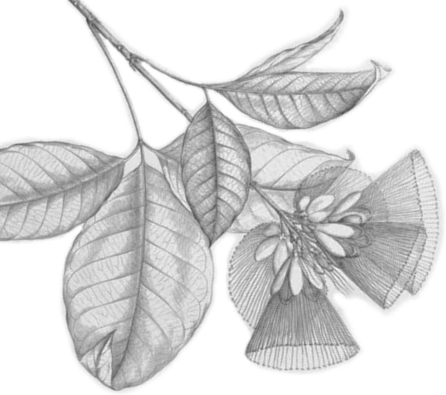

Legal Mechanism of Implementing the Concept of Circular Economy in the Post-Soviet Space (in Terms of Russia)

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ABSTRACT

The article deals with the main provisions of the concept of circular economy in the context of political, educational, legal and other transformations without which achievement of the set goals is impossible. The authors pay special attention to analysis of the legal mechanism of achieving the goals and objectives in the area of reducing the volume of waste produced in the country, creating conditions for development of technologies for its treatment and reuse. This requires formation of the new legal category of "environmental entrepreneurship", along with establishment of the system of incentives, permissions, restrictions and prohibitions aimed at a radical change of the existing model of waste management in legal acts of the system. Development of this legal institution will lead to adjustment of a number of civil agreements, including further development of environmental insurance and environmental audit agreements.

Keywords: Circular economy; waste; environment; resources.

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The concept of environmental policy existing today in Russia and in many other countries of the world in general, and of production and consumption waste management in particular, clearly has reached a deadlock. There is now so much waste concentrated at the surface of the Earth which is harmful and hazardous to the environment and health of citizens, that transition of quantitative changes to qualitative ones is a matter of time, and the consequences of this will be catastrophic. This situation shows a clear need for adoption of a number of urgent measures at the international and national levels.

According to the available official data, the total volume of production and consumption waste accumulated and recorded in Russia on a nationwide scale is approximately 31.5 billion tons as of the end of 2015, and about 40.7 billion tons as of the end of 2016. If we speak about only one kind of waste, solid household waste (SHW), in 2015 20.8 million m3 (7.8% of the total volume of collected waste) was sent to waste treatment plants, 6.9 million m3 (2.6%) to waste incineration enterprises, and 238.9 million m3 of SHW (89.6%) to dumps and landfills. While in 2000 around 144 million m3 of waste was sent to dumps and landfills, in 2016 already 238.7 million m3, i.e., for 16 years removal of SHW to dumps grew twice on a nationwide scale (State report "On the State and Protection of the Environment in the Russian Federation in 2016").

The mentioned landfills and dumps serve as sources of pollution with various harmful substances of not only soil and land resources but also: a) atmospheric air (including with greenhouse gases) during degradation of some waste, as a result of fire difficult to extinguish, etc.; b) water resources, first of all, situated in underground levels, during filtration of harmful substances from the ground surface; c) they are a source of "biological" pollution, since they contribute to spread of rats, are a place of undesirable accumulation of birds, stray animals, insects, etc. Numerous spontaneous (abandoned) relatively small dumps of consumption waste, the exact number of which is still unknown, have a significant negative impact on the environment.

In order to demonstrate the scale of the latter problem, we could provide data on Vologda Region, where in 2015 as a result of organizational and supervisory measures 2359 sites of unauthorized waste placement and garbage piles were identified. These sites were not covered by functions of the regional administration (in terms of record, assessment of their harmful impact, calculation of necessary costs for liquidation or other operations) (Report on the State and Protection of the Environment of Vologda Region in 2015).

The common problem of all large cities consists in the fact that the landfills (dumps) of production and consumption waste are overfull, and the processes of decay of waste that take place

there have extremely negative consequences for the environment and health of citizens, which leads to protest sentiments and unauthorized rallies and demonstrations of citizens (Wave of environmental protests hit Moscow Region 2018).

The given facts allow asserting that Russia and many other countries of the world currently live within the so-called linear type of economy, which implies production, consumption and mass placement of waste. Mankind widely uses non-renewable natural resources, destroying the natural metabolic processes occurring in natural ecological systems, which can not last forever. This circumstance led to emergence of the concept of "circular economy"[3], introduced for scientific use in 2010 and presented by several scientific schools (Webster 2013), suggesting that different industrial products and materials can be reused by means of repair and recovery, thereby reducing the amount of waste. This will allow achievement of the goals of economic growth along with preservation of the quality of the environment. Introduction of the concept of circular economy will have an impact not only on environmental and tax but also civil law, since it will entail further development of lease agreements (including rental agreements) as well as agreements on provision of paid services.

It appears that the concept of circular economy can not be considered out of the context of other modern studies about interaction of environmental, economic and social interests, which means inevitable modernization of the existing Concept of Sustainable Development. Within this new Concept of Sustainable Development 2.0 the state, society, business and citizens will have to realize the unavoidability of the transition to new standards of sustainable development in the field of waste management, and the task of authorities is to create the legal framework within which it will be beneficial for business not to pay fines but perform waste treatment.

