

ENVIRONMENTAL ISSUES IN PUBLIC HEALTH

MODULE FIVE (5) ASSIGNMENT



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**INTRODUCTION**

This assignment is made up of Six questions and each answer explained fully the reasons needed to justified the questions asked into deals and it contains the following Definition and purpose of Environmental Health, Focal Practice Areas of Environmental Health, Role of Government in Environmental Health, the reason why Older people are more vulnerable to diseases and some four diseases, The Health Effect That Is Associated with Contaminants in The Work Place and finally the positive and negative effects of globalization.

**DEFINITION OF ENVIRONMENTAL HEALTH**

Environmental health has been defined in a 1999 document by the [World Health Organization](https://en.wikipedia.org/wiki/World_Health_Organization) (WHO) as:

Those aspects of the [human health](https://en.wikipedia.org/wiki/Human_health) and disease that are determined by factors in the environment is called environmental health. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health.

**Environmental health** is the branch of [public health](https://en.wikipedia.org/wiki/Public_health) concerned with all aspects of the [natural](https://en.wikipedia.org/wiki/Natural_environment) and [built environment](https://en.wikipedia.org/wiki/Built_environment) affecting human health. Environmental health is focused on the natural and built environments for the benefit of human health.

**Environmental health** is the study and management of environmental conditions that affect the health and well-being of humans.

**ENVIRONMENTAL HEALTH PURPOSE**

**Preventing and Mitigating Hazards**

Prevention is a key focus of environmental health. Research, education, public policy, improved practices and new technologies developed by environmental health professionals help make our world cleaner and safer.

The work isn’t entirely regulatory. Many companies hire environmental health officers to monitor their internal processes and institute practices that will help protect workers and the public, while reducing the company’s potential liability.

**Responding to Threats**

When an environmental health threat is identified, the goal is to respond as quickly as possible to contain the hazard and mitigate the damage.

Many environmental hazards cannot be completely eliminated, so environmental health workers aim to reduce exposure, particularly for vulnerable populations such as children, sick people and the elderly.

**Making Our World a Little Safer**

Environmental health professionals work to improve public health by identifying, tracking and addressing environmental risk factors.  They go by many titles, including environmental health practitioner, environmental health officer and public health official. Most environmental health professionals specialize in a particular area, such as:

* Reducing air, water, soil, noise or radiation pollution
* Protecting our food supply
* Improving safety in schools, public areas and the workplace
* Ensuring safe living conditions in housing
* Promoting public health with a focus on environmental hazards

**A Team Effort that Crosses Borders**

Environmental health professionals collaborate with and rely upon a wide range of professionals, including chemists, geologists, biologists, meteorologists, physicists, physicians and engineers as well as government officials and the media. The work is becoming increasingly international in scope, since environmental problems often extend beyond borders.

Individuals who succeed in this field tend to be team players with a strong interest in science, a commitment to the public welfare and an ability to see the big picture. The work is varied and interesting, and enables those in the field to apply science to making the world a better place

**THE FIVE FOCAL PRACTICE AREAS OF ENVIRONMENTAL HEALTH**

[**Environmental epidemiology**](https://en.wikipedia.org/wiki/Environmental_epidemiology)

studies the relationship between environmental exposures (including exposure to chemicals, radiation, microbiological agents, etc.) and human health. Observational studies, which simply observe exposures that people have already experienced, are common in environmental epidemiology because humans cannot ethically be exposed to agents that are known or suspected to cause disease. While the inability to use experimental study, designs is a limitation of environmental epidemiology, this discipline directly observes effects on human health rather than estimating effects from animal studies.

[**Toxicology**](https://en.wikipedia.org/wiki/Toxicology)

studies how environmental exposures lead to specific health outcomes, generally in animals, as a means to understand possible health outcomes in humans. Toxicology has the advantage of being able to conduct randomized controlled trials and other experimental studies because they can use animal subjects. However there are many differences in animal and human biology, and there can be a lot of uncertainty when interpreting the results of [animal studies](https://en.wikipedia.org/wiki/Animal_studies) for their implications for human health.

