

In search of the contours of the post-COVID Sustainable Development Goals: The case of BRICS¹

Sergey Bobylev*,

Faculty of Economics, Lomonosov Moscow State University

Leonid Grigoryev,

Faculty of World Economy and International Affairs,

National Research University — Higher School of Economics

Reference to this paper should be made as follows: **Bobylev S., & Grigoryev L.** (2020).

In search of the contours of the post-COVID Sustainable Development Goals: The case of BRICS.

BRICS Journal of Economics, 2(1), 4–24. <https://doi.org/10.38050/2712-7508-2020-7>

Abstract

The global COVID-19 pandemic and an unexpected recession of a dangerous magnitude have provided strong reasons to look at the Sustainable Development Goals (SDGs) from three points of view: the SDGs as a victim of the recession 2020; the SDGs as an opportunity for better coordination on the way out of recession; and the SDGs as an object of modernization for better adaptation to the realities on “the global ground”. The BRICS countries are, naturally, the primary group of interest for developing and implementing the SDGs on the global scale as a way of catching up. “Pandemic protocol” and additional indicators are proposed as an urgent update to several SDGs.

Keywords: BRICS, health care, inequality, low carbon, pandemic, recession, SDG.

JEL: JEL: F01, F44, F63, F64, O15.

1. Introduction: Dramatic changes in the global framework

The international community is now in the “acute” stage of reconsidering its problems and risks, capabilities and coordination in the face of COVID-19 and the Global Recession of 2020. In this context, we are witnessing broad discussions of the world’s post pandemic future. The main focus is on several areas. The most important task is to

¹ The publication was prepared with the financial support of the Russian Foundation of Basic Research, project No 20-010-00981.

* E-mails of the corresponding authors: snbobylev@yandex.ru, lgrigor1@yandex.ru

restore efficient coordination between major global powers, international organizations, and NGOs in order to overcome the pandemic and provide assistance to all suffering people in developed, and especially in developing countries. An essential point in this respect is cooperation of health care authorities that should produce, test, and recognize all relevant medicines (vaccines, etc.) and then use them around the globe to eliminate hidden sources of infection.

We should also underline the outstanding task of restoring economic activity within countries and the much more difficult task of restoring international travel, human contacts, and intellectual and art activities: connections between universities and scientific schools, concert halls and museums, stadiums, sport clubs and federations. A dramatic crisis was caused by restrictions in the health sector, which the IMF called the Great Lockdown. The breakdown of international economic activity in the fields of recreation, transportation, and services has put at risk hundreds of millions of people (Grigoryev et al., 2020). The objective of overcoming the pandemic will need a lot of trust and cooperation between countries and health authorities, and a certain degree of success in combatting COVID-19. And the earlier the global opening of the lockdown takes place, the faster the global economy will recover from the recession. As of August 2020, the pandemic has moved wider around the continents. There are reports by the WHO that predict a possible second coronavirus wave in the fall of 2020 or winter of 2021. Meanwhile, the recession prognosis dropped to minus 4.9% of GDP and minus 11.9% of global trade in 2020 with prospects of recovery surpassing the 2019 level only in 2022 (IMF, 2020).

Another key aspect of reducing global losses is financial stability — restoring the ability of affected industries, banks, and SME to revive their activities. Trillions of dollars have already been invested by leading countries and IFO. It is not an easy task, and mostly not a set of isolated decisions. A large-scale recreation industry (for example, the Mediterranean tourist world) cannot reopen with normal revenues without simultaneously opening airports, transport connections, suppliers, health care, etc. Medical and economic crises of March–June 2020 dealt a heavy blow to globalization. But without the latter, the world economy will not overcome the current low-level equilibrium. Here's how UN Secretary-General Antonio Gutierrez defined the position of the organization on April 27:

“While this crisis is imperiling progress towards the Sustainable Development Goals, it also makes their achievement all the more urgent and necessary. Moving forward, it is essential that recent gains are protected as much as possible and a truly transformative recovery from COVID-19 is pursued, one that reduces risk to future crises and bring much closer the inclusive and sustainable development required to meet the goals of the 2030 Agenda and the Paris Agreement on Climate Change” (UN. Economic and Social Council, 2020b).

We support the SDGs of the UN in general, but we also believe that some goals and indicators of the Agenda 2030 are timely subjects for discussion. As mentioned above, we see “achievements” in the progress of the SDGs as very modest along many lines of the big picture. From our point of view, the SDGs as a process of achieving Agenda 2030, a set of goals and a system of indicators need certain attention to keep them effective (“self-sustainable”) in the long run. By July 2020, we have already learnt new basic limitations

on the perspectives of global prosperity. The pandemic is slowly exhausting itself in Russia, and some European Union countries have suppressed the outbreak. China still seems to be struggling with the recurring danger of a mutating virus in Beijing. BRICS countries in Asia (India), Latin America (Brazil), and Africa (South Africa) are currently experiencing an increase in the number of infected citizens. There is no clarity about the outcome of the pandemic in the fall of 2020 and the restoration of normal life and economic activity. Essentially, we are observing discrepancies in precautionary measures in European countries coming out of the quarantine; meanwhile the USA, Brazil, and some Asian countries are demonstrating a sad perspective of a prolonged anti-virus battle.

The IMF forecast of June 2020 has concluded that the global recession—2020 was the deepest decline of peacetime economic activity since the Great Depression of the early 1930s (Table 1). This year we expect a 4.9% decline in global GDP, world trade is shrinking by 11.9%, and a recovery above the 2019 level is not expected until 2021. Two years of growth may be considered lost for global development (IMF, 2020). The under-developed countries will suffer the most. However, the poor in the middle-income or advanced economies are also at risk of a prolonged decrease in consumption and a possible step back in social conditions.

The global double crisis of 2020 has made clear that in order to survive the mankind needed coordination, governance and development. The first understanding of this simple idea came from the Club of Rome half a century ago. Recently it affected the climate policy that requires coordination of the energy sector. The SDGs are a manifestation of a long-term survival attempt based on some progressive views, the available scientific background and the actual consensus on Global Governance in 2015. The latter no longer works as it is itself a source of problems. We would also like to point out that without more development, institution-building, equality among countries and social equality within countries, the international community may not be able to reach the objectives of the Agenda 2030 or a longer-term and crucial set of goals. The BRICS countries are important as driving forces, and even more so as beneficiaries of the global progress. It is important to have their vision and interests incorporated in the SDG process.

In this situation, the role of the SDGs could potentially become even more important as a general frame program for global long-term prosperity. There is no other comprehensive program for the mankind to survive and avoid the fate of the ancient tribes of Easter Island. And we should work within the SDGs framework to restore global cooperation for prosperity. We feel it is time to appeal to political elites to reestablish Global Governance (Grigoryev & Pavljushina, 2020). The reignition of the global economy without cooperation in suppressing the pandemic and reviving travel and trade will be difficult, long and the costs will be huge. Now at stake is how long the recession and recovery will last, which will lead to even greater delays in achieving all the SDGs.