The general outlines of this Concept 2.0. are already clear in terms of some developed countries of the world, for example, Denmark, where the first phase of the transition to circular economy is implemented at the moment. Research carried out by a number of authors shows that by 2035 we could expect an increase in GDP of Denmark by 0.8-1.4%, the creation of an additional 7,000–13,000 job equivalents, a 3–7% reduction in carbon footprint, 5–50% reduction in virgin resource consumption for selected materials and an increase in net exports by 3–6 %. These positive effects on the Danish economy are based on five selected sectors, covering 25% of the economy (Potential for Denmark as a Circular Economy a Case Study from, 2015).

[3] In Russian this term is sometimes translated as "closed-cycle economy" or "cyclical economy".

The urgency of the topic under consideration set forth above determined a short review of current legal debates on waste management in Russia in the first section of this article; the second section of the article is dedicated to study of the cultural and historical background of the current situation with waste; the third section includes research in general parameters of the theory of circular economy in the context of its applicability in Russia; in the fourth section a set of measures for development of environmental legal awareness is proposed; finally, in the fifth part we will express our position on the legal strategy and tactics of implementing this concept in Russia.

MODERN ISSUES OF PRODUCTION AND CONSUMPTION WASTE MANAGEMENT IN RUSSIA AND THE EXISTING WAYS OF THEIR SETTLEMENT

At the moment any country of the world has its own system of production and consumption waste management, since the appropriate utilization of solid household waste by their reducing, reusing, processing, composting, incinerating or burying in dumps with cover material is one of the main conditions for environmentally sustainable development of cities (The Sustainable Development Goals Report, 2017). Accordingly, there is doctrinal discussion of different legal aspects of waste management in all countries of the world, and Russia is no exception in this sense.

One of the most discussed issues relates to the very understanding of waste as a legal category.[4] The most convincing, in our view, is the suggestion to define as the main attribute of waste not only the statement that waste was formed in the course of consumption of goods, services, etc. and lost its consumer properties but also the specification of what is included in its structure. The authors of this approach note that solid household waste contain secondary resources, biodegradable waste and unprocessable waste generated in the residential sector, enterprises and service organizations. First, it reflects the social nature of the origin of waste, and, second, it will allow evaluating it in terms of "usefulness" (Likhacheva & Sovetov 2017).

This approach has not yet been perceived by the Russian legislator yet, while it suggests understanding the mechanism of waste management as an ordered set of procedures for collecting, accumulating, transporting, processing, utilizing, neutralizing and other forms of waste management in order to achieve the environmental, economic and social goals and objectives of the country. In addition, of all the concepts existing in Russia, this is the closest in its content to the concept of circular economy.

[4] Ref. Art.1 of the Law of the Russian Federation "On Production and Consumption Waste" of June 24, 1998.

Two other important aspects of waste management remain very debatable, we suggest denoting them as economic and organizational. The economic unit of debates relates to reasonableness of the system of environmental payments (Esina 2009), which do not encourage enterprises to use non-waste technologies, since they are insignificant in contrast to the costs required for purchase of high-tech equipment that minimizes waste or waste treatment complexes (Baeva 2014). Moreover, in Russia no items of targeted use of payments related to nature resources are defined now, including financing nature protection measures and environmental programs. This requires recreation of budgetary environmental funds which operated in the Russian Federation in 1991-2001 and allowed accumulating environmental payments and fines allocating them only for environmental measures. In addition, it is noted that the legislator does not use incentives in the form of tax discrimination, for example, establishing differentiated excise rates for motor fuel based on its environmental properties (Trofimets 2007).

The organizational unit of debates in the Russian legal science relates to reasonableness of distribution of powers among state authorities of the Russian Federation, its subjects and local government bodies. In this field the most difficult situation is establishment of powers of local government bodies, which lack financial resources and also have very limited opportunities to attract foreign investment. We will demonstrate the severity of this problem using the example of a court decision.

For instance, Saratov interdistrict environmental prosecutor applied to the court with the statement that in the territory of the municipal entity there is no properly organized procedure for collection and removal of household waste, no trash enclosures equipped, no land plots for storage of solid household waste allocated, which violates the citizens' right to a favorable environment. Denying the prosecutor's stated claims, the court of first instance relied on the fact that in the budget of the municipal entity no monetary funds for organization of collection and removal of household waste were stipulated, since the budget was subsidized. Cancelling the decisions of the lower courts, the Supreme Court of the Russian Federation stated that settlement by the municipalities of issues concerning collection and removal of household waste, their utilization and processing can not depend on their financial capacities, especially when non-fulfillment of these duties due to the lack of own financial resources creates a threat of violation of the citizens' environmental rights. Consequently, the courts had no grounds to assume that the decision of the representative municipal authorities that had not provided for funds to organize collection and removal of waste and refuse, utilization and processing of household waste in the expenditure budget, exempts them from settlement of the stated

issues of local significance (Ruling of the Supreme Court of the Russian Federation of April 29, 2009 No. 32-Vpr08-22).

The uniqueness of this decision is that the Supreme Court of the Russian Federation, recognizing the fact of the lack of monetary funds of the subsidized municipalities, still imposed on them the duty to settle the issue of waste management without specifying where they should take these funds. Under these circumstances amendments reducing the powers of local authorities due to their transfer to subjects of the Russian Federation were introduced in the Federal Law "On Production and Consumption Waste" some years ago. Meanwhile, in case of increase of the financial base of the local government it will be also relevant to expand powers of the municipalities by assigning to them the functions of municipal environmental control, as it is often suggested in environmental legal science (Buchakova 2011).

