
WORKING FOR SUSTAINABLE FUTURE: EU AND BULGARIAN EFFORTS TO REDUCTION OF PLASTIC BAGS USE

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Abstract: Over the last decades the technological transformations have changed the daily routines of many and has allowed them do extent their worldview and the range of their dreams, expectations and aims. It has led to better healthcare and longer life expectancy. However, they also have negative effects, such as pollution, environmental issues, healthcare issues, new socio-economic challenges, new inequalities, etc. In the process of expanding scientific knowledge new negative effects have been identified. One of them is related to the use of plastic bags. It turns out that something so small that we have been accustomed to for decades turns out to have an extremely harmful effect on nature, animals and human. The new facts have amplified and have been also amplified by a transformation in the values across the societies. It seems like that the focus of the people have been shifting to more care of the environment and humans' rights and their standard of living. Thus, new national and international policies, regarding the use of plastic were introduced over the last decades. In 2015 the European Union adopted the *Plastic Bags Directive (Directive (EU) 2015/72)*. It responded to the high level of plastic carrier bags usage in the Union as the latter were identified as one of the “top ten littered items in Europe”. The concerns of the EU are about the identified effects of these bags on the environment as a whole and in particular on “terrestrial or marine animals”, which are in danger, when eating such material. Furthermore, the humans are also affected, because they consume some of the marine animals and in some ways microplastics. The new directive forces the Member States to take measure and reduce the usage of plastic carrier bags. In response the Bulgarian state took certain measures. Until 2016 the plastic carrier bags were free in the supermarkets in Bulgaria. Since 2016 the country has introduced an additional requirement that all plastic shopping bags up to 50 microns thick should be sold. According to the Bulgarian Ministry of Environment and Water in this way, Bulgaria has applied stricter rules than the required in the European directive, which allows each country to choose how to introduce a limit on the consumption of bags up to 50 microns. In this context, the *purpose* of the current study is to identify the framework of policies and measures at EU and Bulgarian level for reduction of plastic carrier bags usage. The *methodology* used to achieve the purpose include interpretation of the legal documents of the EU and Bulgaria as well as analysis of data from Eurostat. The *results* show that there is a serious involvement of EU and Bulgarian administration in the process of reduction of plastic carrier bags usage, which has some effect by now. Thus, we can *conclude* that the European Union and Bulgaria to some extent achieved their goal, but still have challenges in this respect. This gives ground to *recommend* more restrictions in the usage of plastic carrier bags, investment in innovations in packaging, creating new habits in the process of school education, etc.

Keywords: plastic carrier bags, sustainable development, packaging legislation, Bulgaria, European Union, biotechnological innovations

1. INTRODUCTION

Over the last decades the technological transformations have changed the daily routines of many and has allowed them do extent their worldview and the range of their dreams, expectations and aims. It has led to better healthcare and longer life expectancy. However, they also have negative effects, such as pollution, environmental issues, healthcare issues, new socio-economic challenges, new inequalities, etc. In the process of expanding scientific knowledge new negative effects have been identified. One of them is related to the use of plastic bags. It turns out that something so small that we have been accustomed to for decades turns out to have an extremely harmful effect on nature, animals and human (UN Environment Program, 2018). The new facts have amplified and have been also amplified by a transformation in the values across the societies. It seems like that the focus of the people have been shifting to more care of the environment and humans' rights and their standard of living. Thus, new national and international policies, regarding the use of plastic were introduced over the last decades. In 2015 the European Union adopted the *Plastic Bags Directive (Directive (EU) 2015/72)*. It responded to the high level of plastic carrier bags usage in the Union as the latter were identified as one of the “top ten littered items in Europe” (European Commission, n.d._b). The concerns of the EU are about the identified effects of these bags on the environment as a whole and on “terrestrial or marine animals” (European Commission, n.d._b), which are in danger, when eating such material. Furthermore, the humans are also affected, because they consume some of the marine animals and in some

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Thus, the *purpose* of the current study is to identify the framework of policies and measures at EU and Bulgarian level for reduction of plastic carrier bags usage. *Object* of the research is the EU and Bulgarian legislation in the area of environmental protection. *Focus* of the study is the measures to reduce plastic bags usage. The *methodology* used to achieve the purpose include interpretation of the legal documents of the EU and Bulgaria as well as analysis of data from Eurostat.

