor of Journalism,
State University of New York/
Old Westbury

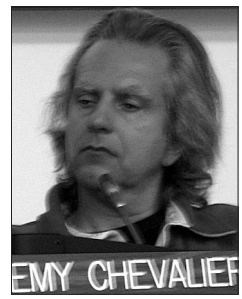
I got into journalism through an internship at a newspaper in Cleveland, Ohio, the *Cleveland Press*. Above the entrance of the *Cleveland Press* was the motto of the paper, "Give light and the people will find their own way." That has been what I have strived to do through the years. It's 2010, and this is the cover of one of my books on nuclear power. It is titled:

Cover Up: What You Are Not Supposed to Know About Nuclear Power. It is loaded with facsimiles of actual documents. For example, the U.S. government's Brookhaven National Laboratory in a report known as WASH740-Update declared that a big nuclear plant accident could devastate an area the size of the state of Pennsylvania, and this document was written before the Three Mile Island accident in Pennsylvania almost did that.

What's being covered up now? You've been hearing about Chernobyl. An agency which was developed through this organization, the United Nations, the International Atomic Energy Agency, would have all of us believe that no more than 4,000 people will die as a result of the Chernobyl nuclear plant explosion. Go to the website of the IAEA and you'll see that statement. However, just published by the New York Academy of Sciences is *Chernobyl: Consequences of the Catastrophe for People and the Environment* which refutes the claim of the IAEA. The book is written by noted scientists including Dr. Alexey Yablokov. He's a Russian biologist, formerly environmental advisor to the President of Russia, someone I know very well. The bottom line in this just published book is that the death toll based on medical data now available is that there were 985,000 deaths mostly from cancer and mainly in the Ukraine, Belarus, and the European section of Russia, all closest to the plant but also in other countries around the world, as a result of the radioactive poisons discharged from Chernobyl.

A new claim is that nuclear power doesn't contribute to global warming. This is false. When proponents say it is a clean alternative fuel that does not emit greenhouse gasses what they're not telling you about is the nuclear cycle. Mining, milling, conversion, enrichment, fuel fabrication are part of this cycle and they contribute significantly to global warming. Meanwhile, nuclear waste remains an insoluble problem.

I firmly believe that if people were given the facts about the terrible dangers of nuclear power and—most importantly—how it is unnecessary, that all the energy we need can be obtained from safe, clean technologies here today, we all would be moving together to put an end to this lethal source of power.



Mr. Remy Chevalier

Founder "Rock The Reactors"

What happened at Chernobyl could happen literally anywhere. There are about 400 nuclear reactors in

operation around the globe, and there's about 103-104 in the U.S. and some of the oldest ones happen to be based in New England. One of the oldest nuclear power plants in the country is about 30 miles north of here on the Hudson River. It was built back in the 1960s, it started with one reactor which has been decommissioned quite a while back.

That decommissioning process for this first reactor that was built took about ten years. About a year ago part of the decommissioning process was to take all of the radioactive water that was still in the cooling pool and literally dump 800,000 gallons of this nuclear radioactive water into the Hudson River with very little fanfare.

Out of the 103-104 reactors that are still operational in the U.S. about 60% of them are leaking and that's because all these cooling pools are made out of 5 feet thick concrete. Concrete ultimately gets porous, back then the concrete also wasn't very good. So these cooling pools are leaking because they are porous and the water literally goes to the ground and one has to keep on putting more and more water into these cooling pools to keep these reactors cool.

At the Vermont Yankee nuclear power plant, in New York at Indian Point, nuclear waste has literally been leaking into the groundwater and sometimes it gets pumped out. In Vermont the people were so outraged by the company that ran the reactor, (the company had been lying for a long time about the extent of the leakage) that the legislature got together and 26 to 4 voted to shut down the Vermont Yankee nuclear power plant despite the protest of the NRC and Entergy which owns the facility. At Indian Point the same kind of leakage is taking place and the Department of Environmental Conservation in New York, voted not to renew the water permit for the plant until they build a new cooling system.

