The most important news of 1992 went largely unreported in the U.S. At a Ministerial Meeting September 21-22 in Paris, 13 European nations agreed, in principle, to eliminate all discharges and emissions of chemicals that are toxic, persistent and likely to bioaccumulate (that is, to concentrate in food chains). In short, these 13 nations made a binding commitment to try to achieve "zero discharge" of persistent toxic substances. Thus for the first time, a significant portion of the industrialized world (Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden, and the United Kingdom) concretely rejected the old philosophy of "prove harm" as a basis for pollution control. A new era of environmental protection has truly begun.

Consider the difference. The old philosophy protection (which still governs in the U.S.) says, "Everyone is free to dump toxic materials into the environment until someone can prove harm to a scientific certainty. After harm is proven beyond doubt, then we can begin to consider taking action to stop the dumping." This approach requires harm to occur before control can begin. All U.S. pollution-control laws are based on this old approach.

Three key assumptions underlie the old approach:

1) Assumption No. 1: humans can "manage" the environment by deciding how much of any material the Earth (or any portion of the Earth) can safely absorb without harm. Scientists call this the "assimilative capacity" approach. According to this approach, scientists can reliably decide how much of any material the Earth, or any portion of the Earth (such as a the Mississippi River or Chesapeake Bay), can assimilate or absorb without causing harm. (This is what every "risk assessment" claims to do.)

2) Assumption No. 2: Once the Earth's "assimilative capacity" for a particular chemical has been decided, then we can and will see to it that no greater amount is permitted to escape. We will set limits, river by river, factory by factory, chemical by chemical, everywhere on the planet, so that the total, cumulative releases to not exceed the "assimilative capacity" of the Earth.

3) Assumption No. 3: We already know which substances are harmful and which are not; or, in the case of substances that we never suspected are harmful, we will be warned of their possible dangers by traumatic but sub-lethal shocks that alert us to the danger before it is too late.[1]

ALL THREE ASSUMPTIONS ARE DEAD WRONG. As a result, the well-being of the planet, and of humans, are reeling from this approach now. Think of ozone depletion (RHWN #285), global warming (RHWN #300, #301) and acid rain; lead poisoning in our children and emissions of mercury (RHWN #213, #214, #294); PCBs in the oceans (RHWN #291); rising cancer rates (RHWN #222, 265, 266); increases in immune system disorders like Parkinson's and Lou Gehrig's disease (RHWN #318). Even government scientists are now concluding that these are real evidence of real harm, caused by our "innocent until proven guilty" approach toward chemicals (RHWN #234).

The alternative approach, which was adopted at the Paris Ministerial Meeting in September, says, in essence, "We don't know--and most likely we will never know--how much toxic material the environment can stand, so we won't chance it. We'll assume that all chemicals can cause harm. Therefore we'll contain everything and discharge nothing." In sum, zero discharge.

The Paris meeting in September was formally called the Ministerial Meeting of the "Contracting Parties of the Oslo and Paris Conventions." At the meeting, a new international Convention (a kind of treaty)--called the Paris Convention--was adopted to replace the Oslo Convention (on ocean dumping, 1972) and the earlier Paris Convention (on land-based sources of pollution, 1974). The new Paris Convention will become effective when all contracting parties ratify it--a process that should take roughly two years.

The meeting in Paris in September adopted three key documents--the new Paris Convention itself (including several Annexes), a Ministerial Declaration, and an Action Plan. Without going into detail, it is important to note that the new Paris Convention specifically targets chlorinated ("organochlorine") compounds for control and phaseout. Article 3 of Annex I of the new Paris Convention says,

FOR THE PURPOSES OF THIS ANNEX, IT SHALL, inter alia [among other things], BE THE DUTY OF THE COMMISSION TO DRAW UP:

(A) PLANS FOR THE REDUCTION AND PHASING OUT OF SUBSTANCES THAT ARE TOXIC, PERSISTENT, AND LIABLE TO BIOACCUMULATE ARISING FROM LAND-BASED SOURCES;

In an Appendix containing criteria and a list of substances targeted for action, we find "ORGANOHALOGEN COMPOUNDS (AND SUBSTANCES WHICH MAY FORM SUCH COMPOUNDS IN THE MARINE ENVIRONMENT)." Halogens are a class of chemicals that includes chlorine, bromine, fluorine, and iodine. In the context of the new Paris Convention, the important one is chlorine because many solvents, many pesticides, and many other industrial chemicals are chlorine-based.

