

# BRICS' urban challenges: non-foresighted spatial development perspectives

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**Abstract.** Urbanization has taken on an unprecedented scale and pace of environmental transformation, and the process is likely to be continuing and accelerating. The growing scarcity of development resources urges searching for a way out. Previous development paradigms, which offered solutions to many urban problems by revitalizing market forces, have also proven problematic. True, they laid the foundation for globalization, which stimulated the development of technologies, large-scale activation of production sites and the activation of trade. Indeed, globalization has borne tangible benefits, but not for everyone. Striking differences are observed both at the interregional level and within regions and cities. The situation was aggravated by the fact that little attention was paid to the issues of macroeconomic forecasting and territorial planning. On the contrary, the entire decentralization policy pursued by international development institutions left all this without due attention. All this makes us take a fresh look at the tasks of planning and forecasting, focusing on the issues of territorial foresight and regional planning. The need to mobilize appropriate actions is argued in the article using the example of the BRICS.

## 1 Introduction

The search for a “new world order”, although it has been discussed for many decades in various spheres of political discourse, still does not lose its significance and relevance [1, 2]. Somehow, the problems of political instability and dramatic confrontation during the Cold War have been replaced by new areas of uncertainty, sparking debate about growing scarcity of environmental resources or by stating the dead end of outdated liberal models of monopolizing political power and usurping economic freedom. The fragility of the world must be considered, but how was the question. Jim O'Neill connected the new foundation of social and economic stability with new fast-growing and developing economies. In 2001, he proposed the BRIC acronym as the "building blocks" of the future. Subsequently, many researchers have emphasized the importance of BRICS and BRICS + in the world economy and in assembling mechanisms for political cooperation [3].

The prospects for urbanization and global environmental change are not fully assessed, therefore adequate measures and necessary efforts are not being taken at the local level. Although all the energy of international programs to improve the urban management system was focused precisely on the implementation of the policy of decentralization. Accordingly,

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the mechanisms of balancing global and local interests were lost to a certain extent. We are faced with the urgent task of improving the methodology for predicting changes in human settlements and their influences on local and global ecosystems. Assessing potential impacts in the short and long term requires the deployment of large-scale studies to quickly present and compare forecast results with real-world estimates of urban land-use change based on satellite observations. This will help to characterize and assess the ongoing changes in the dynamics of urbanization processes and in the structure of urban land use, as well as the impact of the growth of urban formations on the transformation of the planet's ecosystems.

Urban planning within the framework of such events is losing its position and cannot find the proper answers to the most pressing requests. The purpose of urban development is to create decent environmental conditions for people to live by creating space for life and activities and solving urgent socio-economic problems. In the current era, this important mission is complicated by new challenges in the political, environmental and socio-economic spheres. All this requires the mobilization of new resources and the expansion of mechanisms for international cooperation in the field of science and the development of new technologies for environmental management.

The BRICS countries are becoming one of the platforms for such cooperation [4, 5]. Brazil, Russia, India, China and South Africa - with all their diversity, today they form the basis of world socio-economic development. These five countries cover 30% of the planet's surface area, they are home to 41.5% of the world's population, producing 30.7% of the world's total goods and services. An analysis of the prevailing conditions for the development of cities will help not only to determine the essence of the problematic situation, but also to overestimate promising directions and forms of interaction in the modernization of the entire settlement system.

## **2 BRICS countries in a global context**

BRICS is developing as an informal bloc capable of presenting a real alternative to the world order and thereby resisting the fragile construction of a unipolar world [3]. This block can indeed change the configuration of the world economy. But for the implementation of this mission, countries should not so much have a powerful production, economic and resource potential, but provide the world with a real political alternative: multipolarity, which will ensure the transition from the political usurpation of minority power, revealing the prospects for a harmonious and balanced world order. This position is being strengthened today because of effective dialogue.

The transition to a new level of modeling the eco dynamics of the planet should be based on realistic assessments of the evolutionary process, understanding the complexity of world development without allocating the necessary funds for ecological rehabilitation and maintenance of agricultural lands. Without this, we will not be able to assess the effectiveness of existing models and forecasts of urban land use change. Without this, the effectiveness of urban development will be in question. We must reach a new level of knowledge of the processes to effectively include all participants in the process of urban development in the process of ensuring sustainable development based on smart technologies that are friendly to the environment.

