

The Role of Water in Contemporary International Political and Business Relations

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Abstract

This research aims to give an overview of the role of water resources in the world and make analysis of main problems – social, economic, demographic, etc. which may arise in international business and international relations in case of the deficit of water resources. It also intends to analyze the role of hydro resources during relations among different states of the world in the field of business and political relations and using political, economic and legal mechanisms which can provide further exploitation of fresh water resources in favor of humanity.

Keywords: deficit, hydro potential, international law, international regimes, water

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Introduction

The whole water stock of our planet is about 1,4 Billion km³ (Neidze, 2004, p. 31). But, its biggest part is salted. To be more specific, water occupies 70% of the surface of our planet and salt water accounts for almost the entire part - 97.5%. In this case, the share of fresh water among all available water resources is 2,5% (Chitadze, 2017, p.133). It is concentrated mainly in the glaciers and, therefore, it is predominantly inaccessible. Thus, only 1% of available water resources of the planet is accessible for the direct use by the mankind (Neidze, 2004, p.31). In this case, the volume of accessible (available) water resources in the world has not practically been changed toward their increasing for a period of centuries.

In the 20th Century, the population of the World tripled from 1.6 to 6 billion people. In 2011, the number of the world population exceeded 7 billion people (Chitadze, 2017, p.156), the area of watered agriculture increased from 50 to 267 million hectares and the consumption of water increased by six times – annually from 500 to 3 500 km³ (Gleick, 2000, p.127). The real shortage of water provokes the increased demand, which, according to the estimations of experts and international organizations, is connected with the demographic boom, by a change in the food ration by the large groups of population, development of industry and power engineering, urbanization and popularization of bio fuel. The factors, which reduce the volume of accessible water resources, include ineffective/rapacious of water consumption, pollution of water and climate changes.

Literature Review

In the process of writing this article abundant primary sources, archival documents, agreements, statistical data, English and Georgian literature as well as that in other languages were used.

A lot of primary sources are available about understanding main principles related to the role of hydro resources in world business and world politics.

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It is impossible to review global hydro challenges in isolation from the discussion of water deficit problems and fundamental international political processes and evolution of the regional sub-systems of the international economic relations while considering those problems. Analysis in the field of scarcity of water problems at the global level have been presented by appropriate agencies of the United Nations and many researchers from different regions of the world. In the presented research paper, statistical data of the Georgian scientist V. Neidze are used. American Scientists C. Kegley and S. Blanton carried out serious analysis in their well-known book "World Politics", D. Wild "Water: A Market of the Future", reports of such authoritative UN programs and agencies as UNICEF and UNESCO with regard to the observation of main reasons causing the deficit of water resources.

During the discussion about water as the unique object of foreign relations, the leading role was played by such pioneers in this field as F. W. Frey, who in his research "The political context of conflict and cooperation over international river basins", analyzes main aspects of confrontation and cooperation among the states for the determination the status of International river basins.

Within the analysis of the of the human rights on the water – significant contribution for the implementation the research in this field has been introduced by M. Barlow, who published his scholarly article on the topic: "Global Water Crisis and the Coming Battle for the Right to Water" and K. Bakker, in his two researches - "Privatizing Water, Producing Scarcity" and "Economic Geography". It is important to pay attention to the resolution of the General Assembly of UN on June 28, 2010, according to which, the right on the water was recognized as one of the most important principles of human rights.

The works of J. Allan, A.Y.Hoekstra, A.K.Chapagain, M. Zeitoun, J. Warner promoted theoretical understanding of the role of water as economic resource in international business.

Research in the field of national security related to water has been implemented by A. Sen, who, together with E. Lopez-Gunn and a number of other authors analyzed close ties between food and the water problem and politics.

In the second part of XX Century, G. Matthews, J. Rockström J. W. Steffen, K. Noone reviewed several aspects of interstate conflicts for natural resources, among which water was the leading one.

Statistical data related to the number of international basins, their location, etc. are researched by M. Giordano and A. Wolf in the scholarly article "Sharing waters: Post-Rio international water management".

As to the topics on international-political treatment of the problem of available water resources, main presented materials are based on the decisions of the Rio De Janeiro and Dublin Conferences (1992) on environmental issues. Furthermore, important research was conducted in this field by D. Cesano, J.E. Gustafsson. S.Dinar, S. McCaffrey, D. McKinney, Seligman D. M.C. Peterson, Berber F. J. Correia F. N. Barandat J. Lazerwitz D.J. Birnie P. W. Song J. Salman S. M.

Research aims and objectives. The purpose of the research is interrelated to the analysis of the water resources in the world and to determine the content of the influence of the comparative deficit of water on the foreign policy of the different states and international business relations.

Hypothesis. Although humanity has always encountered the problem of scarcity of water, it acquired worldwide nature since the ending of the "cold war", in respect with economic growth in the world, especially, in Asia, globalization

process etc. Scarcity of fresh water within these days has a structural effect on international relations not only through the growing competition of states for this resource, but also through its use for obtaining alternative benefits which can objectively contribute to relative reduction of the conflicting situation in the international environment.

Methodological basis of the research. Theory of international relations played an important role in developing research methodology. Namely, approaches, having been worked out in the framework of the school of defensive neo realism, were filled by several aspects of theories of international regimes in its neo realistic interpretations. In this theoretical frame, several private research theories have been already used. To be more specific, at the first stage the method of analysis of official documents (report of program “UN and Water Resources”, national doctrines, international agreements), scientific publication on this topic, collection of statistical data etc. were used. Later, the problematicological method of the data analysis was applied. Next, the theoretical conclusion was tested using regional examples in the frame of the case study methods. In general, from the methodological point of view research was constructed in the frame of a systematic approach.

Findings: Findings of the presented work are connected with the complex review of the influence of the deficit of water on modern international relations and international business, pointing to basic principles of its influence and their systematization. To be more specific:

1. In-depth analysis of main reasons of the deficit of water at the global level is given, which is interrelated with the population growth; increase of water demand because of population growth; process of urbanization; conflicts, etc.
2. Taking into account, that before by the international tradition predominantly was conducted the separation between the economic analysis of water problem and international-political aspects, such as security, international collaboration, concept of international regimes etc. In the modern times, in the work, by the concept - relative force, it become possible to valuably integrate the economic component of water problem into the international-political context;
3. Main principles of human rights on water have been analyzed and presented;
4. The following universal tools for the analysis of the global water problem are developed and approved: new classification of water crises and the matrix of evaluation of the structural influence of the scarcity of water on foreign relations.
5. Comparative analysis of different researchers and politicians related to dividing and exploitation of water resources of the river between “upper” and “lower” states has been presented;
6. Comparative analysis of the regional examples was implemented, which made it possible to enlarge the concept of hydro-hegemony in the part of the study of the role of the external actors. So, external forces have some resources for the coercion the sides for the dialogue or for the independent solution of problem.
7. In the scientific field – the new methodological approaches, which are useful for this research and which have not been widely used before – are introduced.

Main Reasons of the Causing Deficit of Water Resources

Main reasons for strengthening global scarcity of water are briefly examined below.

Population Growth. Yearly growth of the world population is 80 million people, which creates an additional demand for drinking water in the size of 64 billion m³ per year. Taking into account the fact, that 90% of expected population increase by 2050 relates to the regions, which already has problems with fresh water, the situation can seriously be aggravated (Kegley, Blanton, 2010-2011, pp. 485-488).

Economic growth. China can serve as a clear example water shortage in connection with rapid economic development. To be more specific, in 1997, Hwang Ho, one of the largest rivers in the world, could not reach the sea because of the using the resources of this river for the irrigational needs in the provinces – which are located in the upper flow of river. In 2003, the level of Hwang Ho was the lowest within the last 50 years (Jiltsov, 2008). Exhaustion of available water resources because of active economic consumption forces the countries to come running to the re-adjustment of the entire water system and re-cutting the flows of rivers by weirs and channels. Moreover, in the majority of developing countries, economic development occurred at the background using obsolete irrigational systems, which increased the losses of water. On average, in the world, the loss of water reached 60% of the joint water intake as a result of evaporation or building channels and reservoirs. Water returns to the rivers and underground water-bearing horizons. However, due to the anthropogenic actions, this water is no longer possible to be engaged in economy.