This list is not exhaustive, since the issue of state environmental supervision in the field of waste management remains highly discussed (Trofimets 2006), (it is important also because during implementation of state environmental supervision 35% of all violations are detected in the field of production and consumption waste management) (Panina 2016).

Within the economic unit of discussions in recent years the mechanism of combined state and private partnership in the field of waste management is more and more popular, though in practice at the moment very few private business projects are implemented in the field of waste management, both at the regional and municipal levels. The reason for this is the risks of this activity that are beyond the investor's control.

From the overview above we should draw the conclusion that the issue of waste management in the Russian legal science and legislation is perceived from the position of "classical" linear economy, in addition, most debates go out of the context of complexity of the current issues, which can not be settled by local actions.

This is why we believe that a significant methodological shift in understanding of this issue is required to settle the issues of waste management in Russia, which can be made due to the concept of circular economy.

THEORY OF CIRCULAR ECONOMY: MAIN PROVISIONS AND ISSUES OF ITS INTRODUCTION IN THE RUSSIAN FEDERATION

The essence of the concept of "circular economy" consists in management of materials of biological origin which can return to the biosphere as raw materials (so-called biological nutrients, for

example, forest products) as well as technical products that do not degrade and enter the biosphere (so-called technological nutrients, for example, plastics). Both must be further reused in production cycles. This will result in saving of non-renewable natural resources, which will not be extracted and processed due the extended service life of produced goods and obtaining of new products from the remains of old ones (Bicket 2014).

The transition from today's (linear) to circular economy is based on three pillars: emergence of environmental advantages, especially from the point of view of reduction of the negative impact on nature and consumption of resources; saving due to reduction of natural resources; creation of new markets, provision of additional economic advantages from implementation of the concept of circular economy, for example, in terms of creating jobs or new material values (Taranic, Behrens, Topi, 2016). One of the factors which will facilitate the transition to circular economy is development of renewable energy sources as well as energy efficiency, since it will lead to reduction of consumption of fossil fuels and reduction of greenhouse gas emissions. In addition, we should note that the very possibility of implementing the concept of circular economy arose due to the revolution in the area of technology and materials, which opened entirely new prospects for us that were impossible still 10-15 years ago (Inshakova, Frolov, Kazachenok, Maruschak 2016).

Supporters of the concept of circular economy pay much attention to consideration of the interrelation of human, social, natural and economic capital. Studying shortcomings of the modern economic model, they draw parallels with life of the forest, where we can observe effective interaction of water, energy, plants, animals, bacteria and fungi. Waste of one biological species become food of a second one, and waste of a second one is food for a third one, and, therefore, the forest ecosystem not only survives but also flourishes. This is why linear economy has no future. Cyclic economy based on another system of values has it (Webster, What might we say about a circular economy, 2013).

Let us formulate the main parameters of this concept and those obstacles that impede its full-fledged implementation in Russia.

1) consistent use of materials, components and whole products from one production cycle to another one develops. Although, as a rule, there is some loss of value at each stage, over time the total value derived from the source product increases significantly. For example, cotton clothing is reused first as second-hand apparel, then crosses to the furniture industry as fibre-fill in upholstery, and the fibre-fill is later reused in stone wool insulation for construction, thereby achieving the goals of zero-waste production (Towards the Circular Economy 2014).

2) implementation of this concept requires not only a change in legal culture of citizens and entrepreneurs but also a quite different approach to innovations, in the field of technology, production, supplies of products, etc. The first large corporations have already assessed the prospects of a new market affected by introduction of the concept of circular economy, and, instead of following the traditional strategy of waste reduction, they increasingly begin to focus on raising labor productivity, that is, they produce more products using less natural resources, although this is more expensive (Adams 2017).

3) rapid development of circular economy is hampered by the lack of incentives and market mechanisms of support as well as special legislation on circular economy in most countries of the world. This issue requires a separate discussion of the fact that the initial costs of the transition to circular economy are large and the expected payback period is long, which is especially important for small and medium-sized business, which is usually more sensitive to the additional financial costs incurred as a result of green entrepreneurial activity in contrast to large enterprises (Oakdene 2011).

4) loss of consumer interest in things does not mean their low quality. This is why, for example, Phillips will take not just outdated, but also faulty or broken parts, and entire products – medical equipment, for instance – restore them to good-as-new-condition, and then redeploy them to the market. This remanufactured medical equipment is supplied to smaller hospitals that cannot always afford the newest and best equipment but can accept equipment that is in good working order (Special Report "The Circular Economy: From Concept to Business Reality", 2017).

5) development and implementation of circular economy will lead to a change in the attitude of consumers to property, because sharing goods is cheaper than owning them individually. Therefore, new models of joint shared ownership of movable things will inevitably emerge. In addition, if waste processing becomes a profitable business, the value of waste will also increase, and then the old discussions about ownership of waste, the moment of its transfer to another person will again become relevant (Ponomarev 2017).