[**Exposure science**](https://en.wikipedia.org/wiki/Exposure_science)

studies human exposure to environmental contaminants by both identifying and quantifying exposures. Exposure science can be used to support environmental epidemiology by better describing environmental exposures that may lead to a particular health outcome, identify common exposures whose health outcomes may be better understood through a toxicology study, or can be used in a risk assessment to determine whether current levels of exposure might exceed recommended levels. Exposure science has the advantage of being able to very accurately quantify exposures to specific chemicals, but it does not generate any information about health outcomes like environmental epidemiology or toxicology.

[**Environmental engineering**](https://en.wikipedia.org/wiki/Environmental_engineering)

Aapplies scientific and engineering principles for protection of human populations from the effects of adverse environmental factors; protection of environments from potentially deleterious effects of natural and human activities; and general improvement of environmental quality.

[**Environmental law**](https://en.wikipedia.org/wiki/Environmental_law)

Iincludes the network of treaties, statutes, regulations, common and customary laws addressing the effects of human activity on the natural environment.

### **ROLE OF GOVERNMENT IN ENVIRONMENTAL HEALTH**

Environmental health is clearly the responsibility of government. Many environmental exposures, such as air pollution, are beyond the control of the individual. Others can be avoided only at significant trouble and expense, for example, if people grow their own vegetables, or buy them from farmers whose agricultural methods they have inspected themselves. Governments ensure a healthy environment by various means, sometimes providing services directly, in other cases by setting standards and regulating how the services should be provided

**Identification of Hazards**

A major role of the federal government in environmental health is to identify hazards in the environment and to set safety standards that must be met by industry and by state and local governments to protect people from these hazards. Both the identification of a substance as hazardous and the setting of standards are often difficult and controversial. The risks posed by most synthetic chemicals that are discharged into the environment by industrial processes or that are disposed of by consumers are unknown. Testing for potential harmful effects is expensive and time-consuming, and the choice of chemicals to test may be politically controversial. Even in cases where the health risk is obvious— such as the discharge of raw sewage into waterways or the air pollution caused by America’s dependence on the private automobile—local governments, industry, and even the average citizen may resist requirements to meet standards because of the expense and inconvenience of cleaning up the environment.

**Radiation** is an environmental health hazard that people tend to worry about only when it is artificially produced. However, all people are exposed to cosmic radiation in varying amounts depending on where they live, and natural radioactive materials are found in soils and rocks in many parts of the world. Radon gas, produced by the natural radioactive decay of uranium, is present in many homes, a fact that was recognized only in the mid-1980s. Prolonged exposure to radon is potentially a cause of lung cancer, although the risks from radon in the home are not well understood. Ultraviolet radiation from the sun is a significant cause of skin cancer and melanoma. There is no way these exposures can be regulated by government, except for some testing requirements concerning radon.

**Environmental protection**

Local government environmental protection activities include sewage and trade waste treatment, solid waste management, recycling, and pollution prevention. Local governments have the dual role of both regulator and operator in environmental protection. Their annual investment in environmental protection outweighs its spending in any other environmental area. In 2002–03, local governments spent more than $2.6 billion. Of this, $2.1 billion was current expenditure, $558 million went on capital costs, and there was a revenue shortfall of $28 million. The main source of funds was rates, contributing $2.1 billion (Trewin 2004).

### **Protect Against Environmental Health Hazards**

Protecting against environmental health hazards means addressing aspects of the environment that pose risks to human health, such as monitoring air and water quality, developing policies and programs to reduce exposure to environmental health risks and promote healthy environments, and identifying and mitigating environmental risks such as foodborne and waterborne diseases, radiation, occupational health hazards, and public health nuisances.

#### **Enlarging the Resident-friendly Environmental Health Policy**

A pilot study simulating an environmental health living lab attracting voluntary participation of residents is a participatory survey and research project conducted together with residents to find solutions to the environmental health challenges perceived by residents. Communicating environmental risks to villages will produce a map showing the types of substances released from environmental facilities in villages, as well as the amounts released, health impacts, and evacuation methods and places in case of accidents.

Health care service for victims of asbestos provides services in cooperation with local medical institutions. Nurses visit the homes of patients suffering from conditions caused by asbestos exposure to provide health checkups, education, and information on how to prevent the disease from worsening.

