



# World Ecology Report

Critical Issues in Health and the Environment

Knowledge brings new choices. Education brings new knowledge.

## **SPECIAL FOCUS: Eighth International Conference on Health and Environment: Global Partners for Global Solutions**

UNITED NATIONS HEADQUARTERS

World Information Transfer's Eighth International Conference on *Health and the Environment: Global Partners for Global Solutions* was held at the United Nations Headquarters in New York from 21-22 April 1999. The Conference, co-sponsored by the UN Department of Public Information, on the theme, *Environmental Challenges to Health Through Key Stages of Life* brought together more than 400 attendees.

This special focus presents several key addresses and abstracts of some of the papers presented at the Conference which are arranged by topic. Other abstracts which are closer to the topics in the next issue of *World Ecology Report*, will be published in our next issue. The Point of View contains Part One of the Introductory Statement made by Dr. Christine K. Durbak. Part Two will follow in the next issue.

### **Closing Address: Post-Traumatic States in Societies Ravaged by Ethnic Conflict**

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Ladies and Gentlemen: I am deeply honored to speak at the United Nations and I want to thank Dr. Christine Durbak for inviting me to participate in the Eighth International Conference on *Health and*



Miles Stoby, Assistant Secretary-General for Millenium Assembly; Christine K. Durbak, Founder and Chair, WIT; Vamik D. Volkan, Professor of Psychiatry, University of Virginia

*Environment: Global Partners for Global Solutions* here at the U.N. Along with many others, I appreciate your efforts in dealing with critical issues in health and the environment around the globe. Today, I would like to focus on psychological health issues pertaining to ethnic conflicts and wars. All of you are familiar with societies traumatized by war and ethnic, racial or religious conflict. And you are well aware of the individual suffering these tragedies inflict. Today, I would like to provide you with an additional lens through which the aftermath of these devastating events can be

viewed. Though we are all familiar with the psychological state of the individual Post-Traumatic Stress Disorder (PTSD), we must also look closely at three other groups affected by PTSD, the first of which is composed of indigenous caretakers who themselves may be traumatized by or caught up in ethnic hatred. How do we help them? Next we will look at the large group, or society, and at some of the signs and symptoms of societal processes which follow in the wake of these calamities. How do we diagnose post-traumatic states of societies and develop policies to combat them? And, finally, we will look at future generations and how the legacy of trauma and hatred is passed on at both the individual and societal levels. How do we identify and intervene in these trans-generational transmissions of trauma?

### **Natural or Accidental Traumas**

Before speaking of societies trauma-

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tized by ethnic, national, or religious conflicts, I wish to discuss the societal traumatization that can be caused by natural or accidental manmade disasters. A tropical storm, such as the one that devastated the Dominican Republic in 1998, or an earthquake such as the one that ruined Armenia or Colombia in 1999, are natural disasters. When a natural disaster takes place, there is shock. The level of outside assistance offered in a particular crisis depends on many conditions. Chaos and physical hunger can occur. Furthermore, the survivors need to mourn their losses as they clean up their environment. For months, or even years, their minds may be preoccupied with images of death and destruction. They may exhibit what is known in psychiatry as "survivor's guilt," condemning themselves for having lived while others perished. A shared anxiety also may linger on because the people lose their trust in "mother nature." As far back as 1954, Rangell studied the importance of our physical surroundings, and he described a phenomenon called "attachment to the ground" (p. 314) as a psychic prerequisite for the maintenance of the social state of poise. Massive environmental disasters caused individuals or the society to lose their poise. In the long run, the survivors of natural disasters usually come to find comfort in ascribing an inner meaning to what has happened, declaring that it is the will of God, for example.

Massive trauma can also be brought about accidentally by humans. An example of this is the Buffalo Creek tragedy of 1972, a disaster that occurred when a slag dam collapsed in the West Virginia's mountains and inundated many coal camps, and sixteen towns, with millions of gallons of black water and sludge in a seventeen-mile-long valley, killing 127 people.

Though a relatively small segment of the state of West Virginia was affected, I mention this tragedy because it was the first manmade disaster that was studied extensively by psychiatrists, psychologists, sociologists, and legal professionals (Lifton and Olson, 1976; Erikson, 1976; Rangell, 1976). When the survivors were examined thirty months after this event, their images of death and destruction were still vivid. Many of them also exhibited survivor guilt. Legal settlements in this tragedy played a crucial role in restoring normality to the Buffalo Creek society.

When a society is put on the right track

**Global prevalence of mental health disorders**

- 480 million cases of anxiety disorders
- 360 million cases of mood disorders (depression and mania)
- 250 million cases of personality disorders
- 60 million cases of mental retardation
- 45 million cases of epilepsy
- 29 million cases of dementia
- 22 million cases of schizophrenia

In relation to substance abuse, there are:

- 1100 million cases of tobacco dependence
- 250 million cases of alcohol dependence

*SOURCE: Health and Environment in Sustainable Development: Five years after the Earth Summit, World Health Organization, 1998*

after a disaster, there may occur what Williams and Parks (1975) refer to as a process of "biological regeneration" (p. 304). For example in the Welsh village of Aberfan, for the five years following the engulfment there of 116 children and 28 adults by an avalanche of coal slurry, there was an increase in the birthrate.

The impact of some accidental manmade disasters is much wider. Consider the nuclear accident at Chernobyl. The anxiety of individuals and societies about contamination already lasted many years, and for good reason. Thousands in Belarus and Ukraine, for example, consider themselves contaminated with radiation and do not wish to have children because they fear they would have birth defects. Thus, the existing norms for finding a mate, marrying and planning for a family were affected. Those who had children remain anxious that something "bad" would evolve in their offsprings' health. Here, instead of an adaptive "biological regeneration," society reacted negatively.

**Traumas Caused by Others**

Even though they may cause massive environmental destruction, societal grief, anxiety and change, natural or accidental disasters should be differentiated from those where massive trauma is due to ethnic or other large-group conflicts. When nature shows its fury and people suffer, people ultimately accept the event as part of their fate. In manmade accidental disasters, survivors may blame a small

number of individuals or governmental organizations for carelessness. Even when this happens, there are no "others" who had deliberately sought to hurt people. When a massive trauma is due to ethnic, national or religious conflicts and wars, the situation becomes complicated because of the presence of enemies who deliberately inflict pain and suffering on the victims.

Ethnic or other large-group hostilities initiate a number of shared psychological processes. First of all, when a large group's conflict with a neighboring large group becomes inflamed, the bonding between members belonging to the same large group increases. There is a shift in members' investments into their large-group identity, which, under stressful conditions, may become more important than the individual identity. This movement leads to further differentiation between one's large group and its enemy group. The relationships between people in each group are now governed by rituals of large-group psychology (Volkan, 1988, 1997, 1999). In wars or warlike situations, such rituals are performed according to two obligatory principles: 1) maintaining one's large-group identity separate from the identity of the enemy; 2) keeping a psychological border between the two large groups at any cost. When two ethnic groups are in a "hot" conflict they wish to erase any sameness between them; thus, these two principles become operational. When large groups are not the "same," they can project more effectively their unwanted aspects on the enemy, thereby dehumanizing that enemy.

Anything that disturbs these two principles brings massive anxiety, and large groups may feel entitled to do anything to protect these principles. The hostile interactions are perpetuated. When one large group victimizes another one, those who are traumatized do not turn to "Fate" or "God" to understand and assimilate the effects of the tragedy. Instead, they may increase their sense of rage and revenge.

Feelings of rage and revenge oscillate with helplessness, humiliation, and victimization. Such internal turmoil prohibits the evolution of certain psychological processes that the victims need to go through in order to assimilate and accept their tragedy. Among these psychological processes is the work of mourning (Freud, 1917). Humans are obliged to mourn their losses and changes in life. Mourning

allows us to accept that a loss or a change has occurred. Without mourning we are trapped in the struggle to accept the tragedy and to adjust to life after it. If that struggle is not won, we cannot move on with our lives. We metaphorically remain hiding in the basement after the tornado has passed over and fair weather has returned. An individual, or a society, traumatized deliberately by others has a tendency to remain in the basement. The sense of shame, humiliation, and helplessness may become internalized, which consequently complicates the survivors' guilt.

The psychology of individuals and societies traumatized due to ethnic or other large group conflicts and hostilities should be considered a unique category, quite distinct from those devastated by natural or accidental manmade disasters. What is most interesting is that the study of this psychology is relatively new and that often we still deny its horrible effects.

