

Appeal of Moscow Club of Sustainable Development

Sustainable development concept implies being aware of the need to integrate our growing efforts into the natural potential of the Planet (it is mentioned in international and national strategic documents, including the Concept of Russia transition to sustainable development path). 'Caring for the Earth' in order to provide sustainability of the development process is not a subject for discussion, it is imperative. The definition of sustainable development itself can be the subject for discussion: the former should not be limited by contributing to consumption growth only, whereas cultural development is not that often among its priorities. In the process of the concept implementation, key aspects of various spheres, including ecology, economy, society and culture should be accounted for.

Taking ecological aspects into consideration determines the necessity of biosystems health support (from an organism to the biosphere) as an essential condition for every sustainable development goal, bearing in mind that social medium development implies not only risks but also new opportunities for homeostatic mechanisms supporting the biosphere sustainability.

Such mechanisms in the economy satisfy growing needs amid ecosystems' well-being, based on the 'win-win' policy (social and ecological effect of any project) and decoupling principle (discrepancy between the economic growth processes and negative impact on the environment).

Existing 'failures' of market economy are determined by the lack of consumer wants (including society and government). The critical task is to form the priority of public interests in the area of achieving harmony between humans and nature and to delegate its implementation to the government.

Successful activation of such wants depends on culture, the latter being capable of ensuring social responsibility of those representing all population groups based on their personal agenda. All this determines development of the educational system aimed at putting culture in the foreground.

As a matter of fact, modern ideas of ecology and sustainability are the survival strategy implying cognitive transformation, shaping mindsets and a new methodological approach which determines priorities in any human activity.

Towards to sustainable development: ecology, economy, society and culture

First and foremost, modern ways of sustainable development thinking imply social economic concept targeting living standards improvement. Harmonization of human development and biosphere capacities which includes specific efforts on the part of society in order to foster ecosystem and biosphere sustainability on the basis of economic and social homeostatic mechanisms is fundamental to attaining the goal. Ecology is increasingly acting as a priority of contemporary development both economically and culturally.

Ramifications of rampant economic growth backed by unlimited utilization of natural resources inevitably constrain further development. Escalating ecological problems, disrupting biosphere balance result in unpredictable consequences emergence (including climate change and epidemiological diseases). Ecological problems lead to social economic ones, the latter requiring prompt actions and aggravating crises in the environment. Distinguishing the role of social and natural factors is becoming more and more complicated. Call for action of those countries which went through the environmental crisis and which no longer intend and have no choice but to take into consideration the need for harmonizing human-nature relationship was heard, however, heard incompletely. Natural and social disturbances resulting from improper behavior are becoming the order of the day. Maintaining safety in the places of active performance requires undivided attention. Environmental concern is increasingly emerging not as a humanistic act towards nature but a tough condition for human beings survival. Realizing this led us to brining the ecological issue to the political agenda and to defining the basics of a new development paradigm.

Significance and relevance of the issue of supporting further development required specific attention to it on the side of the United Nations Organization (further referred to as the UN). Accumulated expertise provided several learning

opportunities, with the latter defining the basis of a modern concept of sustainable development. This includes the urgent threat of ecological crisis, difficulties in meeting ecological requirements without solving pressing social economic problems as well as the need for civil society proactive involvement.

In fact, sustainable development concept is the first serious attempt of humankind to take the path of noospheric development. Sustainable development concept implies taking into consideration not only social economic but also ecological priorities, the necessity to match ever growing human needs to the natural potential of our planet, without constraining future generations. Modern interpretation of solving ecological problems within the basic principles of building and developing modern economy , while adhering to the 'win- win' principle which implies mandatory social and ecological effect for any projects is the evidence of political wisdom. An important hallmark of contemporary policy is that sustainability requirement sounds as a voluntary constraint for developed countries and new opportunities for developing ones, with the countries possessing vast natural resources playing a particular role.

What does the call for sustainable development currently imply?

Today this is an established priority of the world community, defining the policy and economy, all aspects of our life, relying on the ideas of our intended future, 'The Future We Want', being the name of the main UN document on sustainable development.

The key task is innovational development powered by technology providing high efficacy of production and impact minimization environmental governance, mitigating environmental negative impact (from natural resources pollution to noosphere disbalance, including climate system) and contributing to increasing capacity of ecosystems, with emerging opportunities for further growth. As per classical definition, ecology is the economics of nature. Nowadays, ecology is increasingly determining characteristics of the economy in society. The threat of climate change resulted in the idea of 'green' low-carbon economy being necessary. Being aware of other essential ecological problems, which are still to be addressed politically, will strengthen the focus on such new 'ecologized' economy.

The basic principle of sustainable development , being desynchronizing the previously allied processes of economic growth and dystrophication (decoupling principle) is implementation of environmentalists' precept of the need for ensuring biosphere homeostasis based on ecological harmony which brings ecology closer to social sciences. This requires appropriate legislation as well as social responsibility of all population groups, a broad movement of the concerned society members. Ecological perspectives in many ways define contemporary mindsets and ethics, establish the

framework of educational system and foster culture becoming increasingly image-building, especially among the younger generations.

Such development path calls for raising natural wealth value (including natural resources and ecosystem services) defining a hierarchical management system referring to all kinds of all performance. Implementing this trend bears no relation to fluctuation of market prices for natural resources. The value of natural wealth will appreciate as a result of its depletion as well as growing economic capacities, knowledge and culture. This ecological priority is in sync with a social priority of raising human life and health value. Taken together, both priorities determine society development level and further economic and cultural development.

Introducing current sustainable development concept included into the Agenda adopted by the world community, as applied to the specifics of countries and particular types of performance, finds its expression in making national reports, preparing system of indicators, industrial and corporate strategies. Modern development paradigm awareness must define motivation and forms of possible participation in its implementation. The ideas of desired future will undoubtedly change in the course of development, defining new concrete paths and mechanisms required to achieve this future both at national and international levels.

Ensuring our progress in sustainable development requires civil society being engaged at all stages, from placing this issue to the agenda to providing process implementation and control over it. The population willingness depends on their interest and also on economic potential which partly resolves an apparent contradiction between technological progress and sustainable development. There is a growing need in society for new indicators reflecting economic success costs for nature and humans and ensuring these costs are minimized. These indicators act as measures of sustainable development and the interest towards them is growing along with society evolving. The so called market 'failures' related to addressing economic and social problems do not reflect deficiency of market economy, they reflect the lack of appropriate demand on the side of consumers, including the population and the government. Accomplishing sustainable development tasks based on the market mechanism implies that this main condition, the customers' demand for products and services stewardship, is fulfilled, resulting in corresponding requirements on the global market and involvement of business structures.

Eventually, ecological problems concern and favoring sustainable development is defined not only by knowledge but by culture, with the choice of behavior pattern proceeding from intrinsic motivation. This defines priorities of educational system, the latter targeting cultural development.

All this is the evidence of the need for providing basic ideas of sustainable

development, with the focus on the ratio between the ecological and economic priorities, with culture playing the major part, while shaping the population demands for science and humanities curricular, any system of comprehensive and vocational education, mass media and advertisement.

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Sustainable development: a new perspective

What is Sustainable Development?

Survival and system preservation implies certain invariants without which Homo Sapiens existence will be impossible. They are revealed by watching the directions of human destruction force. Three such directions are evident: nature, populational health and social stabilizers.

Conventional (however, approved by few) definition of sustainable development can be found in the report of the International Board on Environment and Development 'Our joint future' (1987): what is development when the current needs are satisfied in the way not creating threats to future generations for satisfying their needs. This definition emphasizes the concept of need, but here comes a sacramental question: the needs for what? Any kind of needs or should something be rejected? Wouldn't we get too many different answers if we hear the opinions of many?

Being tired of scrutinizing various needs and different perspectives on them, there is an urge to cut the Gordian knot by one cut: normal needs should be meant. But what are normal needs? What is the objective rationale for these norms? In historic retrospect, comparing what we saw with the current situation in today society and also remembering previous attempts to become aware of what is happening now, we will realize that we haven't gained any traction.

Maybe we look at it from another point of view: *Homo sapiens* is a biological species and biological species have been existing sustainably for millions of years, so why is this sustainability of such extended nature? Evidently, it is defined by certain behavioral factors stipulating what to an observer looks as determination to survive. This (prescribed) objective of the population is achieved by the fact that behavior of any normal individual (the others are rejected through

stabilizing selection) is driven by two main instincts: self-preservation and reproduction. All the other instincts are of secondary, 'instrumental' nature against two major instincts.

Shouldn't we extend this idea of a species objective to *Homo sapiens*? Supposing, the need for ensuring humanity survival should be the only need of all the generations? Then, sustainable development is such kind of development ensuring survival of *Homo sapiens* (certainly, not in any possible circumstances but in those making a certain variety of circumstances). *Homo sapiens* differs from all other biological species by being endowed with reason. This fundamental difference makes us be particularly careful when extrapolating animal characteristics (and anything organic in general) to a human. The major 'news' when switching from unreasonable to reasonable is that in contrast to all the other biota, a human mastered the art of harming himself/herself, i.e. the survival of *Homo sapiens* species. Definitely, one can conclude that for him or her personally the survival of their species is not a goal. It appears to be the wrong conclusion.

Firstly, there are no arguments in favor of a human not being in need of pursuing their species survival, as well as there is no confirmation that it is essential to pursue another goal, whatever this goal will be.

Secondly, only the goal set by a reasonable human, be it an erroneous one, can replace a biological goal. However, there is evidently no such kind of goal.