#### **Preventing and Managing Newly Emerging Pollutants**

Some areas of in the country’s including farming villages and cities, were turned into tourist places, and some cities and guns are receiving an increasing number of complaints from residents as a result of artificial lights during the night-time. Health damage prevention and management measures should be implemented through ordinance enactment and the promotion of education. The country’s is always with the highest risk of exposure to naturally occurring asbestos owing to its geological characteristics in Africa. For this reason, a survey on asbestos health impacts should be conducted and preventing and managing should be carried out around the identified asbestos risk areas. Radon management plan will be established for cities and guns that record high indoor radon concentration in housing in cooperation with the central government. The Honey Health Program for children should be developed and operated in cooperation with the environmental disease prevention and care center.

#### **Empowering Active Provincial Capabilities**

The community should be the ultimate actor that solves local environmental health challenges. To this end, it is necessary to run a forum on environmental health, consisting of local public and private organizations, industries, universities, and research centers, as a place to discuss the country’s environmental health issues and alternatives and evaluate the performance of country’s master plan on environmental health policy. It is also necessary to establish an organic network of administrative organizations and environmental health experts in cities and guns to implement an environmental health policy reflecting regional characteristics.

**HERE IS THE REASON WHY OLDER PEOPLE ARE MORE VULNERABLE TO DISEASES**

**Comorbid conditions and weakness in the immune system**

Older adults become more susceptible to infections due to several factors. As people get older, it is more frequent that they have comorbid conditions, such as diabetes, renal insufficiency and arthritis. Many comorbid conditions, both the number and type of comorbid conditions, predispose people to infections. Often, when people age, there is immune senescence, which means that the immune system doesn’t function as well or as vigorously. The combination of increased comorbid conditions and the decrease in activity of the immune system can make people more prone to infections. The other syndrome that occurs when people become old is frailty. When people become frail, their body mass index drops and they have a harder time functioning independently, in terms of their daily living activities. They become more prone to falls and injuries. All of these things predispose older people to infections. There is an increased association with being older and an increased risk of infection, but it probably has more to do with how successfully some people age. Some people age and they remain active and healthy, and individuals such as that probably do not have an increased risk of infections. But individuals who become frailer and more dependent on others for maintaining their health status and their daily activities, their risk for infections increases greatly.

**Health Behaviors**

This evidence indicates that, as in younger age groups, the behaviors that most significantly affect health in older people are smoking, obesity, and physical inactivity. However, the recently observed compression of morbidity cannot entirely be explained by improvements in these factors. The reduced prevalence of smoking over the past several decades is no doubt responsible in part for the fact that the elderly is healthier than they used to be. But the increased prevalence of overweight, obesity, and physical inactivity would be expected to have the opposite effect, leading to increased disability in older people.

**Smoking** is always a major risk factor for cardiovascular disease and cancer, still the leading causes of death in those over 65. **Chronic obstructive pulmonary disease (COPD)** is caused almost entirely by smoking. Osteoporosis and disorders of the mouth are also made worse by smoking. It is significant that prevalence of smoking drops off with increasing age, in part because many older people have succeeded in quitting and in part because many smokers die before they reach old age.

**Nutrition and physical activity** are the other most important determinants of health in old age. Diet and exercise affect the risk of cardiovascular disease and cancer. Overweight and obesity, the result of overnutrition and lack of exercise, increase the risk not only of the leading killers, but also of diabetes and arthritis of the weight-bearing joints. Interestingly, the percentage of the population that is overweight and obese decreases after age 75, as seen in. The reason for this is not known, but one theory is that, like cigarette smokers, obese people die at an earlier age. This may explain in part the apparent paradox between the obesity epidemic and the trend toward better health in the older population. Because obese people are more likely to report poor health than people of normal weight, it is likely that the compression of morbidity seen in recent years will be reversed unless the obesity epidemic can be halted. However, some studies suggest that the health effects of obesity in older people may be less harmful.

**Obesity** is not the only outcome of poor diet and lack of exercise. Elderly individuals need physical activity to maintain muscle strength, balance, and cardiovascular fitness, which protect them against osteoporosis and falls. The special nutritional needs of the elderly are not well understood, but adequate calcium and vitamin D are clearly important for the strength of bones and teeth. There is little evidence about the special effects of other nutrients in protecting against the diseases of the elderly, and the best advice is, as for younger people, to eat a varied diet low in fat and rich in fruits and vegetables.

**Alzhe ime r’s and Ot he r De me ntias**

Alzheimer’s disease is one of the most dreaded afflictions of old age. It robs the individual of memory and individuality, and eventually reduces him or her to the helplessness of an infant. Caring for someone with Alzheimer’s imposes a crushing emotional, physical, and financial burden on a family. Dementia among the elderly is a major public health problem, currently affecting an estimated 5.3 million people in the United States at a cost of an estimated $226 billion per year; much of this cost is for long-term care in nursing homes. A great deal of the care of patients with dementia is unpaid care provided by family members, often people who are themselves elderly. The estimated value of this informal care is nearly equal to the medical and long-term care costs of dementia patients.

Alzheimer’s is the most common cause of dementia in the elderly. Other causes include vascular dementia, which may be caused by a stroke or a series of ministrokes, which impair blood circulation in the brain. Dementia can also be caused by traumatic brain injury, certain infections, and certain toxic exposures. Diagnosing Alzheimer’s and differentiating it from other forms of dementia is done by taking a clinical history and administering question-and-answer tests of memory and skills at language and arithmetic. Brain imaging studies such as computed tomography (CT), positron emission tomography (PET), and magnetic resonance imaging (MRI) scans are also useful.

**Osteoporosis**

[Osteoporosis](https://www.everydayhealth.com/osteoporosis/guide/) can contribute to becoming less mobile and potentially disabled should you fall and have a fracture or as the vertebral bodies collapse,” Bernard said. The [National Osteoporosis Foundation](https://www.nof.org/news-events/) estimates that 54 million Americans over age 50 are affected by low bone mass or osteoporosis, putting them at risk for a fracture or break that could lead to poor senior health and reduced quality of life. What’s more, they estimate that by the year 2020 that number will rise to 64.4 million.

**Diabetes**

The [CDC](https://www.cdc.gov/) estimates that 25 percent of people ages 65 and older are living with diabetes, a significant senior health risk. According to CDC data, diabetes caused 54,161 deaths among adults over age 65 in 2014. [Diabetes](https://www.everydayhealth.com/type-2-diabetes/guide/) can be identified and addressed early with simple blood tests for blood sugar levels. The sooner you know that you have or are at risk for diabetes, the sooner you can start making changes to control the disease and improve your long-term senior health outlook.

**Oral Health**

As people age, they suffer increasingly from diseases and impairments of the mouth, including tooth loss, dental caries, periodontal disease, salivary dysfunction, cancer and precancerous conditions, and chronic pain. Such problems can have a severe impact on quality of life. They may impair the individual’s ability to chew, taste, and swallow, thereby posing a threat to physical health and nutrition far beyond the anatomical parts that are primarily affected. Like sensory impairments, disorders of the mouth may diminish social functioning by affecting speech, facial esthetics, and self-esteem. Oral health in old age, like overall health, depends on healthy behaviors throughout life, but older people can improve their health status by instituting healthier habits at any time. They can quit smoking, use better oral hygiene self-care practices, and use professional dental services. Unfortunately, many of the elderly do not have access to dental services for financial reasons, and Medicare does not cover them

**THE HEALTH EFFECT THAT IS ASSOCIATED WITH CONTAMINANTS IN THE WORK PLACE**

Workers are regularly exposed to larger amounts of toxic substances on the job than most of the population is ever likely to encounter. Consequently, workers tend to be the first and foremost to suffer from any harmful health effects caused by their exposures. Many chemicals that all people encounter in everyday life may have unrecognized effects at low doses, causing unexplained cancer, neurological disorders, and reproductive disorders in susceptible individuals. Workers, exposed to larger quantities, may inadvertently serve as the guinea pigs that call attention to the dangers.

**Cancer**

Chemicals identified as carcinogens through occupational exposures include benzidine, which caused bladder cancer in dye factory workers; arsenic, which caused lung and lymphatic cancer in copper smelters; and vinyl chloride, used to make some plastics, which causes angio-sarcoma, a rare cancer of the liver. Evidence that radiation exposure causes.

**POSITIVE AND NEGATIVE EFFECTS OF GLOBALIZATION ON ENVIRONMENTAL HEALTH**

**Positive effects**

**Information technology**

The explosion of information technology in the past 20 years has had a tremendous impact on some of the poorest and most remote areas around the world. We now live in a sort of seamless world in which one can get knowledge and information about health instantaneously, Lister said. But of course, to be able to access the Internet and other means of communication technology, people need to have access to the fundamentals such as electricity and computers.