The survivors of the World War II German concentration camps provided psychiatrists, psychoanalysts and other mental health workers with a hitherto unprecedented opportunity to study individual and mass reactions to overwhelming stress brought about by the politically motivated cruelty of man. Persecution in its other forms—for instance, the hunting down of people in hiding, emotional and intellectual erosion, and the mass expulsion from a home—could also be studied in psychoanalytic terms. It is interesting that when the Jews were rescued from the concentration camps, no one, through an astonishing oversight, (Friedman, 1949) took into consideration the psychological plight of these victims. The naive notion that releasing the prisoners from their confinement would end their suffering seemed to prevail. Writing in 1949, Friedman noted how incredible it seemed in retrospect that when plans were first made for the rehabilitation of the Jewish survivors of the Holocaust in Europe, no one considered how likely it was for them to have psychiatric difficulties. Instead, everyone concentrated on the alleviation of their physical suffering. However, when the first survivors of the camps reached the United States, psychiatric help was provided for them, and an understanding of their situation in psychoanalytic terms began.

The Vietnam War again brought to mental health workers' attention the fact that many individuals, even those who are

active participants and not prisoners, can be psychologically traumatized. In clinical terms, such individuals suffer from Post-Traumatic Stress Disorder, a relatively new category in the classification of mental disorders. PTSD exhibits symptoms that are now well known by those who are charged with helping such sufferers. These victims continue to experience their present-day interactions with others and their environment by way of the mental images of the traumatic experiences. Present-day tasks and activities are experienced through the prism of the mental images of past trauma which are not assimilated and worked through. These individuals' preoccupations with such images are accompanied by either paralysis of initiative and/or hyperarousal. They also distance themselves from others, wish for revenge, feel depressed and have suicidal thoughts, or feel inappropriately elated. They suffer from shame, guilt and helplessness. Over time, their symptoms may subside or change function, but new versions of their symptoms continue to disrupt their lives.

Today, when a society is traumatized by mass cruelty to humankind, the victims' mental health is routinely considered by international and indigenous authorities. Nevertheless, a closer look suggests that a tendency to deny the mental health problems still exists. There is an extensive and rich literature covering PTSD patients after ethnic or other large-group conflicts. As I stated earlier, I wish to provide an additional lens for viewing other aspects of traumatized societies.

### **1) How do we equip local mental health workers with the proper tools for serving the directly traumatized population?**

When a massive, bloody ethnic conflict erupts, indigenous mental health workers, such as those caretakers who were in Sarajevo during the months-long bombing of this city by the Bosnian Serbs, may be directly traumatized. One Bosnian psychiatrist, who was assigned to deal with PTSD patient population after the arrival of peace, continued to have a symptom that had started three years earlier during the siege of Sarajevo. Before going to sleep or upon awakening, she would check her legs to see if they were still attached to her body. When I examined the meaning of the symptom with her, we found out that it was connected to an inci-

*"If I am not for myself, who will be for me? If I am not for others, what am I? And if not now, when?"*

**Hillel, 12th Century**

dent during the siege. She had rushed to the hospital one night and had witnessed the amputation of both legs of a Bosnian young man whom she had known before the ethnic troubles started. The young man's legs were smashed when a bomb exploded, and they had to be amputated. The psychiatrist unconsciously identified with this young man. After the peace arrived she kept checking to see if her own legs were intact. When the connection between her symptom and her identification with the young man was brought to her attention years later, the symptom disappeared.

Instead of recalling the tragedy through experiencing appropriate emotions, she was remembering her own horror of being under enemy attack, day after day. This psychiatrist, to a great extent, was paralyzed in dealing with her PTSD patients. Because of her unconscious fear of experiencing horrible emotions, she could not fully help her patients experience their emotions in a therapeutic setting or relieve them of the maladaptive influences of repressing or denying what had happened to them. A traumatized indigenous mental health worker herself or himself needs psychological help in order to be a more effective caretaker.

In bloody ethnic or other large-group conflicts, those who are not directly affected are also influenced psychologically. As we stated earlier, the eruption of ethnic conflicts increases the emotional links between individuals who belong to the same large group. Large-group identity in fact overshadows individual identity. Under such a circumstance, a person who is not directly affected feels the impact of large-group feelings, ranging from ethnic pride and a sense of revenge to ethnic shame, humiliation and helplessness. The loss of people, land, and prestige affects everyone in an ethnic group victimized by a neighbor, including the caretakers.

Psychiatrists, psychologists or social workers in a society traumatized by ethnic



### **Refugees in Afghanistan**

**SOURCE:** *Choices*, UNDP, Oct. 1996

or other large-group conflict develop their own complicated psychological processes even when they are not directly traumatized. In turn, they may have difficulties in caring for patients. A young Croatian psychiatrist who was not directly traumatized during the Croatian-Serbian war was assigned to work in a hospital in Vukovar after peace was made between Croatia and Serbia. (Vukovar is a border city between today's Croatia and Serbia. During the war, when the Serbs attacked this city, they turned it into ruins as the residents of Croatian origin fled inland. Today, Vukovar is a Croatian city, but most of its residents are of Serbian origin. The story of Vukovar induces deep emotions within all Croats.) The young Croatian psychiatrist was proud to be assigned by his Ministry of Health to work in Vukovar, and he thought it his national duty to play a role in changing the emotional atmosphere of the city so that former Croatian residents would want to return. His ethnic sentiments were highly enhanced. When he arrived in Vukovar, he was met in the hospital by colleagues who were of Serbian origin. The Serbian psychiatrists wanted to be friendly with the newcomer and, in addressing him, used his first name.

Working daily with Serbian colleagues who spoke to him as if nothing had happened infuriated the young Croatian psychiatrist. Furthermore, he believed that one of them had been involved in making an "extermination" list of Croatian hospital patients for the Serbs when Serbian forces had attacked the city. The Croatian doctor felt like a traitor for working with this Serbian. Therefore, when working with his Croatian and Serbian PTSD patients in Vukovar, he was paralyzed, to a great extent, in his function as a mental health caretaker.

I believe that NGOs can improve the caretaking skills of indigenous mental health workers in two ways; the first being an intellectual one. They can train these caretakers through lectures, seminars or workshops given by foreign experts. Through our work in traumatized societies after ethnic or national conflicts such as those in Northern Cyprus, Kuwait, the former Yugoslavia, and the Republic of Georgia, we came to the conclusion that foreign NGOs have been most useful in giving this kind of intellectual, consultative and supervisory help to local health care workers.

But while it is necessary, and most useful, often it does not deal with the local mental health workers' own needs to work out their internal conflicts concerning ethnic or other large-group conflicts as described in the two examples above. The

other way in which NGOs can help is by developing programs wherein the emotional well-being of the indigenous caretakers is considered. Up until now, much less emphasis has been placed on these kinds of programs; however, the NGOs should be aware of this neglected area.

### **2) How do we diagnose and deal with societal processes that are initiated after bloody ethnic conflicts?**

Besides an individual developing PTSD after a massive and shared traumatic event due to an ethnic, national, or religious conflict, the society in general usually exhibits a collective disorder, or at least a modification in the traditional ways of expressing the culture. Earlier I noted that such a process followed the Chernobyl accident. Following ethnic or other large-group conflicts, however, such societal changes appear more regularly. A modification of the existing societal process itself may not be dangerous, but it may create shared anxiety due to the loss of the accustomed ways of expressing cultural norms. Sometimes the societal change is clearly maladaptive.

A methodology for diagnosing societal changes after ethnic or other large-group hostilities is rather new. I (Volkan, 1979) attempted to do this in Northern Cyprus after the Turkish Army "de facto" divided the island of Cyprus into Northern Turkish and Southern Greek sectors in 1974. Members of the University of Virginia's Center for the Study of Mind and Human Interaction also carried out more refined diagnostic work in the post-Iraqi invasion of Kuwait (Howell, 1993, 1995; Saathoff, 1995, 1996; Volcan, 1997, 1999). This work was carried out under the directorship of Ambassador W. Nathaniel Howell, who was the U.S. ambassador to Kuwait during the invasion and who kept the embassy open for seven months when Iraqis were in Kuwait City. Ambassador Howell, who is a resident diplomat at our Center, and other CSMHI faculty members made three visits to Kuwait three years after its liberation. Over 150 Kuwaitis, children and adults, men and women, rich and poor, were chosen at random and interviewed in depth. In other words, we evaluated their internal worlds psychoanalytically.

You can imagine that many of these individuals were directly affected and suffered individual PTSD, which had gone undiagnosed. Nevertheless, our emphasis

was on finding out changes in the societal processes. To do so, we recorded certain repeated and shared themes from the interviews, as I had done in my study of the situation in post-1974 Northern Cyprus. We learned that perceptions of young Kuwaiti men concerning the rapes of Kuwaiti women by the Iraqi soldiers had been generalized. Because of this generalized perception and because of the traditional devaluation of raped women, young Kuwaiti men who were engaged to be married, without being aware of the cause, wanted to postpone their marriages. Those who were not engaged to be married wanted to wait a while before seriously considering finding a mate. Thus, the previous tradition concerning the age of marriage of young men and women was threatened. While this did not cause a danger, it created anxiety.