Consumption of water increases with economic growth. For example, if in the old period, during 24 hours, one person consumed 12-18 liters of water, in the XIX century use of water amounts to 40-60 liters whereas in the economically developed countries daily consumption per person is 300 liters whereas in big cities, the figure is 500 liters and more (Neidze, 2004).

Social factor. Rapid water consumption increase in the 20-th century was connected not only with the population growth and its income but also changing the style of consumption. Income increase of population stimulates consumption of meat, dairy products, etc. production of which requires more volume of water. The process, which today is called “protein revolution”, indicates the change in food habits of the entire states and rapid increase of the portion of protein food in the daily ration (FAO, 2004). A similar process occurred in developed countries of Asia – Japan and Korea; however, the proportion to economic development of the region covered the increasing number of countries. To give a more obvious case, on average, in 1985, the citizen of China consumed 20 kg of meat per year whereas in 2011 this index reached 53.5 kg (Worldwide Annual Meat Consumption per capita, 2011).

New waves of urbanization. In 2009, for the first time, more than 50% of world population began to live in the cities. They also had significant effect on the demand: individual consumption of water in the cities exceeded that in the rural locality. According to the forecasts of UN, by 2030 about 81% of the urban population of the Earth will live in the cities of Asia and Africa. From this perspective, not only the change in the habits of the consumption of peoples will occur as such but also rural inhabitants, who arrived to the city, will earn more and imitate the habits of urban population. Thus, a change of the consumption of meat in China per capita is tightly connected with urbanization – the dynamics of consumption of meat by a person in the rural locality is considerably modest than in the cities: during 30 years consumption of meat in the rural locality grew from 6 to 15 kg in 2010 while the inhabitant of the city began to consume more. Besides, the number of “average town people” grew with the anticipating rates.

Climate change. Climate change aggravates the situation both in the traditionally arid regions and developing countries of Asia: one of the reliable manifestations of global climate change scientists call the change in the water cycle (UNESCO, 2009); in the regions with the arid climate the amount of precipitation will be reduced whereas in those with moist, it will get strengthened. Moreover, decrease of the area of glaciers directly effects the volume of accessible water resources.

But the most visual influence of climate change for the water cycle occurs through a radical increase in the number of natural disasters, which have a direct and destructive effect on the situation with water supply. Therefore, they require additional investment into a steadier infrastructure and creation of special dams for restraining floods and reservoirs for the economy of water in the arid years becomes a vital need for the majority of countries. Within the period of 1980-2004, on floods (29%) and droughts (5%) was coming about third of all-natural calamities (UNICEF, 2005). The situation is aggravated by the fact that East Asia – the region most subjected to increased frequency of natural calamities, is most densely populated on the planet. In 2004, fourth of all catastrophes account for this. Moreover, in the beginning of the 21-st century, as a result of natural disasters, on the share of Asia was coming about 45% of all victims in the world (UNICEF, 2005).

All these factors, having been multiplied by ever more intensive fence of water for the industry and agriculture, will lead (and today we already observe examples in the different parts of the World) to the appearance of new densely populated arid regions in China and the south of USA (Wild, 2007).

Water as the Unique Object of Business and Foreign Relations

The fundamental characteristics of interactions between the states in the field of water are determined by the unique special features of available water resources, which determine the specific political character of the role of water.

By the opinion of F. Frey, “water – vitally necessary and at the same time, commodity in short supply, distributed unevenly; moreover, the substantial part of available water resources is located in the international water basins” (Frey, 1993).

Actually, one cannot fail to take into consideration the special value of water for the life and the absence of any type of substitutes. During the drought, a drop in the water level into the season of irrigation makes its price extremely high, at the same time, under the relatively standard conditions sharply falls the volume of accessed water. It seems to us that although the above given definition of Frey is absolutely correct, it is incomplete since it does not reflect a number of most important special features of fresh water as the object of state and intergovernmental regulation and competition. The data of special feature is determined by human rights to the water, by place of fresh water in providing of national security, by trans-border regulation and finally, by special role of water in the ethics and religion. All these phenomena refer straight attitude to the formation of government policy in the sphere of the Water Resources management, international trade in hygroscopic production, establishment control over the drain of international rivers.