We believe that economic growth is not bringing more equality by itself (Grigoryev & Pavljushina, 2019). In this respect we support the intention of the UNDP Report of 2019: “Key message 5: We can redress inequalities if we act now, before imbalances in economic power are politically entrenched” (UNDP, 2019, p. 14). However, we do not believe that the imbalances are not yet politically entrenched. Anyway, the economic development after the pandemic and recession should also be more socially equal than before.

As far as the summer of 2020 is concerned, we are to recognize several realities. We should address the set of problems which has been known for a long time. The first problem is the relatively weak enforcement capacity of the SDGs. In many important cases (goals), results (targets or indicators) cannot be achieved without long-term intensive cooperation, joint financing, and clear prioritizing. So far, the history of COVID-19 shows very limited cooperation with a lot of rivalries, negative consequences of domestic political agendas, or various development agendas. Voluntary targets for each country are natural solutions from a political point of view, while in many fields much depends on a few key countries (in scale or capacity), which makes their responsibility considerably higher. The BRICS countries have three billion people, different pathways of the COVID-19 pandemic, an immense responsibility for their citizens, and a global ability to overcome COVID-19 and the recession (Table 1).

Table 1. The BRICS countries: GDP growth and COVID intensity

	GDP growth rates (%)		COVID cases, as of July 25 th , 2020	
	2019	2020 (forecast)	(thousand)	(per 100 th.)
Brazil	1.1	−9.1	2396	1127
Russia	1.3	−6.6	813	557
India	4.2	−4.5	1394	101
China	6.1	1.0	86	5.8
South Africa	0.2	−8.0	434	713
:				
USA	2.3	−8.0	4315	1303
UK	1.4	−10.2	314	440
France	1.5	−12.5	180	276
Germany	0.6	−7.8	206	247
Italy	0.3	−12.8	245	406
Spain	2.0	−12.8	320	683
World	2.9	−4.9	16 245	215

Source: World Economic Outlook Update (IMF, 2020). <https://coronavirus-monitor.ru>

The second problem of the SDGs is a wide diversity between countries in terms of development levels that implies a specific set of tools for steps forward from their different achieved stages. During the 2015–2019 upturn, there were slow changes (with some setbacks). Now, in the dramatic time of recession, the international community should come to an understanding how the achieved level of the socio-economic system affects the reduction of economic activity, adaptation to infection and changes, ways of recovery and further development in the new environment.

And we see the third problem which sooner or later must come to light and be addressed in the context of the SDGs — compatibility of achieving various goals. The problem can be transformed into a question: How different development goals can be addressed simultaneously in the presence of imperfect institutions and budgetary constraints?

2. Development after signing the Paris Agreement: Diversity between the BRICS countries

It's time to look back at 2016–2019 — a short period of the implementation of the SDGs. Was there really a success story before COVID-19? Apparently, the world has descended into even more instability in 2020 for two dramatic reasons: the pandemic and oil prices shock. Countries' chances of reaching their national voluntary targets continue to diminish. Achieving the SDGs as a program by 2030 seems more and more problematic.

The BRICS countries take an active part in supporting the implementation of the concept of sustainable development as a consensual paradigm of human development in the 21st century (Bobylev, 2017). It is illustrated by the fact that the largest UN summits on sustainable development took place in the megacities of the BRICS countries: Rio de Janeiro (United Nations Conference on Environment & Development, 1992 and 2012) and Johannesburg (2002). The list of the UN concept documents on sustainable development that determine the future of humanity in the 21st century and have been adopted by all countries includes the following documents:

- “The Future We Want” (Rio de Janeiro, 2012), which defines the prospects of humanity in the 21st century based on the concept of sustainable development (UN. General Assembly, 2012);
- “Transforming Our World” (New York, 2015), which defines the Sustainable Development Goals for 2016–2030 (UN. General Assembly, 2015);
- The Paris Agreement on climate change (2015) that sets the priorities of the international community in the field of stabilizing the climate system and reducing losses caused by climate change (UN, 2015).

The world recession and COVID-19 place a new emphasis on the concept of sustainable development. The current situation requires a certain reconsideration of the SDG system, its goals and indicators, as well as a particular transformation of the system as a whole. By the end of 2019, the collapse of Global Governance, increased sanctions and escalation of trade conflicts almost squeezed the joint activities of people all around the world. Levels of capital accumulation, as well as of fixed investment, were lower than before the Great Recession of 2008–2009 (Grigoryev & Makarova, 2019). While the European Union was focused on climate and greenhouse gas problems, the issue of energy poverty in developing countries was underestimated.

In the context of the crisis, the 2030 Agenda (2015) has become not quite adequate to the current situation in the world, especially with regard to healthy lives (SDG 3), hunger (SDG 2), inequality (SDG 10), energy (SDG 7) and climate change prevention (SDG 13), institutions and global governance (SDGs 16 and 17). Due to the limited scope of the article, we analyze only a few approaches to the transformation of the SDGs: correction of the SDGs related to long-term trends of switching to low-carbon development (due to climate change), which would ensure a prompt resolution of the health problem; and an adequate account of human life value in the context of the new COVID-19 reality. In addition to the correction of the SDGs, we suggest changing the methodology of including specific indicators in the SDG system: introducing new indicators that

are important for ensuring sustainability and are currently missing, and also incorporating “connecting indicators” for already existing SDGs.

The new reality reveals that without changing the overall course of sustainable development, the mankind may face disastrous consequences, so it is high time to correct the goals of such a course and the corresponding system of indicators. It is particularly important to take into consideration the specifics of the development, adaptation and implementation of the SDGs in the BRICS countries. There are three main areas of implementation and adjustment of the SDGs in the BRICS countries that can be highlighted according to the 2030 Agenda and that were proposed by the European Commission for the high-level political forum on sustainable development (UN, 2017):

- Adaptation of the Sustainable Development Goals to national and local conditions;
- Sub-regional cooperation to achieve the SDGs;
- Data collecting and control/supervising.

Traditionally, the SDGs are considered to be a balanced system/structure of social, economic and ecological goals, objectives, and indicators. The creation of the SDGs themselves was primarily due to the evident unsustainability of global development. Despite apparent success in solving some of the global and national problems in the 2000s, most of them have persisted and even escalated. By 2019, the poverty rate remained high. The gap between the rich and the poor is becoming wider in numerous countries; ecological problems are aggravating, particularly the ones related to climate, access to clean water and other issues (Grigoryev & Pavljushina, 2018, 2019).

