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On the brink of a disaster

Mercury pollution of India

New Delhi, November 7, 2003: Mercury, a very toxic and dangerous substance, has severely contaminated land, water, air and the food chain throughout India. At a conference recently organised by the Centre for Science and Environment (CSE) on mercury pollution in the country, Dr R C Srivastava, co-chairperson of the United Nations Environment Programme's (UNEP) Chemicals Working Group, said that mercury contamination in India is reaching alarming levels largely due to the discharge of mercury-bearing industrial effluents ranging from 0.058 to 0.268 milligram/litre (mg/l). This is several times more than the prescribed Indian and WHO standards of 0.001 mg/l (for drinking water) and 0.01 mg/l (for industrial effluents).

Compiling all studies of mercury monitoring done by government agencies, research institutions and NGOs, CSE has mapped the regions that are critically polluted by mercury in India*. What the map shows is very distressing:

- High levels of mercury in fish stocks have been found, mainly in coastal areas. Mumbai, Kolkata, Karwar (in Karnataka) and North Koel (in Bihar) are some of the severely affected areas.
- In Mumbai, mercury levels in fish were 0.03-0.82 mg total Hg/kg dry weight (dw); crabs had 1.42-4.94 mg total Hg/kg dw mercury compared to the permissible limit of 0.5 mg/kg.Mercury levels in oysters in Karwar ranged from 0.18-0.54 mg/kg dw.The North Koel river showed mercury concentrations almost 600-700 times above the limits.Mercury in ground water and surface water was detected from across the country: Delhi, Mumbai, Vadodara, Vapi, Ankleshwar, Bhopal, Panipat, Singhrauli, Ganjam, Dhanbad, Durgapur, Howrah, Medak… the list stretched on endlessly.Levels higher than the permissible limits were found near chlor-alkali, cement and chemical units and thermal power plants

The chlor-alkali sector, the biggest known consumer of mercury in India, released about 79 tonnes of the toxin into the atmosphere between 1997-2000. According to Dr Srivastava, chlor-alkali industries located on river basins in eastern India have released 60-320 times more mercury than the permissible limit into the rivers.

Mercury is poisonous in all forms - inorganic, organic or elemental. Methyl mercury is a neurotoxicant: it can damage the developing brain as it crosses the placental and blood-brain barriers easily. The threat to the unborn is, therefore, of particular concern. It can also trigger depression and suicidal tendencies, paralysis, kidney failure, Alzheimer's disease, speech and vision impairment, allergies, hypospermia and impotence. Even miniscule increases in methyl mercury exposures may adversely affect the cardiovascular system, says the UNEP's Global Mercury Assessment report. It is also a possible carcinogen for humans, according to the International Agency for Research on Cancer.

With rising mercury imports continuing unabated, and a pollution problem that has already assumed gargantuan proportions, India sits on the brink of a disaster. How much longer before we realise that our lives - and the lives of our future generations - are not expendable? How much longer before we recognise this danger and act?

*** The mercury hotspots map:** This map of India denotes the regions (marked by blinking red dots) that have been most severely afflicted by mercury contamination. Moving the cursor to these dots opens windows of vital site-specific data. The map also notes the

locations of chlor-alkali units, thermal power plants and cement industries in the country.

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http://www.cseindia.org/dte-supplement/mercury-index.htm

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