6) the existing studies indicate positive effects on employment in the case of introduction of circular economy. This is largely due to increased expenses and lower prices, which are expected in all sectors, labor intensity of processing activities and

high qualification of employees. However, a number of companies and sectors may lose (Growth Within 2015).

7) the concept of circular economy pays particular attention to development of the legal framework for settlement of the issue of packaging. For this purpose, it is proposed to legislate creation of the system of incentives, prohibitions and restrictions aimed at change of the structure of packaging which would meet the requirements of design of the product but would be made not from plastic but from other materials, less toxic and easy to process. This is necessary because the issues of toxicity of plastic have long been well known (Nagornaya, Deminova 2017).

8) gradual modernization of traditional civil law contracts will take place. A new concept of lease is set forth in the scientific literature. For example, Rolls-Royce introduces the following scheme. Instead of buying an engine for a fixed price, customers pay to use it based on the number of hours the engine is actually powering a plane. But the engine is not all that customers are renting, because Rolls-Royce also monitors the engine remotely and maintains it, modifies it and replaces parts as needed. The engine maker generates more than 50% of its revenue through this program, while maintaining long-term customer commitment and dramatically increasing the lifetime value of the original product. In a similar way, the manufacturer of electric cars Renault, instead of including the battery in the purchase price of the car, leases it to French customers. That allows Renault to replace the battery as needed. The used pack can be recycled for replacement without any service delays for the customer (Special Report "The Circular Economy: From Concept to Business Reality", 2017).

If the goods are sold, agreements ensuring return and subsequent reuse of the product or its components and materials at the end of its primary use will be concluded.

9) the EU pays much attention to the issue of packaging, in particular, having adopted the Directive of December 20, 1994, on packaging and packaging waste that covers all types of packages. It is aimed to ensure that all packages that comply with provisions of the Directive can be used throughout the Community, however, the EU member states still have a possibility to introduce a pawn for packages or tax burdens for certain types of packaging, for example, in order to support reusable packages.

The Directive provides for creation of certain reuse quotas and limits the concentration of heavy metals in packaging, obliges the EU member states to create packaging collection systems (Kremer, Vinter 2007). The target indices of reduction of packaging waste and the measures to achieve them should be established in regulations of individual EU member states, for example, this is done in a separate part of the program of the Slovak Republic developed by the Ministry of the Environment (Cepek 2015). At the moment, the European Commission, within the framework of ongoing efforts of the European Union to transform the economy into a more sustainable economy and implement an ambitious plan of action for circular economy, in January 2018 adopted a set of measures, including the European Strategy for Plastics in a Circular Economy and the Annexes thereto for transformation of methods of design, production, use and recycling of plastics and products from them. By 2030 all plastic packaging must be suitable for recycling. The strategy specifies the need for adoption a number of measures to reduce the impact of disposable plastics, especially in seas and oceans.

10) in recent years, the concept of extended producer responsibility has been introduced, first in Europe in the 1990s, and then also in many other countries of the world. For example, in the USA the first bans on sale of drinks in disposable bottles were established in some states already in the 70s of the last century (Duglas 1975). The USSR tried to introduce this concept into practice in the 1980s but failed to complete it because of its collapse.

The essence of the concept is quite simple: companies producing consumer goods are responsible for managing their products and packaging until the end of their life cycle. As a result, expenses for waste management are transferred from local authorities to producers, which frees local authorities from the financial and organizational burden of product waste management (De Paoli 2015). The main idea here is to turn what was formerly waste into the "food" for industry and the next generation of products. This results in a new generation of products that have the cost of reuse, recycling, composting, and utilization (including packaging) included in the retail price. The proper environmental management of the product and its package for their highest and best use becomes part of the costs of doing business, like research and development, marketing, and logistics. In 1991 Germany enacted the law to put the "producer pays" concept into practice, focusing on packaging. Its goal was the reduction of landfill volume, and creation of conditions for packaging recovery (Special Report "The Circular Economy: From Concept to Business Reality" 2017).

Therefore, the concept of circular economy has become widespread in the EU, the USA, Japan, South Korea, Taiwan and China. For example, practice of waste management in China is governed by the Circular Economy Promotion Law (2009) (Benton 2015). In particular, this Law of the

PRC promotes sustainable development through energy saving and reduction of environmental pollution. The concept of "circular economy" is key in the Law and implies actions to reduce pollution, ensure multiple use and recycling (reuse) of the resource. This refers to any activity related to the process of production, circulation and consumption of resources. The law stipulates, in particular, that industrial enterprises must use water-saving technologies, methods and equipment, develop and implement plans for saving use of water. Such measures are also provided for in the agriculture of the People's Republic of China (Rysbekov Yu, Rysbekov A., 2014).

