

TRANSBOUNDARY REGIONS OF EAST ASIA: GEOGRAPHICAL AND POLITICAL PRECONDITIONS AND LIMITATIONS TO LONG-TERM DEVELOPMENT

ABSTRACT. The contradictory integrity of globalization and regionalization processes in the modern world has been embodied in the formation of specific spatial areas – multiscale cross-border regions, whose functioning and development are determined both by the interactions between neighboring countries and by the totality of external geopolitical and geo-economic circumstances. The article is devoted to the factors and features of cross-border processes and socio-economic development within one of the largest and most dynamic structures of modern Eurasia – the Greater Macro-Region of East Asia, embracing the northeastern and eastern territories of Russia, eastern China, Japan, and both Korean republics, Vietnam, and a number of other countries facing the seas of the northwestern Pacific. The integrity of this vast and very heterogeneous macro-region ranging from Chukotka to the Philippine Sea is based on relatively stable cross-border relations, which, in turn, are one of the determinants of these territories' development. The role of geographical prerequisites (geographical location, climatic conditions, natural resources of land and sea) and geopolitical factors (geopolitical location and cross-border features) in the long-term development of this macro-region is assessed. It is shown that both favorable and negative prerequisites are associated with the cross-border nature of the integrated geosystems, including the marine ecosystems. Various types of cross-border regions with two-, three-, and four-link territorial segments belonging to different countries have been identified. The geopolitical potential of countries and regions is assessed, and the zones of geopolitical tension are revealed.

KEY WORDS: transboundary region, East Asia, geographical, geopolitical factors, a geopolitical position, contact structures, long-term development, territorial segments

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INTRODUCTION

East Asia is a large, meridionally extended macro-region situated at the junction of the largest continent (Eurasia) and two oceans (the Arctic and the Pacific). In literature, there is no strict definition of the East Asia composition. The macro-region is defined differently among the countries of China, Japan, Republic of Korea and DPRK (Pacific Russia 2017; Terada 2006). As such, the Russian Far East and Southeast Asian nations are not always included in this region. More often, Northeast Asia is identified as a composition of Northeast China, the Russian Far East, DPRK, Republic of Korea and Japan (Pacific Russia 2017; Tulokhonov 2014; Womarck Brantly 2014). A.G. Druzhinin proposes a new approach to structuring of Eurasia based on a geo-ethnocultural systems conception (Druzhinin 2016). The Asiatic group of such systems is identified without concretization of their composition.

At present, the largest region – the North Pacific, including the USA, is identified but its full configuration is not always consistent (Geopolitical potential 2010; Pacific Russia 2017). In our opinion, East Asia is a more integral region. Taking into account similarity of geographical positions, we included the territorial subjects of the Russian Federation (RF) adjacent to the Pacific Ocean, the eastern portions of China, and all countries entering the seas and the North Pacific in East Asia. This macro-region extends over nearly eight thousand kilometers from north to south (Fig. 1).

The specific features of East Asia include great differences and the contrasts of its particular territories and regions if considered from different perspectives. So, from the environmental standpoint, the macro-region houses virtually all natural zones of the Earth: from the ice Arctic deserts of North Siberia and Chukotka to the tropical forests of Indonesia. The macro-region is characterized by the most diverse combinations of the natural resources of the land and adjoining seas and oceans. In East Asia, the unique diversity of civilizations and cultures was formed including the unique Chinese, Korean, Japanese, and paleo-Asiatic ones, as well as the Russian northern indigenous nations represented by the Yakuts, Chukchi, Koryaks. Finally, in the countries of East Asia, the strong diverse political systems have emerged: presidential republics (Russia, Republic of Korea etc.), constitutional monarchies (Japan, Thailand), the countries of socialist orientation (China, Vietnam), and DPRK, a country with the communist political regime).

The differences in the levels of the social and economic development in East Asian countries are also considerable. Highly-developed countries (i.e. Japan, Singapore and Republic of Korea), dynamically developing ones (i.e. China, Malaysia, Vietnam and Russia) and less-developed states (i.e. Thailand, Laos, Myanmar, Indonesia and Philippines) are found side by side.