The following finding, however, is a more direct expression of a societal maladaptation following a massive traumatic event. During the invasion, many Kuwaiti fathers were humiliated in front of their children by Iraqi soldiers. When the humiliation occurred away from their children, the fathers wanted to hide what had happened to them. In either case, the fathers began distancing themselves from certain crucial emotional interactions with their children, especially the male children, in order to hide or deny their sense of shame. This led to the initiation of a societal process. The male children who needed to identify with their fathers on the way to developing their own manhood responded to the distance between themselves and their fathers.

Many school buildings in Kuwait were used as torture chambers. After the invasion, the Kuwaitis repaired the buildings and painted over areas where tortures had taken place. Adults did not speak to the children about what had happened in the schools during the invasion, but the children knew what had happened. When they went back to their schools, the "secret" between parents and children caused psychological problems for them. In turn, the young ones, without knowing why, identified with Saddam Hussein instead of "distant" and humiliated fathers. For example, in an elementary school play where the story of the Iraqi invasion was put on the stage, children applauded most for the youngster who played the role of Saddam Hussein (Saathof@ 1996).

"Identification with the aggressor" is a

psychoanalytic concept that refers to when a child identifies himself with the parent of the same sex with whom the child has been involved in a competition for the affection of the parent of the opposite sex (A. Freud, 1936). In childhood, this process results in a child's emotional growth. A little boy, for example, through identification with his father, whom he perceives as the "aggressor," makes a kind of entrance into manhood himself. But, in other situations, like those of many Kuwaiti elementary school children, we see how identification with the aggressor, in this case, Saddam Hussein, creates difficulties in families and in the society at large.

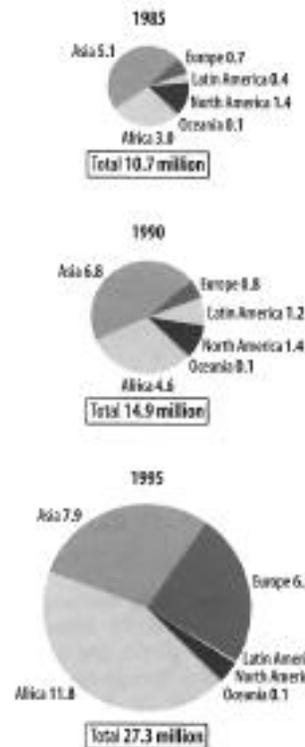
The unconscious distancing between Kuwaiti fathers and teenage sons also resulted in gang formations among the teenagers, who were frustrated by having "distant" and humiliated fathers, and by not being able to talk to their fathers about the tragedies during the invasion. Consequently, they linked themselves together and expressed their frustrations in gangs (Howell, 1996). Such societal processes did not exist in pre-invasion Kuwait.

Societal response to a shared trauma after a war or warlike situation may occur years after the trauma, and the connection to its cause is lost. The society is puzzled or creates incorrect and inadequate explanations. Since the actual cause remains unknown, attempts to counter it are easily frustrated or worsen the situation.

NGOs who deal with traumatized societies after ethnic or other large-group conflicts need also to consider maladaptive societal changes, shared psychological problems that may even lead to political difficulties. Since we now have developed a technique to evaluate such "post traumatic states" (Volcan, 1998, 1999), most recently we applied our diagnostic technique with success to the evaluation of the societal processes in the Republic of Georgia after the Georgian-Abkhazian and Georgian-South Ossetian troubles—this technique can be brought to the NGOs' attention. This area is an arena in which psychodynamic insights can be useful for NGOs.

**3) How do we evaluate trans-generational transmission of trauma, and how do we prevent the next generations from being carriers of the malignant effects of the tragedy that their parents, grandparents or**

### Refugees and other persons of concern to UNHCR by region—1985, 1990, 1995



**SOURCE:** Health and Environment in Sustainable Development: Five years after the Earth Summit, World Health Organization, 1998

### ancestors experienced?

During the last decades, transgenerational transmission of trauma and its relation to the mental health of future generations have come to the attention of NGOs, who deal with the psychological well-being of refugees, internally displaced individuals, and others who have experienced the horrors of wars. This development owes a great deal to studies of the second and third generations of Holocaust survivors and others who were directly traumatized during the Third Reich (see for example, Kestenberg and Bremer, 1996; Kestenberg and Cohen, 1998).

Last summer in Dubrovnik, Croatia, I conducted a small group meeting between Croatian, Serbian, and Bosnian psychiatrists and psychologists designed to explore their own ethnic sentiments and traumas in order to help them become better caretakers. This gathering was organized by Professor Eduard Klain from the University of Zagreb. With a stroke of genius, Professor Klain also had invited a group of Israeli psychoanalysts and other

mental health workers to this meeting. After much discussion of Croatian, Serbian, and Bosnian PTSD patients, and after examining the indigenous caretakers' own problematic issues, the Israelis warned those present that there existed another major issue: the transgenerational transmission of trauma. It had taken the Israelis at least two decades after the end of World War II to work through their own denials and note how the second and

third generations after the Holocaust needed close attention and care. The Israeli guests told the Croatians, Serbians, and Bosnians, "Let us give you advice; you do not need to wait 10 or 20 years before developing strategies to deal with the next generation." In spite of the awareness that transgenerational transmission of trauma occurs, this area requires further study.

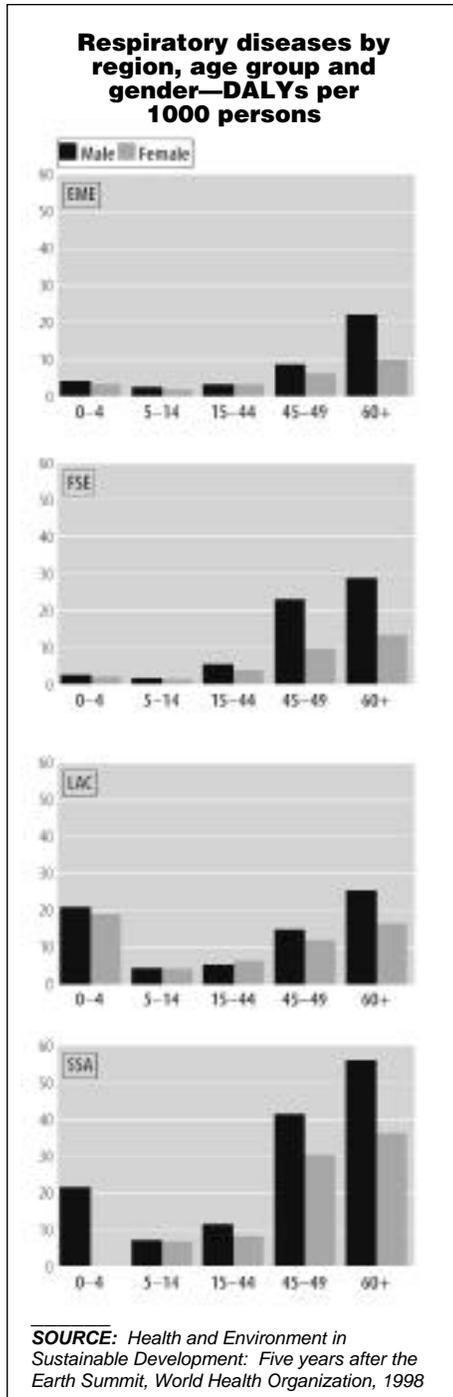
When psychoanalysis was discovered, initially the emphasis was on study of the internal world of an individual. People and things in a child's environment were considered primarily, according to what the child projected on them. As time went on, we learned that in order to "hatch" the child's existing mental potentials, we need to consider the two-way street between the child and his or her intimate caretakers (see, for example, Mahler, 1968). There is a fluidity between a child's "psychic borders" and those of his or her caretakers. And the child-mother (caretaker) experiences function as an incubator for the child's developing mind. But the fluidity also may cause trouble, in that the person from the older generation can transmit undesirable psychological elements to the child in the next generation. Such a fluidity also occurs in drastic ways among adults under certain conditions when the adults regress.

One of the most known examples of a form of transgenerational transmission comes from World War II when the Nazis were bombing London. Anna Freud and Dorothy Burlingham (1945) noted that infants under three did not become anxious during the bombings unless their mothers were afraid.