Human rights on the water as recommending international-legal standard, was formulated and fixed by the UN in 2002. On July 28, 2010 the General Assembly of the UN officially recognized the right to water as one of the basic rights of people. Human rights to water means that no one can be deprived of the access to clean fresh water only because of the fact that he or she has not enough finances in order to pay for water. Hence, it follows that freedom of forming prices on water must be limited. Even if expenses of that allowing water price to be very high, it will not be able to establish the price higher than a certain level, which makes it possible to realize the right to the water (Acreman, 2001). In this case, the right to the water declared by world community enters into direct conflict with laws of the market as such, and its permission will require active interference of state and international-legal regulation.

In this regard, the question about the responsible structure for the ownership of available water resources arises. Supporters of complete socialization of available water resources (most known of which are – M.Barlow and K. Bakker) insist on complete nationalization of available water resources and conducting the water management by the country, under the conditions of sometimes allowing the opportunity of participation by nonprofit organizations in the development of water management process. In any case, the basic thesis of above-mentioned scientists remains - the aim of the water economy is the maximum realization the principles of human rights to the water and not to obtaining the profit.

At the same time, in this case there are several people who consider that privatization of water does not violate human rights to water but in certain cases it can only contribute in accordance with the liberal prerequisite about more effective use of resources by private capital. The supporters of this approach are The World Bank and IMF (International Monetary Fund).

The problem of privatization of available water resources from the point of view of observance of international rules to be in force are widely discussed in juridical literature (Ziganshina, 2008). In spite of the fact that similar discussions remain predominantly a domestic political issue, the international component in them, as a rule, is present and it is connected with non-governmental subjects of the water market – transnational corporations (hereinafter referred to as TNC), which control a whole series of large objects in the developed and developing countries: municipal water systems, weir, channels. Besides, regulation of national legislations (or the introduction of united international standards) exerts direct influence on the international interactions in this sphere. Ecuador became the first country which completely forbade private capital in the water sector. Today, a similar standard is being actively discussed in many countries of Latin America. Republic of South Africa, has become the first country, which fastened human rights to the water in its constitution.

National security. Trade of water in small volumes leads to strengthening interdependence of the states but, in case of significant deliveries of water from one country - creates already one-sided dependence and becomes the source of threat to national security for the importer country.

Citing A. Sen, “There does not exist such a thing as apolitical food problem” (Sen, 1982). E. Lopez-Gunn and a number of other authors consider this view absolutely right and with respect to the problems of water (Lopez, 2012). Therefore, country-buyers of fresh water are facing the task of the determination of economically advantageous and not threatening to the national security the volume of the import of water.

In a broader sense, the discussion deals with forming the policy at the national and international levels of effective intensive rather than extensive water consumption. In this case, creation and introduction of such policy is examined precisely in the context of the concept of providing ecological safety which was proposed by G. Matthews in 1989 (Matthews, 1989 and became the reaction to the fears about possible growth in the number of intergovernmental conflicts for natural resources. Gradually, the idea evolved into the concept of the support of the issue of biosphere which is necessary for the adequate life of humanity.

Two supplementing approaches became the results: the approach “green growth” (opportunity for further operation of natural resources due to increase in effectiveness, use of renewed resources), actively supported by representatives of the neoclassical economic school and the concept of the “limitedness of the Earth” (concept of planetary boundaries) (Rockström, 2009).

This concept is aimed for the search the optimum calculation of the short term and long-term indices of development, first of all through the prism of food and water security (Falkenmark, 2004).

Trans-border regulation. The source of problems of trans-border regulation is, in essence, the imposition of the political map of the world on the map of water basins. 263 international basins are located on the Earth (including, those with two and more countries on the territory of one basin). About 60% of fresh water is concentrated in those basins and they occupy half of the earth's surface. International basins partially seize the territory of 145 countries and the territory of 21 states completely enters into international ponds (Giordano, 2003).

International-Political Treatment of the Problem of Available Water Resources

The problem of water enters into the number of the sharpest global challenges, confronting the humanity in XXI century and it is precisely so received by the world community. The number of key purposes of the United Nations are related to the increase in the access to the fresh water and improvement the sanitary conditions.

During the entire history of humanity, international water basins have always been within the political interest of the countries, which were parts of these basins. Later, in the second-half of XX Century, the numbers of people, who suffered from scarcity of water grew repeatedly. Today, it affects more than 2.2 billion people and in the next decades their number will reach 4 billion. As a result, more than 1.2 billion people lack access to clean drinking water (UN, 2013).