Homo sapiens has been harming oneself (even in the long-term) since the Neolithic era, 10-12 thousand years ago, when a man invented a producing farm and started to transform nature for the sake of its development and expansion (as species *homo sapiens* formed approximately 200 thousand years earlier). Certainly, it was a required consequence of 'being endowed with reason' but the thing is that becoming aware of human activity ramifications came (if it came) always after its development predisposed them (implying, first of all, indirect consequences, not the direct results, for the latter to be achieved such actions were taken). Such lagging realization was also inevitable, therefore, extreme environmentalists' accusing not only a primitive man but the people of Antique, Middle Ages, Renaissance, of the Enlightenment Age of their households 'anti-ecologism' are not fair, Nature laws are not carved on the Tablets presented to us.

What forms the basis of ecologically destructive activity of *Homo sapiens*? Evidently, humans direct their intelligence towards more comprehensive and more efficient (with less efforts made when getting a 'unit' of the desired) satisfaction of their primal instincts. The latter are not being targeted instincts but instrumental ones, providing this satisfaction immediately, here and now, not somewhere and sometime (long-term nature is typical of target instincts), and also, for not all human species but for an individual (as they

say now ‘to my own precious self’).

On the one hand, so many dissertations were written on the subject of a human existing as the ultimate objective of biological evolution, that Nature created a human to know oneself, that global evolution is aimed at advent of mind, which will be followed not by evolution but a noosphere-genesis, etc. On the other hand, *Homo sapiens* with its quick and strong hands guided by this mind, destroys biosphere in which humans formed and without which we evidently cannot exist, and again, guided by their minds, by their behavior, humans deny the goal for which one should strive without fail – preservation of human species, their survival. This goal is even more unquestionable as *Homo sapiens* is the only species endowed with reason! Isn’t this contradiction too conflicting? Is it solvable at all? Or the one who is endowed with reason and has intelligence will die because of it?

Understanding the fact that destroying nature, our habitat, threatens human existence gave impulse to establishing the sustainable development concept. So much was said and written on this subject that there is no need to dwell on this topic. It is not that often that papers on sustainable development mention the danger of modern civilization impact on populational health of *Homo sapiens*. Though the research on medical ecology is in abundance, it is mainly devoted to separate issues of diseases resulting from environmental pollution. Some are encouraged by medicine success, the latter being really quite convincing, however, the diseases the medicine deals with do not represent the danger. The main hazard is that impact on a human psyche which turn him or her into zombies, which to a great extent lost their positive biological characteristics (they are suppressed by the media weighing on them unprecedentedly). The fight against reproduction instinct in the West is already forming a legal framework, adjusting religion to its objectives, etc. Billions of such beings will not be able to ensure human survival. The so-called elite which is engaged in their forming, is confident that they will manage to increase their income two-fold and five-fold. Its policy is the way of turning populational wealth into populational disability.

Eventually, social stabilizers are a variety of means found and formed spontaneously throughout a long history of humanity, aimed at maintaining in proper condition the system of social relations, ‘social climate’, and all public structure. Here the community ability and intention to self-reproduce is a norm. A striking example of primeval social stabilizer is a rain dance. Why was it ‘invented’ by practically all the tribes which experienced such natural disaster as drought? Because a long drought brought the community (tribe) to the brink of death and only by solidarization and joint efforts, by cooperation not by fighting for the last piece of meat, this disaster could be got through. This ritual performs this particular, i.e. solidarizing function (in fact, all the other rituals perform this function). Rain dance was followed

by religion, courts, penitentiary system, legislation etc. as well as upbringing, education etc. Alas, many practices applied, and especially those systems acting as social stabilizers, oftentimes turn into their opposites, for two reasons. First, community living conditions may change in such a way that a stabilizer ceases to play its role. For instance, tragic mistakes resulting from wrong oracle predictions were repeatedly the cause of its liquidation as an institution; ritual or ritual feature may become a barrier on the way to new policy (beards of boyars and Peter the Great); legal regulations are no longer in accord with society needs and many other things. First, a stabilizer may turn out to be a tool of destabilizing policy (history witnesses an abundance of such cases). It is extremely dangerous, especially if we talk about global politics.

Development of human species will be sustainable if – at least – humans do not destroy their environment, their populational health and historically tested social stabilizers. If we skip ‘at least’ and replace past tense with the present, we will get a definition of sustainable development which matches understanding that its essence is *Homo sapiens* survival.

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Sustainable development: a new perspective

Sustainable Development in New Conditions

At present, humanity is looking for new models of economy which could factor in sustainable development and ecological constraints. Failure to continue growth based on traditional economic development is becoming more and more evident due to a large-scale degradation of natural resources and environment, fast-going climate changes, increasing global economy turbulence. Establishing sustainable development concept as a new paradigm of human development has become a response to aggravating ecological and economic challenges. Formulating the concept in scientific research and establishing within real economic processes a green economy models and its types: circular, low-carbon economy and bioeconomy etc. reflects the transition to sustainable development.

In 2020-2021 the overwhelming majority of leading economies declared their aim of achieving carbon neutrality, zero green gas emissions by 2050-2060s. Russia was among these countries, here we should mention the longest of all available government programs ‘Strategy of social economic development of the Russian Federation with a low level of green gas emissions to the year 2050’ (2021). For the first time in history, humanity has a quantitative aim: to prevent in the 21st century – in accordance with the Paris Agreement (2015) - raising global temperature over 1.5 °C. Thus, achieving ‘scientese’ carbon neutrality became a priority long-term goal for the most part of global economy. Instead of traditional goals of GDP, income, production, employment, consumption growth, they brought climate indicators to the fore.