The critical characteristic unifying the countries and the regions of East Asia derives from their transboundary nature. Thus, a great part of the Russian Far East and Northeast China



Fig. 1. The transboundary regions of East Asia

are included into the transboundary basins of the Chukchi, Bering, Okhotsk, Japan, and Yellow seas. In addition, there are several transboundary river basins in the East-Asia region including the Amur, the Ussuri, and the Tumen. The basins of the East China, South China, as well as the Philippine seas are also transboundary. According to our estimates, the transboundary regions of East Asia include practically 100% of its territory. Therefore, the transboundary phenomenon is the most important factor for East Asia combining its regions and countries into one integrated transboundary space.

The environmental, social-economic, cultural, and political characteristics of the macro-region combine to form a pattern that is diverse and unique. The dynamics of the separate parts and structures of this space are determined in many respects by the effect of the geographical and geopolitical factors. These factors also have different impacts on the long-term development of the countries and regions of East Asia. Such separate factors create the favorable prerequisites for the regional development, while the others restrict them. As a whole, the combined impact of the geographical and geopolitical factors and their spatial differentiation on the long-term development of the East Asia macro-region has not been practically investigated. Some works were devoted to Northeast Asia (Baklanov 2000; Geopolitical potential 2010; Larin 2016; Nature management 2005; Tkachenko 2009; Womarck Brantly 2014), the Far-Eastern region of Russia (Baklanov et al. 2016; Baklanov et al. 2015; Larin 2016), Northeast China, Vietnam (Baklanov et al. 2017; Larin 2014; Nature management 2005), the countries of Southeast Asia (Asia-Pacific 2010; Baklanov et al. 2017; Pacific Russia 2017). However, the transboundary nature of the macro-region presents additional complexity to understanding its long-term development. Therefore, the task of this paper is to make an aggregated assessment of the geographical and geopolitical factors and their role in the long-term development of the macro-region.

RESULTS AND DISCUSSION

The main geographical and geopolitical factors

The geographical factors exerting a significant influence on the long-term development of the macro-region include their geographical and economic-geographical positions, the effect of the natural-climatic conditions due to their spatial differentiation, as well as a natural-resource potential in the form of the territorial and aqua-territorial combinations of natural resources.

The most important characteristic of the geographical position of East Asia resides in the fact that its greater part is a zone of the global contact among geographical structures (Baklanov 2000). Firstly, this is a junction between Northeast of Eurasia and the Pacific and Arctic Oceans resulting in different interrelations between land and the sea in the natural-ecological, natural-resource and economical spheres. Secondly, this is the place where Russia borders the world's largest economies (the USA, China and Japan). The contact structures serve as the basis for performing various functions, including utilization of different natural marine resources supported by inshore infrastructure in combination with terrestrial resources. The proximity and dynamic development of the countries of the macro-region generate the external-economic interactions through the joint partnership of land-based and marine transport systems, which in turn contribute to the extension of the market spaces.

The southern portions of the Russian Far East, the southeast portions of China as well as the areas of Vietnam, Singapore and Malaysia have the most favorable economic-

geographical position from the viewpoint of interfacing with the external transportation routes and proximity to the developing markets.

Due to a variety of natural conditions, the most favorable opportunities for sustainable development are found in the southern areas of the Russian Far East and East China. Low temperatures, permafrost and other extreme conditions become the limiting factors in the central and northern portions of the Russian Far East. In the areas of East Indo-China, the tropical extreme natural processes, such as typhoons, floods and tsunami are frequent, although many of these regions are most favorable for cultivation of rice. Local populations have generally adapted to these natural-climatic disturbances (Baklanov et al. 2017).

For some areas of East Asia and adjacent seas, one can identify both land-based and aqua-terrestrial resources. Their similarity and differences for different areas, as well as their generalized natural-resource potential were estimated. The regions of the Russian Far East, Northeast China, Malaysia, Indonesia and Myanmar hold the highest potential. As a whole, one can note the great complementarity of land-based natural resources with marine natural resources, as well as some complementarity of natural resources in certain neighboring areas, like between the Russian Far East, Northeast China, Japan, Republic of Korea and DPRK (Nature management 2005; Tkachenko 2009). Such complementarity of land-based natural resources with those of the marine origin, as well as natural resources between neighboring countries, which is typical in the regions and countries of East Asia, create favorable conditions for the long-term sustainable development.

