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**M. I. NIKISHOV, A. M. KOMKOV
M. A. FEDOSOVA**

**REALIZATION OF LENIN'S IDEAS
IN SOVIET CARTOGRAPHY**

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Soviet cartography formation and development is bound up with the name of the founder of the Soviet State - V.I.Lenin, who attached great importance to working out and application of maps in the development of productive forces and in the popularization of successes of socialist construction, and in the communist education of our inhabitants.

As far back as 1918 V.I.Lenin in his draft plan of scientific and research works put a task to use maps for profound study and development of natural resources, for national placing of productive forces, for electrification of the country, for development of agriculture. Specific tasks of cartography were determined in Lenin's decree about establishment of the Higher Geodetic Administration (March 15, 1919).

Lenin's directions in cartography, his letters and notes, criticisms of some cartographic works have formed the methodological basis for the development of the Soviet cartography. Some of Lenin's directions such as completeness of the phenomena characteristic on the maps, representation of historical method and dynamics (in them), contemporaneity and reliability of data, clarity of the maps are still actual and at present they remain basic principles that determine ways of development of cartography for a long period of time.

Lenin's theme was dealt with in works by the soviet cartographers - Kostritz I.B., Yegorov K.D., Salishtchev K.A., Churkin V.G. and others. However in published works this problem was mainly considered from the scientific-historical point of view, that is Lenin's part in establishment of State geodetic service and projecting of atlases or use of maps in practice was ascertained. In this paper the main attention is devoted to fulfillment in the USSR of Lenin's directions in maps and atlases making.

Lenin's directions in cartography are being successfully carried out. These successes will become more convincing taking into consideration the state of cartography in pre-revolutionary Russia.

It is worth mentioning that as for the time of beginning of science, a number of large cartographic works, scientific character and practical trend Russia was holding one of the leading positions in the world greatly influenced the methods of some trends in the world thematic mapping.

Sufficient territories of the country had been already mapped. There was issued in Russia "Economic-Statistic Atlas of the European

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Russia" (1851). There were also made such remarkable cartographic works as "Trade and Industrial Map of the European Russia" (1911), "Asian Russia Atlas" (1914); prominent scientists Berg L.S., Voyelkov A.I., Fedchenko B.A., Glinka K.F. participating in making them up.

Russia had a great influence on development on thematic map-making. In 1881 the International Geologic Congress adopted A.P.Karpinsky's propositions on the main principles and the legend of geologic maps. Scientific principles of soil cartography were laid by Dokuchaev V.V. in 1870-1880th and also greatly influenced the methods of world soil cartography.

Despite of some progressive characteristics pre-revolutionary Russia cartography suffered from grave shortcomings due to the social system of the tzarist autocracy.

Cartographic study of Russia was very poor. Large scale topographic maps were compiled mostly for western frontier territories. A sizable part of Russia was mapped with a ten-verst map (1:420000) - "verst" is about 3500 feet. All the territory of the country was mapped with a one hundred-verst map. Russia was especially poor provided with thematic maps. Thus, e.g. geologic maps that attracted comparatively much attention covered only 30% of the country and the detailed survey covered only 10% of the territory. Soil mapping was limited by provision of tax service. There were only two scientific-reference atlases - "Asian Russia Atlas" and "World Manual Atlas by Marx".

The Great October Socialist Revolution opened wide perspectives for the development of cartography. The main problem of cartographic-geodetic service was assistance to the development of productive forces of the country on the principles of all-round thorough topographic mapping. It is well-known that this problem is being successfully carried out. By the middle of 1960th there has been already made State Topographic Map of the country at scale 1:100000. Map making at scale 1:25000 is being completed. Zone of the most exploitation is mapped with the topographic map at scale 1:10000, and cities and industrial areas are mapped at scales 1:2000 - 1:5000.

One of the most important Lenin's request to cartography was practical trend of a map. Soviet cartography has always been closely connected with the practice of socialist construction, with the

tasks facing the national economy at one or another period of the Soviet State.

In the years of the first five-year plans much attention was drawn to industrial mapping. Big cartographic works were issued: industrial maps - "European Part of the USSR" (1927) and "Asian Part of the USSR" (1929), "USSR Industrial Atlas" (1929 - 1931), "Industrial Atlas for the Beginning of the Second Five-Year Plan" (1934), "USSR Energetic Resources Atlas" (1935). In the course of these works making aims and problems of the industry were formulated.

