

accordance with its technological and economic level. The remaining natural areas which are not under cultivation can be divided into two categories: forests, pasturage, and fields mowed for hay which are sometimes even more valuable for the national economy as they are than they would be if they were plowed; and wastelands which it would not be practical to bring under cultivation, given the present state of technology and economic conditions in the countries concerned.

All this means that the exploitation of natural areas, primarily of plant communities, will increase.

The changes which are taking place in the structure of the biological resources of the earth are not only of a quantitative nature, as when the over-all production of organic matter decreases in a given area, but also of a qualitative nature, as when certain types of plants and animals disappear and their place is taken by other less valuable types. Historical experience shows that man's activity causes many natural areas to undergo important changes in a relatively short period of time, and that communities of plants and animals are replaced by others. In many cases where this happens (excluding man's creation of highly cultivated areas), the new communities are of less economic value than those preceding them (savannas in place of different types of tropical forests; aspens and birches in place of conifers and broad-leaved trees; vast areas of semideserts and deserts with a rich fauna of ungulates converted into areas of low productivity and sometimes into wastelands).

The mighty growth of technology and its application everywhere is now causing still more rapid changes of the natural plant cover and the animal population of terra firma as well as the plant and animal world of rivers, fresh-water basins, oceans and seas.

For these reasons it is necessary to make a deep, all-inclusive and global study of the productivity of organic matter on earth as the source of food and industrial raw materials to cover man's needs.

In 1960, international scientific associations to which scientists of the USSR belong (the International Union of Biological Sciences, the International Geographical Union, the International Council of Scientific Unions) pointed out the necessity of sharply increasing research on the biological resources of our planet. The decision was taken to organize international biological research in a way similar to research undertaken for the International Geophysical Year, a program which had existed for some years.