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Fairness and Siting: Introduction to a Symposium

Joanne Linnerooth-Bayer & Ragnar E. Löfstedt*

In 1995, the International Institute for Applied Systems Analysis in Laxenburg, Austria, sponsored a meeting to examine the underlying causes for a hazardous waste siting impasse in the U.S. and Europe and to suggest ways of designing procedures and outcomes that command wide support. The papers in the present symposium reflect ideas originally aired at that meeting.

Siting hazardous waste disposal facilities is a major policy problem throughout the industrialized world. For example, in 1981, the Environmental Protection Agency predicted that the U.S. would need close to a hundred new off-site facilities. Despite extensive and costly efforts in most states, there exists today only one new hazardous waste land disposal facility (in Last Chance, Colorado) and fewer than ten new hazardous waste treatment and incinerator units.¹ A similar siting impasse exists for nuclear waste facilities. Despite legislation requiring states to build low-level nuclear waste facilities by this year, only one has been built and a handful approved.² After twenty years of efforts for a high level nuclear waste facility, large uncertainties still exist concerning the acceptability — technical and social — of the Yucca Mountain site in Nevada.³

Siting hazardous toxic or nuclear waste facilities rarely happens, anywhere. Few social problems have proven as intractable in so many countries. Protests have disrupted attempts to site nuclear facilities throughout Europe; it cannot claim more progress than the U.S. on siting toxic or high level nuclear waste facilities.⁴ Also, in Asia, where

* Special issue editors; biographies appear with their papers *infra*.

¹ Michael B. Gerrard, *Whose Backyard, Whose Risk: Fear and Fairness in Toxic and Nuclear Waste Siting* (1994).

² Anna Vari, Patricia Reagan-Cirincione & Jeryl L. Mumpower, *LLRW Disposal Facility Siting: Successes and Failures in Six Countries* (1994).

³ Douglas Easterling & Howard Kunreuther, *The Dilemma of Siting a High-Level Nuclear Waste Repository* (1995).

organized civil disobedience is less common, villagers in Taiwan, the Philippines, Korea, India and even Japan have taken to the streets to protest waste sites.

Failure to find sites for toxic and nuclear waste, however, does not inevitably mean that the process is a failure. As Michael Thompson points out, "unsiteability" can generate opportunities in the form of other locations, new technologies for dealing with wastes and improved waste reduction. Siting out of the country, as Lawrence Summers once argued, may be seen as an efficient win-win strategy for both exporters and importers.⁵ Yet, waste shipments to poor countries evokes moral indignation and has led to an enhanced sense of responsibility by waste generators and probably to increased waste reduction.

A siting process is a failure if the default option for current or future wastes is keeping them in substandard facilities that pose unacceptable risks to the public and the environment. Once a social consensus on the need for facilities is established, and this is often contentious, then the siting problem becomes fundamentally one of allocating the facility burden. With imagination, a wealth of options present themselves, from imposing the burden on the technically most qualified community to recruiting qualified volunteer communities based on bids for compensation, or even using lotteries. The facility burden might also be shared by locating many smaller facilities or rotating responsibility.

The question is how to divide and allocate the social burden, however perceived, from hazardous wastes. Precedents may be helpful, and social burden sharing is commonplace. The tax burden is usually shared progressively; jury duty is allocated by random selection; and schemes for military recruitment range from universal service, lotteries, to professional service using voluntary, market mechanisms.⁶ However, even with many historical precedents for sharing social burdens, it is striking that after many years and many books, a reasonable burden-sharing scheme for existing hazardous wastes has not been forthcoming. If anything, problems have become more acute.

⁴ Ray Kemp, *The Politics of Radioactive Waste Disposal* (1992).

⁵ Lawrence Summers, *Why the Rich Should Pollute the Poor*, *The Guardian*, Feb. 2, 1992, at 8.

⁶ H. Peyton Young, *Equity in Theory and Practice* (1994).

Howard Kunreuther, Paul Slovic and Donald MacGregor attribute this institutional failure, in part, to the erosion of trust in government and industry and to varied perceptions of the risks of toxic and nuclear waste. Trust and risk perception are, in their view, closely linked and related to social relationships and to ways different people view the world. Interestingly, in their empirical research, well-educated white males (who usually propose and build waste facilities) stand out as perceiving the world — and wastes — as less risky than everyone else.

If trust is the key, why after so many years of siting legislation and siting experience has no country been able to design procedures that promote the requisite trust? Benjamin Davy argues that any siting outcome will be unjust or unfair to somebody, and this “essential injustice” will undermine trust in the proposers. He points to three competing notions of justice observed in siting processes: utilitarian justice which provides for the least unhappiness or least risk (i.e., the technically best site); libertarian justice with minimal state imposition and with competitive interactions (i.e., the voluntary, market approach) and Rawlsian or egalitarian justice that allows inequality only if it is beneficial to the least advantaged.

These three notions of justice, as Joanne Linnerooth-Bayer and Kevin Fitzgerald argue, offer the key to understanding the impasse. A utilitarian notion of justice, where sites are imposed, is unacceptable to individualists who view it as too authoritarian. Yet, the libertarian/individualistic paradigm, where communities are given the right of consent and encouraged to bargain for compensation, is sharply criticized by egalitarians who rightly note that such procedures inevitably put facilities in poor communities. Anna Vari, as well as Linnerooth-Bayer and Fitzgerald, shows that the public holds these different views of what is fair. The key to resolving the impasse, in their view, is to design procedures and outcomes that appeal to conflicting ideas of fairness. Although stakeholders in a siting battle usually agree on very little, they do appear to agree on one important concept: The burdens of waste should be borne by those responsible for generation.

Rather than emphasizing responsibility or civic duty, the current trend is promoting voluntary approaches that appeal to self interest, i.e. compensation. However, voluntary market approaches have had little

success. Anna Vari documents public opposition in New York and Hungary, where people view offers of compensation, e.g., as bribes.

If public opposition prevents choices made by government decree or entrepreneurial bargaining, some type of negotiated settlement is called for. A novel form of negotiation has been developed in Germany by Ortwin Renn and his colleagues, where experts provide evidence on the need for waste facilities and their technical qualifications to a randomly selected citizens' committee that supplies the value judgments necessary for the siting decision. This process has succeeded in Switzerland and is now being applied to the challenge of designing a hazardous waste plan in the German Black Forest.

Finally, Ragnar Löfstedt discusses a different type of siting problem, that of an existing Swedish nuclear power plant located very close to Copenhagen. In this transboundary setting, issues of risk perception, communication, trust and responsibility take on additional complexity. What responsibility does a country have to its neighbors? Surprisingly, the Danish and Swedish public appear to understand the problem from the view of their counterparts. In Denmark, for instance, there is a strong support for a solution in which Sweden closes the plant and Denmark reduces its export of acid rain. Again, taking responsibility for one's own pollution appears to be a fundamental notion of a fair outcome.

There is no recipe for successfully siting — or successfully not siting — a hazardous waste facility, but the authors in this volume identify some of the critical ingredients. A facility should certainly not be sited if it is not needed, or if it is not perceived as acceptably safe. Even a facility for which a consensus exists that it is needed will not be "siteable" if a process is not in place that is viewed as fair and trustworthy. Since the public holds different and conflicting notions of what is fair, it will be necessary to negotiate a process design that appeals to all or most of the interested parties. The notion of "taking responsibility for ones own wastes," whether by the individual generator, a region or a country, appears to be an important element of a fair outcome.