It should be noted that the regional contrasts within the transboundary space are generally large. Here, one finds neighboring countries vastly differing both by their size and development level (Table 1). The world's largest countries are China (18.7% of global GDP in 2018), Japan (4.1%) and Russia (3.1%). Smaller countries include Indonesia (2.6%), Republic of Korea (1.6%), Malaysia (0.74%), while Singapore is a small but highly-developed country.

As the Table shows, from 1990 to 2018, many countries of East Eurasia have demonstrated extremely high rates of development: China has increased its GDP by 2,162%, Myanmar by 1,727%, Laos by 1,013%, Vietnam by 1,005%, Malaysia by 709%, Indonesia by 542% and Philippines by 491%. This is in contrast to many other regions of the world, where increases in the GDP have been lower. For example, the GDP during this same period has increased in the EU by 227%, the USA by 244%, Russia by 236%, and for the world taken together – by 370% (gtmarket.ru 2019; fincan.ru 2019). Among the geopolitical factors essential in the long-term development of the macro-region, we consider the geopolitical position of East Asia as a whole and its separate regions, as well as its transboundary phenomenon to be an important specific characteristic of the geopolitical position of the macro-region.

The essential features of the geopolitical position of this macro-region are determined by Russia and China, the eastern areas of which belong directly to East Asia. Russia and China have different "weights" and political systems but, in recent years, the strategic partnership was established between them.

The crucial component of the geopolitical position of the macro-region is the proximate neighborhood with the USA and strategic partnership between the USA, Japan and Republic of Korea that enhances geopolitical contrasts. The USA is one of the three largest countries by its geopolitical potential in the world (15.2% of the global GDP). It neighbors Russia and East Asia across the Bering Strait. The essential

Table 1. Grouping of the East Eurasia countries and regions according to their economic potential and growth rate (according to data for 2018)

Groups of countries by GDP volumes	Names of countries	GDP by IMF estimate at PPP, billion \$	Place occupied by country in the IMF list by GDP (of 192)	Growth of GDP (PPP) in the period of 1990 to 2018 by WB data (%)
1. Large	1. China	25,270	1	2162
	including its eastern parts	14,361	...	...
	2. Japan	5,594	4	127
	3. Russia	4,213	6	236
	including Pacific Russia	46.7	...	...
	4. Indonesia	3,495	7	542
	5. Republic of Korea	2,136	14	489
2. Medium	6. Thailand	1,320	19	441
	7. Taiwan	1,251	22	...
	8. Malaysia	999	26	709
	9. Philippines	953	28	491
	10. Vietnam	710	34	1005
	11. Singapore	566	37	728
	12. Myanmar	344	52	1727
3. Small	13 DPRK	66.7	...	...
	14. Cambodia	70.5	...	...
	15. Laos	53.7	...	1013
	16. East Timor	6.8	...	...

Compiled by: (fincan.ru 2019).

specific geopolitical role is performed by Japan. Being territorially a part of East Asia, this country has the closest and large economic and military-political ties with the USA. In this "team", Japan can be simultaneously considered an external geopolitical factor in East Asia. Its vicinity to the countries of Oceania and Australia, varying by political systems, is also of great geopolitical importance for East Asia.

In Eastern Asia, significant differences between countries and regions are reflected in their geopolitical potential (Table 2). On the one hand, China, Russia, and the USA are the largest countries of the world in terms of their geopolitical potential; and to perhaps a similar extent so is Japan and the Republic of Korea. However, there are a number of countries that have medium and small potential values.

Even greater contrast is reflected by the relative characteristics of the development of the territories including those which belong to the transboundary regions (Table 3). On the one hand, these estimates reflect a cumulative effect of the geographical factors on the development of the territories and, on the other hand, they reflect, perhaps to a larger extent, their geopolitical stability.

