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#154 - How To Achieve Pollution Control? Zero Discharge vs. 'Prove Harm'
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What are the goals of the grass roots movement for environmental justice? Surely one goal is pollution control. How can we get there?

There are two fundamental philosophies of pollution control: total containment vs. partial abatement. We have written before about total containment (see RHWN #106); it is the principle of no dumping, or zero discharge, which says, "All peaceable people (that excludes criminals) are entitled to hold themselves and their property free from coercion, intrusion, and fraud, provided they secure the identical right for each other. This definition of human rights clearly prohibits people who own property from letting it intrude on anyone else's body or property, which includes the common air and water... It is not the obligation of other humans to prove that the dumping would be lethal or even a hazard at all. There is just no right to let your property intrude on others, and you'd better consider that before you make it or buy it." Zero discharge is allowed; anything more than zero will draw a penalty.

The alternative, which we call "prove harm abatement," is what the U.S. has been trying for the past 30 years. This philosophy allows polluters to dump into common air and water until someone can prove harm; after harm is proven, then "appropriate" controls may be required to restrict emissions to "acceptable" levels. Why doesn't this system work?

1) This system rests upon the assumption that we humans know what we are doing. It assumes that we can decide on a rational basis how much of each chemical the earth can endure. Then we are supposed to devise controls that will allow just the right amount of chemicals into the environment, and no more.

There is something ominous about these assumptions. They lack humility. Who really believes we humans know what we are doing? Who believes we understand the environment well enough to determine how much of each chemical is "safe" and how much is "unsafe." Who knew just 20 years ago that emitting CFCs [chlorofluorocarbons] into the atmosphere would destroy the planet's ozone shield and allow dangerous levels of ultraviolet light to flood the surface of the earth? Who knew that nitrogen and sulphur released from power plants in the midwest would devastate crops, forests and lakes throughout the eastern U.S., Canada and Europe by acid rain?

Even if we knew how much of a chemical we could safely release into the environment, who believes we can devise controls that will achieve the desired goal? When you eat swordfish, you are risking brain damage from mercury contamination. Mercury enters the oceans (and then the swordfish) from many sources-from coal combustion, from the manufacture of paper, from solid waste incinerators, and from mercury mining, to mention only a few sources. What level of restrictions on which industrial processes will reduce mercury emissions sufficiently to make it once again safe to eat swordfish? It is an incredibly complex question.

There are too many ways that pollutants get into the environment for society to be able to develop numerical controls on each substance produced by each human activity. There are too many to measure, too many to comprehend, too many to fix, if each is to be separately examined and subjected to a uniquely appropriate control.

2) There are thousands of ways pollutants can directly harm humans; because experiments on animals are expensive to carry out, we usually only test chemicals for gross signs of harm, such as cancer, but there are many more subtle kinds of harm we should be concerned about: reproductive disorders (stillbirths, birth defects, low birth weight), developmental disorders (reduced learning ability, for example), and sublethal effects like headaches, sinus problems, rashes, blurred vision, unsteadiness, kidney problems, and so forth. Medical science knows little or nothing about these sublethal effects of most chemicals. With 60,000 chemicals now in use and 500 to 1000 new ones coming into use each year, there are simply too many chemicals to be tested for subtle damage, so we only test for the most obvious effects (if we test at all).

The "prove harm" philosophy reduces the most obvious damage from the obvious poisons but it fails to take action against unknown ones until some new unforseen consequence becomes obvious. The "prove harm" philosophy is concerned with what are only the most visible fringes of the problem.

3) Even when compelling scientific evidence of harm comes to light, there is still a decades-long struggle to curb pollution. Lead is an example. People have known for 2000 years that lead is a dangerous poison, yet we allowed the automobile industry to emit millions of tons of lead each year into our air. It took four decades to bring it under control. Lead in paint reveals the same problem: doctors knew for two decades that children in urban ghettoes were eating lead paint and damaging their central nervous systems before Congress acted to restrict lead in paint. Even after Congress acted, the problem continued, and continues to this day.

4) Even when you can prove harm, this is not sufficient to guarantee that a chemical will be controlled. It is now fashionable for industry and government to open up a new debate on how much harm is acceptable. Is it acceptable to kill one in 10,000 people exposed to benzene or may we only kill one in a million? As odd as it may sound in our Constitutional democracy, this is a real debate today. Under William Reilly, the EPA (U.S. Environmental Protection Agency) has selected one- in-10,000 whereas his predecessor had selected one-in-a-million.

5) Harm that is known to be occurring, but is not visible in reports of vital statistics, is labeled insignificant or inconsequential. For example, the Department of Energy estimated that the Chernobyl nuclear power plant explosion would kill 28,000 people by giving them cancer but they dismissed this as "negligible" compared to the natural cancer rate.

After the Natural Resources Defense Council (NRDC) published its estimate that the pesticide Alar on apples was causing 5,000 cancer deaths each year in the U.S., the winner of the American Chemical Society's coveted Priestley medal, George Pimintel, ridiculed NRDC's "hysteria," saying 5000 cancers is "a barely noticeable perturbation" of the nation's cancer statistics. (C&EN May 1, 1989, pg. 53.)

6) After harm is proven, and the need for restriction is accepted by government agencies, additional progress toward stricter control can be delayed by any well-funded industry that carries out additional research; each new study becomes an opportunity to open up a debate on whether to relax existing pollution controls.

7) The "prove harm" rule guarantees that we will have many victims of pollution. Until we have victims-or evidence of serious environmental disruption, like loss of the ozone shield, loss of oyster beds from sewage, loss of the striped bass population from PCBs-we do not have a compelling case for restricting emissions.

8) Under the "prove harm" philosophy, the development of controls is dependent upon risk assessments and mathematical models. Since risk assessments and mathematical models are matters of art more than they are matters of science, reliance upon these tools for setting controls is guaranteed to lead to endless debate among high-paid consultants, but little satisfactory control of chemicals. Furthermore, ordinary people are left out of the debate, which undermines democracy itself.

9) Prove harm strategies and item-by-item pollution control are subject to dispute arising out of differences in emphasis, in understanding, or even in aesthetics. When we decide it's OK to dump "some" chemicals into the environment, "some" is difficult to describe, arbitrary to establish, and always subject to question. "None" is not. That is why we should now move to a "zero discharge" philosophy of pollution control.

--Peter Montague

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