Some new reality which is not yet interpreted is invading our lives. New word combinations and abbreviations emerge: SDG (Sustainable Development Goals UN), ESG (Environmental Social Corporate Governance), CCR (Cross-border Carbon Regulation), BAT (Best Available Technologies) etc. The concepts of ecological and carbon footprint, carbon pricing, carbon tax, ecosystem services and payments, etc. come into use.

When we talk about science and about economic development trajectories, we are to overcome numerous stereotypes, for instance, to revise GDP indicators. Up to now the humanity

progress has been formally based on this indicator, the latter defining future plans. International practices demonstrate that for the sake of this indicator, depletion and degradation of natural resources and escalation of social problems (poverty, income gap, unemployment) can be made implicit.

The necessity of radically transforming our approach to measuring development on the basis of sustainability is clearly demonstrated in the book by Nobel Price Laureates, J. Stiliz and A. Sen ‘Measuring Our Lives: Why GDP does not add up?’ Due to this, quantitative interpretation of Sustainable Development Goals (SDGs) (2016-2030) in the world and in Russia is growing in importance. The task is being currently performed by the Russian Federation on its special Internet platform. In addition, in 2020 Russia presented a voluntary report on SDGs implementation.

At the moment, there are two correct integral indices alternative to GDP: Human Development Index (HDI) by the UN and Adjusted Net Savings Index (ANS) by the World Bank. These indices are based on constructive methodology and a good record of practical approval worldwide. In the conditions of humanity survival in the epoch of Anthropocene, a new Human Development Index by the UN adjusted for planetary pressure (2020) including the ecological constituent into a traditional HDI, is promising.

Health factor plays a significant role in social and ecological components of sustainable development. Over the recent years, the world has increasingly tended to emphasize the priority of mainlining good health while solving the problems of sustainable development transition as well as environmental pollution problems. This trend is mostly related to being aware of how significant harm and damage inflicted by ecological degradation are for quality of human lives and human potential evolution.

Ecological focus is currently brining and in the near future it will bring radical economic transformations, structural technological shifts, reformation of traditional sectors of the economy, changes in government and market regulations, customers behavior patterns.

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"Green agenda" and Modern Politics

In the process of implementing 'Green agenda' ('green policy') a number of serious problems have emerged and solving these problems requires both academia theoretical conceptualization and a dialogue of all stakeholders (government, businesses and civil society).

'Green agenda' has come to stay among the priorities of modern policies after 2015 when 193 states-members of the UN adopted the concept 'Transforming our world: the 2030 Agenda for Sustainable Development' which officially approved Sustainable Development Goals (SDGs). 'Green agenda' was expected to become a roadmap of economic policy, to open new opportunities and to act as an incentive for establishing new national and regional models of economic modernization. Soon after that, businesses started to use ESG index all over the world. Along with this, 'Green agenda' was gradually reduced to energy (climate) agenda.

A vital problem is establishing an optimal model of interaction of policy makers (in broad sense, those involved in decision-making process) and experts whose views diverge considerably depending on the methods assessing ecological ramifications of applying different strategies. At that, the balance between academic arguments and a political interest is not in favor of the former. According to modern policy makers' risks assessments, social stability is more essential than ecological compliance. That prioritizes short-term planning amid growing global uncertainty. Linear forecasts do not work, 'black swan' events occur. The longer the planning time-frame, the more complex the decision-making process is. In addition, in public mind survival interests 'here and now' prevail over concerns about future generations. Environmental values are by nature

mostly 'postmaterialist', not common for all the humanity but only for the 'Golden Billion'.

There exists a sensitive problem of sovereignty and justifying interference into internal affairs, for example, in order to preserve ecological resources ('global commons') or in order to use resources in the territory of a particular country in the interests of the 'global community' as per equality of access to resources principle (e.g. Arctic, Baikal Lake or Amazon forests).

Who is to make final decisions in ecological sphere so that they will be considerate legitimate, fair and implementable? How to globally allocate the costs of implementing these decisions? What are the mechanisms providing realization of such decisions and responsibility? Who will control implementation and will have enforcement rights? These issues are all still open.

Theoretically, there have been established two convincing perspectives on 'Green agenda'.

According to the first one, combating environmental pollution, 'green' city planning, alternative energy is a non-alternative 'ecological imperative' necessary for survival. Today, like never before, it is absolutely essential to prevent the 'point of no return' from happening and state policy is to play a decisive role in this.

