

Pricing Pollution: An Overview

Vinyl plastic is a bargain. Chemicals bring good things to life. Nuclear power will be too cheap to meter. We've all heard these claims of cost-effectiveness for environmentally destructive practices, technologies or chemicals. You know that industry is not taking into account all the "true costs" when they make these claims, and government and industry do not fully account for the price of pollution. What are the real costs of environmental damage? What are the health costs of using chemicals?

Vinyl is unacceptably expensive when you take into account the serious health threats and environmental damage it causes from production to disposal. The true costs of using toxic chemicals in products should include increased illnesses to workers and consumers and water and air pollution. The nuclear industry neglects to include the astronomical cost of taking care of highly radioactive waste that is dangerous for tens of thousands of years.

CHEJ's **True Cost Environmental Tool Kit** provides you with information on how organizations are uncovering the true costs of environmentally hazardous chemicals and technologies. Fact sheets by experts describe the powerful tool of precautionary economic analysis and studies looking at the costs of environmental disease. Links are provided to 16 studies that have uncovered the real costs of environmental hazards, including the health-related costs of using toxic chemicals.

"These studies correct some of the huge distortions of current cost-benefit analyses," notes Nancy Myers of the Science & Environmental Health Network.

"These studies give weight and reality to the costs and benefits that fall to the public and to the commons, as opposed to industry and developers. They put numbers where there have been none before, or where they have been ignored. We don't want to get trapped in trying to prove everything by the numbers and assigning a price to things that are beyond monetary value, like health and life. But avoiding economic analysis can lead to the assumption that all economic arguments favor industry and economic enterprise as we know it. And they do not. Studies that put numbers to the cost of harm and the benefits of precaution can give policymakers a rationale for rejecting arguments that privilege "the economy" over health and wholeness."

Precautionary economic analysis also recognizes some things are priceless.

"Economic analysis has had its successes and made its contributions," Lisa Heinzerling and Frank Ackerman wrote in *Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection* (Georgetown University, 2002). "It has taught us a great deal over the years about how we can most efficiently and cheaply reach a given environmental goal. It has taught us relatively little, however, about what our environmental goals should be. Indeed, while economists have spent three decades wrangling about how much a human life, or a bald eagle, or a beautiful stretch of river is worth in dollars, ecologists, engineers, and other specialists have gone about the business of saving lives and eagles and rivers, without waiting for formal, quantitative analysis proving that saving these things is worthwhile."

When CHEJ learned about this new tool at workshops held at the First National Conference on Precaution in 2006, we decided to apply it to toxic waste cleanup costs. We worked with a coalition of grassroots environmental groups concerned about getting a safe clean up of the large West Valley nuclear waste site, located south of Buffalo, NY. The federal government was poised to select the "cheapest" cleanup—leaving vast amounts of buried radioactive waste on site in a region of the Great Lakes with severe erosion problems. Our coalition convinced the local state Senator to obtain \$90,000 in legislative funds and economists and scientists were hired to do an independent full-cost accounting study of the two cleanup options for the site. *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* in 2008 found leaving buried nuclear waste at the site can cost \$27 billion or more while endangering public health for thousands of years. The first-ever study looked at the site of the country's only failed commercial reprocessing facility, and found a waste excavation cleanup costs an estimated \$9.9 billion versus \$13 to \$27 billion if buried waste is left onsite for 1,000 years.

The study looked at the "full costs" of cleaning up waste, included the costs of controlling erosion to try and safeguard buried waste areas, and the costs of water pollution and increased cancers if waste leaked from the site. The study proved that it was cheaper and more cost-effective to dig up the nuclear waste and store it above-ground, instead of leaving huge amounts of highly radioactive waste to eventually leak into Lake Erie. The study helped educate the public and policymakers about the economic and environmental benefits of a safe cleanup.

Here are few more kinds of "true cost" studies.

Costs of Environmental Illnesses

These studies look at the costs of diseases related to environmental exposures, such as air pollution and toxic chemicals. For instance, *Environmental Pollutants & Disease in American Children* by Landrigan et al. in 2002 examined lead poisoning, asthma, cancer and neurobehavioral disorders and estimated annual costs range from \$48 to 64 billion: \$43 billion for lead poisoning; \$2 billion for asthma; \$.3 billion for childhood cancer; and \$9 billion for neurobehavioral disorders.

Some organizations have done state-focused studies to show the health impact costs of using toxic chemicals. For instance, the *Costs of Preventable Childhood Illness: The Price We Pay* by Rachel Massey and Frank Ackerman of Tufts University in 2003 found preventable childhood illnesses attributable to environmental factors impose staggering costs on Massachusetts society with estimates ranging up to \$1.6 billion annually.

Uncovering Hidden Costs

Some studies look at the concealed costs of technologies or proposed projects. For instance, *Easy Money, Hidden Costs: Applying Precautionary Economic Analysis to Coalbed Methane Exploitation in the Powder River Basin* by the Science and Environmental Health Network in 2004 found this large-scale project in WY and MT

would bring no net economic gain to the public, and would bring huge harms and risks, including threats to water resources and a permanently scarred landscape.

Similarly, some studies have investigated the economic benefits of ecosystem restoration. For instance, *Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem* by the Brookings Institution in 2007 summarized the major findings of a more in-depth study on the benefits and costs of cleaning and preserving the Great Lakes ecosystem, and found restoration is likely to produce economic benefits well in excess of its costs.

True Costs of Chemicals

Some studies have explored the true costs of using hazardous toxic chemicals. For instance, the *Five Chemicals Alternatives Assessment Study* by the Toxics Use Reduction Institute, University of Massachusetts Lowell, in 2006 found industry could replace five hazardous chemicals with cheaper and safer alternatives. *The Economics of Phasing Out Vinyl* by Frank Ackerman and Rachel Massey of Tufts University in 2003 found the economic advantages of PVC (polyvinyl chloride) are overstated, and substituting vinyl with safer alternatives is cost-effective and practical.

One analysis looked at the liability incurred by using chemicals in products. *Cross-Cutting Effects of Chemical Liability from Products* by Innovest in 2007 found electronic, cosmetic, and pesticide manufacturers are among the many companies that could face a loss of market share and access to major markets due to "toxic lockouts."

CHEJ will be adding more resources, fact sheets and studies to the Tool Kit in the future.

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