

of its own mission; it is possible, however, that the "mix" of research developed by the several departments and agencies may not be the optimum for the nation as a whole.) Only with a factual background describing today's program is it possible to enter upon a meaningful evaluation of these questions.

Table 1 provides the results from the questionnaire. It is quite certain that this table is the best representation so far obtained of Federal efforts in research, development, and demonstration related to pollution. At the same time, we are aware of a number of items that must be considered in using this table. First, the footnotes to the table indicate that there is a considerable amount of transfer of funds within the Government aimed at the most efficient solving of problems. We have attempted to identify such moneys so that there is no "double counting" in the funds. Second, data were already available on funds spent on pesticide research in fiscal year 1967 and it did not seem fruitful to ask each agency again to supply the information. The 1967 pesticide data were gathered under the auspices of the Federal Committee on Pest Control, which kindly made the data available. They are included in Table 2. There is a small amount of pesticide research also reported in Table 1 but we believe this to be less than \$2 million. Third, for purposes of our tabulations, intramural is considered as work done by Federal employees. Fourth, and very much to the point, much of the research, demonstration, and development reported here is directly pertinent to understanding and controlling pollution, but would be conducted for other reasons even if we were not supporting pollution control at the Federal level. Thus, better means of pest control and improved combustion are both desirable for increased efficiency. They also both contribute to reduction of pollution. We have identified some moneys of this sort but believe much more detailed analysis is necessary to really understand this factor. Fifth, investigations and research on pollution control are required as part of any military research, development, test, and evaluation program (reference to DOD Directive 5100.50). It is difficult, if not impossible, to separately identify all research on the problem, since a large effort is undertaken with regard to systems effectiveness, or military personnel protection. The data on pollution research cost thus do not include many such expenditures.

The Subcommittee considers its most important task the evaluation of the material supplied in response to Part II of the questionnaire. Several approaches have been taken by different agencies. One, by the Federal Water Pollution Control Administration, consists of a presentation of research on "effects of pollution" in the form of a matrix. A part of this is supplied as Appendix 2 to demonstrate this approach. Another, developed by the Public Health Service, requires a relatively elaborate coding but permits display of a large amount of data on a single sheet. An example is shown as Appendix 3.

I appreciate the chance to appear before your Committee and to describe the activities of the Research, Development, and Demonstration Subcommittee of the Committee on Environmental Quality. Many of the Subcommittee members are in the Hearing room and between us we will be pleased to try and answer any questions you may have.

Thank you.