EU environmental policies are among the mandatory EU policies. According to various researchers, this policy has 3 main phases (Deters, 2019; European Parliament, 2020; Orlando, 2013). The first one started in 1973 when the first Environmental Action Programme was adopted. During this period there are sporadic environmental policies. There are still no institutional norms and no synchronous policies. The second phase started with the adoption of the Single European Act in 1987. The policy of this period is based on goals, principles, decision-making procedures and it is based on the SEA. The first generation of environmental policy is being developed, which is mainly focused on the policy and regulations for emissions and prevention from environmental pollution. The Treaty of Maastricht, which enters into force in 1993, set the beginning of the third phase of the EU environmental policy. It starts with new taxes for the polluters. The Environmental Action Program calls for greater involvement of the countries and for the development of targeted instruments in the field of the environment. The period 2001-2010 focused on a more serious regulatory policy and deepening cooperation between industrial stakeholders and EU citizens through institutional consolidation on water pollution, chemicals control, climate change. The European Commission has a special Directorate General for Environment, and at the level of the Council of Ministers there is an Environment Council. The regulatory policy will be reoriented in the period 2007-2013 towards environmental protection, and in 2014-2020 towards inclusion in the bioeconomy and bio-based industry.

Regarding biotechnology policy, the main issues of the previous two programming periods 2007-2013, 2014-2020 were mainly focused on the regulation of genetically modified foods and crops, using a multisectoral and multilevel approach on national, supra national (EU) and global level. The challenge for this biotechnology policy is from coordinated to single because risk regulation and the legal framework are the two contentious issues in the EU. Another moment in biotechnological policy is genetic engineering, which began to develop in the 70's based on recombinant DNA. Research on it have been used for genetic modification of food and crops, and as early as 1978 DG Research and Innovation of European Commission proposed the establishment of a common program in the field of molecular biology and a draft directive to conduct a single standard for research in all biotechnological fields (European Commission, 1978). The regulation enters into force in 80s with the adoption of Coordinated Framework for Regulation of Biotechnology. In the late 80s two new documents are proposed - Directives 90/219/EEC and 90/220/EEC on the Genetically modified organisms. In 2002 European Food Safety Authority was established and a year later Regulations on traceability and labeling of GMOs and GMO food were adopted - 1830/2003 and 1829/2003.

Farm to Fork Strategy (European Commission, n.d._a) has transformed the standard for packaging and labelling, which is related to the materials used in the packaging and decreasing the usage of plastic. The new rules are related to concerns about health and consumer protection.

2. MATERIALS AND METHODS

To achieve the goal of our study we used a selection of methods. These are historical approach, analysis of the contents of legal documents of the European Union and Bulgaria. We also used quantitative data from Eurostat on the recycling of plastic packaging.

3. RESULTS

The general review show that the EU policy is aimed at protecting the environment, climate, human health, and biodiversity, through the European Green Pact, to achieve green technologies and cleaner energy sources. To start forming a culture of environmental protection, the law must, through the introduction of legal norms, ensure environmentally friendly behavior of legal entities. In this regard, the EU adopted Directive (EU) 2015/720 of the European Parliament and of the Council of 29 April 2015 amending Directive 94/62/EC as regards the reduction of the consumption of thin plastic shopping bags. Regarding transposition into national law in the EU Member States,

the measures that Member States can take are through the use of economic instruments, such as pricing, taxes, fees, that are effective in reducing the consumption of plastic bags. The research show that the EU's role is to introduce uniform standards on the standardization of packaging, as well as on product labels or markings to indicate whether the materials from which they are made are biodegradable or recyclable.

The Republic of Bulgaria is part of the European Union and this predetermines its national legislation in the field of environmental law, as a relatively new and fast-growing industry. The EU and national governments have standardized European environmental policy in its programming period up to 2050 with support for specific research programs and projects, the adoption of various regulations and directives, funding for the protection, conservation and enhancement of EU natural capital, and protecting EU citizens from environmental impacts and risks to their health. The economy and the right to work together to regulate and plan environmental standards in the field of biotechnology under the European Green Pact.

The research showed that in the legislation of the Republic of Bulgaria, through a report of the Minister of Environment and Water, changes were introduced in the Environmental Protection Act, the Waste Management Act, as well as in the Ordinance for determining the procedure and amount for payment of product tax for products, after the use of which widespread waste is generated. The ordinance introduces rules on the import of goods that are packed in plastic packaging, it is introduced in the labeling to have data on specific qualities of the material from which the packaging is made. The introduction of fees for this type of goods aims to limit them. When using plastic bags, individuals submit a monthly declaration on the plastic bags placed on the market. Based on the amount of consumption, a product tax is introduced in the Law on Waste Management for polymer bags, which is progressively increasing to limit their use. Data from the Ordinance are presented:

Table. 1 Product fee for polymer bags

	codes*	2011 (BGN/nmb.)	2012 (BGN./nmb.)	2013 (BGN/nmb.)	2014 (BGN/nmb.)
Polymer bags	01 - 19	0,15	0,35	0,45	0,55