Nowadays, the SDGs are taught in schools in many countries all over the world. Many conferences are devoted to their discussion, and the vast majority of governments and parliaments make notable efforts to adapt these goals to their countries’ national characteristics. In our opinion, some countries (including BRICS) often do not thoroughly develop the SDGs and treat them superficially. The goals and their socio-economic components are seen as some parts of a puzzle that can be put together in a rather arbitrary way without taking into account their complementarity or interdependency. Specifically, the way social, economic and environmental SDGs are combined appears to be somewhat uncoordinated. However, emerging realities require that the pieces of the puzzle are put together in better order. In line with the commitments made by countries under the 2030 Agenda for Sustainable Development adopted in 2015, all of these states should develop their strategies of implementing common commitments and highlight the main vectors for achieving the most important “connecting” indicators. All countries are expected to account for their work by 2020, showing the progress made since 2015 and the speed with which they are moving towards their goals that are to be achieved in 2030. The BRICS countries have submitted voluntary national reviews of the implementation of the 2030 Agenda for sustainable development. The reviews were completely different; the countries elaborated sustainable development problems to different degrees. The objective differences between the countries determined the focus of their national goals.

Some countries presented two reviews: first, an introductory one, then a quite fundamental one. Countries like India (2017 and 2020), China (2016 and 2021), Brazil

(2017) and South Africa (2019) presented their own documents. Russia submitted an extensive voluntary national review in June 2020 (UN, 2020), and on July 21, 2020, the President of the Russian Federation signed a Decree on the national development goals of Russia for the period up to 2030². It should be noted that the comprehensiveness of the goals, the intensity of their realization, as well as the progress in achieving them, have significantly varied in the past years.

From the scientific point of view, the SDGs are the legacy of the Millennium Development Goals (MDGs) adopted in 2000 — and that fact is often overlooked (UN. General Assembly, 2000). The MDGs covered the period 2000–2015, and the SDGs, which are due to be implemented from 2016 to 2030, have just pursued the concept of the MDGs in an extended version. The methodical basis of the MDGs was reproduced in the SDGs in a broader version: a three-level configuration “goals — targets — indicators”; several indicators may relate to a particular objective; most of the indicators should be quantifiable; key indicators should be achieved before the exact deadlines — 2015 in the case of the MDGs, and 2030 in the case of the SDGs. Methodically, the MDGs and the SDGs are rather similar; however, the SDG ideology is way more extensive. The MDGs were mostly focused on social issues: six out of the eight MDGs were social, and they are now virtually represented in the SDGs as well, though in a slightly different interpretation. In addition, the MDGs contained one environmental goal (“Ensuring environmental sustainability”) that was converted into several goals in the framework of the SDGs; and there was another MDG of an institutional nature (“Global partnership for development”) that in the SDG system was transformed into two goals (“Sustainable communities”, and “Global partnership for the goals”). The number of the SDGs increased (compared to the MDGs) due to a broader range of economic goals. Consequently, the scope of the 2030 Agenda for 2016–2030 became considerably broader: the SDG framework has twice as many goals as the MDG one, the number of its targets is ten times more than the number of the MDG targets (UNDP, 2010; Analytical Center., 2016)³.

In contrast to the MDGs that were mainly focused on developing countries, the SDGs are designed for all countries with individual variations and national peculiarities (UN. General Assembly, 2015). That is why the SDGs represent an important step towards creating a future in an interdependent world. Nowadays, the BRICS countries (as well as the vast majority of the countries all over the world) lack a complete set of statistical indicators for the SDG framework. Moreover, disaggregation by income level, gender, age, race or ethnicity, migration status, physical abilities or geographical location, or any

² <http://kremlin.ru/events/president/news/63728>

³ The subject of adapting the MDGs to national and local characteristics of Russia was analyzed in detail in the National Human Development Report for the Russian Federation presented by the UN Development Programme in 2005, 2007, and 2010, which was compiled with the participation of one of the authors — S. Bobylev (UNDP, 2010). The SDGs adaptation to Russian conditions and peculiarities was first presented in “The National Human Development Report for the Russian Federation. The UN Sustainable Development Goals in Russia” edited by S. Bobylev and L. Grigoryev and published in 2016 by Analytical Center for the Government of the Russian Federation (Analytical Center., 2016).

other characteristic proposed by the UN in accordance with the key principles of official statistics poses a number of practical challenges.

3. Different stages of development: Problems and advantages for the BRICS countries

Let us focus now on the differences and immediate objectives of the development of the BRICS countries. We usually discuss what is similar in our approach to world affairs in international politics, especially the international financial architecture, trade and investments, et cetera. The BRICS countries represent a huge variety of countries that are “catching-up” with more developed economies. In an era of rapid technological changes, we need to adjust our development strategies to new realities. If they are successful, developing and middle-income countries will have a feasible strategy for achieving success in development. There is an extensive literature on the differences between the BRICS countries and their common interests in “catching-up” and establishing somewhat more adequate Global Governance (Grigoryev & Morozkina, 2012; 2013).

In this article we do not have space to discuss different stages of the long-term development of the BRICS countries. The five countries, plus many countries of the same levels of income and development, are at different stages of industrial development on their way to post-industrial societies. Looking forward, we recognize common interests in the global affairs and a wide range of possible fields for cooperation. To some extent, we have had opportunities to stress “similarity in inequality” in the BRICS issues. Our countries have inherited urban — rural disparities, social inequality, educational and other substantial environmental issues from the past (Table 2).

Table 2. Key indicators of the SDGs for BRICS countries, as indicated

	Life expectancy at birth, 2018	Inequality (share of income for 10th decyl, %, 2016	Human Development Index (rank), 2018	GDP (per capita, ppp, th. int. dollars), 2016	Ambient PM2.5 air pollution (mean annual exposure, micrograms per cubic meter), 2016	Carbon dioxide emissions (per capita, metric tons), 2014	Net CO2 emissions export (% of a country's emissions)	Adjusted Net Savings (% of GNI), 2018	SDG Index (rank)
Brazil	75.7	40.7	0.761 (79)	14.1	11	2.5	-2.9	5.3	53
Russia	72.4	29.8	0.824 (49)	25.0	17	12.5	21.6	8.4	57
India	69.4	32.2	0.647 (129)	6.2	74	1.6	6.1	18.5	117
China	76.7	29.8	0.758 (85)	14.3	58	7.6	14.1	19.9	48
South Africa	63.9	51.3	0.705 (113)	12.3	30	8.8	24.3	1.0	110

Source: (Makarov & Sokolova, 2017), (Sachs et al., 2020), (UN, 2019), (World Bank, 2019).

Economic growth is dependent on domestic institutions and external environment. The OECD countries passed through these stages half a century ago. There is no “simple” theory of transition from “middle income traps” to a stable democratic society with a GDP over 30 thousand dollars per capita. Using “the best available institutions” and policies, BRICS may seek the Sustainable Development Goals while “catching-up” with the growth progress. It would take better coordination of trade, investments, education and R&D efforts and policies. Human capital is growing (Table 3).

Table 3. Personal Education in the BRICS countries, 2016

	Individuals using the Internet (%)		Tertiary gross enrolment ratio (%)	
	2008	2016	2008	2016
Brazil	34	61	35.6	50.6
China	23	53	20.7	48.4
India	4	30	15.1	26.9
Russia	27	73	75.0	81.8
South Africa	8	54	-	19.8

Source: WDI, World Bank.

