

39912

K

EIGHTH INTERNATIONAL CARTOGRAPHIC CONFERENCE
MOSCOW, USSR August 3-10 1976

Dr. Radó, Sándor -- Dr. Papp-Váry, Árpád
/Hungary, Budapest/
PROPOSAL FOR A POPULATION MAP ON THE BASE OF WORLD MAP
1 : 2.500.000

Výzkumný ústav geodézie, topografie
a kartografie v Praze
Knihovna

1307/76

39912

The survey, the scientific analysis of phenomena indicating territorial distribution, the exploration of the ties, relations existing between the phenomena effected on the basis of the territorial differences and spatial situations of the quantitative and qualitative factors, the illustration of the starting-points and the well-arranged, clear-out publication of the researches' results can be attained only by means of the map. The map is therefore a working tool, the materialization of the research method and at the same time a form of communication. With this triple function can be explained the map's ever growing importance in the domain of the natural and social sciences.

The specialists became aware of the map's advantages and they are applying them more and more extensively in the field of regional, or of country-wide researches. The extension of the study of the phenomena to larger areas /to groups of states, continents/, or to the Earth's entire surface has been hindered upto now by the fact that for the researches no adequate base- and working maps were available.

The lack of a map-work compiled according to uniform principles and covering the Earth's entire surface in the same system of measures and at the same scale has been recognized by the geographers already towards the end of the last century. The necessity of making a World Map the first time has been included in the Resolutions of the 1891 Bern International Geographical Congress. After long-lasting preparations the principles of making the International Map of the World at the uniform scale of 1 : 1.000.000 have been approved by the 1913 London International Geographical Congress. The progress of works was rather slow. Even upto now only a part of the IMW-sheets has been published.

Seeing the slow progress of the 1 : 1.000.000 IMW-program, seven socialist countries /Bulgaria, Czechoslovakia, Poland, Hungary, the German Democratic Republic, Romania and the Soviet Union/ decided to produce the 1 : 2.500.000 map of the Earth.

The objective and the function of this mapwork have been established by the participants of this program as follows:

1. General geographical map, covering at uniform scale the entire surface of the Earth /that of the oceans included/ in the same system of measures, with the same contents and in the same execution. This map is providing general information for the geographical study of large areas.
2. Base- and working map for thematical mapping covering large areas. The uniform structure permits for this mapwork to serve as uniform chorographical base for the various branches of thematical mapping. In the choice of the scale this point has been of importance, due to the fact, that according to the judgement of the editorial board of the 1 : 2.500.000 map, the materials available for the time being do not make possible the compilation of more detailed thematical maps covering continents, especially the whole Earth. Also in the choice of the projection it has been a crucial point that sheets covering as large areas as possible could be assembled to uniform base maps.

The projection, the sheet layout, the contents of the World Map have been already discussed in several papers and therefore we intend now to examine only the use of the World Map as base map in the cartographical work. This point is of topical interest, due to the fact, that the works on the World Map were completed in 1975. At present we dispose of the sheets of any part of the Earth which could be the bases of thematic maps.

The base maps are intended to represent the surface's objects and phenomena in such a degree of details, that

- the main features of the area's physical particularities and economic characteristics shall be expressed in a way that the elements serving the orientation do not spoil the legibility of the special contents;
- for the quick and precise compilation of survey data and of the observed phenomena sufficient information should be available;
- spatial identification and recompilation of particulars represented on other maps should be made possible;
- the area, the limits on the Earth's surface of the represented special contents should be unambiguously rendered;
- the ascertainment of the relations existing between the special contents and the surface's physical geographical peculiarities and economic objects shall be facilitated.

Considering the probable density of special thematic contents at the given scale, the development of the following three kinds of base- and working maps have been proposed by the editorial board.

1st variant. General working map intended for all kinds of thematical mapping researches and base map for the compilation of maps representing those economic phenomena which are under major influence of the physical environment. Coverage: without relief colours, the full and very dense contents of the World Map.

The map is serving, among others, the purpose that the research worker could indicate on the working map the various data and that by means of preparing several variants the phenomena could be analysed and synthetised, spatial reconstructions viz. development prognoses could be established.

A further function of the map is to provide a cartographic base for the representation of the phenomena closely related to the economic activity and influenced by the relief.

This variant provides a clear and well-analyzable base for the compilation of land use, agricultural and medico-geographical maps.

The 2nd variant is intended as base map first of all for the natural sciences. According to this, on this map the relations existing between the represented phenomena and the special relief features are emphasized. Therefore in this variant the physical geographical elements of the World Map are contained.

Contrary to the 1st variant, the railway- and road network, boundaries of national parks, names of locations, administrative boundaries are not represented.

This base map can well serve for the compilation of geophysical, geological, soil science, meteorological, hydrological, oceanographical, phyto- and zoogeographical maps dealing with various subjects. In the field of social sciences this variant is well-applicable for the compilation of archeological, historical, ethnographical maps.

The 3rd variant is intended for the function of base map in the field of social sciences. On the map the localization of

public projects /settlements, roads, railways, reservoirs/ and their spatial situation are emphasized.

Contrary to the previous variant the contour lines are not represented.

This variant can serve as base map for the compilation of industrial, commercial, transportation, public utilities-coverage, population maps.

In addition to the above variants by means of a slight modification quite a number of further base maps can be developed.

The base maps can be used not only in the existing sheet layout, but by means of mounting different sheets, or some parts of sheets in modified size too. In this way maps covering countries /e.g. Japan/, groups of states /the Far East/, continents /Asia/, charts of seas or oceans can also be developed.

By means of comprehensive modifications of the contents and of the size in the given scale, for all kinds of thematic mapping can be provided uniform base maps which are most suitable for the given purpose.

In the course of the last decade several thematic mapworks have been published in the field of natural sciences. These mapworks covering large areas are prepared under the terms of international co-operation and are effectively sponsored by the UNESCO too. In the course of preparation of mapworks sponsored by various international organizations every

time individual base maps are prepared. Due to the making of the base maps the terms of the work's completion must be postponed, the costs of production are multiplied and the quick and easy collation of various maps meets difficulties.

Therefore we should like to draw the attention of the national and international organizations to the use of the base map-variants of the 1 : 2.500.000 World Map in such cases, when thematical maps covering larger areas are to be compiled. Due to the use of sheets of uniform structure, one can provide for the users of them base maps, the contents and layout of which are best adjusted to the thematic material.

The utilization of the World Map as thematical base map would be of double advantage:

1. The compilation of the thematical contents on a base map of uniform projection, scale and structure would greatly facilitate the collation of various maps and on the basis of this collation the performance of the necessary examinations.
2. The saving of costs and time due to the quick and cheap production of base maps could be utilized for the speeding-up of the further development of the thematical mapping.

By means of the World Map even quite special requirements in base maps can be met more quickly and more easily than by means of making new base maps.

As mentioned above, in order to meet the requirements in maps of the natural sciences, several international efforts took place upto now. Unfortunately this can not be stated about the economic-geographical mapping. The methodology, the techniques of representation of the economic-geographical maps is not yet properly developed. Therefore the experiences

gained in the course of preparation of an International Economic-Geographical Map of the World would definitely facilitate the development of economic-geographical cartography.

As a result of the examination of the available World's statistical data, the possibility of detailed representation on the scale of 1 : 2.500.000 could be realized in the case of population maps, covering the whole World. Therefore the preparation of a Population Map of the World would be of topical interest.

Earlier, at the Conference on Population Maps, organized in 1969 in Budapest, Witthauer, K. made a proposal for the compilation of a population world map to be prepared on the basis of World Map 1 : 2.500.000 and Stams, W. developed further his idea and made a proposal in 1971.

The territorial distribution of the population, the network of populated places is greatly influenced not only by relief features but also by the range of forests. Therefore, it seems practical to represent on the population maps the territorial distribution of forests too. The representation of the forests is also motivated by the fact that in a number of thematical maps the marking of forests is necessary, for instance in the case of agricultural, medical-geographical, hydrological etc. maps. The uniform representation of forests on a global scale can be estimated as a prospective demand on the base maps of thematical contents.

In this paper we wished to draw the attention to the possibilities of the utilization of the 1 : 2.500.000 World Map sheets in the field of thematical mapping. The makers of the

World Map are prepared to offer the film negatives of the individual sheets for making use of them as bases of thematic maps because they are convinced that in this way they are facilitating the development not only of the cartography on the whole but especially that of the thematic mapping and by this means they will contribute to the strengthening and widening the friendship and understanding between nations in this scientific domain.