

Special Session 2

Health Risks of Environmental Degradation in China

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China's rapid economical growth has come at huge costs of environmental and human health. A China Ministry of Health report reveals that in 2003, the costs of medical care increased to 1,200 billion Yuan, 10.3% of annual GDP, exceeding the growth of GDP.

I. Sand Storm and Air Pollution

1. Sand Storm:

According to historical records, from 300 BC (early West Han Dynasty) to 1990, over a period of 2,196 years, China experienced 140 times serious sand storms, an average of each in 15.7 years. In Gansu province, 60 times sand storms occurred between 1950 and 2000, of which 20 times were in 1990s. Overall, the country experienced sand storms 15 times in 2000; 18 times in 2001. And in 2006, sand storms occurred as early as in late Feb.

Sand storms help spread Foot-and-mouth disease and move large number of harmful bacteria across borders.

2. Air Pollution:

World Bank estimates heavy air pollution contributes for respiratory diseases that killed up to 300,000 a year in China.

Regions with serious air pollution have 8.8 times higher lung cancer rate. Besides, air pollution tends to have larger impact on health of newborns and children.

II. Marine Pollution

1. Red Tides:

Harmful bacteria affect human health through food chain

In 2005, there were more red tides in the marine areas in China over the previous years. The occurrence time of the red tides was earlier than the conventional years and the key bio-species of the red tides increased. The total number and affected areas of the red tides increased significantly. There were altogether over 100 times of red tides found in the marine areas in the whole country. The offshore and coastal zones in Zhejiang, Liaoning, Guangdong and Fujian provinces are the ones with frequent red tides, mainly affected by inorganic nitrogen and phosphate. The red tides covering large areas mainly happened in East Sea, Bo Sea and Yellow Sea.

2. Mercury:

Mercury that contaminates water bodies and soil comes from coal-fired power plants along Chinese coasts. Now the country has become one of the world's largest source of mercury emissions. China's 600 tons of annual mercury emissions account for nearly 25 percent of the planet's anthropogenic sources. Besides, industrial use of mercury in the manufacture of plastics, paper and batteries also has led to the resultant discharge of contaminated effluent into lakes, rivers and the sea.

Lots of marine organisms have been contaminated by mercury polluted sea water. As mercury moves up the food chain of fish species, it accumulates. As a result, larger predator fish, such as sharks, tend to contain higher levels of mercury.

Shark fin soup is popular seafood for most Guangdong residents since it is considered capable of increasing potency. At Garden Hotel, a local five-star hotel, a bowl of shark-fin soup is sold at 600 Yuan, and the hotel can sell 50 bowls a day. According to a manager of the hotel's kitchen, each bowl uses 200 grams of shark fin, and the hotel consumes 10 kilograms a day. Studies show that consumption of the delicacy in this province's capital city Guangzhou amounts to hundreds of tons each year.

III. Loss of Wetland; Wildlife Consumption and Infectious Disease

Loss of wetland has been forcing migratory birds onto alternative sites like farm pond where they come to a closer contact with chicken, ducks and geese.

Wild bird markets are often part of wider domestic markets, so exposure to infected domestic poultry, which is believed to be one source of the disease, is certainly an on-going risk.

Trade in wildlife provides disease transmission mechanisms at levels that not only cause human disease outbreaks but also threaten livestock, international trade, rural livelihoods, native wildlife populations, and the health of ecosystems. Live wildlife in markets in Guangzhou, China, trade in masked palm civets, ferret badgers, barking deer, wild boars, hedgehogs, foxes, squirrels, bamboo rats, gerbils, various species of snakes, and endangered leopard cats, along with domestic dogs, cats, and rabbits. After the outbreak of SARS in 2003, about 838,500 wild animals were reportedly confiscated from the markets in Guangzhou.

Since 1980, over 35 new infectious diseases have emerged in humans at the frequency of one every 8 months.

IV. Water and Toxic Pollution

1. Water pollution:

China today approximately 700 million people-over half the population-consume drinking water contaminated with levels of animal and human excreta that exceed maximum permissible levels by as much as 86% in rural areas and 28% in urban areas. The critical deficits in basic water supply and sewage treatment infrastructure have increased the risk of exposure to infectious and parasitic disease and to a growing volume of industrial chemicals, heavy metals, and algal toxins.

2. Three Gorges Dam:

Rising pollution levels in China's Three Gorges reservoir, with 31 million people living in the area, are increasing the risk of an ecological and public health disaster. After water started to accumulate in the reservoir, the flow rate of the Yangtze river dropped, resulting in a decreased ability of the river to clean itself. At present only 20 percent of the polluted water, flowing into the reservoir is being treated. The most serious health threat is that schistosomiasis could become established in the reservoir area. This parasitic disease persists along the Yangtze despite a 40-year control program, with endemic areas only 40 km below the dam as well as 500 km above Chongqing.

3. Toxic

a. E-waste: Geenpeace investigation to E-waste workshops shows conclusively that all stages in processing the e-waste enable toxic chemicals, including heavy metals, to be released into the workplace and into the surrounding environment. Concentrations of lead in dust samples collected from some workshops in China were hundreds of times higher than typical levels of household dusts. Contamination was not limited to the recycling yards; dust collected from the homes of two e-waste recycling workers in China had higher levels of heavy metals, particularly lead, compared to dust collected from one neighboring house with no link to e-waste recycling.

b. Ship-breaking:

In China's ship-breaking yards, workers were either not completely or insufficiently protected against toxic and hazardous materials. Toxic waste is burnt in open fires. Asbestos was removed without proper protection for workers. The carcinogenic material was sold for re-use to industries producing heating systems. Oil, heavy metals and other toxic substances heavily polluted yards. Pollution has spread outside the yards as well. Studies proved that toxic substances from old ships also pollute sediments of the Pearl and Yangtze River.

V. Environmental Health Approaches:

What We Need to Do:

- a. Support legislation on environment and health issues
- b. Push for governmental actions
- c. Empower local communities and grow local efforts
- d. Journalism training and media outreach
- e. Empower Women groups and participation
- f. Environmental "Bar Foot Doctors" campaign
- g. Environmental and human rights litigation
- h. Guandong Wildlife Campaign