In the post-war period the problem of all possible rise in agricultural production was put in the forefront. There were issued series of maps for the country at large and for individual areas, agricultural atlases of republics and regions (the Ukrainian SSR, the Moldavian SSR, the Chuvash ASSR and others). A large work was the first great "USSR Agricultural Atlas" (1960) which was highly appraised by home and foreign cartographic literature.

All kinds of activities in cartographic providing national economy with the thematic maps were especially widely developed after the end of the Great Patriotic War. Series of geological, soil, geobotanical and hypsometric maps for the whole country at scales 1:1000000, 1:2500000, 1:5000000, 1:7500000, 1:10000000 and at smaller scales have been compiled. Series of thematic maps of nature and mineral resources are being compiled for Soviet Union Republics (the Ukrainian SSR, the Georgian SSR and others) and for individual regions and for territorial-industrial complexes (such as Angara-Enysey, Non-chernozem zone of the RSFSR, Baikal-Amur railway and so on).

Recently the special maps of nature and mineral resources, i.e. the maps of essential for the national economy have been more intensively carried out. These are "USSR Soil Erosion Map 1:5000000" (1968), "USSR Agroclimate Resources Map 1:6000000" (1973), "The Newest Tectonics of the USSR South Map 1:1000000" (1975) and "Leveling Surfaces and Weathering Crusts Map" (1972) which is very important for planning of mineral resources search.

It is well-known what consideration V.I.Lenin gave to atlas cartography. It was already in the first years of the Soviet Power that V.I.Lenin suggested that School Russia atlases and foreign countries atlases should be issued. However his proposals were only

realized in the 1940th. The first Soviet works of that kind were: "Moscow Region Atlas" (1933) and "Leningrad Region and the Karelian ASSR Atlas" (1934).

"The Large Soviet World Atlas" (1937) had an immense influence upon the development of soviet and world cartography. This atlas includes new original world maps of financial dependence and rivalry of powers, of their fight for markets, of export of capitals, of division of the world and others.

"The Large World Soviet Atlas" received an enthusiastic welcome all over the world. In the year 1937 it was awarded with the Grand Prix at the Paris International Exhibition.

Atlas cartography was intensively developed after the end of the Great Patriotic War. Series of school atlases, scientific-reference and local lore atlases of republics, territories and regions of the USSR were published (more than 30 names).

Prominent atlases, published on the USSR in the post-war period are: "Sea (Nautical) Atlas" (1950, 1958), "General Geographic World Atlas" (1959, 1967), "Atlas of the History of Geographical Discoveries and Researches" (1959), "Physical Geographical World Atlas" (1964), "Antarctica Atlas" (1966), "Agroclimatic World Atlas" (1972), "USSR Forests Atlas" (1973), "Ocean Atlas" (1975). Issue of these atlases signifies a new step in the development of the Soviet cartography.

V.I.Lenin paid great attention to the use of maps for popularization of national economic construction. Thanks to his initiative in 1921 there was issued in mass edition the diagrammatical map of Russia Electrofication, devoted to the GOELRO - the first long-term plan of the Soviet State.

In 1919 in his special resolution suggested to circulate among inhabitants statistical data on social and economic problems in the form of cartograms and cartodiagrams. To carry out the resolution a number of popular maps on national economy was issued. Later maps were compiled for all the fove-year plans, and as for the 9th and the 10th five-year plans - series of maps and special atlases were made.

V.I.Lenin considered maps as means of summing up of socialist construction timed to remarkable events and dates of the country. These ideas were completely expressed in the "Atlas of the Development of the USSR Economy and Culture" (1967) that was issued by the

50th anniversary of the Great October Socialist Revolution. The atlas includes economic maps for the country on the whole and individual regions, which show state of economy and culture for 1913 and 1965.

The history of economic and cultural development of the USSR for 50 years of Soviet power was shown in graphic and intelligible form for the first time in the atlas.

Large original works devoted to the most important events and dates are "The Historical-Biographical Lenin Atlas" (1970), "USSR Education and Development Atlas" (1972), "Hero-Cities of the Great Patriotic War" atlas (1973), "History of the CPSU" atlas (1975) that shows the Communist Party of the Soviet Union development and activities.

Above considered atlases were also published for republics and regions. Novosibirsk region atlas "We Live And Construct According to Lenin" can be also mentioned as an example. "Socialist Buryatia" atlas (1973) was issued by the 50th anniversary of the republic.

V.I.Lenin thought "absolute necessity of individual consideration of main regions essentially dissimilar as for their economic significance is concerned" * to be one of the main principles of economy study, agriculture in particular.