Implementation of this experience in Russia is hampered by the low level of environmental culture of representatives of authorities, business and citizens, as well as the lack of incentives and rewards (tax benefits or government support measures) for those entrepreneurs who try to introduce certain elements of circular economy (for example, in terms of transition to more environmentally friendly packaging). Meanwhile, preparation by the Ministry of Energy of the Russian Federation of an annual report on the state of energy saving and improvement of energy efficiency in the Russian Federation (2017) and similar reports in subjects of the Russian Federation can be considered one of the first steps towards circular economy at the state level. However, today programs of energy saving and improvement of energy efficiency of organizations are not provided with methodological requirements that take into consideration their industry specificity, which considerably complicates comparative analysis of the state of energy saving and makes summary analysis in the corporate sector almost impossible. Expansion of the powers of the Government of Russia to determine the principles of formation of requirements for such programs and criteria for assessing energy efficiency (Komarov, Narbut 2009) of state corporations with the purpose to ensure the transition to circular economy appears reasonable. Application of the best available technologies (Makarevich, Kovalev 2017) in the field of waste management, especially their application in closed-cycle production must serve as one of the most important criteria for energy efficiency assessment. As measures to develop the management system in the field of energy saving and improvement of energy efficiency for other organizations, it is proposed to consider the possibility of including energy efficiency indices in the mandatory disclosure statements of individual organizations as well as the possibility of regular energy inspection of largest organizations.

In terms of strategic planning it appears reasonable to consider the possibility of development and approval of the Concept of Improvement of Energy Efficiency of Economy of the Russian Federation for the long term (to 2050). Strategic planning documents can be developed based on provisions of this Concept. Therefore, adoption of the mentioned measures will allow the state to "see"

the concept of circular economy, though its introduction is complicated by the issues of human resources and technologies.

DEVELOPMENT OF LEGAL AWARENESS AS THE MAIN FACTOR OF IMPLEMENTATION OF THE CONCEPT OF CYCLIC ECONOMY IN THE RUSSIAN FEDERATION

Implementation of the concept of circular economy, in addition to proper economic and legal measures, requires also development of measures for environmental upbringing and education. The ultimate goal of these measures was formulated by Ken Webster, who proposed the principle of "personal responsibility", which means that every individual is personally responsible for the garbage that passes through his or her hands, but not the people who produced it, not the system that leaves us no choice but to live as a consumer, and not the laws that do not provide for any other possible way of life (Webster, Missing the wood for the trees, 2013).

In order to implement this concept of enhancement of environmental awareness[5] of citizens, it is necessary to develop the state program of educational measures which will involve both state authorities, local government bodies and educational institutions, social and environmental associations and other institutions of civil society.

1) it is necessary to clearly distribute the functions, the list of activities and the mechanism of their financing from the budget (including grants) for popularization of the concept of circular economy (including, in terms of waste management) among participants of this state program. It appears reasonable to implement this program in two stages. In the first one it will be implemented within the framework of a pilot project in one or two regions with subsequent dissemination of this experience throughout the country. This program will focus on environmental upbringing and education of the younger generation, since the strategy of implementing the model of circular economy is intended for a long period.

2) the first unit of this program must be aimed at inclusion of new academic disciplines (or sections in existing ones) that explain ideas of circular economy (including in respect of biology, economics and jurisprudence) in the programs of secondary and higher educational institutions.

[5] Environmental awareness in relation to the topic of this article is understood by us as a set of legal ideas, values and interests reflecting the degree of formation of citizens' sense of responsibility for the state of the environment and their ability to implement legal rules in order to protect environmental human rights.

3) it appears necessary to pay special attention to application of methods of visual environmental upbringing and education in school. This was pointed out by many scientists mentioning the need to supplement verbal methods with visual and practical methods (Komensky 1982; Ushinsky 1948).

Visual methods can be divided into methods of illustrations and demonstrations. The method of illustrations implies display of posters, maps, tables, pictures, diagrams, drawings, etc. Their use will allow school students to visually perceive, distinguish and assimilate the main thing. Presentation of the material accompanied by sketches, drawings, diagrams and various visual means will help students to understand and remember the studied phenomena, events and facts (Panfilova 2011). Certainly, with regard to our objectives of environmental education, it would be more effective to organize an excursion to fuming urban dumps, but because of the danger posed to children's health, it would be better to refrain from this method of education. However, even the show of a special educational film for school students about kilometers of fuming dumps and their harm for health will have a positive effect, along with explanation of measures to save nature, for example, the need to throw garbage into containers of a certain color. It is not less important in the course of such environmental educational work to show the close interconnection of natural phenomena and processes, including complex consequences of destruction of ecological systems. School students must understand that a garbage dump (especially unauthorized) is not only contamination of water and air but also biological pollution, since rats, crows, stray dogs are carriers of diseases. Therefore, if students do not want to get a bite of a stray dog (Nakonechny, Ibragimova 2016), no fodder base should be created for stray animals, since if there are no open containers with food waste, there are no unfortunate stray animals, which simply will not breed. This is why we suggest including the new subject "Ecology" in the school curriculum of Russia (as it was done in a number of former republics of the USSR, for example, in Kazakhstan (New ecology textbook for high school students published in Kazakhstan, 2014)), with the section about the concept of circular economy.

4) it is necessary to pay no less attention to explanation of the concept of circular economy also in Russian institutions of higher education. For this purpose, the Ministry of Natural Resources and Environment of the Russian Federation and the Ministry of Education must issue methodological recommendations and organize special interuniversity conferences to explain to school and university teachers the main environmental threats of modern times and the role of circular economy in settlement of some of them. The discussions and disputes must result in adoption of new

371 educational standards which would focus on the modern models of waste management.
372 It is especially important in case of further development of the system of network
373 education[6] allowing different institutions of higher education to have comparable
374 educational programs.

