

"CARTOGRAPHIC ANNALS OF RUSSIA AND THEIR USE IN
THE RESEARCH OF NATURE PROTECTING AND
ECOLOGICAL PROBLEMS"

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The collection of cartographic works of the map department of the Russian State Library can be likened to cartographic annals reflecting natural, demographical, social, economic peculiarities of Russia, its history, political and cultural development within the space of several centuries to different degree of detail. The most ancient general geographic map held by the department dates back to the 17th century. It is a handwritten map of the environs of the town of Kashin. It shows a river, the verdure, roads, settlements. "The map of possessions of Ural ore mines" (185) is noteworthy among subject productions.

"The great soviet world atlas" (1937, 1939), "The physical geographical world atlas" (1964), complex regional atlases: "The atlas of the Georgian SSR" (1964), "The atlas of the Azerbaijanian SSR" (1963), "The atlas of the Irkutsk region" (1962), a series of maps for institutions of higher learning (1954-1960) can be considered better pages of these annals taking a place of

pride in the Russian science and culture.

In spite of the unevenness and differences in the completeness of the education of diverse laps of the development of the country they are unique as a source of information, which is corroborated by the following:

1) Versatility of the characteristics of the social and economical development and of the cultural construction in the context of natural, economical, geographical features and complexity in the case of the series of maps and atlases; 2) Possibility of a retrospective analysis of some directions of scientific and practical knowledge which is impracticable with any other sources; 3) Analysis of alterations of the geographical environment (verdure, land tenure, industrial and transport exploitation, population and others) in their concrete spatial context; 4) Possibility of the objectivisation and the check-up of information while comparing cartographic works created by adherents of diverse scientific schools.

The mentioned merits of the cartographic annals in conjunction with the possibilities of the technology of geoinformation system allow to set much store by their role in exploring and solving ecological problems including that of the protection of the nature leaning on complex system presentations and tracking the dynamics of events. Instances of their practical use are: substanti-

ation of the networks of nature protection territories with different status, study of the problem of the deforestation, of the degradation of the black earth, research into the dynamics of the land tenure and so on. Let us dwell only on two examples of the use of maps in ecological investigations.

Firstly, for the planning of the networks of the nature protection territories the series of scientific reference natural and social economic maps of the USSR of a scale of one to four million for the institutions of higher learning put out over 1988-1990 can be undoubtedly helpful: hypsometric, cryolitological, soil, vegetable, landscape, land tenure, nature protection, population, transport and other maps. This series are used for organising the monitoring of arctic, subarctic and other ecosystems.

Secondly, it can be the study of the dynamics of the change of the forestry and of the land tenure on the territory of the European part of Russia, which has suffered huge transformations for the last 100 years. They are utterly evident even at the visual comparison of maps of the European part of Russia (1878) and of the map "Usable areas of the USSR" and "The forests of the USSR" of a scale of one to four million (1990), which are similar to each other concerning the scale.

In the last years the stocks of the map department have been filled up with ecological maps. Many of them are oriented towards the reflection and the estimation of the ecological situation in Russia on the whole and in specific regions.

The availability of information for users is one of the components of the successful solution of ecological problems. During the last years essential alterations have taken place in the regime of the use of entire series of fundamental cartographic works which has considerably widened the volume of ecological information.

In 1993 the catalogue "Ecological and nature protection maps and atlases of Russia and of contiguous states within the pale of the former USSR" was compiled in the map department to the aid of users. The catalogue embraced more than 600 titles of Russian cartographic works - maps published independently and maps issued since 1970 in the composition of series and in the composition of atlases. They differ in subjects, territorial scope, ways of use (wall and desk maps), scale and purpose (from scientific reference to educational and popular maps). The structure of the catalogue gives an idea of its contents. It consists of seven large chapters: 1) Natural ecological potential, evaluation of natural conditions and resources (32 per cent); 2) Unfavourable and

perilous natural and anthropogenous natural processes and events (28 per cent); 3) Use of the natural ecological potential of the territory and anthropogenous ascendancy (26 per cent); 4) Change of the state of the components of the geographical environment owing to the anthropogenous influence (4 per cent); 5) Protection of the nature (7,6 per cent); 6) Complex ecological maps (1,4 per cent); 7) Monitoring the ecological situation (1 per cent). In their turn the chapters divide into 24 subsections.

Complex ecological maps rouse the keenest interest.

Among new acquisitions the ecological geographical map of Russia of a scale of one to four million is notable for the completest reflection of the ecological situation of the country through the evaluation of the ecological state of the natural and production complexes. The project of the compilation of an ecological atlas of Russia stands out among the long range plans.