**Globalisation can help spread the positive effects of environmentally** friendly technologies and practices from developed to developing countries. This can reduce pollution in developing countries through, for example, importing greener technologies or developing better environmental regulations and standards. However, there is debate about how far it is possible to generalise the positive impacts of globalisation on helping developing countries become more pollution-efficient, that is to generate fewer emissions relative to gross domestic product (GDP).

**Agricultural advancements**

There are more than 800 million people in the world who do not have enough food and more than one-fourth of the world’s children suffer from malnutrition, according to Daulaire. Half of child and maternal deaths in the world are a direct result of malnutrition, which leaves these people susceptible to infectious diseases and several other health problems, he wrote.

Fortunately, due to improved agricultural techniques and productivity combined with increased trade, if there is a crop failure in one part of the world, it does not necessarily mean death and famine for those people involved. According to Paul, global food production has gone up dramatically during the past 50 years.

“That has been good because global population has gone up dramatically,” Paul said.

Genetically modified food production, for example, can produce more food, but there are some negative aspects to it as well. The methodology for producing those crops, such as the use of pesticides, can have a harmful environmental side effect, Paul said. It also requires a different organization of agriculture, which drives people off the land and into the cities.

“If you have a pessimistic interpretation you could see the present system being a disaster for humanity,” Paul said. “It is already clearly a disaster for most other species and their natural habitat and that is almost certain to have a serious impact on humans sooner rather than later.”

Another aspect of agriculture on the global market that Lister noted is the inequality in favor of northern countries.

“Both America and Japan, for example, heavily subsidize their producers, which results in dumping products like sugar on the markets of the developing world at rates which totally undermine their agricultural production,” he said. “If we truly had a globalized market in agriculture, then it would be to the benefit of developing nations. It is not globalization that is bad as such, but how we implement it. You have to do it fairly and with a bit of heart.”

**Poverty Eradication**

Before globalization, developing countries have had plenty of resources which they didn’t know how to use. Their population was uneducated as well as there were no roads or means of transport. Nowadays people understood the significance of education and standards of living as foreigners settled in these countries. Consequently, locals went to schools established by the settlers and got employment in their companies and industries. Some of them went abroad for further studies. They were able to raise the living standard of their families by using new knowledge. Today, due to globalization, companies established by locals of some developing states are the major competitors of those from developed states. Although the fight against poverty is not over, there is a great improvement.

**Availability of Employment**

Most developed countries have lots of educated jobless people. Globalization gives them job opportunities in other countries. Their primary advantage over the residents of the developed countries is the fact that they offer cheap services. They are also open to learning as they consider themselves lucky to have a new life.

**Education**

Globalization has enabled further studies. Most developed countries have advanced schools and colleges. They encourage people from overseas to study there. While it is just a business venture like any other, students from developing countries take it as an advantage to get further education and skills to use in their careers. The investors from developed countries settle abroad with their families, what’s more, they want to have good schools for their children. As a result, they donate to local schools, advance the curriculum and hire qualified teachers. Following this way, most developing countries have very advanced high schools and universities. There is no need to move to developed states to seek education because it is readily available in these countries. Enhanced education is a positive impact of globalization in developing countries. The governments of most developing nations provide free training to encourage parents to school their children. Education is compulsory in most developing countries due to globalization because, without it, investors and traders would have a hard time hiring locals.

**Technology**

Globalization has helped to transport technology to developing countries. Some investors and foreigners who have got a bargain with the people from developing countries needed to communicate with them and exchange ideas as well as information. The fastest way to do it was through using of modern technology. It has greatly helped people from developing countries. Most of them can buy and sell goods online at a low price. They work remotely with companies in developed countries. Interaction with people through social media, the Internet and other platforms have opened new horizons on how to improve standards of living. Media coverage has attracted lots of volunteers from developed countries. Consequently, most people can satisfy their basic needs such as food, clothing or medicines.

**Foreign Investments**

Globalization brought in the need for people from developed states to invest in some developing countries. Foreign investment is one of the results of globalization that culminates in many developments in these countries. For instance, some investors want raw materials and goods to be transferred faster to the industry and the market respectively. The only way to do this is to help each government in the building of efficient infrastructure. The local people get jobs from these industries and companies established in their country. Investors boost the country’s economy by paying taxes to the government. They help to improve institutions such as schools and hospital through the government agencies which benefits the locals and their family members.