The Ministerial Declaration from the September meeting says the Ministers

AGREE THAT, AS A MATTER OF PRINCIPLE FOR THE WHOLE CONVENTION AREA, DISCHARGES AND EMISSIONS OF SUBSTANCES WHICH ARE TOXIC, PERSISTENT, AND LIABLE TO BIOACCUMULATE, IN PARTICULAR ORGANOHALOGEN SUBSTANCES, AND WHICH COULD REACH THE MARINE ENVIRONMENT SHOULD, REGARDLESS OF THEIR ANTHROPOGENIC [HUMAN] SOURCE, BE REDUCED, BY THE YEAR 2000, TO LEVELS WHICH ARE NOT HARMFUL TO MAN OR NATURE WITH THE AIM OF THEIR ELIMINATION; TO THIS END TO IMPLEMENT SUBSTANTIAL REDUCTIONS IN THOSE DISCHARGES AND EMISSIONS AND WHERE APPROPRIATE TO SUPPLEMENT REDUCTION MEASURES WITH PROGRAMMES TO PHASE OUT THE USE OF SUCH SUBSTANCES; AND INSTRUCT THE COMMISSION TO KEEP UNDER REVIEW WHAT TIMETABLES THIS WOULD REQUIRE

The Action Plan adopted in Paris in September says the Commission will

--ESTABLISH PRIORITIES,... IN PARTICULAR GIVING PRIORITY TO THE SUBSTANTIAL REDUCTION OF INPUTS TO THE MARITIME AREA OF ORGANOHALOGEN SUBSTANCES WHICH ARE TOXIC, PERSISTENT AND LIABLE TO BIOACCUMULATE, WITH THE AIM OF THEIR ELIMINATION;

The Paris Convention represents a sea change in the philosophy of environmental control. A similar emphasis on zero discharge appeared in an official report from the International Joint [U.S. and Canada] Commission, or IJC, in April, 1992.2 The IJC was established in 1909 by the U.S. and Canada to oversee water quality in the Great Lakes under the Boundary Waters Treaty. As we reported in RHWN #284, the IJC in April called for the U.S. and Canada:

a) To define many chemicals as "persistent toxic substances" and then ELIMINATE them because, as the IJC said, "We conclude that persistent toxic substances are too dangerous to the biosphere and to
humans to permit their release in ANY quantity" (emphasis in the original).

b) To adopt a "weight of the evidence" approach, not waiting for scientific certainty to be established but taking action to protect against toxics as soon as the "weight of the evidence" indicates the need for action.

The IJC recommended that "persistent" chemicals be defined as those with a half-life in air, water, sediments, or living things, of 8 weeks or longer. (The half-life of a substance is the time it takes for half of it to disappear.)

Taken together, these recommendations and the new Paris Convention (and the Bamako Convention in Africa--see RHWN #257) constitute an entirely new approach to environmental protection, one that offers real hope of saving the planet from destruction.

Historically in the U.S. we have been unable to adopt the zero discharge philosophy mainly because the traditional environmental movement has refused to endorse the idea. They say it "won't fly" in Congress. It isn't "doable." It's "unrealistic." They say zero is scientifically unattainable, so we mustn't ask for it.

Think of it this way: we'll never eliminate all murders either, but that hasn't stopped us from making murder absolutely illegal.[3] In some cases, we can achieve zero discharge by eliminating the source (phasing out chlorine, for example). In other cases, we can achieve close-to-zero by CHANGING OUR PHILOSOPHY OF INDUSTRIAL DESIGN, ELIMINATING ALL INTENTIONAL RELEASES. This won't eliminate spills or leaks, but under a zero discharge philosophy spills and leaks will be recognized as aberrations and violations of policy intent, and, as such, they would be punished by fines to provide constant incentive for improvement.

Is it unfair to blame our friends in the environmental movement for our national failure to adopt a zero discharge philosophy? If the environmental movement won't demand zero discharge, no one will. And we'll never get what we don't demand. Our present path--guided by the "prove harm" philosophy--is unmistakably self-destructive. In 1992 a better way became politically possible: zero discharge. Now it is up to US--all of us, WORKING TOGETHER--to seize the day.

--Peter Montague


[3] Thanks to A. Winton Dahlstrom of Whitehall, Michigan, for sending us thoughtful commentary on zero discharge, and to Greenpeace for zero discharge action.

Descriptor terms: zero discharge; hazardous materials; prove harm; risk assessment; global warming; acid rain; global environmental problems; lead; mercury; pcbs; cancer; carcinogens; health; ijc; canada; us; great lakes; persistent toxic substances;