We do not intend to make clear-cut definitions of the stages of development for each BRICS country. But we can make brief remarks about the specifics of each country’s situation. In South Africa, demand for education is a key starting point for developing productivity and middle class, while it takes time and investments to grow out of a deeply divided industrial society with the highest recorded social disparity rates.

China’s system of mass production and export has lifted its huge population out of poverty in 40 years of central planning transforming into market-oriented decision making, competition, and a consumer society based on an industrial society per se. Inequality is an important feature of this society (Jain-Chandra et al., 2018), and the progress to the post-industrial society takes time and institutional changes.

The structure of the Indian economy is very specific and based on services and agriculture, with a large flow of finance from Indian migrant workers abroad. This would be an industrial stage (with a huge shortage of infrastructure and energy) in a not very strong service sector. The segment of trade, repair, hotels and restaurants remains the largest contributor to the services sector.

The Brazilian economy is still struggling to recover from the crises of 2009 and 2015. The previous success gave an important push to development, but it did not provide strong competition capabilities. High levels of inequality prevent the economy from developing into a more stable society, while democracy has survived a chain of recent socio-economic (and corruption) shocks.

The Russian economy is still struggling with the specific transition problems of the 1990s, probably, more than with the problems of the Soviet past. Materials and hi-tech, as well as strong human capital, are unique, while weak institutions leave these capabilities significantly underutilized.

The BRICS countries need a good global environment with predictable governance, improved domestic institutions, and a strong focus on inequality. The SDGs are different for all countries, but many problems and interests are common (Kurdin, Shastitko, 2020). The success of the BRICS countries in achieving the SDGs is a crucial precondition for global success, stability and progress.

4. The SDGs and low-carbon development

The world economy, as well as the economy of any nation, is facing growing environmental risks and threats, including those related to climate change. This fact was recognized by the world's leading scientists, political and business elite at the prestigious World Economic Forum (WEF) in Davos in January 2020. The annual WEF reports highlight five types of global risks: economic, environmental, geopolitical, social, and technological (WEF, 2020). The 2007 WEF report identified, three of the five high priority risks as economic (oil prices shock, China's hard landing, blow-up in asset prices), one as technological (infrastructure breakdown), and one as social (chronic diseases). All the risks in the 2020 report were related to environmental issues: extreme weather, climate action failure, natural disasters, biodiversity loss, human-induced environmental disasters (WEF, 2020).

The fight against climate change declared in the UN Paris Agreement 2015, and the intention of many countries, including China and Russia, to switch to low-carbon development and low-carbon economy are inadequately reflected in the SDGs. At present, SDG 13 "Take urgent action to combat climate change and its impacts" seems to be confusing due to the lack of essential indicators that would ensure a solution of the problem and monitoring of climate change. In general, one of the most important indicators — the indicator of greenhouse gas emissions — is used only twice: in SDG 13 — indicator 13.2.2 ("Total greenhouse gas emissions per year"), and in SDG 9 ("Infrastructure, industrialization and innovation") — indicator 9.4.1 ("CO₂ emission per unit of value added").

For the 13+ SDGs, we suggest new and additional "connecting key indicators"⁴:

- CO₂ emissions by economic sectors (million tons). For BRICS, this indicator is essential due to the rapid development of the energy sector;
- CO₂ emissions per capita (tons). For the BRICS countries with large population, this indicator plays an important role;
- Comparison of changes in CO₂ emissions for all the countries in both "production" and "consumption" sectors (%) (Makarov & Sokolova, 2017);

⁴ We suggest using the term "connecting key indicators" as an instrument to display the interconnection between different sustainable goals which are supposed to be changed in a certain conjunction.

- Forest consumption of greenhouse gases (million tons). The BRICS countries have one of the largest forest areas in the world accounting for 40% of the world's forests. Such areas have a significant influence on climate control. This connecting indicator may be used within the framework of SDG 15 ("Life on land");
- Consumption/emissions of greenhouse gases by the agricultural sector (million tons). The BRICS countries have large areas of agricultural land, and their management has a great impact on climate. This indicator can be of a connecting character and can be used within the framework of SDG 2 ("End hunger, achieve food security and improved nutrition and promote sustainable agriculture");
- Energy intensity (ratio of primary energy consumption to GDP). It has a connecting character, and is now used in SDG 7 ("Energy"), (7.3.1 indicator). This indicator reflects important social (health, etc.) and environmental (climate, etc.) problems. In general, it may be of a connecting character for such SDGs as SDG 3 ("Health"), SDG 7 ("Sustainable energy"), SDG 8 ("Economic growth and work"), SDG 11 ("Sustainable cities"), SDG 12 ("Consumption and production models"), and SDG 13 ("Climate");
- Carbon footprint (million tons of CO₂ and as a balance between production and consumption emissions (%)) (see Table 2). It is an important climate indicator that reflects the impact of certain countries on the climate system via their own emissions and imports of products containing CO₂. Despite producing significant greenhouse gas emissions, the BRICS countries export a considerable part of their carbon-intensive production to developed countries. Namely, both exporters and importers are responsible for CO₂ emission, with the developed OECD-member countries standing out among the importers: for the five BRICS countries, the net exports of emissions account for 13.5% of the total emissions, for the OECD countries this number is negative — 13% (OECD, 2020). The carbon footprint indicator can be thorough and can be used in SDG 12 ("Responsible consumption and production");
- CO₂ emissions per unit of value added. This indicator has already been mentioned as SDG 9.4.1. It is important for technological development towards high-tech industries. It would be worthwhile to transform that indicator into a connecting one and include it in the framework of SDG 13+;
- Adjusted Net Savings Index. This indicator is calculated by the World Bank and published annually in the World Development Indicators database (World Bank, 2019). This indicator reflects essential aspects of sustainable development: education expenditure, natural resources depletion (including energy depletion), damage from CO₂ and PM_{2,5} to environment and health. Adjusted Net Savings Index can be a connecting indicator and can be used in SDG 3, SDG 4, SDG 7, SDG 8, SDG 9, SDG 11, SDG 12, SDG 13, SDG 15.

Transition to low-carbon development and incorporation of environmental-economic and climatic targets in the SDGs should involve modification and integration of the new and thorough key indicators and cover at least SDG 3, SDG 4, SDG 7, SDG 8, SDG 9, SDG 11, SDG 12, SDG 13, and SDG 15.

5. Global combined crises of 2020 and human development

We are very much concerned about global peace and stability. Global Governance is in disarray, and collective efforts are not what we are actually observing now. Nevertheless, we should recognize the shortage of resources to combat the COVID-19 pandemic and to stabilize countries affected by the recession, both developed and developing. The period 2020–2021 will present a difficult task of ensuring the survival of millions of people suffering from poverty or infection, based on long-term solutions in a coordinated approach. Restoration of growth will take time and resources that otherwise could be used for implementing the SDGs.