Thus, international community has discussed for several times the regional and humanitarian aspect of the global water problem. However, the consideration of the problem related to the scarcity of water from the regional and the global point of view represents as theoretical, so also practical interest, especially within the framework of the systems analysis.

What are such reasons on which the scarcity of water acquired the significance not only in the conflicting regions or zones, in which large of numbers of people suffer from the water stress, but in entire world? Since the beginning of world economy globalization, the water component in foreign policy of any state together with the regional aspect, began to be projected to the entire world. Actually, for the first time in history, previously strictly local resources obtained global measurement and allowed to the states, which control them, to present their influence in the global level (Cesano, 2000, 213-227). Contemporary economy is global, therefore, specific goods become valuable resource not only in the countries, which experience its shortage. The countries, allotted by water use them as their comparative advantage and participate in the global competition for those resources. The value of water as resource strengthens the fact that it one of two key elements for the production of foodstuffs, which also became from the usual goods the new economic and political resource. And, this tendency will be only strengthened. Increase in the demand for hydroelectric energy plays an even more significant role, which directly connects questions of water use and national energy security.

Conferences in Dublin (1992) and Rio de Janeiro (1992) carried out under the patronage of the UN played a special role in the forming of global agenda in questions of fresh water. Four fundamental approaches to "water problems" were formulated in Dublin which is called "complex management with water resources". The allotment of water with value in the world economy sharply aggravated competition for the resources between the countries. Besides, if the spheres of conflict of interest practically did not change, opportunities for the realization of advantageous strategies were enlarged repeatedly.

In spite of the fact that this sphere (in view of the natural qualities of water) requires coordination of actions of the states, where water basins are located and in a number of cases, intergovernmental collaboration (in avoiding of the tragedy of communities with the use of lakes, underground water-bearing horizons and river-boundaries) and developments of international hydrological regimes, today we observe almost general celebration of water "realism". Studies show that, as such, technological solutions are rare if they generally sometimes played a decisive role during the solution of the international water problem (Dinar, 2007). Such expensive and in many respects revolutionary projects from the engineering point of view, as water flow between Malaysia and Singapore or weir to Itaipu, located in the joint consumption between Brazil and Paraguay, never could be built without the preliminary political agreement of sides. Classicists of realism, such as, E. Carr, G. Morgentau, F. Schumann, J. Kennan emphasized the competing nature of interaction between the states and the decisive role of force. With an increase the value of available water resources competition for them aggravated both in the economic and in the political sphere. As has already been noted, the tendency of state toward greater national security indicates for the water sector the tendency to support its own food and energy safety, on the one hand, and creation of levers of pressure on other states, on the another. International law only establishes that those who have exit to the international reservoir have the right for its consumption. Today it is possible to obtain four answers to a question of how states explain the issue related with available water resources in foreign relations (Seligman, 2008).

First of all, in the framework of the questions related to water consumption, the position of the states, which are located above the flow (hereinafter referred to as, "upper" states) and below (hereinafter referred to as "lower" states) are factually opposite. "Upper" states usually substantiate their rights by absolute territorial sovereignty (Berber, 1959). "Lower" states rely on absolute integrity of the river (McCaffrey, 1996, 549). It is obvious that the consensus on the basis of one of the approaches is impossible because of their diametrical opposition. In the attempt to resolve this conflict of interests, two additional concepts emerged: the doctrine of limited sovereignty (restricted sovereignty) and the doctrine of generality. Let us examine in more detail these approaches, since international security in the region significantly depends on which of them uses the state while forming its foreign policy. The doctrine of absolute territorial sovereignty, also known as the doctrine of Kharmon, obtained its name in honor of the Minister of Justice and Attorney General of the United States of America, who formulated the concrete approach in 1895. Kharmon proclaimed his concept within the culmination of water disputes between USA and Mexico along with Rio Grande river, that each national state can consume waters of international rivers, which cross their territory by the will, disregarding consequences for other states and without the obligation for consultations (Correia, 1999, 86-94).

This doctrine assumes that other states of the basin have no right to limit the use of resources of the river by a state within the limits of its boundaries.