375 In Volgograd Institute of Management within the framework of the law master's program
376 according to the profile "Natural Resources Law, Environmental Law, Land Law", for several years
377 already, we have been delivering the special course "Legal Regulation of Production and Consumption
378 Waste Management". Within the framework of this course we explain to master's students the
379 fundamentals of the concept of circular economy, and we also do it in terms of the discipline
380 "Environmental Law" for bachelor's students (but, certainly, to a less extent). However, to achieve the
381 appropriate effect, such measures must be taken everywhere, at least in all economic and legal faculties
382 of the country, with the necessary coordination and a common approach to development of
383 educational standards and programs that are still to be prepared.

384 We should point out the need to introduce the concept of circular economy in postgraduate
385 (doctoral) educational programs in economic and legal specialties.

386 5) in the course of higher education, it is very important to apply an interdisciplinary
387 approach, since the "classical" perception of the academic discipline of "environmental
388 law" implies only study of legal rules governing functions of public administration,
389 responsibility for environmental offenses, etc. Meanwhile, the issue of sustainable
390 development (including one of waste management) implies consideration of
391 environmental legal issues in the broader context of social and cultural factors (justice,
392 poverty, democracy, etc.). This is why the new methodological objective must consist
393 in opposing the mechanistic industrial worldview to the worldview of living systems,
394 "promoting development of systemic thinking of people based on the way of thinking
395 cyclically rather than linearly" (Webster, Johnson, Postnova 2011).
396 6) practical activity of school and university students is of great importance for
397 implementation of the program, since only personal participation in environmental
398 programs can complete the process of formation of an environmentally responsible
399 person. For this purpose, it is proposed to form special youth inspectorates and patrols
400 that monitor the territory of the city / district in order to identify unauthorized dumps
401 and other environmental offences and then inform state environmental supervisory

[6] Ref. Art.15 of the Law of the Russian Federation of December 29, 2012 "On Education in the Russian Federation".

authorities. In the period of the USSR such organizational forms already existed ("Green Patrol") and this experience can be used. Special importance within the framework of the practice-oriented approach must be attached to the ability of school and university students (of not profile faculties) to protect their environmental rights. This is why, in addition to identification of biological links in nature or economic preconditions for the transition to standards of circular economy, young people must have a clear skill in drafting legally significant documents (appeals to authorities, statements of claim, etc.). This will allow them to participate personally in the fight against illegal dumps or other offenses, which will promote formation of a proactive approach to life.

7) following the strategy of development of visual agitation, in order to popularize the concept of circular economy, it is necessary to produce calendars, pens, pencil cases and other school accessories and distribute them among schools participating in implementation of the project under consideration.

8) development of social environmental advertisement on radio and television, calling for separate collection of garbage, explaining the negative effects on nature and health from unauthorized dumps, etc.

9) institutions of civil society involved in implementation of the program must conduct awareness-raising work in social networks, since youth blogs, websites and other Internet resources have a great potential to draw young people's attention to environmental issues. Their content can be filled with discussions about why "circularity" is so useful and makes people's lives better.

10) environmental and legal culture not only of the population, consumers of products, but also managers of large companies that can have a different attitude to the green economy and influence the company's development strategy is very important for implementation of the concept of circular economy (Rizos, Behrens, Kafyeke, Hirschnitz-Garbers, Ioannou 2015).

11) involvement of such an important institution of civil society as church would be significant for implementation of this project. So far, most denominations have already expressed their attitude to environmental issues and the ways of their settlement (Position of the Russian Orthodox Church, 2013) however, these statements relate to general (framework) questions, and could be more precise in terms of goals and objectives of the concept of circular economy. Actually, implementation of this

educational strategy will lead to formation of a new type of person, more responsible and less self-centered than that existing in Russia and the world today.

LEGAL STEPS FOR THE TRANSITION TO CIRCULAR ECONOMY

Implementation of the concept of circular economy is possible only in an integrated manner. It will cover municipal, tax, land, environmental, civil, administrative and other Russian legislation, as well as lead to serious changes in social, economic, cultural, educational and other policy, which should be considered in detail.

1) the transition to standards of circular economy with the purpose to reduce waste is the same challenge of the time as overcoming the effects of global climate change, fighting against environmental terrorism, overcoming negative environmental effects of nanotechnology and biotechnology (GMOs), etc. The state and society face the grave issue of creating an efficient system to counteract these threats, otherwise the price of these effects will be too high over time. However, ideas of circular economy supporters alone can not determine daily life of the state and society, for this purpose they must take a legal form, turn into legal rules that are universally binding and guaranteed by measures of state enforcement. In this situation the scientific legal community is charged with the task of developing such legal forms and bringing them to the attention of political authorities adopting responsible decisions.
2) the study of a number of scientific works of supporters of the concept of circular economy shows that they do not assume the gradual transition to this model and do not examine the national specificity of individual countries of the world, which can both facilitate and hinder its implementation. In Table No. 1 we distinguish 3 such stages taking into account the Russian specificity. The first stage includes preparatory work; in the second one the transition to technologies of separate waste collection must be performed in Russia; in the third stage the strategy of circular economy will be implemented.
3) if we talk not about strategic but about tactical tasks, it is necessary to implement the legal concept of environmental entrepreneurship, which has long been developed in legal science and is partially in demand in the Russian legislation (Zlobin 2011; Kazakov 2012; Novoselov 2012). At the moment, Art. 1 of the Federal Law "On Protection of the Environment" containing terms and definitions does not mention this concept. Art. 3 of this Law dedicated to the principles of environmental legislation does not

specify the relevant principle which could be the core of the legal institution regulating activity in the field of environmental entrepreneurship.

