This program has three related objectives: human welfare, scientific advance, and international scientific cooperation. These three objectives cannot be separated. Biologists can contribute uniquely to human welfare only by advancing scientific understanding, and the basic premise of the International Biological Program is that the growth of understanding will be accelerated by international cooperation among the world's biologists.

To be effective the program should focus on problems whose solution most depends on international cooperation in biological research. Accordingly we are concerned with conserving and expanding the world's biological resources to better serve human needs, with the quality of the natural environment as a realm of human happiness, with nutrition as a basis for human health, and with the biological aspects of the problem of balancing human fertility and natural resources. Our scientific objectives are also limited. Our basic interest is the development of scientific ecology in its broadest sense. We believe we should give special emphasis to the genetics and dynamics of populations, to the factors that control biological productivity, to the ways in which plants, animals, and especially men, adapt to their environment, and to the changing distribution of living things in the sea and in the air and on the land. If scientific opportunities are to be created for the future, scientists of different countries will need to cooperate in preserving natural areas as well as in research.

Because most of the land surface and many of the most interesting problems lie within the territories of less developed countries, international cooperation in the scientific development of these countries is not only desirable in itself but is also essential to attain the scientific objectives of the IBP. These objectives will be achieved only if there is a free exchange of scientists for research and training among different countries, and a broad and rapid flow of scientific information.

New methods must be developed and old ones greatly extended. In the past, ecologists have studied particular limited communities; now, work on a few large-scale systems is needed to test and extend our understanding. New techniques for worldwide biological surveys (perhaps by satellites as well as in other ways) are needed to improve our description of the biosphere. Greater comparability of methods of measurement and adequate arrangements for data handling are needed for a better appraisal of its productivity.

Field research in appropriate environments by scientists of different biological disciplines will be an essential aspect of the program. This will be most effective if different kinds of research can be undertaken in the same areas; thus a few carefully selected and well-described international research sites would prove highly beneficial. Only a relatively small number of biologists are skilled in the use of modern methods of field research or in studying the interactions among organisms in large ecological systems. The training of young scientists, particularly those from less developed countries, must be a basic component of the entire program.

The IBP had its origin in the International Council of Scientific Unions. Its theme is "the biological basis of productivity and human welfare." Biologists nationally and internationally for over two years have been planning the research phase of this program. The research is to start in July of this year and the program is to continue for 5 years. The National Committee is supported by nine subcommittees whose titles and purposes are briefly stated in the enclosure to this statement.

From the two-year planning effort now drawing to a close the U.S. program is just starting to emerge. As a first step research now on-going in Government and under private sponsorship that should be allied with the IBP is being identified. More importantly new projects and programs are being proposed, and if pursued will provide the support to the IBP that is needed. In February of this year a report entitled "U.S. Participation in the International Biological Program" was distributed to approximately 50,000 biologists of this country. Resulting from both this report and from planning discussions previously held, biologists have submitted over 60 research proposals to granting agencies recommending in each case that the project be included in the IBP. The estimated costs per proposal range from $5,000/year to $450,000/year for a duration of 1 to 7 years. The majority of these proposals, if funded by granting agencies, will be included in the program. These proposals total approximately $7.5 million.

Four significant IBP programs are now being actively organized. Each will be made up of related projects and will require coordinated efforts. These are: