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GEO-CLIMATIC AND DEMOGRAPHIC FEATURES OF ETHNIC AREAS

Мақалада этникалық ареалдардың геоклиматтық және демографиялық ерекшеліктері қарастырылады.

Bu makalede, etnik bölgelerin coğrafik, iklim ve demografik özellikleri detaylı olarak araştırılır.

Ethnic groups' migrations and their developing new territories took place throughout the history of mankind. Thereby the processes of expansion by peoples of their areas or formation of kindred peoples at new territories proceeded. Meanwhile settlement of peoples was as a rule subject to certain regularity which consisted in migration of peoples to the territories with similar climatic conditions.

For instance, **European nations** during their colonization of the New World settled mainly in North America, and the south of South America, climate of which was the most close to European climate. Therefore countries with the population mostly consisting of European ancestors, namely USA, Canada, Argentina, and Uruguay are located just in these regions. Meanwhile in the most part of Central and South America which has hot humid climate and in some areas hot dry climate Europeans inhabit only the regions propitious for settlement from European point of view, frequently these are middle mountains, where the climate is characterized with lower temperature qualities.

Later on, in XVIII-XX centuries Europeans colonized Australia, New Zealand and Africa, and here the same regularity could be observed. Australia and New Zealand which have climatic conditions similar with European, were populated by Europeans overall except the most arid and high-altitude territories. Meanwhile Africa in tote was not peopled with Europeans except its southernmost extremity (the modern Republic of South Africa), as well as some other regions of East (Kenya) and West (Senegal) Africa with more tempered climate.

In the conquered parts of South and South-East Asia, climate of which totally differs from European climate, Europeans formed only small groups determined by military, administrative and mercantile demands of mother countries.

Demographic expansion of **Chinese** throughout centuries was directed to southern dimension along the Pacific coast. The reason consisted in that Hwang Ho river basin namely historical motherland of Chinese had monsoon climate, i.e. hot humid rainy summer as well as cold dry winter due to proximity to East Siberia. The climate to the south from this region has warmer winter and hotter summer; nevertheless it is monsoon climate either, so is habitual for Hwang Ho river basin population. Also adequate amount of rainfall in southern coastal regions let grow approximately the same crops. That's why Chinese had for centuries developed exactly the regions to the south from Hwang Ho river basin which subsequently became component parts of China.

After developing these territories groups of Chinese moved in the Middle Ages further to South-East Asian countries, hot humid climate of which had similarity with summer conditions in China. In many of these countries Chinese constitute significant part of population up to date.

It should be mentioned, that up to the end of XIX century the territories to the west and to the north (Manchuria) from the Hwang Ho river basin have remained beyond the Chinese demographic expansion sphere. Both territories avoided Chinese colonization because of availability of bellicose nomads being obstacle for Chinese intrusion. However climatic differences had also played role – the climate in the north being monsoon either had meanwhile more frosty winter than in Hwang Ho river basin, while in the west the climate was too dry.

Siberia remained sparsely populated within the long period of time, and its development by sedentary peoples began only in XVI century similar to New World countries. Throughout centuries, Siberia being the part of the Old World was not developed by the peoples of densely populated oases of Turkestan and East Turkestan. Firstly, steppe populated by nomads lied between these regions and Siberia, and secondly Siberian winter was too rigorous for the southern oases dwellers. That's why Siberian lands began to be developed from the west only after emerging of centralized Russian state, by Russians accustomed to frosty winters. Due to the more frosty winter in Siberia as compared to European part of Russia, Siberian lands were developed at a slow pace, and periodically this process was encouraged by the Russian government.

Arabs spread widely during the period of conquers and emerging of the Arab Caliphate. Territories controlled by Arabs lasted from Atlantic Ocean in the west to the Tien Shan Mountains and Indus river basin in the east.

Formation of the Caliphate was followed by spreading throughout the Empire of the Islam and Arabic language, and Arabization of the part of population. From the whole Caliphate territories exactly the regions from Atlantic coast to Mesopotamia were Arabized, and that was determined by the following factors:

1) These territories had maximum similarity by climatic qualities with the primordial territory of Arabs – the Arabian Peninsula both in terms of temperature qualities, thanks to their location in the same latitudes, and in terms of identical Mediterranean precipitation regime (with the precipitation maximum in cold season). Accordingly the flow of Arab migrants to these territories was the maximal.

2) These territories had been populated by Semitic peoples being kindred to Arabs, and that facilitated the process of assimilation of aboriginal peoples by the Arabs. This is also an illustration of the coincidence of the climatic zones' boundaries with the cultural and confessional zones' boundaries which will also be discussed below.

Thus, firstly, Arabization did not take place in Iran and Central Asia, having the same precipitation regime (Mediterranean) but located to the north, in

case of southern regions of Iran – more high-altitude and because of this characterized with a colder winter.

Secondly the territory of to-date Pakistan was not Arabized either, because of being isolated by Iran from Arabian territory, because of high population density and monsoon climate. Pakistan's climate having approximately the same temperatures of winter and summer at the same time was characterized by maximal humidity in summer season as compared to dry Arabian summer, and correspondingly it was hardly sustainable for Arabs.

Also it should be noted that predominantly arid territories were conquered by Arabs. Even in India and Europe Arabs conquered the most arid territories – accordingly North-West India (the modern Pakistan) and Iberian Peninsula and southern regions of the modern Italia. Anatolia – the region comparable in terms of aridity with the Iberian Peninsula was Islamized later, by Turkic peoples.

Turkic peoples throughout the history had entered to southern territories with warm winter, for instance India, Egypt etc. and dominated in these regions throughout centuries, however they formed as ethnic groups only at territories with cold winter. For instance, Turks are practically not available in Arabic countries of the Middle East and Northern Africa (with the exception of the northernmost regions of Iraq and Syria), India and Pakistan despite their rule over these territories over a long period of time.

Mass migration of **the Arians** from Central Eurasia which has cold winter and arid climate to India which is the territory with completely different climatic conditions is probably a sole exception in regularity of peoples' migration to territories with similar climate. This migration is one of the most significant in mankind history, because it considerably changed ethnic constitution and historical process in India.

Climatic features to a large extend determine culture of peoples. Community of climatic conditions also frequently defines certain mental community.

Islam is historically spread in the most arid parts of Asia and North Africa, as well as the most humid parts of the South Asia.

Thus all Arab countries, Iran, Central Asia, Islamic regions of north-west and north-east Africa are arid regions. On the satellite map of the world, yellow land zone stretching from China to Africa's Atlantic coast indicating arid part of the planet virtually coincides with the main part of the Islamic world.

Indonesia and Malaysia, being the part of the Islamic world in the Buddhist South-East Asia, are simultaneously the most humid countries in the humid South-East Asia.

Even in historical India Islam spread in the arid west i.e. Pakistan, and in the most humid east i.e. Bangladesh.

Location in certain latitude, availability or absence of the winter, winter's temperature qualities – all this influences the cultural characteristics of peoples, and the process of their historical development.

Absence of winter or mild winter makes peoples' housekeeping much less power-consuming. Therefore southern countries should be the most economically developed. However the very countries with marked winter are the most economically advanced. In all likelihood it was related to the necessity of generation of supplementary amounts of alimentary goods, fodders, stocking the firewood, namely it stimulated additional work not related directly to the current demands, therefore it encouraged development of abstract and strategic thinking.

Investigation of the most martial peoples let conclude that a frosty winter is one of the factors for high martial qualities of peoples. As examples Turkic peoples, Mongols, Russians, Vikings and their descendants – German peoples can be mentioned.

Therefore nomadic style of living of Turkic peoples and Mongols was not itself a basis for formation of their high martial qualities, but the climate with frosty winter was also the factor. One can observe that on the example of Bedouins who also being a nomadic people meanwhile only once could found great empire which took place under the influence of the social energy surge as a result of monotheistic religion acceptation. Thereby winter frosts most probably exert hardening influence on the individuals and encourage formation of psychological qualities positively affecting their martial characteristics.

Political influence of an ethnic group is determined first of all by its internal qualities, such as solidarity and brotherhood, diligence and propensity for education. For instance, Jewish and Armenian peoples count not more than 15 million and 7 million people accordingly; nevertheless these peoples play the role in political life of countries of residence and in the world much exceeding their share in population.

On the contrary, quantitative advantages of the Indian people, being the second largest nation in the world historically were partly whittled away by its lower internal unity, because of division of Indian people to multiple ethnic and confessional groups, but first of all because of the cast barriers. That's why India despite its enormous preponderance in population was relatively easily conquered by Britain.

Nevertheless quantitative characteristics of ethnic groups are also a matter of large consequence. Chinese community not also has high qualitative characteristics, such as solidarity, diligence, and propensity for education, but has also advantage consisting in its number exceeding 1.3 billion people and well-organized Diasporas in different countries of the world counting up to 40 million people.

There are several ethnic communities in the world, who occupy vast territories. These are Anglo-Saxon peoples, Russians, Arabs, Chinese, Indians, Turkic peoples etc. These peoples occupying vast territories have big differentiation in number among them due to different population density of the occupied territories.

Territories' population density is determined by the possibility to feed at a

territory certain number of people, which in its turn is dependant on climatic peculiarities of territories, namely precipitation amount, duration of vegetation period (warm period required for plants growth), as well as the climatic factors defining level of comfort of residing at the territory.

Arid areas, excessively humid tropical regions, and excessively cold northern territories are the lowest populated areas.

Europe has the optimal precipitation regime, because precipitation in Europe is not concentrated in the cold season, like in countries with the Mediterranean precipitation regime, making dry summer a problem for agriculture. Also precipitation is not concentrated in summer like in monsoon climate, making the summer hardly sustainable, as well as population density excessively high. Optimality of precipitation regime in Europe consists in the even distribution of precipitation throughout year.

Europe is located in the northern latitudes thanks to which it has mild, cool summer. Whereas in winter availability of Gulf Stream current is hindrance for the frosts inherent for these latitudes. Thereby Europe has cool summer and simultaneously mild winter i.e. temperature regime of Europe is also the most comfortable.

Thanks to all above-mentioned Europe has relatively high population for these latitudes – in average about 100 people per square kilometer.

Southern, south-eastern and eastern **coastal regions of Asia** with the monsoon climate are the most densely populated areas of the world. Average population density in coastal and fluvial regions of Asia make several hundred people per square kilometer. Here high population density is provided both by vegetation period duration and by the sufficiency of precipitation, which falls on the very vegetation period. However the climate of these regions is characterized by low comfort due to the concentration of humidity in a hot season, i.e. hardly sustainable summer. Excessively high population density is itself also an unfavorable factor for the residence comfort.

Arab and Turkic world due to location predominantly at arid territories have in average low population density.

Turkic community occupies vast territory; meanwhile the Turkic world by its population density and population number is inferior to many other ethnic groups.

Climatic regularity of Turkic peoples' distribution historically consisted in that Turkic peoples in ancient times had peopled steppe and desert areas of internal Asia, and at new territories Turkic peoples also predominantly settled in steppe and desert plains.

The modern Turkic world according to its climatic and demographic features can be divided into 4 geographical regions – South-western, East European, Central Asian, and Siberian regions.

The South-western region includes Anatolia, Azerbaijan (including Iranian) and Turkic areas of the Middle East. This region has the most favorable in

the Turkic world conditions of precipitation and provision by warmth. Accordingly, this region possesses the highest rates of population density amongst other regions of the Turkic world – 80-100 people per square kilometer. The region occupies about 1 million square kilometers and counts about 90-100 million of Turkic population.

Regularity of Turkic peoples' settlement at steppe plains can be observed in the South-western region of the Turkic world either. Turkic tribes primordially settled in more arid regions – in Anatolia – in its central part, in what is the modern Azerbaijan – on the steppe plains of the Absheron Peninsula. Meanwhile at the Mediterranean coast of Anatolia, in the mountainous areas of Anatolia and Azerbaijan, non-Turkic peoples constituted considerable part of the population. Thanks to the space integrity of these areas and political domination of the Turkic peoples, Turkic element finally prevailed at these territories.

At present the same regularity is being observed: in Turkey non-Turkic peoples predominantly inhabit high-altitude areas – Kurds, or excessively humid areas in the east of the Black sea coast Rize, Artvin – Lazs, Georgians. In Azerbaijan high-altitude areas are inhabited mostly by Caucasian peoples, while the most humid region Lenkoran is populated by Talyshs.

Caspian Sea western and eastern coasts that have arid climate and populated by Azerbaijanis and Turkmens accordingly, are separated by excessively humid regions Gilan and Mazanderan, being populated with non-Turkic peoples.

East European region stretches from the Turkic regions of the Balkans, Gagauzia, Crimea and the Turkic regions of North Caucasus to the Idel-Ural region.

In ancient times and the Middle Ages the region was one of the main parts of the Turkic world and the zone of the solid settlement of Turkic peoples. This zone virtually coincided with the steppe zone of Eurasia and it extended into Central Europe up to Hungary. Climatic regularity of Turkic peoples' settlement was manifested by the practically coinciding of the boundaries between Turkic and non-Turkic peoples' areas with the boundaries between steppe and forest zones.

As the steppe zone had been developed by sedentary peoples, and the nomads had been displaced by them, the Turkic areas predominantly remained in sedentary Islamic regions, and at present Turkic peoples in the East European region populate discrete areas.

Here the Gulf Stream warm current influence on the climate of the west of Eurasia should be mentioned. Because of the current, general climatic regularity in the northern latitudes of Eurasia consists in decreasing of winter temperatures from the west to the east. Winters in the same latitude are warmer on the East European plain than in West Siberia, and in West Siberia – than in East Siberia (except, of course coastal areas of East Siberia).

January isothermal line (the line marking the boundary between average temperatures) -16 Celsius degree passes practically along Ural mountains i.e. firstly from north to south but not from the west to the east as should be, and secondly it

passes approximately along the boundary between East European and West Siberian plains.

Thanks to the Gulf Stream current influence provision with warmth in winter months is higher in East Europe than in the same latitudes in the center of Eurasia. For instance, in Kazan city daily mean temperature of January is -10.4 Celsius degree [1], whereas in Aralsk city situated in Kazakhstan to approximately one thousand kilometers south from Kazan daily mean temperature of January is -10.6 Celsius degree [2], and in Petropavlovsk city in Kazakhstan located approximately in the same latitude with Kazan daily mean temperature of January is -15.6 Celsius degree [3].

Central Asia (Turkestan) – is the central by location and the largest by territory part of the Turkic world. Central Asia including East Turkestan and the northern areas of Afghanistan occupies about 5.6 million square kilometers. The climate of Central Asia is characterized by inadequate precipitation and frosty winters in the north. Average population density is low and equals to about 14 people per square kilometer.

In Uzbekistan, Turkmenistan, Tajikistan, south of Kazakhstan, Fergana part of Kyrgyzstan, north of Afghanistan precipitation regime acquires Mediterranean type namely it is characterized by the minimum precipitation in the warm season. For instance Tashkent city has about 419 mm of annual precipitation (which is not as few for the arid region), from which only 17 mm fall to the period from June to September [4], in Ashgabat city 12 mm of precipitation falls to the same period from the 227 mm annual precipitation [5], in Turkistan city in the south of Kazakhstan 12 mm from 190 mm annual precipitation [6], and in Maymana city in the north of Afghanistan – only 1 mm from 365 mm annual precipitation [7].

Therefore climate aridity in these regions consists not only in a small amount of precipitation, but also in its distribution, i.e. few part of precipitation falls on vegetation period. Precipitation falling in the cold season frequently has scanty utility (except spring precipitation). Only precipitation falling in the mountains is accumulated in form of snow and glacier, and their melting in warm season provides the main source of water for Central Asian rivers. That's why agriculture in Central Asia is possible only with artificial irrigation in valleys of rivers beginning in the mountains.

Despite the general low population density in Turkestan due to the above reason population density acquires highest values congruent to the indicators of coastal areas of Asia in several regions which possess dense network of rivers and irrigation channels like Fergana valley.

Thanks to the minimum precipitation in summer and accordingly maximum sunshine fruits, watermelons, melons, and vegetables in Central Asia have high taste qualities.

Tarim basin – vast territory between Tibet and Tien Shan – is the most arid region of the Turkic world and Central Asia. Thus, annual precipitation in the

following cities make: in Yarkant – 55 mm [8], Hotan – 37 mm [9], Kashgar – 64 mm [10], Artush – 80 mm [11], Aksu – 74 mm [12], Kumul – 39 mm [13].

In Turpan area annual precipitation equals to only 16 mm. Turpan is one of the unique places in the world. Daily mean temperature in July equals to +32.3 degree, i.e. acquires maximal values for Central Asia, whereas in January it decreases to daily mean -7.2 degree [14]. Thanks to the abundance of sunshine fruits and especially grapes of Turpan possess peerless taste qualities.

Central Asia has potential reserves to increase population density, at the expense of which the whole Turkic world population number can be increased. The main of these reserves is improvement of water provision in Central Asia which can be achieved in the following ways:

1) Implementation of water-saving technologies in order to ensure employment and provision by alimentary products of the more number of populations at the expense of the water resources already being utilized in agriculture;

2) Development of the water resources not being utilized in the region, mainly in Kazakhstan;

3) Realization of the projects of the water resources transportation from adjacent regions.

Siberian region. Turkic areas of Siberia also shrunk significantly within the last centuries. Nevertheless, the Turkic part of the present-day Siberia is enormous either, mainly at the expense of Yakutia, and Siberia is the second largest by area part of the Turkic world. However due to the frosty climate with a short vegetation period Siberia is characterized with extremely low population density, which makes about 3 people per square kilometer throughout Siberia, and in Yakutia it makes about 0.3 people per square kilometer.

Currently three zones of Turkic peoples' settlement can be separated out in Siberia: Yakutia with the area of 3.1 million square kilometers, Sayan-Altay region, and the south of West Siberia inhabited by Siberian Tatars and Kazakhs who do not have statehood in this region.

In Siberia climatic regularity of the Turkic peoples' settlement also became apparent: Lena basin, Sayan-Altay and south Siberian steppes are the territories with the minimum precipitation in Siberia.

Yakutia is a unique region of the world with the most extreme climate on the habitable part of land. Daily mean temperature of January in Yakutsk city makes -39.5 Celsius degree [15].

Polemics is continuing regarding which of Yakut towns whether Oymyakon or Verkhoyansk to consider the pole of cold of the Northern Hemisphere. Officially the coldest temperature in Oymyakon -67.7 Celsius degree was registered in 1933 and in Verkhoyansk -67.8 Celsius degree was registered in 1892 (in that time observations in Oymyakon were not carried out yet). But in 1924 in Oymyakon the temperature -71.2 Celsius degree was unofficially registered. Also, according to the Chief Geophysical Observatory data absolute annual

minimums in Oymyakon are lower than in Verkhoyansk averagely by 3.5 Celsius degree. To the date Yakutia authorities have solved the issue to the favor of Verkhoyansk but the issue is remaining open [16].

Despite such cold winter summer in Yakutia being short is meanwhile quite hot and the summer temperature can reach for a short period the level of +35 Celsius degree, in Yakutsk city temperature maximum equals to +38.3 Celsius degree.

Yakut climate has the most amplitude between winter and summer temperatures, difference in which reaches 100-105 degree.

It should also be mentioned that Yakut people having migrated to the land's most cold part have introduced and developed unique experience of cattle farming in the northern latitudes in the region where livestock farming mainly had consisted from reindeer breeding.

LITERATURE

1. *Kazan.* Wikipedia. (in Russian). http://ru.wikipedia.org/wiki
2. *Aralsk.* Wikipedia. (in Russian). http://ru.wikipedia.org/wiki
3. *Petropavlovsk.* Wikipedia. (in Russian). http://ru.wikipedia.org/wiki
4. *Tashkent.* Wikipedia. http://en.wikipedia.org/wiki/Tashkent
5. *Ashgabat.* Wikipedia. http://en.wikipedia.org/wiki/Ashgabat
6. *Turkestan.* Wikipedia. http://en.wikipedia.org/wiki/Turkestan
7. *Maymana.* Wikipedia. http://en.wikipedia.org/wiki/Maymana
8. *Yarkant County.* Wikipedia. http://en.wikipedia.org/wiki/Yarkant_County
9. *Hotan.* Wikipedia. http://en.wikipedia.org/wiki/Hotan
10. *Kashgar.* Wikipedia. http://en.wikipedia.org/wiki/Kashgar
11. *Artux.* Wikipedia. http://en.wikipedia.org/wiki/Artux
12. *Aksu, Xinjiang.* Wikipedia. http://en.wikipedia.org/wiki/Aksu,_Xinjiang
13. *Kumul, Xinjiang.* Wikipedia. http://en.wikipedia.org/wiki/Kumul,_Xinjiang
14. *Turpan.* Wikipedia. http://en.wikipedia.org/wiki/Turpan
15. *Yakutsk.* Wikipedia. http://en.wikipedia.org/wiki/Yakutsk
16. *Oymyakon.* Wikipedia. (in Russian). http://ru.wikipedia.org/wiki

РЕЗЮМЕ

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ГЕОКЛИМАТИЧЕСКИЕ И ДЕМОГРАФИЧЕСКИЕ ОСОБЕННОСТИ ЭТНИЧЕСКИХ АРЕАЛОВ

В статье рассматривается геоклиматические и демографические особенности этнических ареалов.