**Box 9.1** Risks of death in the United States: selected environmental hazards and their cost of reduction

| | Deaths per 1 million people exposed | Cost to avoid 1 death ($ million) |
|---|---|---|
| Trihalomethane in drinking water | 420 | 0.2 |
| Radionuclides in uranium mines | 6 300 | 3.4 |
| Benzene fugitive emissions | 1 470 | 3.4 |
| Benzene occupational exposure | 39 600 | 8.9 |
| Asbestos occupational exposure | 3 015 | 8.3 |
| Arsenic/copper exposure | 63 000 | 23.0 |
| Acrylonitrile occupational exposure | 42 300 | 51.5 |
| Coke ovens occupational exposure | 7 200 | 63.5 |
| Hazardous waste land disposal | 2 | 4 190.2 |
| Municipal solid waste landfill standard | 1 | 19 107.0 |
| Hazardous waste: wood preservatives | <1 | 5700 000 |

*Source:* The Council on Environmental Quality (1990)

The risks shown relate to numbers of mortalities for the relevant exposed population. All the hazards shown are the subject of environmental legislation in the United States, so, for example, the risk that is affected by the piece of legislation is the numerical value shown here. Notice that expressing the risks as 'per million' makes some of them look large. The largest risk, for arsenic/copper exposure, is 0.063 when expressed as a fraction, or 63 in 1000 or just over 6 in a 100. The manner in which risk is expressed often influences the extent to which people react to the risk.

The legislation costs money. The right hand column shows what happens when this cost is divided by the numbers of lives that the legislation is expected to save. In this way, cost and 'effectiveness' (lives saved) can be compared – see text.