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Toxic Chemical Exposure Costs California \$2.6 Billion

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By Katherine Torres

The Californian government's inadequate oversight of hazardous chemicals is sickening thousands of workers and children each year and costs the state an estimated \$2.6 billion in medical expenses and lost wages, according to a report released by researchers at the University of California.

The report, "Green Chemistry: Cornerstone to a Sustainable California," reveals more than 200,000 California workers were diagnosed with deadly, chronic diseases, such as cancer or emphysema, in 2004. These diseases were attributed to chemical exposures in the workplace. Another 4,400 workers died as a result of those afflictions.

The new findings, based upon well-established methodology for analyzing economic impact, indicated that those diseases resulted in \$1.4 billion in both direct medical costs and indirect costs that include lost wages and benefits.

An additional \$1.2 billion in direct and indirect costs is attributed to 240,000 cases of preventable childhood diseases in California related to environmental exposure to chemical substances, the report says.

The California EPA commissioned the UC Berkeley and UCLA Centers for Occupational and Environmental Health (COEH) to prepare the report.

"This report, for the first time, puts cost estimates on the consequences for Californians of current chemical and product management policies," said Dr. John Balmes, COEH director, UC Berkeley professor of environmental health sciences and UCSF professor of medicine.

Health Problems Predicted to Grow

The report presents data from the state's Department of Toxic Substances Control showing that 61 of the state's 85 largest hazardous waste sites are leaking toxic material directly into groundwater. In addition, an estimated 1 million California women of reproductive age have blood mercury levels that exceed what the federal EPA considers safe for fetal development. Biomonitoring studies detected more than 100 synthetic chemicals and pollutants in breast milk, umbilical cord blood, and other bodily fluids and tissues, the report says.

With global chemical production predicted to increase 330 percent by 2050, health problems related to environmental contamination are likely to grow unless comprehensive steps are taken now, say the report authors. Green chemistry – the use of renewable and safer raw materials, manufacturing processes and products – offers a sustainable solution, according to the report.

"Research conducted in the past decade has provided ample evidence of significant health impacts from exposure to toxic chemicals," said John Froines, COEH director at UCLA and professor of environmental health sciences. "It is timely for California to reduce the use of toxic agents through innovative technological approaches available through green chemistry. New policies that prevent hazards rather than cleaning up problems after the fact will foster innovation and help green chemistry emerge as a central part of our economy."

Steps for Policy Reform

The report calls on California to lead the nation in implementing a comprehensive approach to the management of chemicals and products. Policy recommendations include:

- Passing new laws to remedy the insufficient data available on the toxicity of chemicals so California businesses, regulators and consumers can make informed choices about the products they use.
- Providing California agencies with a new legal framework to enable them to act when there are reasonable concerns about a product's safety, even when complete hazard or tracking data are unavailable.
- Investing in the design of chemicals, materials and manufacturing processes that are inherently safer for humans.

Some of these recommendations echo a 2006 UC report to the California Legislature on green chemistry policy, which contributed to the introduction of new state legislation in 2007 to require improved reporting on the sale of high quantity chemicals and reductions in some uses of the most toxic chemicals.

That legislation is expected to be reintroduced in 2008.