The Intersections of Trade and Environmental Health: Discussion of the Roundtable on Environmental Health Sciences, Research, and Medicine

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The Institute of Medicine’s Roundtable on Environmental Health Sciences, Research, and Medicine was formed in 1998 to provide a neutral setting for individuals with different backgrounds and perspectives to discuss sensitive issues of mutual interest. By bringing together participants from the academic community, federal government, industry, and other sectors who are actively engaged in activities related to environmental health, the Roundtable helps to identify problems—current or potential—and by considers approaches to solving them. The aim is to share knowledge and ideas, but not proffer formal advice or recommendations.

At its 11th meeting, held on November 10, 2003, the Roundtable began a discussion of the environmental health impacts of international trade and globalization. John Froines, Associate Director of the Southern California Environmental Health Sciences Center at the University of California, Los Angeles, defined globalization as a process by which nations, businesses, and individuals across the globe—by means of economic integration, communications, cultural diffusion, and travel—become interdependent. Globalization is not a new idea, he acknowledged; humankind has been pushing against borders and exploring, expanding, conquering, and assimilating from time immemorial (Labonte, 2003). This process has been in effect for a long time, and yet, it is obviously different in terms of its speed, content, and direction at this point in history. In any case, Froines noted, while the economic, social, and environmental impacts of the phenomenon are becoming inherently global, the health impacts are primarily local.

The Honorable Frank Loy, former Undersecretary of State for Global Affairs, noted that the World Trade Organization (WTO), which regulates global trade, was built by lawyers and businesspeople for the purpose of facilitating and increasing trade—not for safeguarding the environment or human health. However, in its basic statute, the Global Agreement on Trade and Tariffs (GATT), the WTO does specifically give countries the right to adopt measures designed to protect life and health, as long as they are applied in nondiscriminatory ways and are reasonable actions for the stated purposes—i.e., they are necessary, and not trade restrictions in disguise. Nevertheless, the lack of
transparency in the WTO’s procedures, together with the absence of formal mechanisms for direct input from the scientific community, causes concern in various community groups about WTO’s commitment to protecting environmental health. Also, the criteria for action are ambiguous. Although the Earth Summit in Rio de Janeiro in 1992 concluded that “where there are threats of serious or irreversible damage to the environment, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation,” interpretation of this precautionary principle may vary. One prominent example is the continuing trade dispute between the United States and the European Union regarding genetically modified organisms (GMOs), where a multilateral agreement (e.g., biosafety protocol) threatens to clash with the GATT (see below).

John Audley, Director of the Trade, Equity, and Development Project of the Carnegie Endowment for International Peace, noted that the Grossman-Kruger study of 1991 connected increases in income to improvements in environmental quality. He suggested that when individuals have more money, they can afford to pay more attention to air, water quality, and waste disposal. They pay more taxes, enabling governments to afford to provide these services, resulting in an increase in the quality of life and environmental protection. Adding trade liberalization to the equation encourages businesses to internalize environmental costs to produce a cheaper and more environmentally friendly product. Using Mexico as an example, he noted that the environment is dirtier there than it was a decade ago, but the average incomes remain under the $8,000 mark argued for by the Grossman-Kruger study. He suggested that the industries didn’t move to Mexico to necessarily externalize environmental costs, but Mexicans haven’t hit the $8,000 mark to enable citizens to take the next steps.

Audley also offered some examples of the direct use of trade instruments to accomplish environmental-policy objectives. Developing countries, within the context of trade negotiation, have requested international technical assistance and capacity-building to address their own environmental priorities such as water quality, air quality, solid waste management, and pesticides. In exchange for such technical assistance, developing countries would open markets. As trade advances, we need to make sure that communities are able to put forward their own environmental protection and public health proposals. Citizens need to be empowered with information and a role in decision making. Governments must make a commitment to enforce their own laws and be accountable for that commitment, concluded Audley.

Lynn Goldman, M.D., Professor, Bloomberg School of Public Health, continued the discussion by focusing on the complexity of biotechnology. She noted that biotechnology has become a more ubiquitous part of everything we do in the United States, and not all of biotechnology is a source of dispute between the U.S. and the European Union. The main controversy surrounds the use of genetic modified organisms (GMO) as a food source. The EU is working on a law to regulate these GMOs that is more restrictive than US law because it requires labeling; it has put a moratorium on imports pending finalization of the new law. Underlying the difference is that the EU has more of a precautionary approach on this issue than the U.S. (There
are other areas where the U.S. takes a more precautionary approach.) The health risks from GMO consumption aren’t easy to demonstrate, however, for products on the market to date, we don’t have clear environmental and health benefits. According to Goldman, where there are questionable benefits, it is easier for people to adopt a precautionary approach to new technology.

International trade creates significant transportation-related environmental health impacts, according to Andrea Hricko, MPH, of the Southern California Environmental Health Sciences Center, based at the Keck School of Medicine, University of Southern California (USC). For example, the Ports of Los Angeles and Long Beach—the main U.S. distribution center for Pacific Rim trade—have expanded to become the third-largest port complex in the world. Economic development advocates argue that port expansion is driving the region’s economy, but others question the wage levels of jobs created by goods movement. The ports are the single leading source of air pollution, such as NO\textsubscript{x} emissions and particulate matter in the South Coast Air Basin. Emission sources include unregulated container ships, small service ships and equipment to offload the containers, as well as heavy-duty trucks and trains which move cargo. As the ports continue to expand, emissions will rise in the port area and along major highways and rail routes as more trucks and trains are needed to move an increasing volume of containers. This raises concerns about health impacts, according to Hricko. For example, USC studies show that children living in the more air polluted communities of Southern California have reduced lung function, growth, and more school absences than children living in less polluted communities. Hricko concluded that discussions about economics and congestion currently overwhelm considerations of health in the transportation planning process. The challenge ahead is for health scientists to engage with regional planners as port and related infrastructure (e.g., freeway) expansion plans are being considered.

While globalization has the potential to improve living standards as trade expands, said Harley Shaiken, Director of the Center for Latin-American Studies at the University of California, Berkeley, fierce global pressures are pushing down wages and undermining working conditions, thereby threatening environmental health. He noted in particular that as China, Brazil, and Mexico have emerged as manufacturing powers based on their low labor costs in combination with high-quality production, their relative lack of labor rights has contributed to serious worker-health problems. But he also pointed out that times are changing. During the height of the North American Free Trade Agreement (NAFTA) debate in the mid-1990s, the dominant perspective was that expanded trade should come first, with improvements in working conditions and the environment coming later. Today the perspective has shifted, Skaiken reported, so that environmental health and labor issues are discussed in combination with trade issues right from the start.

Raphael Moure-Eraso, chair of the Department of Work Environment at the University of Massachusetts, Lowell, added that in the era of globalization, worker health is tied not only to the safety of the workplace but to the quality of the environment in general, and that worker health is an indicator of community health. There is thus a triple “bottom
line”—fiscal, social, and environmental responsibility—for industry to maintain. He also noted that while pollution-prevention technologies have been affording increased protection for workers and the community, progress is needed in making systems for waste management more effective from an environmental health point of view. For example, waste management is the least effective for protecting health and the environment. Implementation of waste minimization provides increasing protection, while pollution prevention provides the best protection for workers and the community. He suggested by looking at technologies associated with the best protection for health and environment is where industries need to focus while building capacity in other countries.

The Roundtable’s program concluded with general discussions about the role of science in trade agreements, the need for better use of technology by developing countries, and the United States’s increased responsibility to support infrastructure and research programs in those countries.

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