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Digitalization and public marketing of environmental safety processes and recreation development

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Abstract. Environmental issues today are global in nature. Climate change caused by man-made human impact on the environment, changes in natural ecosystems, habitats of animals and plants, lead to irreversible changes in the environment. Rising environmental problems are the cause of natural disasters, the threat to ecosystems, human life and health. It is important to form environmentally conscious thinking among the population, the formation of environmental trends in the green economy in order to form social priorities for the harmonious coexistence of human and the environment. The formation of environmentally conscious thinking both at the level of the individual and at the level of major business operations in regions, states, the global socio-political system is based on the use of modern digital technologies. The use of Internet resources and social networks directly affects the formation of public opinion. Thus, the article analyzes the digital resources of leading public organizations working to address issues of environmental development. Through the analysis of digital resources, mechanisms for digital promotion of information have been identified and proposed for use by the authorities. Mechanisms can be used to form environmentally conscious thought at the level of public administration, namely public marketing. The development of a public marketing system to ensure environmental safety is identified as one of the priorities of state environmental policy.

1. Introduction

In the context of global challenges, environmental issues have great relevance. According to United Nations research, most of the priorities for sustainable development in accordance with the approved Concept of Sustainable Development relate to environmental issues. In particular, the world community highlights the problems of human access to clean drinking water, changes in terrestrial and ocean ecosystems, rational use of natural resources, including energy efficiency, rational consumption, peace and law and order (because military conflicts have a negative impact on the environment and destroy the ecosystem) and other. These problems are global in nature, to some extent they are being fought by all countries of the world. At the same time, since environmental problems are global and cannot be solved only by local efforts, it is appropriate to highlight the lack of a unified environmental policy and the formation of environmentally conscious thinking in the global dimension. The result of man-made human impact on nature has been a tendency to increase natural disasters, climate change, global



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warming by 3-5 degrees Celsius, which will lead to desertification of land and reduce the amount of fresh water, which is not enough [1]. These trends will continue and grow. To date, more than 83% of species of flora and fauna have been destroyed by man-made activities. Thus, the problem of developing effective mechanisms of environmental policy at the level of public administration is relevant.

According to statistics, in 2021 the number of Internet users on the planet was more than 4.5 billion people. At the same time, in 2010 this number did not reach two billion. Accordingly, in ten years the number of Internet users has more than doubled. 4.2 billion people actively use social networks in their daily lives [2]. Accordingly, it is advisable to define the resources of the Internet and social networks as the basic resources for informing the population of the planet and the formation of public opinion. Note that the majority of users belong to the younger generation, so the trend of increasing the number of Internet users will only increase. Therefore, it is advisable to identify mechanisms for the use of digital resources in the system of public marketing in order to increase the effectiveness of environmental policy.

2. The Purpose and Objectives

The main goal of the investigation is to determine the digital mechanisms of public marketing aimed at the formation of environmentally conscious thinking.

In accordance with the purpose of the study, a number of tasks were set and performed, in particular:

- to analyze the activities of the world's leading environmental organizations,
- identify digital environmental positioning mechanisms used by international NGOs,
- to analyze the possibility of implementation of digital mechanisms of ecological positioning, which are used by international public organizations, in the system of public marketing.

3. Analysis of Recent Research and Publications

Methods of analysis, induction and deduction, comparative analysis, statistical analysis were used in the work to determine the digital mechanisms of public marketing aimed at the formation of environmentally conscious thinking. Accordingly, a database of relevant information has been formulated, which allows to assess the effectiveness of digital mechanisms in creating environmental policy both at the level of public organizations and at the state level.

Due to the great relevance of the topic of environmental policy and the global level of environmental issues, the topic has been analyzed in the works of many authors. In particular, Ishel Bianco, Igor Ilin and Alexander Iliinsky considered the issue of digital technologies as an element of the corporate culture system of large companies aimed at ensuring their environmental friendliness [3]. A number of authors have considered the development of digital technologies, including in the public sector, namely Trusova, N. V., Oleksenko, R. I., Kalchenko, S. V., Yeremenko, D. V., Pasiaka, S. R., & Moroz, S. A. [4]. The works are devoted to the issues of public marketing and development of ecological policy Olena Uhodnikova, Viktoriya Svitlichna, Svitlana Aleksandrova and Sofiiia Kravtsova [5]. The issues of environmental protection and environmental policy in the works are investigated in detail George Lăzăroiu, Luminița Ionescu, Cristian Uță, Iulian Hurloiu, Mihai Andronie, Irina Dijmărescu [6]. Romanova, D E Morkovkin, V N Nezamaikin, A A Gibadullin and M A Ivanova considered the formation of environmental policy at the level of individual states [7]. Thus, the development of environmental policy and its information support at the public level have been considered in the works of many scientists. However, the uniqueness of the research material lies in the attempt to adapt the best experience of world public environmental organizations to the system of information support of public marketing processes.