The doctrine allows to the "upper" state to freely take away entire water from the international river leaving nothing to the "lower" states.

The doctrine of the "absolute integrity" of the river considers the international river as a general property for the countries of the basin. This means that no one state is permitted to deprive another's specific benefits in the water question (Barandat, 1998, 15). From this emerges the principle of absolute right of "lower" countries to require continuous drain which is expressed in the right of the veto of the "lower" state above any actions of its "upper" neighbor, which can substantially influence the current of the river (Lazerwitz, 1993, 247-271).

Both doctrines in their primordial form have obtained specific support in the “interested” states (especially, the doctrine of absolute integrity of the river) but in view of the obvious conflict of interests, they did not obtain wide acceptance in international practice (Birnie, 1994, 207). A priori conflict situation leads to the fact that for reaching the agreement according to water relations in the format of “upper/lower” for the state is usually much more difficult than with the agreement of the position on the demarcation by the rivers (Song, 2004, 40).

On the basis of the general legal principle, which states that “each must use its property in such a way as not to damage the others’ property”, the doctrine of the limited territorial sovereignty has been established. The essence of this doctrine is the fact that each state can freely use water of the divided rivers which cross their own territory, until this consumption brings damage to the rights and interests of other countries of the basin. All countries of the pond have mutual rights and responsibilities in using of water of their international water flows and each has the right to fair separation of benefits (Caponera, 1992). There is a point of view that this doctrine will be able to obtain wide acknowledgement and become the basis of international law for fresh water resources (Salman, 2007, 15). However, at the background of strengthening the role of the state, understanding of sovereignty as the most important resource of competitive ability and political weight of the country in the international arena, this approach is more frequently considered from the skeptical point of view.

The most recent doctrine - that of minimizing harm examines river as one hydrological units control of which must be achieved by the unified whole. Each state in the limits of the pond has the right to undertake actions against any other state of the pond if this state can influence any action on water resource without collaboration and permissions of its neighbors.

Current tendencies are very accurately formulated by Patrisiya Waters during her presentation at the World Economic Forum in 2011: “The potential of water conflicts under the existing economic conditions today will be only grown. The reaction of the states to the global economic crisis showed that the states select the strategy “of a lone person” (Waughray, 2011). Actually, “selfishness” of states is sharply manifested in the water question; however, the tightest connection of economic development and scarcity of water already creates new sizes of intergovernmental interactions, forms a new agenda and considerably enlarges the traditional dilemma of “conflict-collaboration”. When the discussion deals with the use of fresh water, we observe the development of these processes in a parallel manner, although in all cases, with absolute priority of national interests above the global. A water question, in spite of the unique role of water for economic development, human capital, stability of ecosystems, does not become an exception in the framework of general laws of world politics and International Business.

Conclusion

The purpose of our research was to determine the character of the influence of the growing deficit of water on international relations. Implemented analysis enables us to make a conclusion about the fact that the influence has its structural character and from the qualitative point of view is reflected in the situation of different states in the framework of international relations and its regional sub-systems (through the increase or decrease of the comparative power of states) and on the methods of interrelation among of them.

The structural research was divided into three parts. In the first part the global character of the “water challenges” and transition of the presented problem from the regional to the global level was held due to the new economic role of water as an international resource. As a result, the new classification of water crisis, related to the comparative deficit of water, was suggested.

Later, from the whole different aspects of water's deficit attention was concentrated on the international-political issue. The international-political side of the global problem of water was reflected in different concepts, on the which the states are based in their foreign policy related to the water issues;

Depended on the fact, where the states are located along with the concrete rivers, it can be the doctrine of the absolute territorial sovereignty and doctrine of the absolute integrity of the river. It is gradually working out the compromise conventions, which are based on the consolidation of the both doctrines to the common item, concretely to the limitation of the sovereign rights. However, it is impossible to point out about wide recognition of such approaches. Those principal contradictions at the interstate level are reflected in international law.

Presented analysis in this research gives a possibility to make the conclusion that nowadays full analysis of international law on water resources is absent. So, the principles of "complex management of water resources are not adequately reflected in international legislature of water. Most of the signed international agreements are bilateral. There are less multilateral agreements and they do not cover basic problematic zones. More specifically, distribution of water, hydro-energy and joint management.

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