The type of resistance, against the old nuclear power plants being decommissioned, that has emerged is in great part due to people getting organized again. The NRC started the re-licensing process for all the nuclear power plants in 2000 and it had been going around from state to state, basically divide and conquer with a lot of small citizen groups trying to fight their nuclear reactors on a regional/local level. The NRC has managed to rubber stamp all these old reactors. We're now at the point where it will not take much to prevent the re-licensing of Indian Point, to prevent the re-licensing of Vermont Yankee and to get to where Karl wants to get to - a complete reanalysis and new debate over the future of nuclear power.

I came from the fashion industry, my father was a famous photographer and he co-created "Elle Magazine." I was raised in the editorial offices of Elle. The fashion industry in New York City is one of the most influential industries in the city. Rock the Reactors was created to bring fashion designers to influence the political decision- making process that would ultimately get the politicians in the district where the nuclear power plant is in to work very hard to refuse a new license for the old plant.

Ms. Bahar Shahpar

New York Fashion designer

I work in fashion, I've worked in mainstream fashion for over a decade and I was never an activist, by definition. When I started out I did a thesis on the history of the American farm and really just researched how we got to where we are and it didn't take us very long. There was a time not long ago when systems were cleaner when life was simpler and that's not to say that technology is a bad thing its just that we've allowed the convenience of modern technology to overshadow the potential destructive elements. Fashion and politics have always been inextricably intertwined throughout the ages because people throughout history have all have visual identifiers to portray their message.

Clothing and the textile industry are two of the oldest industries on the earth and in terms of agriculture and in terms of the manufacturing processing it affects air, land, water, soil. Right now there is an incredible amount of momentum behind green, behind environmental activism and a lot of what is being said here today is because of the politics of the last 20-30 years. The anti nuclear message has been quieted for more cheerful environmental activism but one thing that I always try to put out there is that it's not all about politics. It's about a good life, it's about a clean life, it's about something that every one of us has a right to and that is to not be inundated with toxins.

From left to right is Dr. Christine K. Durbak, Mrs. Carolyn T. Comitta and Judge Arnaud LaFleche

Dr. Oksana Baczynskyj and Deputy Permanent Representative of Ukraine to the UN Mr. Yevhenii Tsymbaliuk

Dr. Claudia M. Strauss, Ms. Danika Dahlin and Ms. Kristina Dahlin

Ms. Bahar Shahpar, Ms. Lindita Bodjani and Ms. Sarah Trepel

Distinguished guests and WIT interns during lunch.

Dr. Hanna Kapustyan, Dr. Christine K. Durbak and Mr. Kurt Dahlin

Mr. Werner Obermeyer and Dr. Christine K. Durbak

H.E. Mr. Yuriy A. Sergeyev

Mr. Barnett S. Koven, Ms. Sarah Trepel, Dr. Claudia M. Strauss, Mr. Sergei Kapustyan, Ms. Lindita Bojdani

***LUNCHEON SPEAKER**, continuing, beginning on page 28*

Contradictory evidence: Plenty of verified data directly contradicts the blanket generalization that "our planet is getting warmer." We've all seen the polar bear pictures from North Pole area. The ice is melting... at least right now. But did you know that there is 43% more ice in the Antarctic today than there was 30 years ago in 1980? These aren't guesses. This is hard data from the National Oceanic and Atmospheric Administration and the National Snow and Ice Data Center at the University of Colorado, funded by the National Science Foundation.

Global (or regional) cooling? These same scientific measurements report that winter temperatures in the Antarctic have actually fallen by 1°F since 1957. The coldest year ever measured in Antarctica in our lifetimes was 2004. And there are lots more contradictory and confusing measurements – Hotter and colder. Wetter and dryer. Windier and calmer.

