

Greenlist Bulletin

From the Toxics Use Reduction Institute
at the University of Massachusetts Lowell

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This is the weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to jan@turi.org if you would like more information on any of the articles listed here, or if this email is not displaying properly.



Wasting Our Waterways 2012: Toxic Industrial Pollution and the Unfulfilled Promise of the Clean Water Act

[Source: Environment America, March 22, 2012](#)

Five states -- Indiana, Virginia, Nebraska, Texas, and Georgia - account for forty percent of the total amount of toxic discharges to U.S. waterways in 2010, according to a new report released today by Environment America. Wasting Our Waterways: Industrial Toxic Pollution and the Unfulfilled Promise of the Clean Water Act also reports that 226 million pounds of toxic chemicals were discharged into 1,400 waterways across the country.

The Environment America report documents and analyzes the dangerous levels of pollutants discharged to America's waters by compiling toxic chemical releases reported to the U.S. EPA's Toxics Release Inventory for 2010, the most recent data available.

Major findings of the report include:

- Pollution from just five states-Indiana, Virginia, Nebraska, Texas, and Georgia-accounted for nearly forty percent of the total amount of pollution dumped into our waterways in 2010;
- Food and beverage manufacturing (slaughterhouses, rendering plants, etc.), primary metals manufacturing, chemical plants, and petroleum refineries were some of the largest polluters. AK Steel dumped the most toxic pollution: nearly 30 million pounds-into our waterways in 2010;
- In 2010, industries discharged approximately 1.5 million pounds of cancer-causing chemicals, like arsenic, chromium, and benzene, into America's waterways. Nevada's Burns Creek received the largest volume of carcinogens in 2010, while neighboring Mill Creek placed third.
- Nitrates accounted for nearly 90 percent of the total volume of discharges to waterways reported in 2010.

Nitrates are toxic, particularly to infants consuming formula made with nitrate-laden drinking water, who may be susceptible to methemoglobinemia, or "blue baby" syndrome, a disease that reduces the ability of blood to carry oxygen throughout the body.

Environment America's report summarizes discharges of cancer-causing chemicals, chemicals that persist in the environment, and chemicals with the potential to cause reproductive problems ranging from birth defects to reduced fertility. Among the toxic chemicals discharged by facilities are arsenic, mercury, and benzene. Exposure to these chemicals is linked to cancer, developmental disorders, and reproductive disorders.

[Download the report](#)

Communicating hazards

[Source: Chemical & Engineering News, March 26, 2012](#)

Author: Cheryl Hogue

New warning labels and standardized descriptions of chemicals' hazards are coming to U.S. labs, factory floors, and other workplaces. Through a regulation released last week, the Occupational Safety & Health Administration is bringing U.S. requirements for communicating chemical safety information to workers in line with an international system.

Governments, businesses, and labor groups worked through the UN to develop the Globally Harmonized System with the aim of protecting human health and facilitating trade. Thus far, 67 countries have adopted at least part of it.

Labor Secretary Hilda L. Solis says OSHA's revised hazard communication standard "will improve the quality, consistency, and clarity of hazard information that workers receive, making it safer for workers to do their jobs and easier for employers to stay competitive in the global marketplace." She adds, "Exposure to hazardous chemicals is one of the most serious dangers facing American workers today."

The agency's move will require chemical makers and importers to use warning symbols that were developed through the United Nations. Called pictograms, the symbols are designed to communicate chemical hazard information to workers regardless of whether they can read or the language they use.

Companies will also have to incorporate standardized language in the material safety data sheets they provide to customers about products' hazards. Currently, each producer may choose the wording for its safety data sheets. In some cases, the description of a substance's hazard varies substantially among safety data sheets from different suppliers, says Michael J. Wright, health, safety, and environment director for the United Steelworkers, which represents chemical and refinery workers.

Clean & green: best practices in photovoltaics

[Source: As You Sow, March 28, 2012](#)

A new report highlights the best practices of photovoltaic (PV) manufacturers to protect workers and the environment during the production of solar panels. It also analyzes investor considerations regarding environmental, social, and governance practices for responsible management of PV companies.

The report, Clean & Green: Best Practices in Photovoltaics, was released by As You Sow, a nonprofit organization that promotes corporate responsibility through shareholder advocacy and innovative legal strategies. Along with highlighting how solar manufacturing companies are reducing environmental, public health, and safety risks, the report offers steps companies can

take to ensure clean production and fiduciary responsibility.