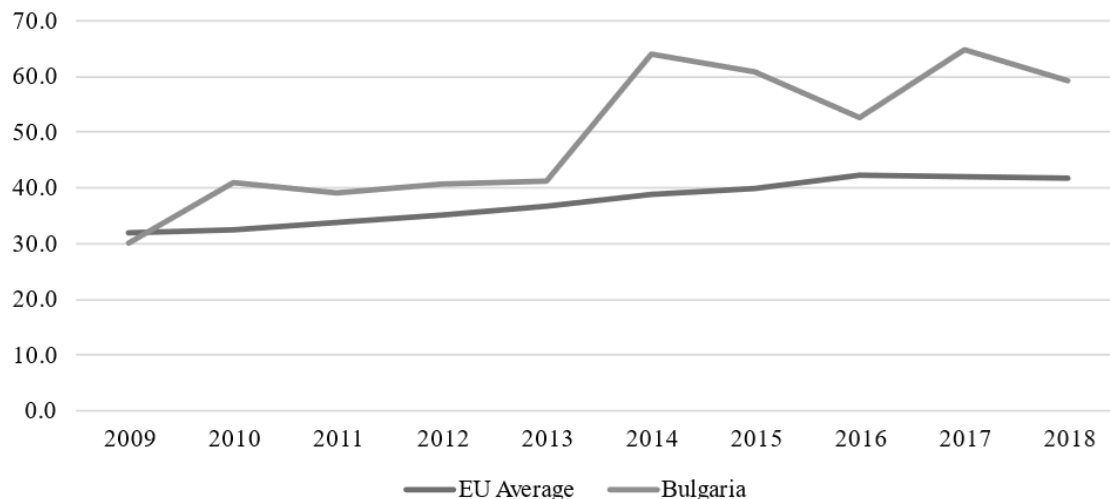
Source: Annex № 2 to the Ordinance on packaging and packaging waste (Council of Ministers of Republic of Bulgaria, 2012)

We identified that certain concepts have been introduced in regulations, such as “thin plastic bags”, “very thin plastic bags” and „oxidizable degradable plastic shopping bags“. Training videos on the overuse of plastic bags and environmental pollution were promoted on national television channels. Market policies have been introduced for consumers who use so-called “reusable” shopping bags made of natural materials. The Ministry of Environment and Water provides detailed information on the Ministry's website on the basic concepts, frequently asked questions, and fees for plastic bags (Penchev, 2019). Legal liability for environmental protection is in the following categories: administrative, civil and criminal liability. In case of non-compliance with the introduced rules, the legislation introduces sanctions in the form of: fines, restoration of the functions of the environment, elimination of the consequences of pollution, as well as the punishment of imprisonment. (Penchev, 2017)

It seems that the purpose of the introduced regulatory framework is to reduce the risks in modern society of environmental problems by introducing legislative and economic measures in the countries and the EU. It is argued that the impact caused by environmental pollution affects the human body, so measures must be introduced through analysis and assessment of the state of the environment. This can be achieved through legislative measures in the field of healthy and favorable environment and the right to information on the state of the environment, supported by the state. (Naumova, 2017)

The Eurostat data show that compared to the EU Average Bulgaria has a higher recycling rate of plastic packaging. (Fig. 1)

Fig. 1. Recycling rates of plastic packaging waste for monitoring compliance with policy targets, EU average and Bulgaria, 2009-2018



Source: Based on data from Eurostat (Eurostat, 2009-2018)

Nevertheless, there are areas, which require more efforts and measures in order to overcome the existing challenges. (Vladikov, 2019)

4. DISCUSSIONS

Both the issue of a unified environmental policy and the issue of the development of biotechnology are subject to numerous EU regulations, because this is a highly politicized case risk, multisectoral challenge, multilevel concern and reflects the national fears for ecology. These issues require the adoption of a single European policy and new directives through which to introduce a single regulatory framework, standards and risk management related to the industrial processes, which pollute the environment. Emphasis in the new programming period is placed on the shift and the orientation towards the bioeconomy and biotechnological innovations and is moving towards a supranational large-scale change of the legal framework, which is the result of many political decisions, coordination, the process is highly politicized.

In Bulgaria, the economic and legal policy on the use and production of plastic bags will be developed in the direction of their biodegradation and limitation of use. Inform legal entities about the benefits of limiting the use of plastic bags. Consumers should have easily accessible information about the benefits of environmental protection and to form a culture for the use of organic products and technologies.

5. CONCLUSIONS

All the directives on environmental protection in the EU have been introduced in the legislation of the Republic of Bulgaria through normative acts, from the analysis it can be concluded that the institutions are working towards expanding, promoting and stimulating the consumption of bio innovative technologies. The *results* show that there is a serious involvement of EU and Bulgarian administration in the process of reduction of plastic carrier bags usage, which has some effect by now. Thus, we can *conclude* that the European Union and Bulgaria to some extent achieved their goal, but still have challenges in this respect. This gives ground to *recommend* more restrictions in the usage of plastic carrier bags, investment in innovations in packaging, creating new habits in the process of school education, etc. Member States need to launch consumer awareness programs on the use of plastic bags, as well as educational programs to raise children's awareness of the timely protection of the environment.

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