Question two:

Real trends? Within a broad historically accurate record, are there real trends revealed by our measurements? And, are these trends statistically verified and likely to continue? Humans are easy to fool and think there are trends.

Answer: Within a broad historically accurate record, are there real trends revealed by the measurements... and are these trends statistically verified and likely to continue? A trend is a tricky thing to the human mind. Flip a coin 6 heads in a row and we all see a trend. Have 27 hurricanes in one season – must be a trend. Never mind there are almost none the next year.

The human brain is wired to see and believe trends. But real trends are statistically verified. They are often much harder to discern especially in climates that are always changing over thousands of years. Climate trend forecasts are based on computer models. So if the question is, are we seeing real trends? Then we have to ask another question, how are we confirming any such trends?

To project trends, climate scientists make computer models. They're sort of like super video games that predict the future... based on hundreds of variables and millions of measurements.

But how good are these computer games at predicting the future of our climate? Many climate scientists believe they are worthless.

Question three:

Potentially catastrophic? If there are real trends, how likely are they to be potentially catastrophic? Or, are these trends part of an ever-changing fluctuation in our climate?

Answer: The single most famous graph of the whole global warming controversy is the infamous 'hockey stick' chart. It was created by Penn State climatologist Michael Mann. However, Professor David Hand, President of Great Britain's Royal Statistical Society, largely invalidated the infamous 'hockey stick' graph. He said this graph strongly "exaggerated" warming trends across the whole 20th century. He said that the data, if accurate, shows that the 20th century was slightly warmer... but nowhere near the alarmist numbers.

Trends take time to see. One reason we don't know if trends are meaningful is because climate trends take centuries to really become clear. When you try to make predictions based on a few decades, you risk being wildly wrong. History proves this.

History tells us that the climate alarmists have been wrong before about supposedly dire "trends." They can be wrong again. And if you were to make a bet, the smart money would say they are wrong again.

If we can't verify significant trends, then we certainly can't know if we face potential catastrophe. You can't build certainty on top of uncertainty. Yes, we can all forecast that a 6-degree temperature increase would mean melting ice and rising seas. But if it's not based on facts, it's not a useful projection.

Question four:

How much human impact? If there is a potentially catastrophic trend, how much of trend is likely to be attributable to human activity? We could be largely responsible or a minor element.

Answer: Carbon dioxide (CO_2) is the most important greenhouse gas; Human beings are mostly responsible for the steady increase in CO_2 measurements in the atmosphere. This argument is unproven at every point. Ounce for ounce, a molecule of methane is 20x more effective at trapping heat than CO_2. Methane production may be far more important than CO_2. Among other things, enormous amounts of methane are produced by the billions of cows, pigs, and other animals we farm to eat. Also, 60% or more of CO_2 in the air is not human-caused but is naturally caused by the biology of the earth. CO_2 increased dramatically in Europe 600 years ago. This was not due to cars or industrial manufacturing.

Question five:

What can we do? If human activity is a significant part of a catastrophic trend toward potentially catastrophic climate change, specifically more global warming... What can we do to help reduce the potential for serious global harm?

As individuals?

As companies?

As economies?

As nations?

Answer: We don't need policies unless we can clearly identify the problems. You know who loves big new trillion-dollar programs? Bureaucrats who administer them, politicians who tell us we need them and companies and especially consultants who want to sell us things.

> ***"Extraordinary claims require extraordinary evidence."***
> - 20th century astronomer Carl Sagan

Question six:

If there are things we can do to reduce the chances of climate catastrophe, what are the costs and tradeoffs in doing so?

Financial resources aren't infinite so there are always tradeoffs. Classic tradeoffs are more schools vs. more hospitals...More drug research vs. more clean water plants.

Answer: Now it's about lives, not science. Up until now, the discussion has been about science.