Generally, taking into consideration a transboundary phenomenon, the sea water area crossed by national frontiers, and the portions mainland of the territories adjacent to it to some extent become the influence zones of neighboring countries and the zones of intersection of their mutual geopolitical interests. The estimates of the natural-resource potential owned by one country (in the coastal areas and marine exclusive economic zone) and, especially, stability and efficiency of the national types of resource management in the neighboring countries

become interrelated and interdependent. This refers to all transboundary regions. According to our research (Baklanov et al. 2008; Baklanov et al. 2015; Geopolitical potential 2010), a transboundary phenomenon creates both favorable and negative conditions for the long-term development. So, when reaching the high standards of natural resource management in a neighboring country, the space and efficiency of the renewable resources regeneration (fish, forest, land etc.) are extended.

Under otherwise equal conditions, the integrity of the transboundary geosystems (including the marine ecosystem) creates objective opportunities for the long-term international cooperation of the countries within the transboundary region. This contributes to the rise of a sustainable natural resources management system, extension of the market space, and, as a result, long-term viable development of the region. At the same time, a risk of transboundary transfer of technogenic pollutants from one country to another, regular violations of the natural resources management standards in one of the countries, and lack of the sufficient information can impair the achievement of sustainable development in the transboundary region as a whole. All of the above-mentioned points are of great relevance for the countries and groups of countries included in various transboundary regions of East Asia.

Depending on how many countries border a transboundary sea (river), one can carry out specific zoning programs. This will determine a overlapping of influence zones and geopolitical interests of two, three or more countries within one transboundary region. Thereupon, we have identified the following types of the transboundary

Table 2. Main characteristics reflecting the elements of the geopolitical potentials of the countries and regions of East Asia (according data for 2017)

Regions	Area, thou. km ²	Share of transboundary territories in total area, in %	Length of coastline, km	Population size, thou. people	GDP, billion US\$
1 Pacific Russia	3,086.3	100	59,883	5,219	46.8
2 Eastern areas of China	2,207.3	100	30,017	770,327	14,61
3 Japan	377.8	100	29,020	126,824	5,443
4 DPRK	120.5	100	4,009	28,491	66.7
5 Republic of Korea	100.2	100	12,478	53,733	2,035
6 Taiwan	36.0	100	2,007	24,827	1,189
7 Singapore	0.78	100	268	5,470	528
8 Thailand	514.0	100	7,066	71,037	1,236
9 Laos	236.8	100	0	7,007	49.2
10 Cambodia	181.0	100	1,127	24,827	64.3
11 Vietnam	329.6	100	11,409	93,402	649
12 Philippines	299.8	100	33,900	107,143	877
13. Malaysia	329.8	100	9,323	41,700	993
14. Myanmar	679.5	100	1,930	54,045	344
15. Indonesia	1,904.5	100	95,181	269,479	3,250
16. East Timor	14.9	100	706	1,212	6.8
In all	10,418.8		298,324	1,684,743	31,138.8
Average value for country, region	651.2	100	18,645	105,296	1,946.2

Compiled by: (www.wri.org 2019; gtmarket.ru 2019; fincan.ru 2019; InfoTables.ru 2019; gtmarket.ru 2019; Pacific Russia 2017).

Table 3. Contrast of East Asia transboundary space according to the level of development (according to data 2018)

Names of countries	Population size, people/ km ²	Economic density, thous. US\$ /km ²	GDP per capita, US\$/person	Comparison to the country with maximum density (times) *
1. China	139	2,633	18,110	53 / 276
including its eastern parts	349	6,506	18,643	21 / 112
2. Japan	336	14,805	44,227	22 / 49
3. Russia	8.6	246	29,267	859 / 2,957
including Pacific Russia	12	48	9,817	6,157 / 15,218
4.Indonesia	127	1,835	13,230	58 / 396
5.Republic of Korea	494	21,315	41,351	15 / 34
6.Thailand	131	2,568	19,476	56 / 283
7.Taiwan	650	34,565	53,023	11 / 21
8.Malaysia	86	3,030	30,860	86 / 240
9.Philippines	333	3,179	8,936	22 / 229
10.Vietnam	272	2,154	7,511	27 / 338
11. Singapore	7389	727,506	100,345	1 / 1
12. DPRK	189	556	2,341	39 / 1,308
13. Myanmar	79	507	6,511	94 / 1,434
14.Cambodia	80	389	4,335	92 / 1,868
15.Laos	27	227	7,925	273 / 3,208
16.East Timor	77	447	5,242	96 / 1,627

Compiled by: (gtmarket.ru 2019; fincan.ru 2019; InfoTables.ru 2019; gtmarket.ru 2019).