The tasks of ensuring sustainable development in social, environmental, and economic terms require urgent measures to coordinate interaction, distribution of responsibility among all participants in the urban planning process. These measures will help to understand the nature of disaster risk and ensure its reduction through engagement with civil society. Sergei Glazyev noted that without disclosing the real laws of human development, it is impossible to scientifically predict socio-economic processes, nor to reasonably manage them in the interests of the whole society [6]. The table below illustrates the dynamics of the socio-

economic development of these countries, reflecting the above observations on the positive dynamics of sustainable development trends in the BRICS.

**Table 1.** Basic macroeconomic indicators, 2019

|              | Population<br>(millions) | Surface area<br>(thousands<br>km <sup>2</sup> ) | Density<br>(peoples<br>/km <sup>2</sup> ) | GNI PPP<br>(billions \$) | GNI PPP<br>(\$ per<br>capita) |
|--------------|--------------------------|---|---|--------------------------|-------------------------------|
| Brazil       | 211,0                    | 8515,8  | 25  | 3135,0                   | 14850                         |
| Russia       | 144,4                    | 17098,3   | 9   | 4147,4                   | 28270                         |
| India        | 1366,4                   | 3287,3  | 455                                       | 9507,2                   | 6960                          |
| China        | 1397,7                   | 9562,9  | 148                                       | 23403,2                  | 16740                         |
| South Africa | 58,6                     | 1219,1  | 48  | 739,7                    | 12630                         |
| WORLD        | 7673,5                   | 132025,2  | 60  | 134984,3                 | 17591                         |

Source: World Bank, 2020. <http://wdi.worldbank.org/table/WV.1>

How can one assess the consequences of the fragmentation of existing ecosystems under the influence of ongoing processes in the market economy and the consequences of hasty political decisions? It is becoming apparent to all parties that there is a need to identify knowledge gaps, methodologies, and typologies of cases on land-use change in low- and middle-income cities, where the issues at hand are of relevance and resources for there is no counteraction to the development of negative trends. International initiatives and actions are needed to build global spatial development prospects. What they are?

### 3 Understanding upcoming challenges

It has been five years since the international community has gathered for its third conference in Quito, the capital of Ecuador, to discuss human settlements issues. The UN conferences on human settlements were held at intervals of two decades. The first took place in 1976 in the Canadian city of Vancouver. The second UN Conference on Human Settlements (Habitat II), held in 1996 in Istanbul, culminated in the adoption of the Habitat Agenda, which largely echoed many of the political slogans of Agenda 21 adopted in Rio de Janeiro. However, in 1992 the Istanbul Conference proclaimed the principles of affordable housing and sustainable development in an urbanizing world. The 2016 conference, called the Conference on Housing and Sustainable Development (Habitat III), was marked by the adoption of the New Urban Agenda.

The conference was expected to provide the community with a unique chance to achieve global strategic goals by harnessing the enormous potential of sustainable urbanization. However, this did not happen. Although many professional organizations did not speak openly, they asked with great bewilderment what was new there, what was urban planning and where was the program itself? The conference document contained recommendations for the formation of state urban policy in their countries. Moreover, the focus on cities ignored the problems of the rural population, and this is almost half of all people living on the planet, also suffering from global problems and adversity. Thus, with this conference, another problematic node appeared, associated with finding ways to rationally use the allocated resources to solve the problems facing the community.

The severity of the global challenges to which the rural and urban settlement systems must seek solutions was not fully indicated by the conference. The key is the problematic node of the growing eco-scarcity. The management system must be debugged and modernized to ensure the harmony of spatial arrangement. On this path, there are many obstacles associated with social and economic segregation, both between regions and economic blocs, and within them. This is all aggravated by climatic changes and destruction

of the natural complex. Natural disasters alone, a decade before the Quito Conference, affected 1.5 billion people in one form or another, and caused \$ 1.3 trillion in damage. Sustainable urbanization has long been voiced both in Johannesburg in 2002 and in New York a year earlier at a special session of the UN General Assembly.

Now, instead of the confrontation between the West and the East, the world is increasingly confronted with numerous areas of conflict, including conflicts related to the resource base, the growth of migration flows, as well as the growth of internal and interregional differences. Cities and regions are forced to compete to attract economic activity, jobs, infrastructure and more. These trends change and redefine political alignments, opportunities for cooperation and leadership, and the rules underlying international trade and finance. However, a casual reading of current events suggests that organizational and legal is undergoing rapid change.