From here on out, it becomes about life and death. We have to weigh the potential risk of "killing the planet" against the potential risk of condemning millions of people who could be saved with that money. Money used properly can feed children, discover cures, build hospitals and provide clean water.

Question seven:

Does our normal calculus apply? When we evaluate the possible tradeoffs, do we use an ordinary

calculation or an extraordinary one...since one possible outcome of a wrong choice could be "planetary death?" In other words, even if there is only a 1% chance of planetary disaster,...don't all other considerations go out the window?

Answer: Saving the planet could be deadly. The answer is: no, we can't forget all other considerations. An aggressive policy to reduce, halt or reverse global warming could kill millions of children. In other words, the climate is not the only planetary threat because global warming is not the only threat of planetary disaster facing us.

> ***"The whole aim of practical politics is to keep the populace alarmed – and hence clamorous to be led to safety – by menacing it with an endless series of hobgoblins, all of them imaginary."***
> - Political writer H.L. Mencken

For example, asteroid collision is an absolute certainty. At some point an asteroid is going to strike the earth and wipe out all life as we know it. Scientists call this an "Extinction Event." And unquestionably, it will happen again. Every single day about 100 million tons of asteroid material hits the earth's atmosphere. We could take precautions. We are the first generation in history that has the ability and the choice to prevent this. It would cost trillions of dollars and force us to cancel many socially positive programs. But remember – we're talking about something that is absolutely going to happen.

Another planetary risk would be a super-virus. A virus could run through the planet's population in a few days and wipe out the entire human race. Past pandemics killed millions and we are more vulnerable today. It is possible that the next super-virus pandemic could wipe out the entire human population.

In conclusion, what we need is level headed thinking and not hysteria. Planetary threats require analytical thinking...not emotional appeals.

Conclusion:

When I was asked to address this gathering, I told Dr. Durbak that I wanted to talk about "the climate we deserve." And yes, we all deserve clean water, clean air and a livable planet. And we all have a responsibility to help bring them about. But we also deserve a climate of healthy debate. We deserve a climate of open minds and honest facts. We deserve a climate of free and independent inquiry. We deserve an environment where dissent is welcome and where disagreement is seen as a sign of a healthy, vital democracy.

Ladies and gentlemen, this is the climate we deserve. We owe it to ourselves. As citizens of a free country, as citizens of an interdependent world, this is the climate that we owe to each other. And, for you young people in the audience: as citizens of the future, this is the climate you owe to yourselves.

One hundred years ago, we were told that the "science" of eugenics proved some races were smarter than others. Just 60 years ago there was no proven links between smoking and cancer. Just 40 years ago they told us a scientific "consensus" proved the world was heading toward a new Ice Age. Just 10 years ago the scientific consensus was that the universe was expanding steadily and might slow down. Now we know it's expanding faster and faster.

Every single one of the most fundamental scientific questions is open to debate today... and every day. The jury is still out on so many scientific questions. But that's the point: in science, the jury is always out.

Young people should be prepared. As a young person you'll be confronted all your life with "this is true; this is settled; you don't have to think about it ...we've done all the thinking for you." Don't believe it. The more you hear this, the more you have to look into it for yourself.

I'm not here to reject evolution, relativity, or quantum physics. And yes, human beings have put more CO_2 into the air than ever before in history, so far as we can tell. But I am here to say that you should watch for private agendas. Watch for attempts to stampede public opinion and shut down debate. Watch for people who have a vested interest.

Demand evidence. Question motives. When you hear "it's agreed," when there is a potential political or economic agenda, that's the time to look more closely. Ask: who is making this claim? What are their sources? Why might they have their own reasons for saying these things? Nowhere is this truer than of climate change.

I am confident that you – the free young minds of tomorrow – will solve our political problems. Your imagination, your ingenuity and your idealism have always been our greatest natural resources... and they always will be. Thank you very much.