4. Presenting Main Material

Global environmental development issues are attracting the attention of the international community. A large number of public activists defend the harmonious existence of human and nature. Associations of public activists work to ensure ecological balance, protect ecosystems, form environmentally con-

scious thinking, ensure the rational consumption of resources and energy, combat climate change and other pressing issues of environmental development.

Greenpeace is one of the world's largest non-governmental organizations working on environmental issues. The organization was established in 1971. It is headquartered in Canada, where the organization was founded, began operations, and the first Greenpeace community activists appeared. The main task of the organization is to promote ecological revival and the formation of environmentally conscious thinking in the world's population.

The basic principles of the organization were defined as environmental protection. Among the main priorities:

- combating global warming;
- conservation of biodiversity, including oceans;
- preservation of virgin forests;
- transition to a peaceful atom;
- rational use of nature, including ecological agriculture;
- stop production of toxic materials.

The organization's most extensive network is in Asia, the least Greenpeace community activists in Africa, due to local poverty, low education and access to information.

The information resources used by the organization are as follows. The organization has its own website. The site has a very good visuals and interface. On the home page of the site you can find branches and representative offices in all countries of the world, which are located for convenience in alphabetical order. The site is translated into 37 languages. The basic version of the site is presented in English, the most common language in the world - Spanish is represented by a number of national sites based on local dialects. Immediately on the home page of the site there is a call to action - "Join Greenpeace. Together we can change the world" [8]. The use of calls to action in digital resources is a powerful tool to attract attention and engage people in the information on the site. The site provides information about the organization, news, implemented projects. The site is decorated in a single style, has bright photos that illustrate the text, the texts are concise, clear and meaningful. The organization has a good content on the Facebook page. The information is accompanied by videos, even a new Facebook tool such as TV series has been singled out [9].

The international organization that is the center of environmental research is called Global Nest. It brings together scientists, engineers working on the development of ecology and the environment. The association attracts stakeholders with an interest in sustainable development. The main task of the organization is to develop methods and technologies of environmental development aimed at protecting the environment in order to ensure sustainable development of mankind [10]. The main information resources of the organization are a research journal and holding scientific and practical conferences that bring together the world's leading scientists and environmental activists to find solutions to global environmental problems. The autumn conference was held in 2019 in Greece, its topic was "International Conference on Environmental Science and Technology" [11]. According to the results of the conference, research materials are published in the public domain through placement in international scientometric databases. The official website, the website of the journal and the conference mainly have information about the scientific activities of the organization. Thus, these information resources are a communication platform for scientists. The research results are not presented on the websites, but are posted on the profile sites of international scientific databases. This has both disadvantages and advantages. In particular, the site is not overloaded with information and is not significant due to the large number of downloaded resources. However, the negative is that the main results of the work are not presented on the organization's website. The site provides information about the organization and its main activities, including [10-12]:

- combating climate and nature change;
- ensuring sustainable development;
- protection of water resources;

- development of mechanisms of ecological policy at micro-, meso- and macro-levels.

An important element of environmental protection is the protection of animals. The largest organization dealing with animal protection at the global level is the World Society for the Protection of Animals (WSPA). It is a public organization represented in more than 150 countries. It has more than 900 branches and representative offices on all content of the planet. The main tasks of the organization are the following [13]:

- counteraction to cruelty to animals;
- creation of a global animal protection movement;
- rehabilitates animals;
- works with reserves;
- develops and lobbies for legal documents that ensure the protection of animals (in particular, the organization has developed a World Declaration of Animal Welfare, submitted for approval by the United Nations).

The history of the organization dates back to 1953. The official date of establishment of the organization is 1981, but the organization is the successor to two organizations that worked long before the union, namely the World Federation for the Protection of Animals and the International Society for the Protection of Animals. The organization's website provides information about its history and main activities, projects implemented by the organization. It is important to be able to join the work of the organization directly through the site [13].

