

1 issues involve multiple stressors interacting across a variety of media, and which change over the
2 temporal cycles of the activities giving rise to the problems as well as the manner in which we
3 attempt their control, there is a critical need to evaluate and prioritize environmental problems in
4 an integrated way that goes beyond current media-specific environmental programs. The SAB
5 urges the Agency to establish its environmental priorities for the next five to ten years and to
6 provide the necessary science and research to support and implement cross-media approaches to
7 protecting human health and the environment. EPA also needs more highly integrated decision-
8 making models that can be adapted for a range of decision contexts. Social sciences are critical
9 to the design and implementation of these decision models and need to be an integral part of
10 EPA's organization and structure.

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12 EPA's recent commitment to environmental sustainability and priority issues such as
13 climate change, alternative energy, and energy security present the nation with a challenge and
14 an opportunity to develop more integrated approaches to environmental protection. New, broad-
15 reaching energy and climate change policies may bring unintended harm to ecosystems and to
16 human health in addition to co-benefits. The EPA should be the nation's lead agency in
17 analyzing the implications of energy and climate change policies and guiding the country to
18 optimal strategies. However, to do so will require that EPA reexamine its research program, its
19 investments, and also explore innovative ways to conduct research and leverage funding. For
20 example, NIH, NSF, DOE, and DARPA have all recently considered creative public-private
21 partnerships and funding mechanisms that could be models for consideration by EPA. The SAB
22 is prepared to assist the Administrator in the inventory and assessment of possible models. The
23 SAB understands the challenges raised by the current state of the economy. EPA must commit
24 to establishing a research base that will make it possible for the nation to acquire the knowledge
25 needed to address the difficult environmental problems that we now face. Because resources are
26 limited, it is imperative that EPA also take a leadership role, both within and outside of the
27 federal government and especially in the international arena, and develop new ways of partnering
28 with stakeholders to achieve its mission.

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30 The SAB is pleased to welcome you as the new leader of the nation's environmental
31 programs. We applaud your deep commitment to scientific integrity. We agree with your
32 statement to EPA's employees that note that the Agency must clearly articulate its policy
33 judgments and actions to account for knowledge gaps and scientific uncertainties. We look
34 forward to working with you in the future as the most critical environmental issues are
35 addressed. Soon, the SAB intends to begin a project to develop explicit advice on how EPA can
36 enhance its science program in order to address the integrated and complex environmental
37 problems that confront the nation. We would be pleased to discuss this letter, and our project to
38 develop the longer term advisory whenever you are available.

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40 Sincerely,

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42 Dr. Deborah L. Swackhamer
43 Chair
44 US EPA Science Advisory Board