The global agenda has been drastically changed from 2015 to 2020: from long-term coordinated prosperity till 2030 with average GDP growth of approximately 3% and efforts to achieve the 17 SDGs to a more intense focus on climate change prevention. The latter is obviously in the center of the EU policy promoted by IEA, and it was supported by the special agreement in Paris in 2015. The impact of the recession and the COVID-19 pandemic on the implementation of the SDGs is not uniform. We consider the SDG Agreement as a coordinating tool for solving the problems of humanity. Today we see the necessity of some sort of a concordat between urgent problems and the general norms of the SDGs. It should be emphasized that the above-mentioned interrelated nature of some “connecting” SDGs contributes to the creation of synergy in realizing particular, separately taken SDGs (Bobylev & Solovyeva, 2017).

The new world order requires a transformation of the SDG structure taking into account new theoretical accents. First of all, this transformation should focus on human development. The concept of human development was elaborated by the UN institutions more than 40 years ago, then it became officially recognized, and since 1990, the organization publishes an annual Human Development Report. The Nobel laureate Amartya Sen made a major contribution to the human development theory (Sen, 1990). In addition, we would like to highlight the works by K. Griffin and T. McKinley (Griffin & McKinley, 1994) in this field. However, this concept mainly remains a declaration that lacks support from decision-makers, scientific studies, economics and society. We believe that this fact is largely due to absolutization of economic growth that is justified by the theory of human capital, which is largely based on a person’s ability to perform labor, a combination of knowledge and experience (Schultz, 1960). Both global political and economic mainstreams adhere to the human capital theory, though some of its aspects contradict those of the human development theory. This contradiction is clearly seen, at least when analyzing the activity of elderly (65+ years) people, infants, housewives etc. who do not produce income or profit that is one of the main characteristics of any capital (including natural).

The COVID-19 pandemic consequences may lead to new approaches towards implementing and evaluating economic policies aimed at achieving the SDGs. Nowadays, humanity faces an unprecedented situation when almost all nations have sacrificed economic growth for the sake of saving human lives. That means that human lives have become an absolute priority. Consequently, development must be measured

differently, in terms of the value of human lives. How does the fight against COVID-19 differ from realization of different economic scenarios that take into account, for example, environmental issues? The WHO data shows that in China, a resident of a “clean” area lives several years longer than a resident of a megalopolis. This difference exists due to coal burning and transport pollution. That is why traditional coal-based energy scenarios can be dangerous for many countries, not only from the climate change perspective, but from the perspective of premature death and morbidity as well. According to health workers, the most dangerous pollutants are suspended particles less than 2.5 microns in diameter (PM2.5) that are abundantly produced by coal-related industries and activities (mining, incineration, transportation, etc.). From a medical point of view, in terms of annual mortality rate, coal is a greater threat to humans than COVID-19. The fact is that morbidity and mortality caused by the effect of coal on human health are protracted, while those caused by COVID-19 are supposed to be localized within one to two years. Therefore, development scenarios must take into account the risks of additional deaths in many respects, inter alia, due to environmental pollution. These estimates are difficult to carry out; nonetheless, modern science is able to do so using the concept of risk. The number of deaths caused by PM2.5 pollution might be even higher for such BRICS countries as China, India, Russia, and South Africa than the number of deaths caused by COVID-19, although, of course, the calculation is based on a rational and complex long-term accounting system (see Table 2).

Given a full assessment of the global value system, the SDGs should be viewed in terms of the value of human life, rather than in terms of economic growth. In this regard, we consider the MDGs to be simpler and more understandable in the context of human development theory than the SDGs. In the view of high probability of a second COVID-19 wave or new epidemics, it is necessary to strengthen the concept of the value of human life in the SDGs. Several options are possible, taking into account the potential correction of a number of the SDGs. There are at least two variants of the SDGs modification: first, transforming SDG 3 (“Health”) and including health-related indicators from other SDGs in it; second, creating an additional SDG in the light of the concept of the value of human life and the risk of epidemics and new diseases.

The first option implies transforming and changing SDG 3. This is easy as it does not require new lengthy negotiations or compromises between developed and developing countries in relation to forming an additional SDG. However, from the point of view of sustainable development as the main paradigm of human development in the 21st century (that is, of course, not limited to 2030), a clear declaration of the value of human life as an independent goal would be more constructive. In order to formulate such a goal, it is necessary to take into account not only the health factor (SDG 3) but also many other socio-economic realities that cover, for example, the acute problem of inequality (SDG 10).

Currently, the objective of combating epidemics is included in SDG 3 — 3.3 target: “By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases” (UNDP, 2015). It is worth mentioning that in the MDGs, the fight against epidemics

was allocated to a special Goal 6 “Combat HIV/AIDS, malaria and other diseases”. The current denomination of SDG 3 — “Ensure healthy lives and promote well-being for all at all ages” — seems too limited for the new realities. Based on the MDG 6, the title of SDG 3 could be transformed into the following: “Ensure a healthy lives and reduce the risk of epidemics and other diseases”. The transformed SDG 3 can be defined as SDG 3+, as it has already been done when adapting the MDGs to the national level.

SDG 3+ and other related goals should be complemented by indicators that reflect the state of health and value of human life. These indicators can be either new or connective, taken from other SDGs. This is a fundamental point since the classical SDGs contain a non-overlapping system of indicators, which, in our view, impoverishes the potential for achieving the Goals. As mentioned above, we suggest using a system of connecting key indicators, in which each indicator could be considered as a part of several SDGs and used to monitor a number of goals.

We suggest using the following indicators as the new ones:

- Life expectancy/longevity (years). This is a key indicator for measuring human development. It is unclear why this indicator is not included in the final list of the UN SDGs, although it is used within the SDG framework in certain countries and associations.
- Health (medical) expenditure (as a percentage of GDP or as a percentage of government spending). Nowadays, there is a widely used similar indicator of education expenditure as a percentage of GDP. COVID-19 revealed the weakness of all countries, including the developed ones, in fighting epidemics, which is an objective signal of the present need to increase health spending.
- Hospital capacity (per 10,000 people). The appalling picture of people lying on hospital floors or ill patients waiting in queues outside hospitals has shown the current huge deficit of hospital facilities. The capacity of hospitals should be significantly increased in order to increase the number of patients provided with hospital care.
- Human development index (HDI). This integral index is crucial for assessing sustainable development (including health and education) from a social point of view. The HDI may be of a thorough character and may be used within social SDG 4 (“Education”) and SDG 8 (“Promote sustainable economic growth, employment and work”). This indicator in the BRICS countries is presented in Table 2.

SDG 3+ may also include new indicators as well as thorough indicators that are already included in other SDGs. For example, SDG 3 already contains health indicators that reflect environmental aspects of sustainability: “mortality rate attributed to household and ambient air pollution” (indicator 3.9.1) and “mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene” (indicator 3.9.2). As mentioned above, suspended particles measuring less than 2.5 microns in diameter (PM2.5) contained in the air play a crucial role in mortality and morbidity rates. PM2.5 air pollution is rather dangerous in the BRICS countries (see Table 2). PM2.5 emissions are especially high in India and China resulting in a significant number of diseases and deaths in these countries.

