

while it is important that the two Academies set up an appropriate relationship with those executive and legislative agencies whose immediate responsibility is to propose, enact, and enforce regulations concerning the protection of the environment and of natural resources, it is likewise essential that other bodies be set up or designated with the responsibility for studying the longer range aspects of the subjects involved.

Mr. DADDARIO. Do you have anything in mind in regard to these committees with long-range objectives which you speak of?

Dr. GERSHINOWITZ. Yes, I will describe this in a moment.

We have agreed that the most effective way of interacting with what may be called the operating agencies and legislative committees is to parallel their organization. Specifically, since the field of pollution is conventionally divided into air, water, and solid wastes, the proposals that have already been made that the NAS-NAE set up ad hoc committees with these areas of responsibility is the proper one. Nevertheless, it is clear that these committees will have so much to do to interact with and satisfy the demands of the governmental agencies with whom they will deal, that they will have little opportunity to look at the problems in broad perspective and in relationship to each other.

I do think that there exists within the actual and potential structures of the two Academies, and within their relationship with the National Research Council, not only adequate but unusual opportunities for achieving the kind of interaction between applied research and its utilization that is essential for the optimum application to our national problems of the resources of our national community of scientists and engineers. I do not wish to belabor the analogies with industry, but I believe that it is true that only in a few larger research-minded companies and in our more successful mission-oriented national laboratories that basic research, applied research and engineering application have been able to work in such a manner that the efforts of each both benefit from and reinforce the others. The responsibility that has been assigned to us involves the first major interaction and cooperative effort of the NAS and the NAE. If we can develop a satisfactory method of operation and cooperation we will have achieved something which in the long run may be even more important than our specific task.

As I said earlier, the charter of the ad hoc committees should limit them to the known and the immediately attainable. The three chairmen, presumably all engineers, would become members, ex officio, of a committee, whose other members, also ex officio, would be the chairmen of the other committees which are involved in the problems related to the environment.

That is the mechanism for the long-range study. Mr. Chairman.

This committee would report to us, the ESB, and through us to the loci of planning in the Executive Branch and the Congress. It would be the responsibility of this committee of chairmen to propose and recommend the longer range and interdisciplinary activities, the need for which arises from the projects underway.

I also have remarks later on as to what might be desirable in the interdisciplinary activities.

It would still be the responsibility of our Board to recognize and define and promote the studies in and interaction of physical and