There are various forms of transgenerational transmissions. Besides anxiety, depression, elation or other feelings, the mothers or other caretakers pass unspoken thoughts and fantasies to their children. For example, a mother's unspoken wish that her newborn daughter should be a son may play a role in the daughter's sexual life when she becomes an adult. If we examine this situation clinically we note how the mother, without actually describing her wish, had influenced her daughter in many ways (Volkan and Masri, 1987). Similarly, we note certain repeating activities in a patient who seems to be doomed to having to save someone she considers "needy." We find out that this individual had a depressed mother who unconsciously gave a task to her daughter. Thus,

the daughter, as an adult, centered her activities on being a savior of "needy people" who represented the image of her depressed mother (Volkan, 1982). Among refugees, when mothers or other caretakers are under stress and regressed, such transgenerational transmissions of tasks can be observed, even when interactions take place between adults. We examined a Georgian woman in her early forties and her 16-year-old daughter. At the time, both had been refugees from Abkhazia for over four years. They, with other family members, were living under miserable conditions. Every night, the mother went to bed worrying about how to feed her three teenage children the next day. She never spoke to her only daughter about her worries. But, the daughter sensed her mother's worries and also, unconsciously, developed a task to respond to and alleviate her mother's pain. The daughter refused to exercise, became somewhat obese and put a frozen smile on her face. When we interviewed both of them, we learned that the daughter, through her bodily symptoms, was trying to save her mother by sending her a message: "Mother, don't worry about finding food for your children. See, I am already overfed and happy!"

In order to more fully understand how the influence of a massive, shared trauma passes to the next generation, we need to consider still another form of transgenerational transmission; a type which more directly influences the individual and large-group identity of the next generation(s). This type of transgenerational transmission involves the "depositing" of an already formed mental image into the developing identity of the child (Volkan, 1987). We know that this often occurs in some children known as "replacement children" (Poznansid, 1972; Cain and Cain, 1964). A mother's child dies. Soon after this, she gets pregnant and has a second child who lives. The mother "deposits" her image of her dead child into the developing identity of her second child who now has a task to keep this "deposited" identity, one way or another, within herself. Thus, the replacement child may have identity problems as an adult. He or she may have a "double identity" and develop what we call a "borderline personality organization." Or, the person is doomed to live up to the idealized image of the dead sibling within himself or herself and may become obses-



sively driven to excel.

Adults who are drastically traumatized may deposit their traumatized self-images into the developing identities of their children. A Holocaust victim who appears well adjusted may be behaving in this way because he has deposited different aspects of his traumatized self-images into his children's selves (Brenner, 1998). His children now are responding to the horror of the Holocaust, "freeing" the older victim from his burden.

After a shared massive trauma, affected individuals' traumatized self-images are linked with the same trauma. When hundreds, thousands, or millions of individuals deposit their traumatized images into their children after a massive shared trauma, this process affects the large-group identity. While each child has his or her individualized personality, they all share similar links to the "memory" (the mental representation) of the trauma and similar unconscious tasks to deal with this "memory." Therefore, under such a situation, an unseen network among hundreds, thousands or millions of people is created. Usually, the shared task is to keep the memory of the parents' trauma alive and to mourn their losses, reverse their humiliation, or take revenge. If the next generation cannot effectively deal with their shared tasks—and this is usually the case—they will pass such "tasks" to the third generation, and so on.

According to external situations, shared tasks may change function from generation to generation (Apprey, 1987, 1993; Volkan, 1987, 1992, 1997, 1999). For example, in one generation the shared task is to grieve the ancestors' loss and feel their victimization. In the following generation the shared task may be to express a sense of revenge. But, keeping alive the mental representation of the ancestor's trauma remains the primary task. Since it is shared, the new generation(s)' burden also supports the large-group identity. I call such "memories" (mental representations) the large group's "chosen trauma." In open or dormant fashion, a chosen trauma continues to exist within the generations throughout years or centuries. When there is a new ethnic, national, or religious crisis in the large group, leaders intuitively re-kindle memories of past chosen traumas as Slobodan Milosevic and his entourage did before the Serbian's recent war with Bosnian Muslims. They reactivated the memory of the Battle of

Kosovo, which had taken place 600 years ago when the Serbs and Ottoman Muslims fought. The "memory" of this battle had been the Serbs' "chosen trauma." The six-hundred-year-old remains of Prince Lazar, who was the Serbian leader during the Battle of Kosovo, and who was captured and killed, was put in a coffin. This coffin traveled from Serbian village to Serbian village for a year-long journey, and at each stop a kind of funeral ceremony took place. The Serbian people reacted as if Lazar had been killed just yesterday. Such a response created a "time collapse." Feelings, perceptions, and anxieties about a past event were condensed into feelings, perceptions, and anxieties pertaining to current events. Since Lazar was killed by Ottoman Muslims, present-day Bosnian Muslims—seen as an extension of the Ottomans—were killed and raped. In effect, an atmosphere was created in that the Serbian people could consider revenge a Serbian entitlement.

Time does not permit me to detail this "reenactment" of Serbia's "chosen trauma" (Volkan, 1997, 1999). I simply wanted briefly to introduce you to certain possibilities concerning the "fate" of a chosen trauma. There are, as far as I know, no established methods for dealing with the transgenerational transmission of shared trauma. I am familiar with the work that is being carried out in regard to aspects of this phenomenon in Georgia and South Ossetia. But, the prevention of malignant developments due to transgenerational transmissions, for practical purposes, remains unexplored and should be included in governmental and non-governmental organizations' responsibilities to note this phenomenon and help develop effective measures for dealing with it.

### Summary

My aim today was to provide you with a new means of seeing the social aftermath of ethnic, national and/or religious conflicts. While ministering to individuals who suffer acutely from PTSD remains our primary task, it is important for NGOs to be aware that PTSD hinders the restoration of individual as well as societal processes. Indigenous caretakers of victims, such as mental health workers, are themselves victims and need outside intellectual, consultative and supervisory assistance, but, more importantly, they need help to work through their own emotional complications. Programs need to be devel-

oped in this regard. The effects of this disorder also permeate, distress and linger with society at large. Some diagnostic techniques are now available to NGOs. The resulting psychodynamic data should prove valuable. Lastly, I have noted that shared trauma crosses generational boundaries. This, largely unexplored territory needs further study.

Our knowledge of the legacy of ethnic wars is expanding with the effort of many disciplines. NGOs can transform this new knowledge into more effective efforts in restoring the peace, securing stable societies, and derailing the passage of ethnic hatreds to new generations.

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Lebanese elderly above 65 years constitute around 8.6% of the population. They will make approximately 13% of it in 2025 according to the United Nations projections.

As you know, the graying of the population is now a worldwide phenomenon.

Today, there are more than 587 million people over 60, and this generation is growing at an unprecedented rate.

Because of the advances in the medical field, people are living longer. About 20% of us, present here today have passed the age of 65 and are still alive.

This percentage is not evenly distributed between developed and developing countries.

Developed countries, mainly Europe and North America, have the highest number of elderly. However, the developing countries are catching up, and it is estimated that the number of older adults in developing countries will quadruple between 1980 and 2025, while the number will only double in the developed world.

In comparison to other countries of the region, and if one is to consider the proportion of population above 60 years as a good indicator of the aging of the population, then Lebanon, whose proportion of elderly is estimated at 10.4% stands as second among countries of the region to have the highest proportion of elderly. It is preceded only by Cyprus whose demographic profile is very similar to that of developed

*“Health for ALL is not an achievable goal until millions more women are empowered to promote and safeguard their own health, and consequently their own development.”*

WHO, 1995

European countries and followed by Tunisia.

This data, though limited, exemplifies the demographic and health transition Lebanon is currently experiencing. While this may be partly due to the aging of the population, it is, as well, a reflection of the role of risk factors and of intervention curative measures adopted from the West in changing patterns of disease and mortality in a population.

In the following section I will briefly describe the existing health and social policies, services and programs for the elderly in Lebanon, and highlight the role of non-governmental organizations as well as the family in providing elder care and support.

**1. At the Government Policies Level**

Clearly defined government policies for the elderly in Lebanon are relatively non-existent. Several attempts have been made since the country's independence in 1943

**Aging in Developing Countries**

*Karam Karam, M.D.  
Minister of Health of Lebanon*

Lebanon is a small country (as big as the State of Connecticut) with an ancient history older than its cedars.

There has been no population census of the past 3 generations. In retrospective, my grandfather was the last “sensed” person of the family.

The 56 year old contemporary Lebanon, born in 1943, was destined to live nearly half of its life in political turmoil and armed conflict (1975-1990). The population in 1975 was estimated at 2.55 million. After this date, reliable estimates of the resident populations were difficult to provide because of the absence of accurate figures for the large numbers who emigrated since the beginning of the war. While the United Nations estimates were 2.35 million in 1984, national estimates are about 3.5 million, about half of which live in the capital city, Beirut and its suburbs.

While Lebanon has still a large proportion of its population in the 0-14 age group, data shows a growth in the proportion of its elderly population. The

**A comparison of estimated mid-year population in Lebanon by age percentage distribution in 1970 & 1993**

Age in Years	1970		1993	
	Number	Percentage	Number	Percentage
0-14	993,900	43.88	998,000	34.4
15-64	1,159,600	51.20	1,747,000	60.3
65-69	44,300	1.96	68,000	2.3
70-74	31,400	1.34	40,000	1.4
75-79	35,800	1.58	25,000	0.9
80+			23,000	0.8
<b>Total</b>	<b>2,265,000</b>		<b>2,901,000</b>	

Age in Years	1970		1993	
	Number	Percentage	Number	Percentage
65+	115,000	4.88	156,000	5.4

*SOURCE: Salamar Charitable Foundation for Social Development*

to create plans for the welfare.