World Wide Fund for Nature - a public organization whose work is dedicated to the restoration of ecosystems. The organization is directly engaged in research work in the field of ecology. It unites more than 5 million activists and employees of the organization, is the world's largest environmental organization in terms of membership. The public organization's offices have been relocated in 120 countries around the world. In total, the organization currently has more than a thousand environmental projects in all parts of the world. The organization operates mainly through charitable contributions, which indicates a high level of trust in the organization and its active positioning as an environmental defender. The main task of the organization is to ensure the harmonious coexistence of man and nature, the preservation of biodiversity on the planet. At various times, the organization was a closed club, which included representatives of the royal dynasty of Great Britain, representatives of the Rockefeller and Rothschild clans, leaders of the monarchical dynasties of the Middle East. Subsequently, the fund became a global organization, which during its work has implemented more than 11 thousand environmental projects in different countries. The advantages of the official website of the organization should determine the blocks of projects that are presented immediately on the home page. With this structuring, the user can immediately select the desired direction. The site has a convenient way to register and help the organization. The site is visually attractive, has a lot of quality photos and infographics [14]. The organization's official Facebook page has almost 3 million contributors. The information there is provided promptly, it is advisable to identify not only the news, but also a large amount of analytical material. The page has a variety of content and good visual design.

Having analyzed the main information resources of the world's most environmental NGOs, it is advisable to accumulate the results of the study in the form of the following table (Table. 1)

Thus, the analysis identified the main mechanisms and digital tools used by global NGOs to formulate environmental policy and protect the environment. The main task of information resources is the formation of environmentally conscious thinking and informing people about environmental problems, finding methods to solve them. At the level of public marketing it is very important to form environmental values. Environmental policy has an important social role, so it should be a priority of the public administration system. At the level of governments, the policy of ratification and implementation of global regulations in the field of environmental development is pursued.

However, such work is not enough. It is advisable to consider the possibility of creating and positioning state information resources aimed at protecting the environment. The issue of forming the

information component of environmental policy lies in the field of public marketing for a number of reasons:

- people trust official sources more;
- environmental development has an important social role, so it should be a priority of the state;
- the state can use not only open resources, but also administrative mechanisms to promote environmental policy;
- since the main element of the system of ratification of international environmental documents are public authorities, they must be the first to inform the public about the ecological state of the environment.

Table 1. Main information resources of the world's most environmental NGOs.

Name of the organization	Year of creation	Headquarters	Task	Digital resources
Greenpeace	1971	Canada	promoting ecological revival and the formation of environmentally conscious thinking in the world's population	Official site: https://www.greenpeace.org/global/ [8] Facebook page: https://www.facebook.com/greenpeace.international [9]
Global Nest	-	-	development of methods and technologies of ecological development aimed at environmental protection in order to ensure sustainable development of mankind	Official site: https://www.gnest.org/ [10] Official site of the scientific-practical conference and scientific journal of the organization: https://cest2019.gnest.org/ [11] https://journal.gnest.org/ [12]
World Society for the Protection of Animals (WSPA)	1981 (successor in 1953, the World Federation for the Protection of Animals and 1959, the International Society for the Protection of Animals)	London	protection of animals, counteraction to cruel treatment of breeds	Official site: https://www.worldanimalprotection.org/ [13]
World Wide Fund for Nature	1961	Swaziland	harmonious coexistence of human and nature, conservation of biodiversity on the planet	Official site: https://www.worldwildlife.org/ [14] Facebook page: https://www.facebook.com/worldwildlifefund [15]

According to the analysis, it is recommended to use the following mechanisms for digital positioning of environmental issues:

- creation of official websites of representative offices of state authorities dealing with environmental policy issues,
- maintenance of pages in social networks of representations of the state authorities which are obscured by questions of ecological policy,
- visual support of official pages of sites and pages of social networks: photos, video content,
- formulation of appeals to the population on environmental policy,

- creation of resources for joining environmental actions and projects through the official pages of representations of state authorities dealing with environmental policy issues,
- formation of infographics on the main indicators of ecological development with presentation of tendencies of ecological development,
- formation of a clear structure for providing information on the environmental policy of the state.

5. Results

As a result of the investigation, the main mechanisms of digital information positioning of environmental development processes were identified. As a result, the requirements and mechanisms for the effective influence of official digital sources on the formation of environmental awareness of the population are identified.

6. Discussion

The result of the study identifies innovative approaches to building a system of public marketing with the aim of positioning environmental policy and the formation of environmentally conscious thinking.

7. Conclusions

As a result of the study, the main international environmental organizations, the tasks of their activities, implemented projects, information resources they use were analyzed. All public organizations have official websites. Official sites have information about the organization itself, its activities, implemented projects and news. Some organizations have official pages on the social network Facebook. The site and pages are actively updated. The information is visually beautifully decorated. Among the mechanisms that should be used in public marketing, the results of the analysis identified mechanisms for public involvement, structuring information, its official dissemination to prevent shakes, development of trend infographics for visual perception of information.

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