According to these directions thematic maps in the USSR are issued not only for the country at large but for the union and autonomous republics, economic regions, especiallu for the territories which were backward colonial outlying districts in pre-revolutionary Russia.

Regional principle was applied by V.I.Lenin first of all when studying agriculture of zone distribution.

V.I.Lenin worked out the indeces basing which he ear-marked (alloted) regions for Russia trade agriculture. These regions are shown in the map of "The Agricultural Atlas" (1960). Lenin's principles of agricultural division into districts were further developed in maps issued separately or being a part of atlases or encyclopedias, e.g. "Agricultural Regions of the USSR" map **.

It is well-known how much importance Lenin attached to maps of mass purpose, i.e. political administrative, political, tourist's,

* V.I.Lenin. Complete Works, vol. 27.

** "Children's Encyclopedia", vol. 6, ed. 3, 1974.

road maps.

When making such maps correctness of borders, simplicity, clearness and clarity of them was required as well as accompaniment of the map with the explanatory text and diagrams.

The Soviet Union was a great success in making maps of mass purpose. These kinds of maps are issued in editions of many copies. For example "The USSR Automobile Roads Atlas", "The USSR Political Administrative Atlas" and "The World Political Atlas" are issued in edition of one million copies. In the USSR there are made more than 200 of tourist schemes and maps for various regions, the total number of copies being more than 44 million.

V.I.Lenin's directions about mapping of foreign countries are also being carried out. Characteristics of geography and economy of foreign countries are represented in school atlases, atlases for teachers of geography, the USA, Latin America and Africa atlases where original thematic maps describing social economic conditions of life in those countries. The important impact into map-making of foreign countries is publishing of series fold table general purpose geographic maps with cut in economic maps. Edition and systematic reedition of such maps is of exclusive importance in development of foreign tourism, in accordance with broadening of economic and cultural ties between the USSR and foreign countries.

V.I.Lenin was greatly interested in compiling of World maps and atlases, in usage of maps as a means of intercourse among peoples and of international cooperation. As an example of realization of Lenin's ideas on international cooperation may be named the general geographic map of the world at scale 1:2500000 that was made due to efforts of geodetic services of socialist countries; "Atlas of Cuba" made by Soviet and Cuban scientist and awarded with the State Prize of the USSR in 1973; geological-geophysical atlas of the Indian Ocean, made according to UNESCO plan.

It is well-known how well and broadly V.I.Lenin used maps when solving the problems of State importance, i.e. political, military economic and cultural.

How various were the maps Lenin used in his work one may learn from taking a look at Lenin's library in the Kremlin (which contains 99 names of maps and atlases) * including many large works of that

*"Lenin's library in the Kremlin (catalogue)". All-Union Book Chamber edition. M., 1961.

time namely "Asian Russia Atlas", "World Manual Atlas" by A.F.Marx, "Russia Railways" atlas (1918) that were Lenin's handbooks.

Soviet cartography did much to fulfil Lenin's directions in cartography. However carrying out one of his most important demand for marxist representation of complex, unified, integral picture of the world is the basis for further development of cartography.

Accomplishment of this demand is particularly urgent in the light of historical decisions of the XXV Congress of the CPSU.

Materials of the Congress broaden fields of application of thematic maps and complex atlases, requires necessity of improvement of their contents and of working out of scientific methodical principles of making out and using of maps with the help of new sources of information and means of automation and computers.

One of the most important trends in the field of thematic map drawing is intensification of scientific research in working out of methods of making maps on protection and rational use of soil, entrails of earth, the vegetable and animal kingdom, expanses of air and water.

It is worth noting that legal principles of nature and its usage in the USSR were laid by V.I.Lenin. The laws were adopted about land, forests, about struggle against drought and others in which the problems of protection of soil, forests, rivers, relicts of nature, parks and other objects were considered. These ideas were further developed in the decisions of the Party and Government, in the documents of the XXV Congress of the CPSU.

At present draft maps of nature protection are being worked out now. We may name one map of protected territories in the USSR at scale 1:2500000 compiled by the Council for the Research of Productive Forces of the USSR Gosplan (State Planning Board).

To solve the problems of nature protection and rational nature usage it is necessary to broaden the application of space photographs in thematic cartography. The cartographer's assignment is to work out methods of space materials application in cartography.

Scientific-technological revolution requires further expansion of contacts and international cooperation in the field of thematic and complex map drawing, and working out thematic maps and atlases on nature protection and usage of the World ocean resources above all.

The task of cartographers is to intensify working up of maps

and atlas making of the world at large and of individual regions on the basis of international cooperation.

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