At present, this indicator is part of SDG 11 (“Sustainable cities”): “Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)” (11.6.2 indicator). It would be reasonable to make this indicator a thorough one and include it in SDG 3+. In addition, it should be included in at least two other SDGs: SDG 7 (Energy) and SDG 13 (Climate) due to extensive production and burning of high-carbon and high-emission coal in the world.

Contamination of water resources (SDG 6) causes a lot of diseases and deaths worldwide. According to the UN, the number of people affected by this problem has reached 2,2 billion (UN, 2020b). Two indicators included in this SDG should also become thorough and be used in the SDG 3+ framework: 6.1.1 indicator (“Proportion of population using safely managed drinking water services”); 6.2.1 indicator (“Proportion of population using (a) safely managed sanitation services, and (b) a hand-washing facility with soap and water”). In the COVID-19 context, the latter indicator is crucial for fighting the epidemic, though nowadays 3 billion people in the world lack hand-washing facilities with soap and water (UN, 2020b).

Currently, SDG 3 contains an indicator that should be made a connecting one and also included in SDG 17 (“Global partnership”): “Total net official development assistance to medical research and basic health sectors” (3.6.2 indicator). However, in the current definition, the indicator seems to be too limited. We propose to modify this indicator within the framework of SDG 3+ and SDG 17 as follows: “Total net official development assistance for fighting epidemics and other diseases, medical research and basic health sectors”.

Global development represents complex socio-economic factors and characteristics, some of which are constantly changing, and some are stalling. Among the widely discussed features of modern societies, one would notice inequalities of various natures. Reducing this is the target of SDG 10. In the 21st century, inequality between countries is decreasing quite slowly (if at all), especially excluding the factor of China and India. Stylized facts argue for global coordination of investments into physical infrastructure and human capital to ensure self-sustainability for growth. Social inequality is growing at the top of the scale (10th decil, 100th percent, etc.). Redistribution of income (consumption) in favor of the lower strata has improved Gini coefficients, but not the “social distance” between the rich and the poor, or even to the lower middle strata. In the case of a double blow — a pandemic and a severe recession, — this creates a risk of social instability and actually delays success in achieving the SDGs.

The problem of inequality between countries was discussed in various aspects (Grigoryev & Pavljushina, 2018). Here we can offer some indicators for monitoring success in reducing inequality between countries (Grigoryev & Pavljushina, 2018), such as: (10a) — reducing dispersion between the 20 developed countries and other countries, calculated in 10-year increments.

The growing social inequality in the world has been in the focus of discussions in recent years (Grigoryev & Pavljushina, 2019, 2020). The current crisis makes it especially visible and addressed on a very high international level (Guterres, 2020). We are suggesting an approach with some quantitative parameters for considerations: (10b) — the growing

share of income (consumption) going to the 1st quintile for the same groups of countries, calculated in 5-year increments; (10c) — the decreasing share of income going to the 5th quintile, calculated in 5-year increments (from levels above 45%).

The number of suicides and homicides must be classified as an unfavorable indicator related to social inequality (SDG 10): in particular, homicides are associated with poverty and countries with low and middle income per capita, while suicides — with upper- and upper-middle-income countries and strata (Grigoryev & Popovets, 2019).

We would like to highlight the new integral Human Development Index (HDI) suggested as an indicator for achieving the SDGs. The HDI formation dates back to 1990. This index is published now on a regular basis in Human Development Reports at the global and national levels (including Russia). In terms of ideology, this index was elaborated in order to counter the GDP indicator which is too focused on a country's economic performance and ignores other important economic and social characteristics. From the point of view of sustainability, the HDI primarily reflects the social component: health (life longevity) and education level. The third HDI sub-index reflects the achieved level of economic development — GDP/GNI per capita. The environmental component is latent in the HDI as it is part of the life expectancy index (used to evaluate harm to health and longevity caused by environmental pollution). Based on the existing studies and the WHO data, the damage caused by environmental pollution in the BRICS countries amounts to several years of lost life for the vast majority of citizens, especially those who live in polluted cities.

Nowadays, there are a lot of HDI modifications that include gender, inequality, more detailed aspects of education, etc. (UN, 2019). One of the important advantages of the HDI is that it pays more attention to assessing social aspects compared to economic ones. For example, countries with high GDP levels but low life expectancy are ranked lower than countries with high life expectancy. In the HDI ranking, Russia is listed among countries with a very high level of human development and ranks 49th, while Brazil (79th), China (85th), South Africa (113th) are in the list of countries with high human development, and India (129th) is among those with a medium level of human development (see Table 2). However, in our opinion, the HDI generally cannot reflect the sustainability of development in an adequate way since it cannot address multidimensional challenges of sustainability, in particular, environmental ones.

Another connecting SDG Index that is possible to use was designed by well-known economists J. D. Sachs, G. Schmidt-Traub et al. (Sachs et al., 2020). This index was presented at the UN Political Forums in 2016 and 2017. The SDG Index covers all 17 SDGs, it is statistically significant and most of the countries in the world provide statistical databases for its calculation. China occupies the highest position among the BRICS countries — 48th place, Brazil and Russia are close by (53rd and 57th places, respectively), and India and South Africa are in the lower middle of the ranking — 117th and 110th places (see Table 2). The limitations of the SDG Index are the contradictory nature of the choice of some of its indicators and their quantitative assessment. All in all, the index represents merely a country's position in the ranking and its dynamics without paying attention to the interaction of mechanisms that should provide for achieving the final goals.

Thus if such parameters as the value of human life and health are to be taken into account, then the existing indicators should be modified and new, connecting indicators should be included in the system, at least, this concerns SDGs 3, 4, 6, 8, 11, 17.

6. Conclusion. “Pandemic Protocol”

Modification of the SDGs might be an option for the international community in the long-run. And the difficult year 2020 is the right time to start discussing this issue. However, we are not currently calling for an overhaul of the SDGs. The time has come for urgent anti-pandemic and anti-recession measures, but it would be the wrong time for such a complex multilateral negotiation process. As the second-best approach, we suggest creating some kind of an addition to the SDGs in the form of a Protocol clarifying urgent necessities and priorities during a pandemic and recession. Such an approach can provide a guidance for all countries on coordinating stabilization of the health system and initiating recovery in the frame of long-term SDG solutions.

SDG 1. Take measures to ensure the supply of the population of LDCs in the face of a recession or disconnection from traditional sources of income, or deprivation of economic activity due to anti-COVID-19 restrictions or a recession: tourism, transport, services, agriculture, fishing.

SDG 2. There are prospects for potential coordination of efforts of the BRICS countries in the fields of agricultural policy development, and balancing export-import food regulations owing to the critical role of most of these countries agricultural productions, exports and imports on the global level.

