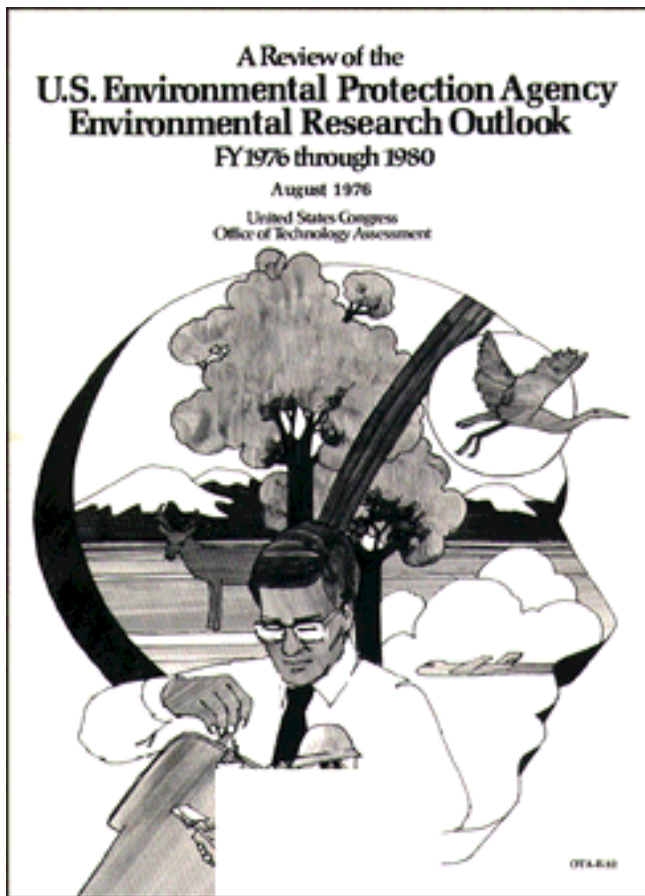


*A Review of the U.S. Environmental
Protection Agency: Environmental
Research Outlook FY 1976 Through 1980*

August 1976

NTIS order #PB80-258191



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AUG 4 1976

Committee on Science and Technology
U. S. House of Representatives
Washington, D. C. 20515

Gentlemen:

On behalf of the Office of Technology Assessment, we are pleased to forward a report: A Review of the U.S. Environmental Protection Agency Environmental Research Outlook, FY 1976 through 1980.

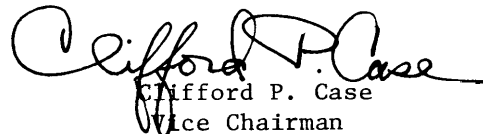
The report concludes OTA's review of the first EPA five-year research Plan presented to Congress in February 1976. It presents and discusses issues identified by three panels convened to assist in the review and analysis of the Plan. The report is being made available to the Committee in accordance with Public Law 92-484.

Sincerely,



Olin E. Teague
Chairman

Sincerely,



Clifford P. Case
Vice Chairman

Enclosure

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AUG 4 1976

Honorable Olin E. Teague
Chairman of the Board
Office of Technology Assessment
Congress of the United States
Washington, D. C. 20515

Dear Mr. Chairman:

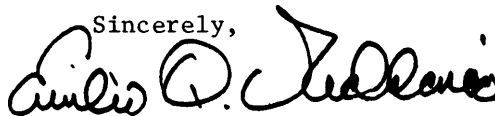
The enclosed report, "A Review of the U.S. Environmental Protection Agency Environmental Research Outlook, FY 1976 through 1980", presents OTA's analysis of EPA's five-year research Plan.

This study was conducted at the request of the House Committee on Science and Technology on behalf of the Chairman of its Subcommittee on the Environment and the Atmosphere. As you know, early study results were presented in a preliminary briefing for the requesting committee during its consideration of the EPA R&D Authorization Bill for FY 1977. This report presents our final results to Congress.

I am especially grateful to EPA Administrator, Russell E. Train and Assistant Administrator, Wilson K. Talley, for EPA's cooperation in the conduct of this study. Thanks also are due to the Deputy Assistant Administrators of the Office of Research and Development for their help.

Inevitably, a review of the kind reported here gives the appearance of emphasizing deficiencies. However, the context in which I hope this report will be read should be one of appreciation and understanding for the difficulty of planning a comprehensive five-year research program for the first time and, in the larger sense, EPA's commendable accomplishments to date. Our review is intended to serve as a supportive and constructive base to enhance the dialogue between EPA and Congress.