In our view, environmental entrepreneurship is the activity of citizens who are entrepreneurs and legal entities aimed at production of goods, performance of works and provision of services allowing prevention, limitation or elimination of the negative impact on the environment. Successful implementation of this activity requires proper legal regulation of relations in the field of environmental entrepreneurship as well as creation of economic interest of entrepreneurs in implementation of this type of activity.

At the moment, Art. 17 of the Federal Law "On Protection of the Environment" of January 10, 2002 stipulates a number of measures of state support of economic and other activity which is performed with the purpose to protect the environment, including benefits regarding taxes and payments related to nature protection, as well as allocation of funds from the state budget.

Meanwhile, the mechanism of implementing these measures is documented in the tax legislation not fully enough, this is why in Russia today there are almost no incentives for environmental entrepreneurs who decide to make their contribution to the country's transition to circular economy.

4) environmental insurance (Bazhaikin 2002) and environmental audit (Iutin 2008; Marin 2009) should be pointed out among the environmental services which can be provided in the field of waste management in terms of implementation of the concept of circular economy. Both of these civil law contracts with environmental specificity (Ruden 2015) are concluded today only on a voluntary basis, while the transition to circular economy may require establishment of mandatory cases as well.
5) the transition to circular economy, including the new model of waste management, requires development by the government of a framework program document, as it was done in other important fields of social relations (Decree of the Government of the Russian Federation of 25.04.2011 No. 730-r). In terms of this document, it is necessary to formulate clearly the government's plans for creating incentives and restrictions, permissions and prohibitions that promote settlement of the set objective of the transition to standards of circular economy, which must be clearly formulated, as well as the algorithm for their gradual implementation.
6) along with the framework concept (program) containing a list of legal measures aimed at promoting the transition of Russia to standards of circular economy, it is necessary

to work out a package of more local measures, for example, regarding circulation of plastic bottles or packaging materials as well as development of alternative energy. In any case, both the framework concept and the more local documents adopted on its basis must be coordinated with other strategic plans, for example, in the field of energy or social economic development, the Concept of Development of Civil Legislation and the Concept of Development of Environmental Legislation, which is still to be prepared.

7) the second stage of the transition of Russia to circular economy requires economic justification and introduction of the ecolabeling system. There are dozens of eco-labels in Europe and other countries of the world. Labels with the Green Dot symbol are the best-known industry-funded labels to designate the recyclability of packaging waste. Furthermore, circular economy labelling initiatives need to go beyond packaging recycling; re-usability, re-manufacturability and recyclability of products could encourage sustainable production and consumption (Taranic, Behrens, Topi 2016).

8) change of the concept of tax policy. Today in Russia labor is the main source of taxes. For the transition to circular economy, an opposite strategy must be adopted: to impose a big tax on natural resources to save them. At the same time, it is necessary to reduce the tax on labor to overcome unemployment and to move to mass production of environmental goods and provision of environmental services (Wijkman A., Skånberg 2015). Benefits related to the profit tax and the land tax must be established and the tariff policy in the field of transportation, etc. must be changed for environmental entrepreneurs. In fact, there will be a shift from use of natural capital to use of human capital, which will accelerate the transition to circular economy that is low-carbon and resource-efficient in its nature.

9) in contrast to planned economy, in terms of market economy the state can not finance the entire waste sector from the budget, this should be done by business and citizens. In order to give economic entities an additional incentive to involve waste into economic circulation, it is necessary to create conditions for development of combined state and private partnership, more efficient use of available nature protection mechanisms and tools of public administration – the authorization system for waste placement, the nature protection payments, the mechanism of legal liability for violation of environmental legislation, etc.

10) to stimulate the demand for products manufactured with the use of "unprofitable" waste, it is necessary to apply mechanisms of state and municipal orders more intensively, by analogy with the Japanese Law on Promoting Green Purchasing (purchasing environmentally friendly goods and services), according to which the state provides assistance to enterprises using resource-saving standards of production policy and promoting environmentally friendly goods in the domestic market (Filimonov 2011).

11) by 2025 it is necessary to cover 100% of the population with separate collection of solid municipal waste, and by 2022 with the system for collecting from the population, using and (or) detoxicating complex domestic appliances and other goods that have lost their consumer properties, including waste containing hazardous substances. At the moment, in Art. 3 of the Law of the Russian Federation "On Production and Consumption Waste" the following areas are specified as the main ones of state policy related to waste management: maximum use of original raw materials; prevention of waste generation; decrease of waste generation and reduction of the hazard class of waste in the sources of their generation; waste processing; waste utilization; waste neutralization. As aptly noted by Yu.V. Vasilchuk, "separate waste collection is not considered as priority objectives and, consequently, is not the basis of the current legislation on production and consumption waste" (Vasilchuk 2015).