The other view (which can be provisionally called 'critical') focuses on the fact that 'Green agenda' initiated by Western countries aims at ideological consolidation (under the plausible excuse of saving nature) of the currently collapsing unipolar world, creation of unsurmountable obstacles for 'catching up' China and African countries; establishing the most favorable conditions for developing American and European 'green' technologies hoping it will help the West to overcome structural economic crisis. 'Green agenda' is seen as a 'disguise' for private interests, a tool of economic competition (green protectionism), conservation of global inequality. 'Carbon tax' is perceived as an actual ban on development for those who are 30-50 years 'late', as a course towards artificial appreciation of any production costs, in the eyes of critics, it is a mandatory reallocation of costs from wealthy manufacturers of 'green energy' to the others.

'Green agenda' has become the most powerful tool of influencing global public opinion, turning itself into a new ideology, similar to 'political correctness' a few decades ago. Its radical version implies ecosystems immunity, reestablishing them in such a state they were several thousand years ago at the expense of shrinking population (due to declining birth rate) and domestic animals (vegetarianism, etc.).

In the Russian context, environmental agenda developed in close relation with traditionalist conservative vector (movement against Northern rivers diversion into Central Asia and for preservation of Russian North ecosystems),

however, after the Soviet Union collapse it took a backseat. The majority of 'green' protest movement participants of recent decades oftentimes turned out to be affiliated with agents of a foreign power, foreign organizations, which actively call for 'restraining Russia'.

In June, 2020 President V.V. Putin signed the decree on goals of national development to the year 2030. This new document emphasizes the importance of ecological agenda. Among main goals, we see establishing a stable system of processing municipal solid waste, reducing air emissions by half, the latter making the most negative impact on environment and human health. In addition to this, the most hazardous facilities harming nature are to be closed down, along with ecological improvement of water bodies.

Special military operation in Ukraine resulted in the West imposing sanctions on Russian energy exports leading to lack of energy resources in Europe. European policy makers immediately abandoned their 'green' rhetoric and engaged in ensuring energy security by reactivating coal thermal power plants and restoring coal mines, atomic power stations and importing American liquefied natural gas, the latter being extracted by not exactly 'green' hydraulic fracturing. We witness the 'ban of ban' of carbon energy, when 'dirty' European coal turned into a 'good' one but Russian gas being cleaner has become a 'bad' one. In the USA and Canada they also 'forgot' about green energy.

Under new geopolitical conditions, there is a sharp decrease in possibilities of international environmental cooperation both on global and local levels, government-to-government relations between 'collective West' and Russia are severed, disintegrational processes are gaining momentum. Before the well-known events in Ukraine started, the world saw a mega-trend towards disintegration and local production (which was partly related to COVID pandemic) for which not only Russia and America struggle for, but all the other countries, too.

In spite of all domestic and global problems, Russia cannot ignore environmental issues. Thus, we face the task of adjusting 'green agenda' to our national interests and goals by also applying innovative solutions, the latter taking Russian conditions into consideration.

Russia has a strong competitive advantage as compared to most countries in terms of strategic resources, notably, not only mineral and energy resources (which are the exports basis and the source of replenishing the budget) but also environmental ones, namely, water and biological (forests, bio diversity). The vast space of the country itself is also a resource. Arctic zone of the Russian Federation is considered a promising territory not only due to vast undeveloped reserves of mineral resources and logistic advantages of the Northern Sea Route but also in terms of favorable living conditions in case of serious global climate change.

The peoples of Russia have accumulated vast experience of sustainability on a local level: mostly isolated survival of local communities for thousands of years have been relying on establishing unique and adapted to specific natural geographical conditions, be it extreme North tundra or arid zones of the Russian South, cultural norms and practices of sustainable and not violating ecological balance of economic activity, cattle and crop farming , hunting and fishing.

The expertise of indigenous peoples of Russian natural resources management can be and must be sought-after, interpreted and applied in new historical conditions in order to boost spatial and economic development of this country. Undoubtedly, no one calls for returning to traditional living and abandoning modern scientific and technological achievements, we mean the culture of careful attitude to renewable resources, 'reasonable' use of ecological potential of every region of the country.

Russian science demonstrating achievements in life support system research is to play a key role in devising a strategy and implementation of state industry policies (ecological, energy, industrial, agricultural, regional and others).

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Sustainable Development in the Context of Global Transformation

Transformational changes, first of all, transition to the sixth technological paradigm, green energy transition, evolution of postindustrial and informational society, globally promoted transition from shareholder capitalism to stakeholder capitalism are the specific features of the present stage of human development and sustainable development agenda. Under these circumstances, risk-oriented approach, critical assessment of the occurring changes, the need for pursuing practically oriented creative methods is of particular importance. In this contemporary transforming world value-based restrictions come to the fore.

We regret to acknowledge that modern world development cannot be called sustainable. The crisis related to the spread of COVID-19 and particularly efforts undertaken in order to fight this disease, widening social and economic gap, radical diagnoses which are oftentimes made to contemporary world, and even more radical treatment methods are all quite alarming signs.

Risk-based approach allows to define sustainable development in the following way: sustainable development is such kind of development which maximally factors in the risks of economic, social and ecological nature: the risks revealed are averted and if it is not possible, negative ramifications of unfavorable events occurred are mitigated.