Sincerely,



EMILIO Q. DADDARIO
Director

Enclosure

Introduction

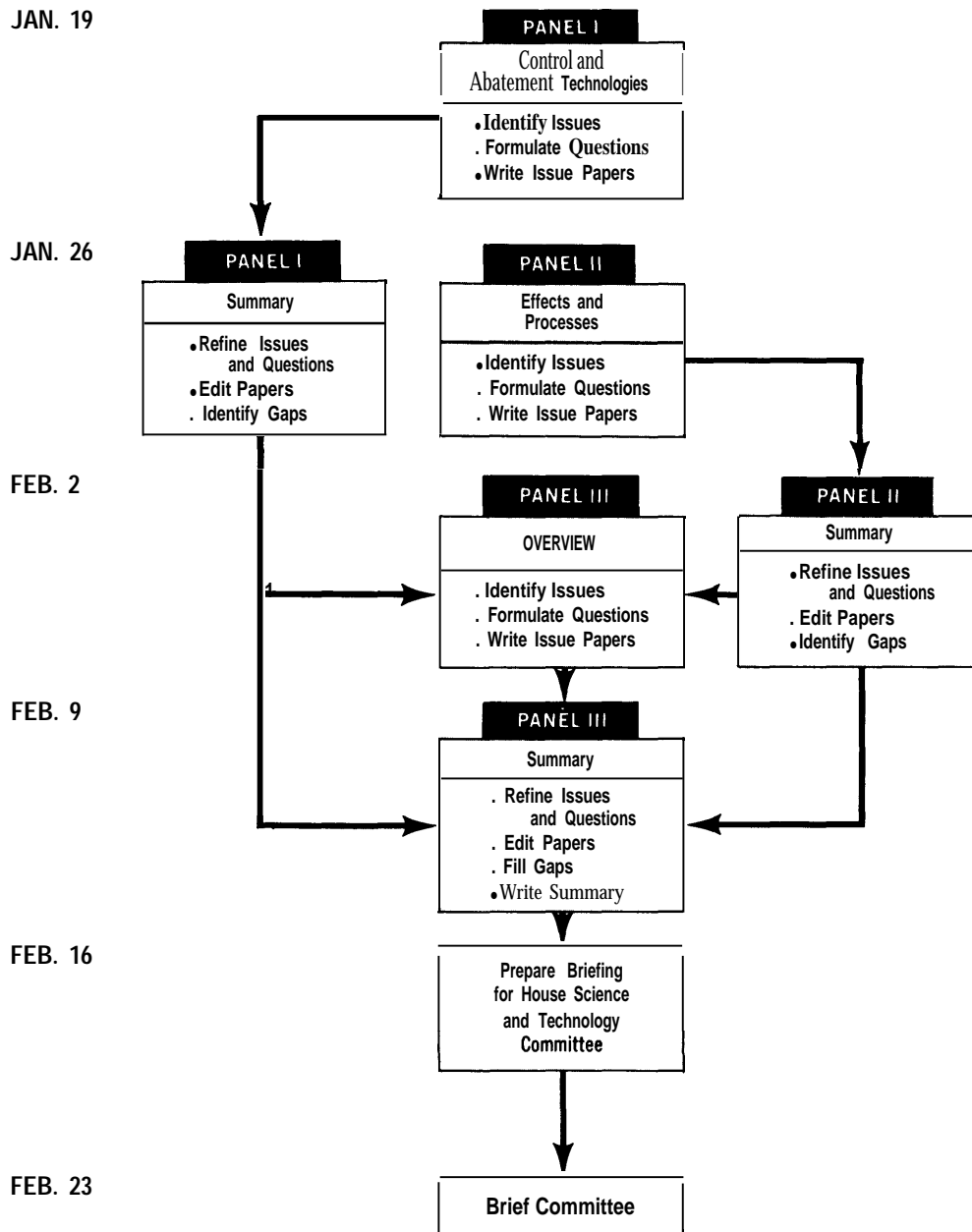
The Office of Technology Assessment (OTA) is pleased to present its review of the U.S. Environmental Protection Agency (EPA) report, entitled "Environmental Research Outlook, FY 1976-1980," which was presented to Congress in February 1976.