**Negative effects**

**Acid Rain**

Acid rain is produced when two common air pollutants—sulfur dioxide and nitrogen dioxide—react with water to form sulfuric acid and nitric acid. In the United States, the industrial areas of the Midwest are a major source of the pollutants that acidify rainfall in the East, since prevailing winds blow from west to east. Acid rain in eastern Canada resulting from U.S. air pollution has been a cause of diplomatic tension between the two countries. The environment in Europe, the former Soviet Union, and southern China— everywhere that coal and oil are intensively used—is also seriously affected by acid rain.

Acid rain damages forests, reduces crop yields, and corrodes surfaces of buildings and statuary. It turns the water in lakes and rivers acidic, killing freshwater shrimp, wiping out bacteria on lake bottoms, and interfering with fish reproduction. Some lakes are so acidic that they can no longer support life: All fish species disappear, as do most frogs, salamanders, and aquatic insects. Because many metals, such as aluminum, lead, copper, and mercury, are soluble in acid, the increasing acidity of water may lead to toxic levels of metals in drinking water supplies.

**Depletion of Ozone Layer**

Depletion of the **ozone layer** is another manifestation of the global effects of certain air pollutants. Ozone, which is so harmful to respiratory systems at ground level, is a natural component of the upper atmosphere that provides a layer of protection against ultraviolet radiation. The detection of **chlorofluorocarbons (CFCs)** in the ozone “hole” which opened over Antarctica in the early 1980s convinced scientists that these chemicals, which were used as refrigerants and spray can propellants, were responsible for the breakdown of ozone. Being very stable, CFCs drift upwards to the ozone layer, where they may cause damage for many decades. The increased ultraviolet radiation that reaches ground level is causing greatly increased rates of cataracts, already a major cause of blindness in the world, and skin cancer. It also has harmful effects on other organisms, including food crops, and could be a major threat to life on the planet

**Climatic Change**

There are potential risks of global climate change to health, for example, in the geographical range of vector-borne infectious diseases such as malaria. Climate change can therefore bring about a greater spread in infectious diseases. Many of the biological organisms and problems linked to the spread of infectious diseases are especially influenced by fluctuations in climate variables, notably temperature, precipitation and humidity (WHO, 1997; 2006).

**Globalization and Emerging Environmental Health Risks**.

Globalization brings new environmental health risks such as rise of non-communicable diseases (coronary heart disease, cancers) and forms of substance abuse such as alcoholism, and tobacco – related diseases (Lee 2000). It is also time that globalization is changing the nature of infectious disease. Lee (2000) highlighted most recently in the case of SARS and Avian Flu. Infectious diseases such as tuberculosis, malaria, plague and cholera are interpreted as re-emerging. For example, WHO (1997) explained that the re-emergence of malaria is seen in areas (developed and developing countries) where it had been thought it was eradicated. Also, there are other newly emerging diseases like HIV, Ebola, SARS and Avian Flu (WHO, 2006). However, with the increase in global travel, tourism, population migration and displacement, other diseases like malaria and cholera, HIV are proving to be public and environmental health threats (Lee, 2000). The increase and intensification of worldwide mobility in both people and trade also has key public health risks and implications for the transportation of food (expired/contaminated) and the increased incidence of transborder food-borne-diseases (Labonte & Torgerson, 2005; WHO, 2006).

**Global Inequalities in Health**

Globalization is seen as exacerbative inequalities of resources (Lee, 2000). These inequalities in wealth and income are growing at an unprecedented rate, not only among countries, but also within most of developed and developing countries. For example, the largest growth in income inequality in Eastern Europe and countries in the former Soviet Union has had a major impact on the resurgence of tuberculosis and there has been a large and significant impact on life expectancy and personal security (United Nations Development Programme, 2001). Furthermore, a deficient of social capital (social networks and civil institutions) adversely affects the prospects of health by predisposing to weakened rich-poor gaps, inner urban decay, increaased drug trade and weakened environmental health systems (Mc-Michael & Beaglehole, 2000).