To the greatest extent, risk-based approach (as well as practical approach we describe below) found its reflection in the wordings which include the abbreviations ESG (Environmental Social Governance). What is called ESG agenda is based on risk-based approach, when a certain interpretation of ecological, social and managerial factors allows to declare the level of ESG-risks susceptibility and the quality of their control, helps to change investment priorities and financing for the sake of reducing a hypothetical damage from potential cases of ESG-risks.

Another important issue when discussing sustainable development priority, is a critical assessment of information we get from various sources.

Critical assessment refers, first and foremost, to assessing how material the risks are for society, assessing negative consequences of their hypothetical occurrence. An important issue here is if the significance of these or those risks is backed by scientific research, how credible the assessment of the risks consequences is.

Over the recent years, the concepts of sustainable development and corporate social responsibility were contextually combined into a new paradigm of capitalism development – stakeholder capitalism. This paradigm was announced in Davos by stakeholders of the World Economic Forum themselves. However, any radical shift of social development, and this is the way this claim for transition from established economic models to ‘stakeholder economy’ can be called, will be accompanied by hard-to-forecast fundamental changes and consequences in all areas of human life, mainly a social sphere.

At the current historic moment, risk-based and critical approaches give us a new perspective on the Sustainable Development Goals (SDGs) formulated by the UN in 2015. Unfortunately, they do not properly reflect those risks typical of the modern state of society development: shifting to postindustrial and informational society. In postindustrial society, certain threats to society itself and its sustainable development are concentrated in the service sector (healthcare, providing food safety, education), while in informational one – they lie in falsifying information and promoting a particular informational agenda, the latter being formed by the so called developed countries, with liberal values prevailing. At present, we observe how the above given threats of postindustrial and informational society are merged together, generating synergy effects, with these effects having unpredictable impact on humans as biological species.

Thus, the role of risk-based approach and critical assessment of occurring changes is increasing manifold.

Climate agenda is central to the modern discourse of sustainable development. Generated management architecture and low-emission infrastructure are the part of ‘sustainable development agenda’ and ‘ESG agenda’: an international system of financial, investment and rating institutions is being consistently established, which are including climate agenda into their recommendations and performance. For the first time in history, the rationale behind energy transition is explained not by economic benefits of using more efficient energy sources but by threats of realization of the declared risks, the latter relating to climate change and their economic outcomes. If previous energy transitions occurred in a natural, progressive and evolutionary way, at the household, industrial and productional levels, within national economies, the fourth energy transition is initiated by promoting international climate agenda and is guided globally. It is to be

mentioned that those changes in productional technologies used and in power transfer is an objective process, accompanying the technological shift. The process of establishing a new technological setup always goes along with competition for future technological leadership and in case of shifting to the sixth technological setup it is accompanied by the competition for those technologies providing green energy transition. This global advanced nature of energy transition creates its uniqueness along with the corresponding economic mechanisms of low-emission development that are currently being formed. Such experiment is conducted for the first time in history and is also accompanied by considerable risks.

While speaking of practical creative approach, it is worth reminding a well-known environmentalists' slogan 'Think globally, act locally'. Amid numerous debates on global problems and less attention to ecological problems at the local levels as well as searching the ways of tackling them, the second part of this slogan is pushed to the side. After experiencing and overcoming the shortage of professional ecologists, the tertiary system is facing a new task: every expert, every manager should be guided by certain values, including values of environmental protection, perform his or her professional duties taking this priority into account. The global community failed to clearly formulate the concept of global ecological values (to a certain extent, this attempt was made in the document 'Earth Charter'). Possibly, it is the consequence of the fact that one has to 'act locally' in specific historical and socio-economic conditions. Hence, these values should be clear, tangible and successive, we can say – traditional, established in a particular cultural civilized space. And establishing these values is one of the tasks the education system faces.

In this connection, we would mention a great potential of such a focus of Russian secondary education which can be defined as 'ecological regional studies': studying the environment in all its diversity in a particular district, region or settlement, getting learners familiar with ecological situation of their local place, those problems one comes across in this territory and how they are addressed.

Vocational education should take into account that modern knowledge important for environmental protection and providing ecological and safe living conditions working conditions is constantly growing, involving new knowledge from natural sciences, technical, economic, managerial sciences, social sciences and humanities. Addressing ecological issues today mostly depends on developing corresponding economic mechanisms, instruments of green financing, ESG-transformation of corporate sector. If at the end of the last century, there was a lack of professional ecologists, at present we need specialists in the sphere of corporate sustainable development agenda, low-emission economic development.

Considering risk-based and practical approaches, critical assessment of information about the changes occurring, there is a growing need for providing the university educational process with necessary materials, after studying which a student and anyone interested in sustainable development will be able to form his or her own opinion on those topical problems humanity is facing at the moment. There is an online open access base of scientific publications and materials related to sustainable development. Uploading topic-based information, in our case, information regarding sustainable development, into the Internet resources reduces the time professors and students spend on searching necessary data in order to prepare for classes and research. MGIMO digital library on sustainable development is an example of such a resource.