The most recent one is the Retirement and Social Security Scheme, which to date has not yet been implemented. The proportion of elderly who are covered by some kind of insurance scheme for old age is still not known.

### 2. At the Service Delivery and Non-Governmental Organizations Levels

To counterbalance the absence of involvement of the public sector in the health and social welfare of the elderly, several private voluntary organizations, mainly religious, proliferated in the past years. These provide free or subsidized care for the elderly. Reliable estimates of their number, type, occupancy rate, type of services, member and characteristics of their residents and staff is not available.

### 3. At the Family Level

The main provider of elderly care in Lebanon remains the family. It is believed that the social and cultural values of the country are the main determinants that trigger individuals to care for their parents. However, due to the economic recession, the fact that women are joining the workforce and because of urbanization, the role of the family is being slightly modified. As a result, more elderly are seeking care from members outside their families, and from institutions.

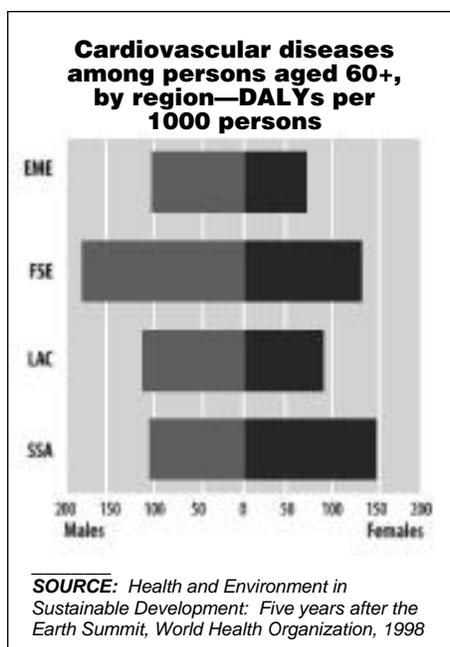
### 4. At the Professional Manpower Level

It is only recently that medical doctors are being interested in specializing in geriatrics. Hence, there are only a few geriatricians in the country. In addition, geriatrics is not included in the curriculum of medical schools. Nurse, and social workers trained in geriatrics and gerontology are lacking. There is a need to address this issue through continuing education programs for social workers and nurses.

### Two Landmark Years: 1997 & 1998

The concern of health and social policy makers for this segment of the population has only recently been instigated (1997). The conference on "The Golden Age" organized by the Middle East Council of Churches in November 1997 aroused a long neglected issue.

Social, welfare and health issues, old age security plans, policies and services, cultural and social values, the role of the family were discussed from a number of



perspectives. Public awareness was raised, and the recommendations were adopted by the Ministries of Public Health and the Ministry of Social Affairs and NGOs.

As a result a ministerial decree was issued in 1998 with the appointment of a National Commission on the Third Age. Within 6 months, a national plan of action was developed and made public on the occasion of the International Day of the Elderly.

An Intergenerational Walk held under the patronage of the First Lady took place on October 11, 1998. This joint event organized by UNFPA in cooperation with the Ministry of Social Affairs and local NGOs rallied more than 1500 children, adolescents, adults and elderly in downtown Beirut.

Four days later, on October 15, 1998 Lebanon witnessed the passing over of a new presidential era, thus bringing about a major change on the Lebanese scene. President Emile Lahoud was elected; his address to the nation highlighted the promise of a major political, economic and social reform. A newly elected cabinet was formed with a clear mandate to rehabilitate the public sector, focusing on the provision of services and support to the most vulnerable target groups. Priority has been granted to health, education and social assistance.

Only four months have elapsed during this period of time and the government has been reevaluating its national agenda giving priority to basic human rights

issues. The road ahead is full of challenges. But challenge is the spur of action.

As much as investing in the future of our children and women ranked high on our national agendas in the past decades, safeguarding our living heritage in view of carrying the legacy of human culture and healthy societies remain equally important duty. For there is not future to any generation that negates its elders.

This endeavor requires a great deal of collective effort. Our life expectancy today is higher than that of our grandparents. We owe it to our grand children by the year 2025, to live in a better world. I hope that most of us present here will still be able to remember 1999, the International Year of the "Future" Elderly, with a sense of vested pride.

### Quantitative Analysis of Radiation Effects: A Paradigm for Studying Health Effects of Environmental Disasters

Shigenobu Nagasaki, M.D. and Ph.D.

Director

Hiroshima Radiation Effects Research Foundation, Hiroshima, Japan

Professor emeritus, Nagasaki University of Medicine

The aims of this presentation are

### Thyroid cancers in children (under 15 years of age) in Belarus, Ukraine and the Russian Federation after the Chernobyl accident

Year	Belarus	Ukraine	Russian Federation*
1986	2	8	0
1987	4	7	1
1988	5	8	0
1989	7	11	0
1990	29	26	4
1991	59	22	3
1992	66	47	5
1993	79	43	11
1994	82	39	19
1995	91	44	9
<b>TOTAL</b>	<b>424</b>	<b>255</b>	<b>52</b>

\*Russian Federation (Bryansk & Kaluga regions)

**SOURCE:** Health and Environment in Sustainable Development: Five years after the Earth Summit, World Health Organization, 1998

threefold:

1) To discuss the extent to which the causes of environmentally affected health disorders have been clarified, taking dioxin, ultraviolet rays, air pollution, carbon dioxide, etc., as examples.

2) To explain the results of ongoing studies of health disorders, taking radiation as an example.

3) To discuss scientists' social responsibility, taking radiation induced health disorders as an example.

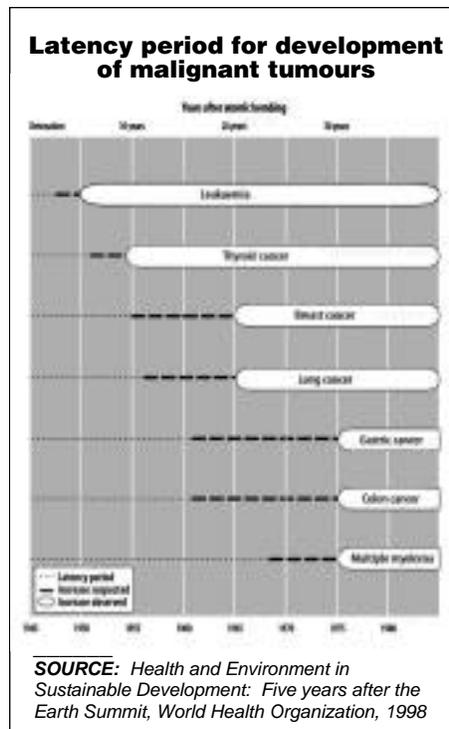
Estimates of early deaths and injuries from the Atomic Bombs were 140,000 deaths (38% of population) and 80,000 injuries (22%) in Hiroshima and 70,000 deaths (28%) and 80,000 injuries (32%) in Nagasaki. A National census was carried out in 1950 for the first time after the Atomic-bombings, and 284,000 people declared that they were Atomic-bomb survivors. Among these 284,000, 195,000 (Master Sample) were interviewed and 120,000 were selected as the Life Span Study Cohort of the Atomic Foundation (RERF) in 1975. Most of the cohort members have radiation dose estimates according to the DS86 system.

In addition to the Life Span Study, 20,000 people in the Adult Health Study, 3,300 in-utero exposed survivors and 80,000 children of A-bomb survivors have been followed by ABCC/RERF for more than 50 years after bombing. Scientific results of these follow-up studies have been published as the "Late Health Effects of A-bomb Radiation".

A-bomb survivors are known to have a relatively high incidence of the following:

- 1) Malignant tumors; leukemia (excluding chronic lymphatic leukemia and adult T-cell leukemia), cancers of the female breast, thyroid, colon, stomach, lung and ovary,
- 2) Non-cancer diseases; radiation cataracts, hyperparathyroidism, delayed growth and development (childhood exposure), autoimmune hypothyroidism,
- 3) Immune competencies, reduction of T-cell mediated responses, change of humoral immune responses,
- 4) Chromosome aberrations in lymphocytes, and
- 5) Somatic mutations in erythrocytes.

In utero exposed survivors are known to have a relatively high incidence of: microcephaly, mental retardation, delayed growth and development other than cancer, and deterioration of scholastic achievement and IQ.



ABCC/RERF research results have been used widely by the International Community as:

- 1) basic dose information for radiation protection by the International Commission on Radiological Protection (ICRP), the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), and the US National Academy of Sciences, Advisory Committee on the Biological Effects of Ionizing Radiation (BEIR),

- 2) information on medical preparedness at the time of radiation accidents, and
- 3) information on the biological effects of radiation on humans.