Historically, the solar industry has faced hurdles competing against fossil fuels on cost, and the industry faces additional challenges because large-scale manufacturing of solar panels currently requires the use of several compounds that are toxic to humans or the environment.

"Even though there are toxic compounds used in the manufacturing of many solar panels, the generation of electricity from solar energy is much safer to both the environment and workers than production of electricity from coal, natural gas, or nuclear," said Amy Galland, PhD, Research Director at As You Sow and author of the report. "For example, once a solar panel is installed, it generates electricity with no emissions of any kind for decades, whereas coal-fired power plants in the U.S. emitted nearly two billion tons of carbon dioxide and millions of tons of toxic compounds in 2010 alone."

The report was compiled from a survey of over 100 solar manufacturers around the world, and best practices were determined via consultation with scientists, engineers, academics, government labs, and industry consultants.

[Download the report](#)

Environmental Health Perspectives' bisphenol A collection

[Source: Environmental Health Perspectives, 2012](#)

Bisphenol A (BPA) is a component of polycarbonate plastics and epoxy resins and is one of the highest volume chemicals produced globally. Researchers have found this chemical in many places in the environment, including the drinking water, air, food, and house dust. Many studies also have shown that BPA has estrogenic activity in several in vitro and in vivo preparations. The possibility that exposure to BPA might be associated with adverse health effects in humans has prompted safety evaluations by regulatory agencies in the United States and the European Union.

Both the U.S. Food and Drug Administration (FDA) and the European Food Safety Authority (EFSA) have declared that exposure to BPA is safe at current levels. However, these decisions have been challenged by some members of the environmental health science community on the basis that hundreds of potentially relevant studies were summarily excluded from the risk assessment.

It is clear that BPA continues to be a topic of interest to the toxicology and regulatory communities. For this reason, EHP has developed this collection of BPA-related commentaries, reviews, and research articles published in the journal between 2007 and 2011; we capped the collection at the past five years for the sake of timeliness and maneuverability.

The collection is divided into four sections: Toxicology, Epidemiology, Exposure, and Regulatory. Abstracts are provided for each article as well as a hyperlink to the full article on EHP's website (<http://www.ehponline.org>). Readers can also search the website for additional information on BPA, including editorials, correspondence, and news.

[Download the BPA Collection](#)

Driving green practice adoption in the logistics industry

[Source: Network for Business Sustainability, March 12, 2012](#)

Much research has focused on green technologies and management practices in the manufacturing industry. But how do companies in other parts of the supply chain "go green"? Logistics companies provide services such as warehousing, transportation, inventory management, order processing and packaging, implying they can have a substantial environmental footprint. As many are also small businesses (82 percent of firms surveyed had fewer than 300 employees), logistics firms can be dogged by resource and knowledge constraints.


Chieh-Yu Lin and Yi-Hui Ho (both of Chang Jung Christian University, Taiwan), using regression analysis, analysed the factors that influence the adoption of green practices within the logistics industry using a survey of 322 logistics firms in the Shanghai and Shenzhen areas of China. Green practices investigated include the adoption of fuel efficient vehicles, electricity management systems and solar energy systems.

The role of organizational factors (firm size and quality of HR systems, for example), the business context (pressure from customers or government and uncertainty in the business setting) and technological factors are investigated. Technological factors, such as the relative benefits of new technologies and innovations, how well suited they are to a firm's needs and how easy they are to understand and use, are a relatively new focus for research.

The results show that technological factors can impact green technology adoption: firms were more likely to adopt green technology and practices when they offered an advantage and were well suited to a business. Complex practices were less likely to be adopted by firms. Green practices were also more likely to be adopted if firms provided organizational support, such as extra resources and training, increasing employee motivation for adoption and when they were subjected to regulatory pressures and/or received government support.

Uncertainty in the business setting, in the form of frequent and unpredictable changes to technology or customer preferences, inhibited firms from adopting green practices. Customer pressure is not as significant a factor in the adoption of green practices for logistics firms as it is for manufacturing firms. This is likely because they are further down the supply chain and seen as "removed" from the manufacturing process.

[Read more](#)



You are welcome to send a message to jan@turi.org if you would like more information on any of these resources. Also, please tell us what topics you are particularly interested in monitoring, and who else should see Greenlist. An online search of the TURI Library catalog can be done at <http://library.turi.org> for greater topic coverage.

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