SDG 3. The COVID-19 pandemic has demonstrated the vulnerability of the mankind as a whole, including developing countries and pockets of poverty in developed countries. All countries should focus on providing health care to low-income strata through state systems of mixed medical insurance. Additional attention should be paid to building international cooperation and sharing information and research results for testing, curing or preventing coronavirus infections now and in the future.

The COVID-19 problem has cast doubt on the health-related definition of SDG 3. It should be modified taking into account epidemiological problems. At present, the goal of fighting epidemics is included in target 3.3 “By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases”.

SDG 4. It aims to provide quality education and promote lifelong education opportunities for all. It would be reasonable for the BRICS countries to create joint educational programs in the field of sustainable development and improve knowledge in the field of the SDGs implementation. Besides, all countries should raise public awareness of the dangers of coronavirus diseases and preparedness of health systems to combat pandemics globally, including the poor social strata.

SDG 6. It is aimed at ensuring public access to safe and affordable drinking water and rational use of freshwater ecosystems. In the BRICS countries, there is a need to improve access to quality sanitation and hygiene services, especially in rural areas.

SDG 7. Provide access to affordable, reliable, sustainable and modern energy for all. The common goal is to assure a stable supply of affordable energy for economic growth, development and catching up in less developed countries. Fighting energy poverty should be addressed as an integral part of development with a target of climate change prevention in terms of technology transfer, financing and human life. Energy transition should be conducted in a way that is compatible with the prevention of climate change on a global scale.

SDG 8. Economic growth should be restored from the low level of recession as soon as possible using the vast resources of advanced economies to combat COVID-19 on the global level. Global instability also requires a review of the traditional financial accounting system including the dictate of GDP, which does not adequately reflect social and environmental issues (Richard, 2020).

SDG 9. Create flexible infrastructure, promote inclusive and sustainable industrialization and innovation. Physical and human infrastructure and innovation capability should be built as a common project of mankind.

SDG 10. Inequality between countries is reducing quite slowly, and social inequality plays an outstanding role in the pandemic and recession of 2020. These problems should be addressed as a target for the immediate future with indicators suggested above.

SDG 11. The mission of ensuring the safety, resilience and environmental sustainability of cities is acute for the BRICS countries in the context of fast urbanization which is accompanied by environmental problems. High levels of pollution in cities lead to high mortality and morbidity levels of their inhabitants (Porfiriyev & Bobylev, 2018).

SDG 12. Ensuring transition to sustainable and rational consumption and production models implies increasing efficiency of the use of natural resources. The BRICS countries can develop joint plans in this field within the framework of the 10-year UN programmes on sustainable consumption and production (10YFP).

The recession has led to travel bans and contact restrictions. It gives an example of reduced personal consumption for the rich strata and includes recreation, services and transportation. We call for long-term measures to preserve some lifestyle changes. We also suggest paying considerably more attention to recording emissions by consumption and green consumption, as well as technological progress and implementation of the green approach to production.

SDG 13. In order to “take urgent actions to combat climate change and its impacts”, the BRICS countries should elaborate coordinated approaches to shaping the positions of the BRICS member states on climate change issues, including regulation and compensation of greenhouse gas emissions from forest and other ecosystems, within the UN organization and other dialogue platforms.

SDG 14. This goal is aimed at conservation and sustainable use of oceans, seas and marine resources for sustainable development. The BRICS countries that have huge coastlines, significant protected areas in the marine environment and high levels of fishing (or overfishing) can effectively coordinate efforts to implement SDG 14.

SDG 15. In order to “protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”, the BRICS countries should promote achievement

of this goal and emphasize their role as global environmental donors in international agreements and commitments in the field of climate change prevention, water scarcity mitigation, ecosystems and biodiversity conservation.

Meanwhile, *SDG 16* (“Sustainable societies”) was recognized as an important broad institutional goal. In 2020, the BRICS countries and the whole world are starting to look at them from another, virtually new point of view. The example of *SDG 16* (“Peace, justice and effective institutions”) shows this tendency quite well. The pandemic has shown the imperfection of domestic and international institutions. All in all, here are a huge number of new questions concerning institutional support for sustainable development. It is obvious that the world is moving towards greater instability in 2020, and realization of the SDGs by 2030 has become even more challenging. The SDGs should be a balanced system of social, economic and environmental targets, objectives, and indicators.

In the context of the current world recession and growing budget deficits in countries all over the world, *SDG 17* should cover a range of new and acute problems. The problem of deceleration of the implementation of the SDGs is becoming evident in many countries because there are simply no financial resources left for accomplishing a number of goals. What is more, it is difficult to draw any conclusions concerning the problems of developing countries in general. It is obvious that in the short run, the political burden will shift towards solving short-term social and economic problems at the expense of long-term sustainability issues. Apparently, the international community should prevent the SDGs from being relegated to a secondary place.

The Secretary-General of the United Nations mentioned that the response to the COVID-19 problem should amount to at least 10% of global GDP (UN. Economic and Social Council, 2020). In fact, his words referred to the budgetary funds of developed countries and international financial organizations. It is also important to preserve the level of bilateral development assistance. However, in 2020, the problem of declining foreign direct investments and private financial flows, estimated at several percentage points of GDP, should also be taken into account, and for a number of recipient countries this problem will itself become an external shock. Rebuilding the global economy after the epidemic and recession will be a challenging process that will require new global coordination of the SDG system and effective use of the limited resources of the international community. Certain modifications to the SDGs could help coordinate common efforts around the world and, in particular, in the BRICS countries. Finally, we must reiterate that this pandemic and recession are far too dangerous for the mankind. The international community, the UN, the Bretton-Woods, academia and NGOs, and responsible actors should reestablish global coordination and governance for reaching the SDGs. The BRICS countries can provide institutional support to achieve this important objective.

References

- Bobylev, S. (2017). Ustojchivoe razvitie: Paradigma dlya budushchego. *Mirovaya ekonomika i mezhdunarodnye otnosheniya*, 61(3), 107–113 (Sustainable development: A paradigm for the future. *World Economy and International Relations*, 61(3), 107–113).