The EPA Research and Development Authorization bill for fiscal year 1976 requires that the Administrator of EPA annually submit to Congress a comprehensive 5-year plan for environmental research, development, and demonstration. On December 9, 1975, Chairman Olin E. Teague and Congressman George E. Brown of the House Committee on Science and Technology requested OTA to review the first EPA 5-Year Research Plan; the request was subsequently approved by OTA's Congressional Board. Congressman Brown, who chairs the Subcommittee on the Environment and the Atmosphere of the Committee on Science and Technology, further requested that OTA complete its review in time to brief the subcommittee in February 1976, during its consideration of the EPA Research and Development Authorization bill for fiscal year 1977.

To assist in this review, OTA convened three panels in late January and early February 1976. The members were drawn from a wide range of disciplines and points of view. Scientists, engineers, physicians, biologists, lawyers, ecologists, administrators, economists, and other concerned citizens were called upon from industry, academia, Federal and State governments, research institutes, consulting firms, and public interest groups.

Panel I addressed EPA's research plans for Control and Abatement Technologies, while Panel II considered the plans for research on Effects and Processes. Panel III, the Overview Panel, reviewed the Plan as a whole; it identified crosscut issues and

Figure 1. OTA Review of the EPA 5-Year Research Plan



organized the material for further analysis and presentation. Figure 1 depicts the process by which the 5-Year Plan was reviewed and evaluated.

The panelists had diverse views on environmental issues. This report does not necessarily reflect the opinions held by individual panel members; rather, it is a synthesis of their statement of the issues.

Time constraints required that OTA's organization and conduct of the review be compressed and intense. It was necessary in this limited study to deal with the salient features of the Plan rather than undertake a detailed analysis.

To augment this inquiry, the OTA panels interviewed key staff members from the Environmental Protection Agen-

cy, the Energy Research and Development Administration, the U.S. Department of Agriculture, the Department of the Interior, the Department of Health, Education, and Welfare, and the Commission on Natural Resources.

Invariably, a review of the kind reported here begins by identifying perceived shortcomings of the document under review. Thus, the review alone may appear somewhat negative. To provide a balanced perspective and greater appreciation for what motivates EPA's research, an article is appended (see appendix A), entitled "The Research Mission" by Dr. Wilson K. Talley, EPA's Assistant Administrator for Research and Development, which appeared in the October 1975 edition of the EPA Journal.

This report consists of six chapters covering significant issues identified by the panels. The first chapter addresses the question of the role of long-range research. The remaining chapters deal with specific aspects of the EPA Plan; in each of these chapters a short introductory statement highlighting identified issues is followed by papers addressing each issue. Each issue paper includes a summary, further questions on the issue, and background statements.

EPA was established in December 1970 by Executive order under Reorganization Plan No. 3. The purpose of forming EPA was to unify the disparate environmental agencies engaged in pollution control scattered throughout the Federal Government. EPA inherited 15 separate programs from several Federal agencies addressing air, water, and noise pollution, solid waste management, pesticides, water supply, radiation, and toxic substances.

EPA's regulatory mission is supported by the Office of Research and Development (ORD). ORD's research programs derive from nine major environmental statutes and EPA directives appearing in various appropriation reports. While EPA has the line responsibility for setting and enforcing standards, many other Federal agencies also conduct environmental R&D programs. For example, EPA coordinates an interagency environmental-energy program with 18 other Federal agencies. Appendix B of this report details the statutory and administrative background of EPA.

This project was conducted by Dr. Robert Daly, project director; Dr. Audrey Buyrn, executive secretary for the Panel on Effects and Processes; Mr. Patrick Gaganidze, executive secretary of the Panel on Control and Abatement Technologies; Dr. Hend Gorchev, American Political Science Association Fellow; Dr. Richard Rowberg, planning adviser; Dr. Charles Wolf, American Association for the Advancement of Science Fellow; Ms. Lisa Jacobson; Ms. Ogechee Koffler; Ms. Linda Parker; Ms. Patricia Poulton; and Ms. Joanne Seder. General support for this project was provided by Mr. Edward Edelson, Mr. David Sheridan, and Mr. Peter Miller.

The project was organized and performed within OTA's Energy Assessment Program, directed by Mr. Lionel Johns. Special thanks are due to OTA's Energy Advisory Committee and the Technology Assessment Advisory Council for their helpful comments in reviewing this study. The project staff is grateful to Mr. Frank R. Hammill, Jr., counsel, House Science and Technology Committee, for his assistance.