In the numerator – differences in population density, in the denominator – in economic density.

Table 4. Basic zones of geopolitical tension in the transboundary regions of East Asia

Names of transboundary regions	Subject and zones of the geopolitical tension	Parties (countries) where the geopolitical tension exists
1. Chukchi Sea basin	Demarcation of the eastern part of the Arctic shelf	Russia – the USA
2. Sea of Okhotsk basin	Claims of Japan to the South Kurile Islands	Russia – Japan
3. Sea of Japan basin	Absence of peace treaties between countries Absence of official borders in the area of the Takeshima-Dokdo Islands	DPRK – Republic of Korea Japan – Republic of Korea
4. East China Sea basin	Ownership of the Senkaku Archipelago (8 small islands with a total area of 7 km ²)	Japan – Republic of China (Taiwan) – People's Republic of China (PRC)
5. East China Sea basin	Ownership of Taiwan Island. Affiliation of Taiwan. China considers the island of Taiwan its territory.	China – Taiwan
6. South China Sea basin	Ownership of the Spratly Islands (a key area in the context of regional presence and availability of oil and natural gas).	Vietnam – China– Taiwan – Malaysia– Philippines–Vietnam–Brunei
7. South China Sea basin	Affiliation of the Paracel Islands	China – Vietnam
8. Water area of the Sea of Japan	Naming of the sea (in the Republic of Korea and DPRK, this sea is called the Eastern Sea).	Republic of Korea, DPRK, Japan

Compiled by: (www.geopolitics.com 2019).

regions in East Asia: two-link regions facing the Chukchi, Okhotsk and Bering Seas; three-link zones facing the Yellow Sea; four-link territories (including the Amur transboundary region) facing the Sea of Japan; continent-island regions facing the East China and South China Seas and island regions facing the Philippine Sea. In the multilink transboundary regions, there is a concentration of national frontiers (land and maritime) of different countries which complicates their geopolitical relations in general (Baklanov 2000).

East Asia, mainly in its transboundary regions, is characterized by the presence of zones of international tension and geopolitical problems related to unresolved borders, some of which are remaining legacies of the World War II. In particular, there is a certain unsettledness with regard to differences in positions and related geopolitical tensions between DPRK and the Republic of Korea, between PRC and Taiwan, as well as a number of geopolitical problems associated with the ownership of individual Pacific islands (Table 4).

The existence of such zones of tension in the transboundary regions creates significant constraints for sustainable natural resources management and development. The search for compromises and ratification of long-term international treaties are necessary.

CONCLUSION

Many countries and regions of East Asia have significant geographical (including natural-resource, advantages of location and collocation etc.) and geopolitical (transboundary phenomenon etc.) opportunities for long-term development.

Therefore, availability of considerable land-based natural resources and maritime natural resources seas is a favorable geographical factor for nearly all countries of the macro-region. Many of these resources are renewable (biological, forest, land, water, hydro-power, etc.) and thereby foster the long-term sustainable development of the macro-region. At the current stage of development, this macro-region has the highest and steady rates of economic growth in the world. Eastern Asia is characterized by a very high contrast of the key socio-economic indicators of cross-border spaces of neighboring countries: population density, GDP values, and economic density. A steady decrease in the contrast among neighboring countries of Eastern Asia can be an important factor in reducing the level of conflict and the growth of sustainable development.

The most significant geographical limitations to its sustainable development are evident for the northern and northeastern portions of the Russian Far East, as well as the Western Pacific seismic arc. Within other countries, these limitations are less pronounced. Geopolitical tensions, such as territorial disputes, should be removed by diplomatic means, if all countries are to achieve sustainable international cooperation. In general, the transboundary phenomenon that is typical for all regions and countries of East Asia presents favorable opportunities for the long-term development.

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