- Bobylev, S., & Solovyeva, S. (2017). Sustainable development goals for the future of Russia. *Studies on Russian Economic Development*, 28(3), 259–265.
- Doklad o chelovecheskom razvitií v Rossijskoj Federacii: Celi ustojchivogo razvitiya OON i Rossiya. (2016). Pod red. S. N. Bobyleva & L. M. Grigoryeva (S. Bobylev & L. Grigoryev (Eds.)), *Human development report in the Russian Federation: UN sustainable development goals and Russia*. Analytical Center for the Government of the Russian Federation). <https://ac.gov.ru/archive/files/publication/a/11138.pdf>
- Griffin, K., & McKinley, T. (1994). *Implementing a Human Development Strategy*. MacMillan.
- Grigoryev, L. (2016). Russia in the system of global economic relations. *Strategic Analysis*, 40(6), 498–512.
- Grigoryev, L., & Morozkina, A. (2012). BRICS instruments: Specifics of objectives. In H. H. S. Viswanathan & N. Unnikrishnan (Eds.), *Search of stability, security and growth BRICS and a new world order*. ORF, pp. 125–134.
- Grigoryev, L., & Morozkina, A. (2013). Different economies, similar problem. *Russia in Global Affairs*, 2, 26–39. <https://eng.globalaffairs.ru/articles/different-economies-similar-problems/>
- Grigoryev, L., & Popovets, L. (2019). Sociology of individual tragedies. Homicides and suicides: Cross-country cluster analysis. *Russian Journal of Economics*, 5(3), 251–276.
- Grigoryev, L. (2020a). Sustainable development goals — BRICS countries' specifics. *International Affairs: A Russian Journal of World Politics, Diplomacy and International Relations*, 60–65.
- Grigoryev, L. (2020b). Global social drama of pandemic and recession. *Population and Economics*, 4(2), 18–25. <https://populationandconomics.pensoft.net/article/53325/>
- Grigoryev, L., & Makarova, E. (2019). Norma nakopleniya i ekonomicheskij rost: Sdvigi posle Velikoj recessii. *Voprosy Ekonomiki*, 12, 24–46 (Capital accumulation and economic growth after the Great Recession. *Issues of Economics*, 12, 24–46).
- Grigoryev, L., & Pabst, A. (2020). Introduction — international cooperation in times of post-Cold War (dis)order. In L. Grigoryev & A. Pabst (Eds.), *Global governance in transformation — Challenges for international cooperation*. Springer, pp. 1–12.
- Grigoryev, L., & Pavljushina, V. (2018). Mezhranovoe neravenstvo: Dinamika i problema stadij razvitiya. *Voprosy Ekonomiki*, 7, 5–29 (International inequality: Dynamic and the problem of stages of development. *Issues of Economics*, 7, 5–29).
- Grigoryev, L., & Pavljushina, V. (2019). Relative social inequality in the world: Rigidity against the economic growth, 1992–2016. *Russian Journal of Economics*, 5(1), 46–66. <https://rujec.org/article/35485/>
- Grigoryev, L., & Pavljushina, V. (2020). Global recession and income inequality: Factors of disruption for elites in the twenty-first century. In L. Grigoryev & A. Pabst (Eds.), *Global governance in transformation: Challenges for international cooperation*. Springer, pp. 275–297.
- Grigoryev, L., Makarov, I., Sokolova, A., Pavlyushina, V., & Stepanov, I. (2020). Climate change and inequality: How to solve these problems jointly? *International Organizations Research Journal*, 15(1), 7–30.
- Grigoryev, L., Pavlyushina, V., & Muzychenko, E. (2020). Padenie v mirovuyu recessiyu 2020... *Voprosy Ekonomiki*, 5, 5–24 (The fall into 2020 recession... *Issues of Economics*, 5, 5–24).
- Guterres, A. (2020). Opening remarks at Nelson Mandela lecture: “Tackling the inequality pandemic: A new social contract for a new era”, July 20. <https://www.un.org/africarenewal/web-features/“tackling-inequality-pandemic-new-social-contract-new-era”>
- IMF. (2020). *World economic outlook update, June 2020*. <https://www.imf.org/en/Publications/WEO>
- Jain-Chandra, S., Khor, N., Mano, R., Schauer, J., Wingender, P., & Zhuang, J. (2018). *Inequality in China — Trends, drivers and policy remedies*. Working Paper No. 18/127. <https://www.imf.org/en/Publications/WP/Issues/2018/06/05/Inequality-in-China-Trends-Drivers-and-Policy-Remedies-45878>
- Kurdir, A., & Shastitko, A. (2020) The new industrial policy: A chance for the BRICS countries. *BRICS journal of economics*, 1(1), 60–80.

- Makarov, I., & Sokolova, A. (2014). Ocenka uglerodoyemkosti vneshney trgovli Rossii. *Ekonomicheskij Zhurnal VSHE*, 18, 477–507 (Assessment of carbon intensity of foreign trade in Russia. *Higher School of Economics Economic Journal*, 18, 477–507). https://elib.hse.ru/e-resources/HSE_economic_journal/articles/18_03_06.pdf
- Makarov, I., & Sokolova, A. (2017). Carbon emissions embodied in Russia's trade: Implications for climate policy. *Review of European and Russian Affairs*, 11(2), 1–21.
- Makarov, I., Chen, H., & Paltsev, S. (2020). Impacts of climate change policies worldwide on the Russian economy. *Climate Policy*. 19 June.
- OECD. (2020). *Carbon dioxide emissions embodied in international trade*. <https://www.oecd.org/sti/ind/carbondioxideemissionsembodiedininternationaltrade.htm>
- Porfiriyev, B., & Bobylev, S. (2018). Cities and megalopolises: The problem of definitions and sustainable development indicators. *Studies on Russian Economic Development*, 29(2), 116–123.
- Richard, J. (2020). Towards a new ecological and human type of national accounting for developing economies (The CARE/TDL model). *BRICS Journal of Economics*, 1(1), 43–59. https://www.brics-econ.org/current/2020.Volume.1.Number.1/JournalArticle.20200417204956_3290/
- Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F. (2020). The sustainable development goals and COVID–19. *Sustainable Development Report 2020*. Cambridge University Press.
- Schultz, T. W. (1960). Capital formation by education. *Journal of Political Economy*, 68(6), 571–583.
- Sen, A. (1990). Development as capability expansion. In K. Griffin & T. McKinley (Eds.), *Human development and the international development strategy for the 1990s*. MacMillan, pp. 41–58.
- UN. (1992). *Agenda 21*. United Nations conference on environment & development. <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>
- UN. (2015). *Paris Agreement on climate change*. <https://www.un.org/sustainabledevelopment/climate-action/>
- UN. (2017). *Input from the Economic Commission for Europe to the high-level political forum on sustainable development*. <https://digitallibrary.un.org/record/1290269>
- UN. (2020). *Voluntary National reviews database*. <https://sustainabledevelopment.un.org/vnrs/>
- UN. Economic and Social Council. (2020). *Progress towards the sustainable development goals*. Report of the Secretary–General (E/2020/XXX). https://sustainabledevelopment.un.org/content/documents/26158Final_SG_SDG_Progress_Report_14052020.pdf
- UN. General Assembly. (2000). *United Nations Millennium Declaration*.
- UN. General Assembly. (2012). *The future we want* (A/RES/66/288). https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_66_288.pdf
- UN. General Assembly. (2015). *Transforming our world: The 2030 agenda for sustainable development* (A/RES/70/1). https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf
- UNDP. (2010). *National Human Development Report 2010 in the Russian Federation*. Millennium Development Goals in Russia: Looking into the Future. http://hdr.undp.org/sites/default/files/russia_nhdr_2010_en.pdf
- UNDP. (2019). *Human Development Report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century*. <http://hdr.undp.org/en/2019-report>
- WEF. (2020). *The Global Risks Report 2020* (15th ed). http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf
- World Bank. (2019). *World Development Indicators*. <http://wdi.worldbank.org/tables>