National Institutes of Health
Public Health Service, Office of International Health
Office of Education, Division of Graduate Programs
Bureau of State Services, Environmental Health
Department of the Interior
Department of State
International Sciences and Technological Affairs
Agency for International Development, Nutrition Branch
National Aeronautics and Space Administration
Smithsonian Institution

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Following are the subcommittees of the U.S. National Committee and definitions of their programs:

Productivity of Terrestrial Communities (PT) in collaboration with Productivity of Freshwater Communities (PF). This subcommittee will concentrate on ecosystem function, including: (1) productivity and its utilization, with emphasis on primary and secondary energy flow within the framework of the concept that man is both manipulator of and a functional component of his environment; (2) circulation of nutrients, with emphasis on vital processes of decomposition and the nutritive base of production; (3) pollution and other disturbances that affect production in and composition of ecosystems; (4) search for means of integrating data on components within a systems-analysis or other statistical-model framework.

Production Processes (PP). This subcommittee is encouraging studies on recognized specific problems, including: (1) physiology of plants under water stress; (2) frost resistance and the growth limitations imposed by upper or lower temperature thresholds; (3) restricted rooting volume due to low base status, acidity, and aluminum toxicity of the soil, especially in tropical areas, and physiological studies of root growth and root rhizosphere interaction; (4) problems of nitrogen fixation, including (a) assessment of regional bases (types of soils and climates) of the magnitude of nitrogen fixation; (b) factors influencing rate and magnitude of fixation; (c) potential fixation in inadequately studied areas such as the Tropics, the Arctic, and the hydrosphere; (d) distribution of organisms and symbiotic systems that bring about fixation; (e) nitrogen budget and cycle as related to primary production; (f) systematics of nitrogen-fixing organisms; (g) the biochemical mechanisms of fixation and physiological processes associated with the reaction. The subcommittee believes that a study of these specific problems will ultimately lead to a more general treatment of broader problems.

Conservation of Ecosystems (CE). This subcommittee is concerned with freshwater and marine conservation as well as terrestrial, and will help to provide the scientific basis for the preservation of natural and research areas. The program includes: (1) establishment of criteria by which ecosystems can be described and classified; (2) registry of areas now available for research; (3) selection of types of areas still needed to complete a system of research reserves representative of American ecosystems; (4) identification of types of ecosystems and species threatened by destruction; (5) ecological surveys of American sites for concentrated multidisciplinary studies; (6) provision of scientific data in support of the preservation of natural research areas.

Productivity of Freshwater Communities (PF). In collaboration with Productivity of Terrestrial Communities (PT), efforts will be concentrated on a selected stream and a selected lake and their drainage basins. Areas of research will include: (1) detailed analysis of aquatic and terrestrial communities; (2) soil and geological descriptions; (3) transfer of material from air, soil, and bedrock to water and the reverse; (4) nutrient cycling; (5) role of organic substances, as in eutrophication; (6) population dynamics at all trophic levels; (7) role of bacteria in trophic dynamics and decomposition; (8) energetics of the ecosystems; (9) migration of organisms; (10) computer analysis and synthesis of biotic and other variables. Other general objectives include studies of eutrophication, primary and secondary production, fish production, the chemical environment, production in man-made lakes, and production under extreme environmental conditions.

Productivity of Marine Communities (PM). Because studies of the open ocean are already included in other international programs and because man's influence is most marked on estuaries and inshore waters, this program will emphasize the latter. The approach will include: (1) ecosystem analysis as a central problem involving hydrology, solar radiation, nutrients, dissolved and particulate organic matter, phytoplankton pigments, rate of photosynthesis, and the abundance and biogeography of benthos, phytoplankton, zooplankton, and fishes; (2) human food resources; (3) natural and artificial modifications of the environment; (4) distribution and abundance of organisms; (5) development of better understanding of basic ecological mechanisms.

Human Adaptability (HA). The goals of this subcommittee are to measure the distribution and identify the sources of variability of man's adaptive capacity and to elucidate the processes of adaptation. In fulfilling these goals, the subcommittee will undertake studies on a variety of human populations ranging from hunting and gathering groups to industrialized societies which exhibit significant contrasts in genetic background, habitat, and culture. Special attention will be given to the biological adaptation of isolated and migrant groups. The emphasis will be on population dynamics, human genetics, adaptation to stress, and morphology, growth, and aging. In studying adaptations, the subcommittee is especially