In the scientific studies of environment and health, it should be noted that:

- 1) the scientific pursuit of the medical causes of diseases is the basis of treatment and prevention of disease,
- 2) a study should not be conducted from the "all or nothing" point of view, quantitative analyses are important,
- 3) study results should be verified by up-to-date techniques made available by the progress of science, and
- 4) study results should always be made public.

Finally, as scientists' social responsibility, it is important to recognise that:

- 1) while seeking the understanding of society, scientists should assertively conduct studies which are both relevant to

the present and hold the promise of advancing scientific knowledge, and

- 2) scientists should explain the results of their scientific studies to the general public in an easily understood way. Unnecessary concerns or prejudice should be eradicated.

### Challenges of Workers' Health in the Region of the Americas

Maritza Tennessee, M.D.  
PAHO

There is currently a global consensus on the importance of workers' health as a key element for the equitable development and social and economic well being of human beings. Recognition of the importance of the sustainable development model has renewed concern in international and regional forums, as well as the countries, about the situation of workers' health and the need to improve it.

The 23rd Pan American Sanitary Conference (1990) adopted Resolution CSP23.R14 on workers' health, urging the Member States to increase the development of different institutional workers' health care arrangement in order to promote the attainment of universal coverage and requesting the Director of PASB to support the initiative. Thus, workers' health has been included in the Strategic and Programmatic Orientations for PASB, 1999-2002.

The situation analysis of workers' health in the countries of the Region reveals major economic and social inequities in the labor sector, as well as a significant institutional vacuum at both the international and national level when it comes to addressing the problem of workers' health, particularly in the informal sector.

Responding to this situation, PAHO took the initiative and structured its technical cooperation activities in workers' health around an integrated, multisectoral, and participatory preventive approach. The result was the preparation of the Regional Plan on Workers' Health, which includes cooperation activities at the regional, subregional, and country level. The Plan has been conceived as a frame of reference and orientation that will enable the actors in the field of workers health to operate with a common perspective, permitting synchronized country and international cooperation

activities and optimum use of the available resources on behalf of the countries.

### **Skin Cancer in the Elderly: Environmental Aspects**

Patricia L. Myskowski, M.D.  
Department of Dermatology  
Sloan Kettering Hospital, NY

On 1998, the American Cancer Society estimates that more than 900,000 new cases of skin cancer were diagnosed in the United States. It is well-established that the risk of all types of skin cancer increases with advancing age. Thus, as our population ages, we may anticipate that skin cancer will become an increasingly important health problem.

Fortunately, the vast majority of skin cancers are the nonlethal basal and squamous cell carcinomas (the so-called non-melanoma skin cancers), which are readily curable and rarely metastasize. However, the incidence of melanoma—the most serious and deadly form of skin cancer—has increased by 4% per year since 1973. It has been estimated that there will be 44,200 new cases of melanoma diagnosed in the United States in 1999, and 7,300 deaths attributed to this tumor. Furthermore, melanoma represents an increasingly important problem on a global level, with an estimated 9,200 new cases in 1985. These figures represent 7% of cancers in men and 8.5% of cancers in women in developed countries. The lowest rates were found in dark-skinned individuals in less-sunny climates, while the highest rates were found in countries with light-skinned populations living near the equator (i.e. Australia).

Skin cancers may arise in a susceptible host who is exposed to certain environmental factors. Most important of these factors is ultraviolet light, which has been epidemiologically linked, on a cumulative basis, with basal and squamous cell carcinoma. A role for ultraviolet light exposure in the pathogenesis of melanoma is felt to be supported by the association of intermittent intense sun exposure with melanoma, and the higher incidence of melanoma in lower latitudes. Other environmental hazards which may contribute to the development of (primarily non-melanoma) skin cancers include ionizing radiation exposure and

### **Summary of the main effects of solar UVR on the health of human beings**

Nature of effect	Direction of effect	Strength of evidence
<b>Effect on immunity and infection</b>		
Suppression of cell-mediated immunity	Harmful (?)	Sufficient
Increased susceptibility to infection	Harmful	Inadequate
Impairment of prophylocating immunization	Harmful	Inadequate
Activation of latent virus infections	Harmful	Inadequate
<b>Effects on the eye</b>		
Acute photokeratitis and photoconjunctivitis	Harmful	Sufficient
Climatic droplet keratopathy	Harmful	Limited
Pterygium	Harmful	Limited
Cancer of the conjunctiva	Harmful	Inadequate
Lens opacity (cataract)	Harmful	Limited
Uveal melanoma	harmful	Limited
Acute solar retinopathy	Harmful	Sufficient (?)
Macular degeneration	Harmful	Inadequate
<b>Effects on the skin</b>		
Malignant melanoma	Harmful	Sufficient
Non-melanotic skin cancer	Harmful	Sufficient
Sunburn	Harmful	Sufficient
Chronic sun damage	Harmful	Variable
Photo dermatoses	Harmful	Sufficient
<b>Other direct effects</b>		
Vitamin D production	Beneficial	Sufficient
Other cancers	Beneficial	Inadequate
General well-being	Beneficial	Inadequate
<b>Indirect effects</b>		
Effects on climate, food supply, disease vectors, air pollution, etc.	Probably Harmful	Inadequate

Limited = suggestive but not conclusive evidence  
? = some uncertainty about assigned classification

**SOURCE:** *Health and Environment in Sustainable Development: Five years after the Earth Summit*, World Health Organization, 1998

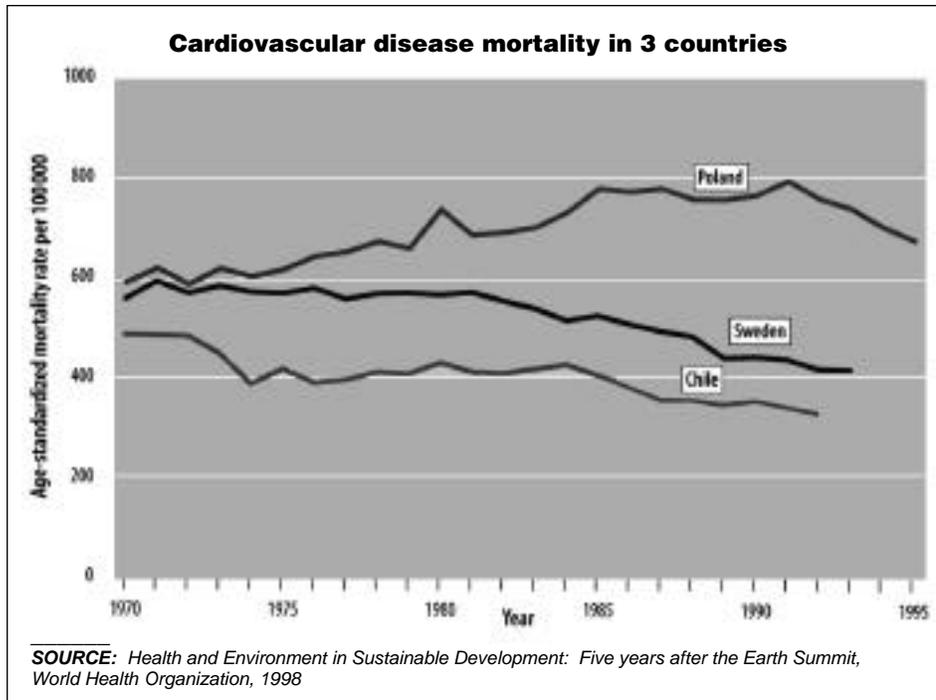
inorganic arsenic, especially in drinking water.

Certain host factors are known to be associated with an increased rate of skin cancers. These include: fair skin, light eyes and hair, tendency to sunburn, immunosuppression, family history of skin cancer, and advanced age. For melanoma, additional risk factors include an increased number of moles (nevi), (whether atypical or normal), and family history of melanoma. Future directions in the prevention and control of skin cancers will likely involve the identification of high-risk individuals, avoidance of environmental hazards, and close surveillance for early detection of these neoplasms.

### **Endocrine Disruptions and Persistent Organic Pollutants**

Ted Shettler, M.D.  
Director  
Science and Environment Health Network,  
Boston, MA

A series of UNEP-led international negotiations aimed at globally eliminating the production and use of twelve toxic long-lived organic chemicals (persistent organic pollutants—POPs) has focused widespread attention on their dangerous properties. These twelve are among the most toxic effects by interfering with hormone function. POPs are particularly troublesome because they persist for many years in the environment. They also tend to bioaccumulate, so that their concentrations build up in organisms high



in the food chain, putting humans at particular risk. Moreover, many studies show that the developing organism is particularly susceptible to toxic effects of POPs and other hormone disrupting chemicals, and fetuses and nursing infants may be disproportionately exposed. This presentation will describe the characteristics of these chemicals that justify international concern, review their global distribution, and describe how they exert their toxic effects with particular attention to the developing organism and susceptible life stages. It will explore the controversies surrounding the level of evidence of harm necessary to take health protective measures.

Persistent organic pollutants (POPs) are toxic organic chemicals that are long-lived in the environment and tend to bioaccumulate as they pass up the food chain. Under the leadership of the United Nations Environment Program, a series of international negotiations is underway at eliminating production and use of twelve of the most troublesome POPs. Among these twelve are dioxin, PCBs, DDT, and several other pesticides.

Many POPs exert their toxic effects by interfering with hormone function. A large number of other chemicals in widespread use, not classified as POPs because they do not persist or bioaccumulate, also interfere with hormone function and are under increased

scrutiny of medical professionals, regulators, toxicologists, and the general public because of their potential to cause serious harm, particularly to fetuses, infants, and other developing organisms.

Several epidemiological studies show that fetal exposure to PCBs impairs normal brain development such that offspring experience significant developmental delays, certain kinds of learning disabilities, and impaired intellectual function. A large number of animal studies show that fetal exposure to extraordinarily small levels of dioxin causes long-lasting changes in development of the reproductive and immune systems. In animals and humans DDT is metabolized into DDE. In animals, DDE behaves as an anti-androgen, blocking normal function of male hormones and causing demasculinization of males. It is unclear if DDE has a similar effect in humans. DDT has been banned in many countries because of its toxic effect on wildlife reproduction, but it is still widely used in many parts of the world, primarily for mosquito and malaria control. A phase-out of DDT use will depend on replacement with a safer alternative, and several candidates have been identified.

Most POPs tend to be widely spread throughout the world's ecosystems as they enter into global atmospheric transport. Levels of POPs in animal tissue may become alarmingly high. For example,

marine mammals tend to accumulate many of these chemicals in their fatty tissue, and indigenous people eating pollutants, are exposed to some of the highest concentrations anywhere on earth. These chemicals also tend to concentrate in breast milk because of its high fat content, and the nursing infant is consequently exposed to larger amounts than adults. This is particularly problematic because the developing infant is likely to be more sensitive to toxic effects than an adult. However, the advantages of breast feeding are clear and unequivocal. The appropriate policy response to chemical contamination of breast milk is not to avoid breast feeding, but rather, to do what is necessary to get the chemicals out of the milk. It is essential that the international community develop the political will to address this important problem and protect the most vulnerable of our communities from the toxic effects of these chemicals.

### **Health, Environment and the Elderly**

*M. El Banna, M.D.  
Chairman, NGO-GEF, UNDP, Egypt*

By the end of the century, 20 years will have been added to the average life span. This longevity is one of the greatest achievements of the twentieth century and is resulting in a dramatic increase in the world's older population.

Recognizing aging as one of the major achievements and challenges of the twentieth century, the United Nations convened the World Assembly on Aging in 1982 and endorsed the International Plan of Action on Aging. In 1990 The Assembly designated October 1 as the International Day of the Elderly and in 1991 adopted the United Nations Principles for Older Persons. In 1992, The Assembly adopted a strategy for decade 1992-2001, including the International Year of Older Persons 1999 with a theme "towards a society for all ages".

In the course of a few generations, the proportion of older persons age 60 and above to the overall population will live in urban areas whereas in the developing nations they will live in rural areas. Women will outnumber men in both. Good health is one of the major deterrents for helping the elderly to remain independent, maintain their quality of life and avoid isolation, marginalisation

or nursing home placement.

Over the last decade scientists have accumulated a huge amount of evidence and data from the results of research about the health consequences of environmental change. There is no doubt that the quality of the environment is a major determinant of health and the most immediate world health problem is ill health and premature death caused by biological agents in the human environment in water, food, air and soil, as WHO stated many years ago.

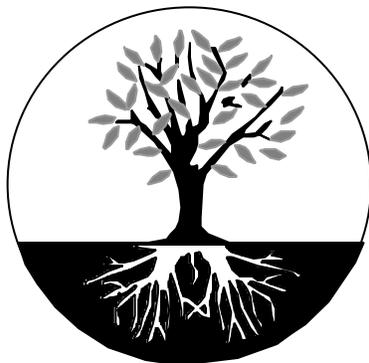
However, when the environmentally induced diseases are addressed they are addressed in relation to the population at large. Sometimes children are specified but rarely the elderly are mentioned as a special group with specific environmentally induced or related health problems.

In this presentation, an effort is made to outline the effects of environmental degradation on the health of the elderly particularly those who are living in the developing countries e.g. poverty, unsustainable developmental programs, overpopulation, malnutrition, water-related diseases, air & soil pollution and environmental toxins. A brief mention of elderly women with environmental health problems. Reference to the problems in the elderly in the developed world will be made briefly whenever it is appropriate. It is hoped that this preliminary effort may be contemplated by other efforts to start a specialty of environmental medicine for the elderly as we are approaching the age of longevity.



**A Cambodia landmine victim**

**SOURCE:** Choices, UNDP, July 98



## GOOD NEWS

■ **Philippine President Joseph Estrada** on Saturday threatened to defy the dominant Roman Catholic church's ban on birth control, saying the country's rapid population growth had to be checked. In a weekly radio interview Estrada said that with 2.3 percent population growth, the Philippines could have a population of more than 100 million within 25 years, from the current 74.7 million. "That is a big problem. No matter how high our production is...if our production of children is also high, we will always be short of classrooms, of basic services because our population is too large," he said.

**SOURCE:** Agence France Presse, Manila, May 22, 1999

■ **Bacteria That Gorge On Rotting Waste Can Break Down DDT**

Chicken and cow manure, old newspapers, straw and wood chips can be used to clean up land contaminated with dangerous chlorinated pesticides such as DDT, according to Canadian scientists at the life sciences firm AstraZeneca.

Finding a practical way to clean up contaminated land is tricky. Digging up soil and moving it elsewhere is no longer acceptable, sealing it in a landfill site is now illegal in the US, and heating it in massive kilns to burn off offending pesticides is expensive. The team at AstraZeneca has come up with an alternative, using local bacteria that feed on organic waste to break down hazardous substances into less harmful by-products in a process called bioremediation.

In a year-long test at an old pesticide factory in Tampa, Florida, AstraZeneca's process, called Xenorem, cut DDT levels in the soil by more than 95 per cent. DDT is considered one of the worst pollutants because its breakdown products, such as

DDE, were thought to be almost indestructible. But recent research has shown that DDE can be degraded (*This Week*, 9 May 1998, p 16) and in the Tampa trial the bacteria reduced levels of DDE, DDD and other chlorinated pesticides to below US Environmental Protection Agency safety limits.

The new technique will remove contaminants at around half to two-thirds of the price of incineration, the next best solution, says Frank Peter, AstraZeneca's director of environmental services. It can also be carried out on site and is environmentally friendly, using natural waste products to help indigenous bacteria gobble up pollutants. "It solves two problems at once," he says.

**SOURCE:** *New Scientist*, 5 May 1999



**H.E. Ambassador Anwarul Chowdhury, Permanent representative of Bangladesh to the UN, addressing the luncheon on April 23, 1999**

■ On May 19, supermodel and activist Waris Dirie brought the issue of female genital mutilation to Capitol Hill as part of a briefing on the pending UNFPA funding bill. Senators James Jeffords (R-VT), Harry Reid (D-NV) and Representative Carolyn Maloney (D-NY) joined Dirie at a press conference to urge lawmakers to support House and Senate bills to reinstate the U.S. contribution to the United Nations Population Fund (UNFPA). She emphasized UNFPA's work with non-governmental organizations (NGOs) to eradicate female genital mutilation, speaking about her own experience as a survivor. Congress eliminated funding last year for the UN Population Fund, for which Dirie is a special ambassador.

**SOURCE:** *Global Population Media Analysis*, April 14-May 21, 1999, Communications Consortium Media Center, Washington, DC.

