environmental priorities. One possibility for establishing environmental priorities is to use the matrix of ecological stressors and the list of high risk human health stressors that were developed by EPA's Science Advisory Board (SAB) and published in its 1990 report "Reducing Risk: Setting Priorities and Strategies for Environmental Protection."

EPA believes that this report and its findings may offer an appropriate baseline around which to frame the public discussion regarding the establishment of environmental priorities in the context of purchasing environmentally preferable products or services. It should be noted that the rankings in the report are not perfect; they may be incomplete and may emphasize global-scale impacts, at the expense of local ones. EPA is presenting the following matrix of ecological stressors and the list of stressors presenting high risk to human health to begin the public debate, and is very interested in receiving comments on whether this proposed approach should be used for making decisions concerning the relative environmental priorities and thereby assist in

determining the preferability of products or services.

EPA recognizes that determining which environmental impacts are most important and setting environmental priorities involve certain value judgements. Who should be responsible for making decisions concerning the relative environmental priorities? EPA envisions applying this decision matrix within the context of pilot acquisitions in hopes of learning how Executive agencies should establish environmental priorities for making decisions about environmental preferability. EPA is interested in receiving comments about this proposed approach. EPA proposes including this decision matrix and the list of human health impacts in the guidance as Appendix É. Should this approach be considered for inclusion as an Appendix to the guidance?

1. Ecological priority impacts matrix. The Decision Matrix for ecological priority impacts, which is presented below, would provide some guidance to Executive agencies on making trade-offs among various environmental attributes.

According to EPA's Science Advisory Board, the ecological recovery time affects the severity of the risk; the longer the recovery time (the less reversible the damage), the higher the risk of that

ecological stressor. Thus, the matrix uses reversibility of the impact as the horizontal axis for estimating the severity of the risk associated with environmental attribute information provided by the vendor. Stressors whose effects cause the ecosystem to take centuries or an indefinite amount of time to recover are given a greater risk ranking than those that take years or decades to recover. Non-renewable resource consumption, for example, is considered a more significant ecological stressor than the discharge to water of conventional pollutants such as biochemical oxygen demand, loadings, from which an ecosystem can recover in years.

The Science Advisory Board also considered significant the geographic scale of the area subject to the stress and the importance of the ecosystem that is actually affected within the stressed area. Thus, ecological stressors that have impacts on a global or biosphere basis are to be considered higher risk or more significant than ecological stressors that have an impact only on a local or regional/ecosystem basis. The Agency has, therefore, used geographic scale of the stressor's impact as the vertical axis for its matrix.

TABLE 1.—ECOLOGICAL PRIORITY IMPACTS MATRIX GEOGRAPHIC SCALE/REVERSIBILITY

	Years	Decades	Centuries/indefinite
Local/Regional	Rapidly Renewable Resource Consumption. Conventional Pollutants.		
National	Hazardous Air Pollutants	Bioaccumulative Pollutants.	
Global			Non-renewable Resource Consumption. Ecosystem Impacts. Ozone Depleting Chemicals. Global Warming Gases.

- 2. List of stressors presenting high risk to human health. The list of stressors below have been identified by the Science Advisory Board in its "Reducing Risk" report as presenting high risks to human health. The stressors are not listed in any particular order of importance:
  - Ambient air pollutants.
  - Hazardous air pollutants.
  - Indoor air pollution.
- Occupational exposure to chemicals.
  - Bioaccumulative pollutants.3

provide support for this addition. The Science Advisory Board (SAB) did not consider bioaccumulative pollutants as a high risk stressor in part because "Unfinished Business" (an earlier report that provided the basis for "Reducing Risk") did not separately break out this category; that report focused on pollutants based on the Agency's organizational and regulatory structure. The SAB report discusses bioaccumulative pollutants in several sections, however, as posing potentially high risks. For example, the report states: "It is also noteworthy that certain environmental toxicants such as heavy metals, PCBs, and long-lived radionuclides-tend to persist indefinitely in the environment and may gradually become concentrated in certain components of the human food chain. Consequently, such toxicants may continue to pose a threat to human health long after their release into the environment has halted." See Appendix B: The Report of Human Health Subcommittee of Reducing Risk for a more complete discussion of the human health stressors

EPA believes that this is one approach to making decisions concerning the relative environmental preferability of products. EPA seeks comments on the usefulness of the ecological impact matrix as well as the list of high priority human health impacts. In addition, readers are encouraged to provide their thoughts concerning the placement of the impacts in the matrix, gaps in the matrix, and whether or not the human health impacts can be prioritized in a similar manner. Comments on other methods of prioritizing ecological and human health impacts are also solicited.

listed above and how the SAB determined that they presented a significant risk.

<sup>&</sup>lt;sup>3</sup>The EPA has added bioaccumulative pollutants to the list of stressors that pose high risks to human health. While not explicitly identified in the SAB report as a high risk stressor, the report does