Confirmation of these evolving changes must be at the heart of any realistic assessment, ranging from the likely prospects for global spatial development. These perspectives are critical in the context of the growing trend towards global interdependence. Will the trend towards global interdependence be propelled through microeconomic ties and international markets amplified or frustrated by geopolitical development? Expectations for this range are wide. In some extreme assessments, there is a fear of chaos due to the collapse of the old order, leading to regional conflicts, trade wars, or autarky. On the other hand, there is hope for a new era of cooperation between peoples within the framework of renewed institutions of global cooperation.

## 4 Urbanization and development restructuring

During the first decade of this century remarkable benchmark of urbanization has been taken over. Now most of the world's population are living in settlements classified as urban. It is important to note here that the growth of the urban population itself has acquired unprecedented proportions over the past century [7, 8]. The world's urban population is expected to reach 6.679 billion by mid-century, a nearly ninefold increase over the century. During the same time, the urban population of the BRICS countries will increase almost 12 times and will amount to 2 billion 353 million. 35% of the world's urban population will live on the territory of these countries, although a century ago this figure was equal to 26.6%. The table below illustrates the dynamics of growth by country, indicating the difference in rates. So, if in Russia the urban population will only double, then in South Africa it will increase 10 times, and in China it will increase 16 times.

**Table 2.** BRICS' urban population, 1950-2050

|              | 1950   | 1970    | 1990    | 2010    | 2030    | 2050    |
|--------------|--------|---------|---------|---------|---------|---------|
| Brazil       | 19517  | 53296   | 110404  | 165969  | 201296  | 215063  |
| Russia       | 45321  | 81290   | 108303  | 105486  | 108337  | 110605  |
| India        | 64134  | 109389  | 222297  | 380745  | 607342  | 876613  |
| China        | 65437  | 143513  | 310022  | 669354  | 1017847 | 1091948 |
| South Africa | 5755   | 10919   | 19545   | 32095   | 46457   | 58057   |
| WORLD        | 750903 | 1354215 | 2290228 | 3594868 | 5167258 | 6679756 |

Source: United Nations, DESA Population Division. World Urbanization Prospects 2018 Revision.

In China, land use regulation in the context of spatial planning involves the preparation of a general land use plan, territorial schemes for individual sectors, and special detailed land use plans. General plans are developed for the whole country and each provincial region based on the land use law. General plans control the distribution of land resources and are basically aimed at improving the environment and conserving land resources [5, 7].

The key strategic document for regulating territorial development is the National Spatial Plan, which is controlled by the Ministry of Land and Natural Resources. This plan is aimed at the sustainable development of the national ecosystem, including the optimal distribution of national land resources, a rational structure of the national space, improving the possibilities for ensuring the security of energy resources, promoting the universal conservation of national lands, and the safety of implementing the national spatial plan.

Given the current context of development and its possible consequences for the entire area of human settlements, we assume the globalization of the world economy, growing interdependence in all spheres of political, social, and cultural events of societies, growing political and economic integration - all these and many other factors determine the evolution of segmented, isolated, and disparate systems for calculating benefits and benefits. The emerging system of global settlements is necessary for all parties involved in the action of human settlements development to have a common vision of this development. The need for a common vision is necessary and important to avoid political confrontation, conflicts of interest and intentions, and so on.

This challenge of unprecedented scale and size is also characterized by the fact that the growing demand for achieving social and political sustainability in a global context can only be met by jointly building spatial prospects for urbanization, urban development and regulation of the regional land use system. This challenge is also linked to regional efforts to maintain peaceful development and help build a foundation of mutual trust and reliability [9-11].

## **5 Resources assessment and action planning**

In the late 1990s, there was a lot of talk about the fact that cities in the context of globalization have become active players in the political arena of socio-economic development. Their new position defines a significant difference from the previous paradigms in which the central government played a major role. Cities have become more active in attracting foreign investment, which promises both new income and new jobs, as well as the promise of better quality of life.