## CHERNOBYL UPDATE

### Age and Species Susceptibility to Toxicity from Environmental Radioactivity Due to the Chernobyl Disaster

Cham E. Dallas, Ph.D., Director of Toxicology, University of Georgia, Athens, Georgia

The Chernobyl nuclear disaster in the former Soviet Union, which involved the release of over 100 times the amount of radiation in the Hiroshima and Nagasaki atomic bomb detonations has provided the closest approximation yet of a widespread post-nuclear war environment contaminated by the aerial dispersion of fallout. Research on the deposition of radionuclides and certain parameters of toxicity related to the accident have revealed interesting new relationships concerning the influence of age and species specificity on the toxic responses seen due to environmental radioactivity. The influence of age on the radiation dose received is presented in Chernobyl-contaminated areas in Russia, together with the resulting incidence and character of radiation-induced thyroid cancer. A surprising finding relative to the geographic incidence of these radiation effects is discussed, in which spatial distribution of radiocesium and radioiodine in soil, population, and geographic parameters of transportation arteries are correlated. An interesting finding is the lack of a consistent correlation between the spatial distribution of radionuclides in the soil and thyroid cancer incidence. Instead, most of the thyroid cancer cases were diagnosed in settlements situated on major railways and

roads. Also presented is the incidence of congenital malformations in Chernobyl-contaminated versus in contaminated areas, and the relationship of this reproductive incidence with dramatic birth rate anomalies. The distribution of radionuclides in living systems is compared between species for cohorts of highly contaminated individuals. Extraordinarily high disposition of radionuclides in rodents from areas around the Chernobyl reactor are compared to the disposition in aquatic species, soil and sediment distribution and to Chernobyl liquidators (Soviet workers who were involved in cleanup after the accident). The species differences in toxicity response are also evaluated, including differences in radiation-induced oxidative stress responses, cell cycle distribution and changes in DNA content of red blood cells, leukocytes, and whole blood and aneuploidy. The relevance of these findings to economic and sociological parameters is also addressed, such as in family planning and remediation strategies. The utility of this data for more accurately predicting the probable consequences of the use of nuclear weapons are discussed, with a focus on some of the unexpected lessons that have been learned from the Chernobyl disaster.

## Voices

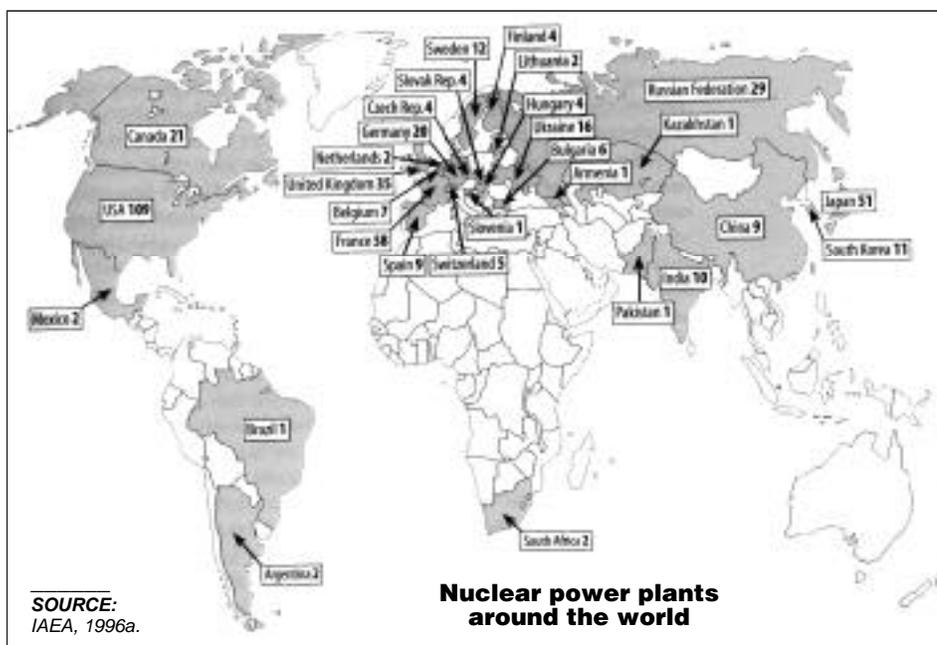
■ The first of four scheduled regional hearings proposed by the UN Secretary-General with a view to generate innovative ideas regarding specific goals the UN should strive to achieve in the decades ahead in five core areas of its work was held at United Nations House in Beirut on 23-24 May, 1999.

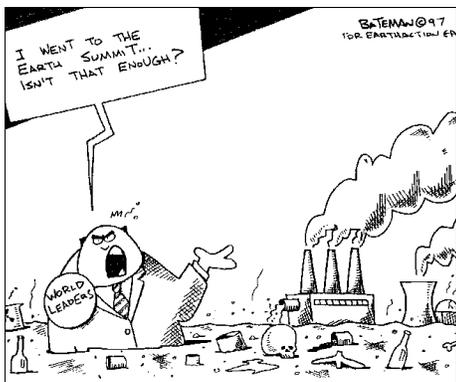
The Beirut meeting was organized by the UN Economic and Social Commission for Western Asia (ESCWA) and focused on three areas of UN work: Peace and Security, Economic and Social development, and Human Rights and good governance. About 70 leaders and representatives of civil society from the ESCWA member states were invited. Farouk Mawlawi represented World Information Transfer and spoke on the relationship between NGOs and the UN. Following is a brief account of the conclusion:

A synchronistic relationship exists between all the above areas, as peace and security are unattainable in the absence of human rights and economic development. There should be no selectivity in implementing UN Security Council resolutions. This tendency in recent times has weakened the UN and caused it to lose confidence and support. There was agreement that the UN should be strengthened and enabled to assist the people of developing countries in solving their economic and social problems. The ESCWA region and especially its civil society should pay more attention and cooperate with the UN, which is to their benefit. Democracy, good governance and human rights are poorly observed in the ESCWA region. Some speakers felt that we have gone back rather than advanced in these areas. Several speakers, not all women, called for giving equal rights to women and involving them in decision-making. Conflicting views were expressed on the need to increase the membership of the Security Council, as long as the power of the veto remains. Simple majority should suffice when voting in issues relating to human rights. There is need for education on human rights.

ESCWA was asked to expand cooperation with member states and to provide needed studies and information relevant to economic and social development. A number of experts addressed the question of the need to join WTO and addressed pros and cons of the matter.

There was unanimous calls on member states and the UN to seek the views and participation of civil society in all matters. The Hearings are followed by the annual intergovernmental session which, this year, marks the twenty-fifth anniversary of the founding of ESCWA.





**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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**PART 1**

**POINT OF VIEW:**

**“Environmental Challenges to Health Through Key Stages of Life”**

*Introductory Statement by Dr. Christine K. Durbak*

Chief Seattle, a great native American leader once wisely remarked that: “We are part of the web of life; and whatever we do to the web we do to ourselves.” Today is Earth Day, and we are to be celebrating the web on which we travel and on which we depend.

Thanks to people like yourselves: to NGO's; to countless others around the world concerned with saving our environment; and to the various international agencies like WHO, UNEP, we have at a minimum, raised awareness and successfully initiated thousands of remediation programs to repair our tattered web.

But despite the many successful global partnerships and despite the resounding success of so many environmental remediation programs the task of saving our web...and saving ourselves...remains daunting indeed.

Those of you here who are environmental experts, physicians and health professionals are concerned about the potentially devastating and, in some cases, irreversible effects of environmental degradation on human health.

While the health of all of us depends on the cleanliness and normal functioning of our web it is the world's most vulnerable citizens...the young, the elderly and the disabled...whose health and well-being are at particular risk.

**The Elderly**

Health, economic and social issues of aging are inextricably linked to the devel-

opment process. As the age structure of developing countries changes, demands on scarce resources by adult and elderly population can be expected to grow. The strain placed on extremely limited health care resources by infectious diseases not at conquered is compounded by growing levels of non-communicable disease and related disability and increasingly common environmental hazards. Even a brief examination of the factors underlying the process of demographic aging indicates their magnitude and complexity.

While the world's population grow at an annual rate of 1.7%, the population over 65 increases by 2.5% per year. What characterizes recent decades is the increasing rate of growth due to the rapidity of demographic transformation of many developing countries: currently around 360 million of a world total of just under 600 million persons over 60 live in the developing world. In 2025 11.9% of the elderly will live in the developing world and 23.6% in the developed world.

It's axiomatic that these surging numbers of elderly citizens are particularly vulnerable to environmental hazards. For example, global warming suggests that punishing heat waves, such as the 1995 event that killed over 700 elderly people in Chicago alone, will become more common. As surface temperatures rise, major cities around the world could experience thousands of additional heat related deaths annually. Studies indicate that by 2020 global warming could cause up to a

145% rise in heat-related mortality in New York City alone! (Kalkstein, Environmental Health Perspectives #105, 1997)

**The Children**

Health care professionals are aware that children are more vulnerable than adults to the environment for the following reasons:

1. The rate at which children absorb nutrients from the gastrointestinal tract is faster than that of adults, a fact that can impact their exposure to toxicants.

2. Children's metabolic systems are still developing so their ability to detoxify and excrete toxins differs also from that of adults. The difference is sometimes to the child's advantage, but more frequently they are not able to excrete toxins as well as adults, and thus are more vulnerable to them.

3. Behaviors characteristic of early childhood also affect a child's exposure to toxicants. In the first year of life the young child spends hours close to the ground where he or she may be exposed to toxicants in dust, soil and carpets as well as to pesticide vapors in low-lying layers of air.

4. Normal development in early childhood includes a great deal of hand-to-mouth behavior, providing another avenue for exposure to such toxicants as lead in paint dust or chips and to pesticide residues.

***Part 2 will be continued in the Fall issue of the World Ecology Report.***

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

Margaret Mead

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