The possibility of separate waste collection is nevertheless directly mentioned in the text of the Federal Law "On Production and Consumption Waste" of June 24, 1998 No. 89-FZ, however, these references are not of an imperative nature. According to it. 2 Art. 13.4 of the Law, accumulation of waste *may* be carried out by means of their separate storage according to types and groups of waste. In order to make the transition to standards of cyclical economy, the law must formulate *duties* for this transition and include certain articles (chapters) defining the strategy and tactics of the transition to cyclical economy within the framework of which the volume of waste will be reduced.

12) emergence of waste means poor regulation, which is unacceptable in the world with limited resources, because it threatens the future of human civilization. In this regard, on a nationwide scale it is necessary to create a special coordinating body for waste management at the federal level, as it was done in a number of countries, for example, Germany (Transcript of parliamentary hearings, 2006).

13) in the period from 1991 to 2001 in Russia there was a system of environmental off-budgetary (and after budgetary) funds, which accumulated environmental payments, fines, etc (Vershilo N.D., Vershilo T.A. 2009). Resources of these funds were used for financing of environmental measures. It appears necessary to return to this system, since the current "dissolution" of environmental revenues to the budget among other income, as well as the available system of budgetary financing of expenditures on the environment according to the "residual principle" prevents the transition to new standards.

14) there is a need in cooperation between different public authorities, business representatives, social environmental associations and citizens, which requires development of the system of electronic democracy in the Russian Federation. This cooperation can be implemented in the form of provision of environmental information to the public, organization of joint patrols to search for unauthorized dumps and through expert and analytical work. Within the framework of such cooperation it is necessary to further enhance the system of transparent distribution of grants for social environmental associations and consumer rights protection agencies to carry out human rights and educational work.

15) efficient waste management and the transition to standards of circular economy are impossible without a reform of local government, also by redistributing income in favor of local budgets.

16) the transition to standards of circular economy, as well as settlement of other global environmental issues (climate, GMOs, etc.) will inevitably lead to an increase in the number of disputes, as well as raise the level of complexity of cases considered by courts. For this purpose, Russia needs implementation of the long-discussed concept of environment court, which could professionally consider this complex category of environmental cases.

17) the necessary provision of the transition to circular economy with human resources will require professional training (retraining) of specialists of various branches of knowledge, from technical and biological specialties to economic and legal ones. Settlement of this issue is impossible without modernization of the system of education. For this purpose, a number of the available educational programs must be reviewed along with introduction of changes to the law on education, preparation of

new standards for assessing the quality of knowledge, development of the system of academic mobility, etc.

CONCLUSION

Although the transition to circular economy is now at the top of the political agenda in Europe, the linear model of economy continues to prevail. One of the reasons for this is complexity of the concept of circular economy, which ultimately affects not only all sectors of economy but also has legal, cultural, political and many other aspects. Supporters of this doctrine write about it as about an ideal, its parameters and main elements, economic effect, fight against unemployment, etc., however, few people pay attention to highlighting the stages of "climbing to the ideal" – a number of steps successive achievement of which would allow an individual country (for example, Russia) to fully transition to standards of circular economy. Very little attention is paid to the role of law in this process in modern scientific works on the theory of circular economy.

The transition to the model of circular economy in the near future is not possible for Russia, and this is why it is a long-term strategic goal. However, already now it is time to discuss the mechanism of implementing this doctrine, in order not to be left behind the advanced ideas and technologies developed by the leading countries of the world. In Table 2 we present four available models in the field of waste management, their pros and cons. And if now the model focused on obtaining the largest income through saving nature protection costs prevails in Russia, the transition from level 1 to 4 is necessary to save nature and human health.

The ambitious plans of Russia's transition to circular economy considered in this article will require a complex of economic, legal, political, educational and other reforms, among which the reform of environmental legislation is of interest to us. In this case we speak about the need to amend a number of laws and by-laws to create such an economic and legal model in the country within which a radical decrease in the volume of waste will occur.

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Sobre el mecanismo jurídico para la realización del concepto de economi-CIO circular en el espacio post-soviético (en el ejemplo de Rusia)

RESUMO

En el artículo se examinan las principales disposiciones del concepto de economía circular en el contexto de los cambios políticos, educativos, jurídicos y de otra índole, sin los cuales no es posible alcanzar los objetivos fijados. Los autores se centran en el análisis del marco jurídico para lograr los objetivos y objetivos de reducir los desechos producidos en el país, crear condiciones para el desarrollo de las tecnologías de reprocesamiento y utilización secundaria. Esto requerirá la formación de una nueva categoría jurídica de "empresa ecológica", con la incorporación en los instrumentos jurídicos del sistema de incentivos, permisos, restricciones y prohibiciones para modificar radicalmente el modelo existente de gestión de desechos. El desarrollo de este Instituto jurídico llevará a cabo ajustes en varios contratos civiles, incluida la continuación de los contratos de seguro ambiental y auditoría Ambiental.

Palavras-Chave: Economía circular; Desechos; Ecología; Recursos.

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