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Sustainable development: a new perspective

Transformation of Education for the Benefit of Sustainable Development

As the Address of Moscow Club of Sustainable Development states (2023), choosing sustainable development is determined not only by knowledge but also by culture, and the choice of behavioral model is based on intrinsic motivation defining priorities of educational system (formal and informal). The ability to move forward along more sustainable trajectories will depend upon the aptitude of drawing lessons from the experience gained, including retraining (forgetting the known in order to learn new). Thus, facilitation of education and enhancing the knowledge how it should be made more effective must be an essential priority.

Sustainability problems are characterized by complexity, high level of uncertainty and ambiguity. It is essential to link the problems research to implementing, spreading and expanding social technological innovations. Education, namely, education for sustainable development (ESD) is to play a significant role in it.

The diversity of opinions is of primary importance for understanding how multiple problems interact with new sustainability challenges. ESD goes beyond separate disciplines and approaches, overcoming the boundaries between social and natural systems, science and society as well as theoretical and practical performance.

As we know, there are no ready-made solutions for global environmental problems: here grandfather, father and grandson are in similar situation. Due to this, traditional mechanisms of transferring cultural expertise from older generations to younger ones, being the essence of educational process, cannot be efficient. Innovational solutions are to be sought here.

The interest towards this issue, also in terms of education, was encouraged by the UN adopting in 2015 Sustainable Development Goals 2030 (SDGs). However, in our opinion, dividing the comprehensive perception of sustainable development which was not initially complete, into 17 separate goals and 169 tasks contributed even more to disengagement of understanding

sustainability ideas among academia.

What are the focus areas of ESD in the current situation of high dynamics and uncertainty?

1. Transformation of ESD learning processes aims at knowledge integration at various industries level, including natural and social sciences, nature and society, corporate governance, business and public. Being directed towards solving real-life problems of various scales (both theoretical and practical), crossing boundaries between knowledge and actions, ESD relies not only on several disciplines (interdisciplinarity) but also on methodological pluralism (transdisciplinarity) – a variety of opinions is a decisive factor for becoming aware how numerous problems interact with new sustainability challenges.

It is essential for ESD to ‘get out of the comfort zone’ and aim at different areas, for instance, from public health to agricultural sphere. It is also necessary to establish the procedures of joint acquisition of new knowledge, the latter being meaningful for certain people, to consider not only the current situation but also the past and present dynamics, traditional values and other specifics of those communities in which and for which the educational process is being implemented.

2. Sustainable future vision. The key elements of ESD (being forward-looking, not catching up) is determining what situations combined with a wide range of visions (general guidelines) and scenarios (various future paths) will be preferable in future. Thus, though paradoxically, studying future within the educational system is gaining more importance as compared to studying the present and, as it occurs traditionally, the past.

3. Facilitating changes. An important requirement of sustainable development transition is the educational potential to facilitate social technological transformations: those changes in the institutions, methods, regulations, norms, practices determining development and use of technology in society, economy and nature. Due to this, ESD is aimed at accelerating and directing the emerging transition processes from unsustainable to the intended sustainable development.

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Sustainable Development Issues in General Education

In all types of activity aimed at achieving sustainable development goals, individuals' responsible treatment of nature, learners' actions regarding natural and social environment are determined by their ecological culture, being the system of ecological knowledge, views and beliefs.

The system of general education plays an essential role in accomplishing tasks and achieving goals of sustainable development. According to the UN Sustainable Goal in the sphere of education, by 2030 all the pupils are expected to 'acquire knowledge and skills necessary for promoting sustainability, with teaching sustainable development and sustainable way of living issues'.

Within the Program for International Student Assessment (PISA), in 2018 learners from 27 countries took part in the first study aiming at assessing the ability of 15-year-old learners to 'study global problems, to understand and to value different perspectives and outlooks, to interact with others in a respectful and successful way and to take measures for achieving collective well-being and sustainable development'.

The analysis of the obtained results revealed that regarding the key knowledge and skills elements, Russian schoolchildren demonstrated average level as compared to their peers from other countries. The majority of Russian schoolchildren are capable and want to take deliberate actions directed to 'positive changes in their surroundings, to improving living standards in their community, and eventually, to establishing more equal, peaceful, inclusive and ecologically sustainable world'. This is confirmed by the competitive edge of Russian system of general education teaching the matters of sustainable development and sustainable living.

Sustainable development: a new perspective

In the long term, achieving sustainable development goals in general education is related to applying federal state educational standard of basic general education (FSES BGE) adopted in 2021. The program of acquiring universal learning skills is aimed at forming sustainable development knowledge and skills in the course of FSES actualization.

In addition to the above mentioned program, FSES BSE regards understanding geography role in addressing sustainable development tasks, ‘the ability of assessing interaction between humans and nature in various geographical conditions in terms of sustainable development concept’, studying government procedures on Russia’s transition to sustainable development model as academic achievement in the discipline ‘geography’. According to these federal standards, demonstrating academic achievement in biology implies shaping pupils’ values-based attitude to nature, understanding the importance of biodiversity conservation, protection of forests, development of nature reserves system.