**Globalization encourages deforestation.**

Deforestation is an indirect but very significant cause of the greenhouse effect. Clearing and logging reduce the volume of CO2 that plants convert into oxygen. This translates into an equivalent increase in the volume of CO2 in the atmosphere and thus adds to the greenhouse effect. And burning the cleared wood releases vast quantities of CO2. In total, estimated emissions from deforestation represent some 20% of the increased concentration of GHG in the atmosphere. Between 1990 and 2005, the world lost 3% of its forests. Some 200 km2 of forest land – twice the size of Paris – disappears each day. Globalisation is often an ally of the chainsaw. Deforestation is mainly due to the conversion of forests into agricultural land, especially in developing countries. Take Brazil: for a little over a decade, much of its agriculture was export-oriented. Between 1996 and 2003, Brazilian soy exports to China rocketed from 15 000 to 6 million tonnes. This dynamism involved deforestation and converting part of the rainforest into farmland.

**By impoverishing biodiversity**

A large number of species have become extinct in recent decades. Again, the link between the extinction of some species and globalisation is indirect. Human activities (particularly industry, because of its pollution of ecosystems), urban sprawl, farms and mining – which displace certain species – are not in and of themselves the result of globalisation. But globalisation implies the multiplication of distribution channels, creating new needs and new demand for products that are used around the world. It accentuates industrialisation and the quest for and exploitation of new lands, subsoil and resources, thus weakening many ecosystems. The example of fishing is particularly telling. Overfishing has emptied the oceans of some fish species. Stocks of Atlantic cod – formerly one of the most abundant species in Canadian waters – collapsed in the 1970s, decimated by overfishing and rising global demand. Mediterranean bluefin tuna has met with the same fate. Considered a delicacy in Japan, it’s threatened with extinction from overfishing. According to the International Union for Conservation of Nature (IUCN), 22% of the world’s mammals are threatened with extinction today, as well as 24% of the world’s snake species, 31% of the world’s amphibians and 35% of the world’s birds.

**Infectious diseases**

One of the negative sides of globalization is the increase in emerging and re-emerging infectious diseases. For example, tuberculosis was thought to have been eradicated in the 1950s, only to re-emerge in the 1980s. One of the reasons for this is the increasing resistance to drugs. AIDS also is a great concern worldwide.

According to Martin, there are numerous ways to look at this downside of globalization and one way is to divide it into communicable and noncommunicable diseases. For example, severe acute respiratory syndrome (SARS) virus, a communicable disease, has the capability of rapidly spreading around the world.

“Fortunately, there was a vigilant response from the World Health Organization (WHO), as well as individual nation states and the epidemic was controlled,” Martin said.

Yet Martin believes that the world is going to see more and more of this type of epidemic.

“We are likely to see a flu epidemic in the near future, which could have devastating effects, particularly on the poor,” he said.

**Unemployment**

In almost all developing countries over half of the working population relied on casual jobs in industries until globalization took root. The advancement of technology has reduced such employment and increased global need for skilled professionals. Majority of people in developing countries don’t have skills, while the available jobs are poorly paid due to high demand caused by globalization. Most of the people are left unemployed and unable to meet their basic needs resulting in increased criminal activities such as burglary, pickpocketing, murder and drug abuse. The rate of unemployment and poverty keeps growing as the gap between the rich and the poor widens.

**Increased Lifestyle diseases**

Globalization has brought in the consumption of processed foods; planting crops using chemicals to minimize the duration of growth and increase profit. In order to benefit from business, animals such as the cows are fed on chemicals that make them produce a lot of milk or increase in weight for those that are sold for the meat industry. Due to increased ingestion of chemicals from foods, chronic diseases are on the rise. The mortality rate is high. Furthermore, there is a reduction in the lifespan in the developing countries.

**Conclusion**

The emerging picture of environmental health risks is changing fast in the face of modernity (Giddens, 1990). Can environmental health keep up with the pace of change brought about by globalization? A more pertinent question is - ‘What role can the environmental health practitioners play in utilizing the positive forces of globalization and or alleviating its more negative effects?’. The environmental health practitioners must identify the newly emerging issues that are unpinging on their practices that can be directly or indirectly related to globalization. They should be concerned with the threats the global society and a global level trade system pose to environmental health. This issue throws up key questions surrounding inequalities, global climate change, global working conditions, regulations and so on. Similarly, the environmental health practitioners must

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