Radiant assessments of globalization saw the prospects for the integration of various sectoral strategies, influencing the territory, in the consolidation of a harmonious process of spatial development. This meant preventing conflicts and development crises. This was not observed. Over the past three decades, the world has increasingly faced crises and global threats. In their opinion, the global governance system has not demonstrated the effectiveness of its mechanisms. This raised the question of the effectiveness of the agreements built and their viability in ensuring environmental stability and economic growth.

In the harmonization of the spatial structure, it is necessary to focus on solving those issues that will determine the prospects for the development of cities and regions, by improving the mechanisms of international cooperation and interregional coordination. The scale of the new challenges underscores the need to find ways to achieve a fairer consensus. Previous mechanisms were focused on obtaining positional advantages for stronger and more significant players in a politically divided world. Accordingly, many international cooperation initiatives have failed to adequately promote regional integration based on common principles and a common vision of spatial development prospects.

BRICS should "formulate a common spatial framework and basis for a wide range of sectoral cooperation initiatives." This will help avoid scattered activities and waste of resources, the threat of increasing differences in living standards and will help with the need to improve the environment. An important international planning initiative should be associated with building an integrated vision of spatial perspectives, as a basis for action and

as a guide for the relevant authorities in the development and implementation of urban planning policies on the ground.

The globalization of economic activity and the internationalization of markets were considered the key point in determining the prospects for interregional spatial development. This predetermined the needs for programs and projects of cross-border, interregional and transnational cooperation. The growing scale of construction work also requires improved mechanisms for the exchange of information between countries and their regional and local authorities about already completed or just proposed planning documents. "This will be the case, in particular, in cases where major events foreseen by one Member State could significantly affect the spatial structure of neighboring countries, including non-member countries, or even wider transnational territories."

The set development goals are aimed at: building a strong, competitive economy; ensuring the viability of urban centers; supporting a thriving agriculture; promoting sustainable transport development; maintaining a high-quality communications infrastructure; providing a wide range of quality housing; increasing demands for a good level of engineering and design; promotion of healthy lifestyles; protection of the green belt; tackling climate change, flooding and coastal change; preservation and improvement of the environment; preservation and improvement of the historical environment; promoting sustainable use of minerals.

For example, China's changing urbanization policies are: (1) people-centered fair distribution of profits; (2) balanced settlement development, agricultural modernization, computerization and industrialization, and the integration of urban and rural areas; (3) ensuring the optimization of the placement of productive forces; (4) promoting models of ecological civilization, "green" and "low-carbon" society; (5) preserving a culture that forms and expresses urban identity [7, 11].

Cities entering the international arena as active players have fallen into different "weight" categories. Some cities began to develop very successfully, while others plunged into stagnation or degraded. All this contributed to the polarization of opportunities and, accordingly, the development of "backwardness". Fast-growing metropolitan areas have faced various challenges. Paris, London, Madrid, due to the large influx of labor migrants from other countries, realized the problems of intercultural contradictions and the formation of ethnic enclaves. The implementation of such scenarios may lead to a change in the ethnic structure of the indigenous population, which will become a serious threat to the preservation of national identity.

The development of an analytical framework can help raise awareness among the partners involved and organize a broad discussion among them on long-term guidelines for spatial development. Such spatial development programs require analysis of long-term forecasts and research on relevant spatial problems to establish a permanent system of observation and monitoring of spatial development.

## **6 Summing up: capacity building for sound urban development**

The above remarks indicate that a change in development paradigms requires corresponding reforms in the management and planning system. Inadequate consideration of challenges and threats affected the viability of the entire urban planning system. First, it should be noted the low efficiency of measures in terms of assessing the protection of cities from impending climate change and natural disasters.

It is required to develop urban planning audit and improve the systems of territorial planning considering risk factors to ensure the safety of life. Adaptation of urban planning systems to climate change, as well as ensuring the protection of ecosystems, together with

mitigating the effects of natural disasters and threats, should be at the center of the urban planning agenda [12, 13].

Anticipating all the above comments, it should be emphasized that building spatial development prospects requires strong political will. Its presence will make it possible to formalize the relevant international initiatives that can really ensure the mobilization of the necessary actions. These initiatives must be properly justified, considering a multifaceted assessment and a balanced understanding of the unprecedented nature of the changes that have occurred in the current environment in which we live. This understanding is deeply rooted in the tremendous changes that have taken place in recent decades.

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