While developing pupils’ skills and knowledge necessary for fostering sustainable development, we should proceed from the fact that the key factor of an individual’s development is his or her performance, reflected in terms of moral and ecological concepts. In the course of one’s performance, all these concepts are filled with deep personal meanings and are transferred ‘into an individual’. Further, learners gradually develop understanding of a necessary conscious and careful attitude to environment, implementation of sustainable development and sustainable living ideas. That said, validating ecological outlook, careful treatment of water and land resources, green plantation and nature reserves, personal responsibility for establishing and maintaining a favorable environment, consciously following ecological regulations and requirements in learners’ mindset, feelings and conduct is of great importance.

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Integrating Sustainable Development Into Education

One of the major principles of ESG (Environmental, Social and Government Criteria) is the balance between economic, social and ecological development. Integrating this principle into the educational process can contribute to students understanding of importance of natural resources conservation, environmental protection and social responsibility. Artificial Intelligence can assist the teachers in creating lessons which will be aimed at improving skills and knowledge of sustainable development. Many large companies tend to declare their contribution into addressing ecological and environmental problems using such marketing communication tool as social advertising.

According to Twiga Data Solutions data on advertisers' costs in 2022, social advertising is number 15 among all other industries which require advertising budgets. In 2020, it was number 51 and in 2021 it rose to the 37th position on the list. Over the last year, its volume in mass media grew 3.7 times, to 4.9 billion rubles.

Social advertising which is directed to tackling problems related to ecology and environment is gaining popularity. Small and medium business is actively engaged in addressing these problems through communicating with their target audience. Together with large multinational companies, public organizations are also trying to contribute to environmental concerns.

Being the representatives of communicational industry, we feel ashamed for improper 'performances', when 'eco-activists' openly demonstrate their incompetence when attracting public attention to environmental problems, when in the museums of the world fecal waste is thrown at the works of great artists. All this is an abuse of such tools as advertising and PR.

For communication to be actually proper and for marketing communication tool to be used to the benefit, ESG agenda should be implemented into current curricular by the following formula: Sustainable development + Journalism = Qualified experts/communicators in the sphere of sustainable development. Its realization will allow to cover ecological problems in mass media in a bright and creative way and will attract more

Sustainable development: a new perspective

attention to the environmental problems. And interaction with the audience will become high-quality and effective.

At present, new innovational digital tools are being actively applied, among them Artificial Intelligence (AI), being a set of algorithms, allowing the programs to self-learn and improve. Currently, AI is being used ubiquitously: from chatbots to neural networks of unprecedented capacities. All this gives an opportunity of bringing communication with the audience to a higher level.

Neural networks can be classified according to their functional features:

- multilevel neural networks, or perceptrons processing numeric data;
- convolutional neural networks working with images;
- recurrent neural networks collecting and processing information, the latter changing with time;
- generative neural networks creating content such as texts and images.

Potential application of these tools is impressive. In the not-so-distant past, it took an artist or a designer a lot of time and effort to create an image. Today this process looks entirely different. The main task is to formulate the query in the right way, and the program will make impressive images within a few minutes, which allows us to save more financial and other resources needed for creating such images. There are many services specializing in image creating, with Stable Diffusion, MidJourney, Kandinsky, Shidevrum being the most popular ones. Also, there are platforms creating video-animation, writing texts and doing many other things. Today our world crossed the threshold of digital revolution, however, we should not think that artificial intelligence will replace the intelligence of humans. All these opportunities and tools lose their meaning without human engagement. Only humans can generate that genius idea and implement it by making use of the above mentioned methods and tools. The main thing is to use them to the benefit of our world and our common home. The future is in our hands, we just have to make the right choice.

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Meetings of Moscow Club of Sustainable Development

December 15'2022

Subject of the meeting: Establishing the Club

Speakers: Vladimir M. Zakharov

Moscow, IPEE RAS/IDB RAS

January 27'2023

Subject of the meeting: 'Sustainable development: ecology, economy, society and culture'

Speakers: Vladimir M. Zakharov

Moscow, IPEE RAS/IDB RAS

February 17'2023

Subject of the meeting: 'Sustainable development: economy and society'

Speakers: Victor I. Danilov-Danilyan,

Sergey N. Bobylev

Moscow, IPEE RAS/IDB RAS

March 31'2023

Subject of the meeting: 'Sustainable development: education and culture'

Speakers: Andrey A. Avramenko,

Dmitry S. Ermakov, Sergey V. Sumatokhin,

Maxim A. Tiukov, Vladimir A. Evstaf'iev

Москва, FRC CSC RAS/MWU

April 11'2023

Subject of the meeting: 'Sustainable development': modern policy

Speaker: Artur L. Demchuk

Kazan, Volga Region GUFKSIT University

June 28'2023

Subject of the meeting: Discussing the report of Moscow Club of Sustainable Development

Speakers: Vladimir M. Zakharov

Moscow, IPEE RAS/IDB RAS

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