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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 Mission Statement

World Information Transfer, Inc., (WIT) is a not-for-profit, non-governmental organization in General Consultative Status with the United Nations, promoting environmental health and literacy. In 1987, inspired by the Chornobyl 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. WIT exercises its mandate through:

- ***World Ecology Report (WER).*** Published since 1989, the World Ecology Report is a quarterly digest of critical issues in health and environment, produced in four languages and distributed to thousands of citizens throughout the developing and developed world.
- **Health and Environment: Global Partners for Global Solutions Conference.** Since 1992, WIT has convened what we believe to be one of the world's premier forums for the presentation of scientific papers by international experts on the growing clinical evidence supporting the link between degrading environments and diminished human health. The conference has been convened as a parallel event to the annual meeting of the UN Commission on Sustainable Development. The scientific papers presented at the conference are available on WIT's web site.
- **Health and Development CD ROM Library.** This project consists of a library of CDs each of which focuses on a subject within the overall topic of Development and Health information. Our Human Information CD ROM Library offers one bridge across the "digital divide" for both developed and developing countries. The project is continuous with future topics being developed.
- **Health and Development CD ROM Library for Ukraine.** In conjunction with UNDP, WIT has developed a country specific library disc for distribution in schools and centers in Ukraine.
- **Humanitarian Aid.** In conjunction with the K.Kovshevych Foundation, WIT provides humanitarian aid to schools, hospitals and orphanages in areas devastated by environmental degradation. Shipments include computers, clothing, toys and medical equipment.
- **Internship.** World Information Transfer (WIT) offers internships in New York City, where our main office is located. Our goal is to encourage future leaders in health and environment. Our interns spend the majority of their time at the United Nations.
- **Scholarship Program.** With the support of the K. Kovshevych Foundation, WIT offers scholarships to intellectually gifted university students in need of financial assistance to continue their studies in areas related to health and environment.
- **www.worldinfo.org** WIT provides through its web site up to date science based information on the relationship between human health and the natural environment, including the papers from the WIT's annual conference, the archived World Ecology Reports, and our new Ecology Enquirer, an e-newsletter written by our Interns targeted to young people.
- **Centers for Health & Environment.** The aim of the Centers is to promote research, education and solutions. The first center was opened in Ukraine in 1992.

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LUNCHEON SPEAKER

Mr. Jay S. Walker

President,
Walker Digital

The Climate We Deserve

Thank you, Dr. Durbak, for inviting me to address this group. The title of my talk today is, "The Climate We Deserve." Climate change is an issue that affects everyone alive today and everyone who will live on this planet in the future. After all, the environment is the greatest resource that we pass on to future generations. Young people will live with consequences. I'm especially glad to be able to discuss this subject with you – because I know there are a lot of young people here today. Whatever society decides to do about climate change, you are the ones who will live with the consequences. Climate change is an issue that demands answers. But to get the right answers, we have to use the right tools. The right tools are the scientific method – transparent data, open research, peer review, and honest debate. The wrong tools are emotions, guesses, hypothetical scenarios and anecdotal examples like polar bears floating on the ice, or the melting snows of Kilimanjaro. And, if we want the right answers using science, we have to ask the right scientists – truly independent experts in climate studies. Not scientists from other disciplines. And, not scientists with vested interests in their version of the answers. The worst people to ask would be politicians and political leaders – for reasons that I will explain later. Lastly, we must ask the right questions. There are seven of them.

Question one:

What is really happening to the earth's overall climate? And how sure are we that we are measuring it correctly?

Answer: We don't know. A planet is very big and complicated. The global climate has a million variables. You can measure the atmosphere at 5k, 10k, 20k feet... You can measure ice at the North Pole, the South Pole... You can measure wind speeds of storms, rain in the desert, the temperature of the oceans, the gasses in the atmosphere... and on and on. And however you measure it, the system as a whole almost always takes a very long time to change. 100 years is nothing to a planetary climate. Measuring a planetary climate is confusing and difficult.

Continuing on page 24

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