

Features of eco-labeling in the context of sustainable development goals

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Abstract. In the process of research, the international system of environmental labeling, which arose under the influence of global challenges and the initiative of the UN and the goals of sustainable development set for it in order to save our planet from pollution and the human environment, was considered. In order to significantly reduce the man-made load on the environment and stop the processes of degradation of its quality, it is necessary to radically change the existing management practice. Environmental certification and environmental labeling are recognized as one of the ways to achieve the set goals. One of the main criteria for choosing environmentally safe products is the ecological labeling of products that have passed ecological certification. The world experience of managing an ecologically efficient development model shows that one of the key measures for the formation of environmental awareness of the population and ensuring "sustainable consumption" is ecological certification. Today, various eco-labels are widely used (national, international, individual branches of production). The strict standards of the eco-certificate motivate manufacturers to make their production more ecological, and give consumers a simple and understandable tool for choosing products. A sociological survey was conducted in order to find out the advantages of the consumer of ecologically safe products and the level of awareness of citizens in this field. According to the results of a detailed study of its results, it was established that ecological labeling is a promising direction and a real marketing tool, which is an effective means of increasing consumer loyalty to products.

1 Introduction

The set of measures to ensure environmental safety becomes an objective regularity. Today, we can already talk about greening at the global level, when states cooperate and conclude appropriate agreements to reduce the negative impact. In order to significantly reduce the man-made load on the environment and stop the processes of degradation of its quality, it is necessary to radically change the existing management practice. That is why sustainable development is based on the following principles and principles: the principle of interaction - man depends on

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nature and vice versa, which creates the prerequisites for economically beneficial interaction of ecological processes and business goals, i.e. environmental protection, investments in resource-saving equipment and products; the need to limit the use of energy resources, which are one of the most threatening factors for the environment, in particular by reducing energy intensity; limited use of water resources.

One of the ways to achieve the set goals, the UN calls environmental certification and environmental labeling [1]. In the conditions of ever-increasing competition, attracting the attention of consumers to their products becomes a priority task for manufacturers. Among the tools for attracting the attention of buyers, it is worth highlighting the advertising of products in the mass media, on the street, increasing the popularity of the brand, the presence of medals and diplomas of various exhibitions on the product packaging. However, it is not enough to draw attention to products, you need to win the trust of customers. The trends of the consumer market are such that only such products, the quality of which is indisputable, arouse the trust of buyers. Environmental labeling is one of the ways to inform the buyer about the high quality of products. Today, it is not enough to simply offer a quality product, it is necessary to confirm its quality and environmental safety. Non-food products (computers, paper, stationery, clothing, construction and finishing materials, detergents and cleaning products, floor coverings, household appliances, furniture, vehicles, fuel, etc.) can be marked with ecological labeling. food products (bakery, groceries, agricultural products, etc.); services (restaurants, shops, hotels, production of various types of energy, tourism, etc.); works (construction and finishing works).

2 Formation of the international system of environmental labeling under the influence of global challenges.

In 1987, the International Commission on Environment and Development introduced a new concept of human existence - "sustainable development". This concept is designed to stimulate the economic growth of the countries of the world at the same time as improving the ecological quality of products and preserving the environment. The goal of sustainable development is to assess the maximum possible load on the environment in each specific market, within which it is able to naturally restore its qualities and characteristics.

In 2008, the UN prepared a new environmental protection program UNEP, the goal of which was to restore the economy and increase employment while simultaneously accelerating the fight against climate change, land degradation and poverty. A "Green Economy Initiative" was announced to help governments green the economy by realigning and refocusing policies, investments and spending on a number of sectors such as clean technologies, renewable energy, water services, green transport, waste management, green buildings and sustainable agriculture and forestry. In June 2009, the Organization for Economic Co-operation and Development (OECD) adopted the Declaration on "Green Growth". In developed countries (France, Germany, Canada, Great Britain, etc.), the greening of national scientific and technical programs is actively taking place, in which important environmental technologies are being introduced. In 2012, the World Wildlife Fund and the "Cleantech" company published a rating of countries that have organized favorable conditions for the development of new business in the field of environmentally friendly technologies. The first places in the rating were taken by Denmark, Israel, Sweden, Finland and the USA.

The world experience of managing an ecologically efficient development model shows that one of the key measures for the formation of environmental awareness of the population and ensuring "sustainable consumption" is ecological certification. In 1994, a global network of ecological labeling (Global Ecolabelling Network) was created, which included multinational ecological signs, thereby confirming the recognition of these symbols by the world society.

More than 50 countries around the world have implemented environmental labeling programs [2].

Unique environmental tools provided by environmental standards (environmental criteria) for GEN members have now been introduced:

- environmental labeling programs are perceived and supported by producers, due to the fact that they participate in the development of environmental standards (ecological criteria), although they do not have a decisive voice;
- standards are regularly updated on the basis of leading scientific studies of the life cycle of products and analysis of production practices, raising the bar of requirements for environmental characteristics of goods of a certain product category;
- in order to obtain the right to apply ecological labeling, not only the applicant's production capacity and products are evaluated, but also the ecological characteristics of all its supply chains;
- a clear way of removing products with an expired service life, especially those containing hazardous substances, including those that affect climate change, is defined [3].

To date, more than 30 different ecological signs are used in the world. In the countries of Western Europe, the system of environmental labeling of products and services is actively developing and already covers almost all groups of goods. Today, various signs of environmental labeling are widely used - these are both national and international, as well as signs of individual branches of production, for example, the textile industry - Oeko Tex, the forest industry - FSC, etc. The only post-Soviet state represented in this system is Ukraine, whose national symbol "Green Crane" was officially included in the network in 2004 (Fig. 1) [4].

3 The main criteria for choosing an ecological label.

Since January 1, 2009, it has become mandatory for manufacturers of ecological products to use the EU logo (Ecological products) on their packaging. The advantage of the EU logo is that consumers of all EU countries will be able to easily identify an ecological product, regardless of the country from which it was imported. This is, in particular, the mark of the British "soil organization", which sets standards for organic products in agriculture, food, cosmetics, and partly in the pharmaceutical industry. Soil association, "Soil organization" - a sign in the form of a triangle of three arrows, which means a closed cycle (creation - application - disposal), shows that this packaging is suitable for further processing. Inside the triangle is usually one or two numbers indicating the type of material. This symbol appears on packaging made from recycled or recyclable material.



Fig. 1. Ukrainian environmental mark ("Green Crane") [4]

The main types of EU environmental labeling include:

1. Environmental labeling of products of the European Union is indicated by the ecological sign "Flower". Today, the EU eco-label covers a wide range of products and services, including cleaning and technical products, paper products, textile products, home and garden products, lubricants, travel services [5].
2. Environmental labeling of products containing hazardous substances is indicated by the sign of a crossed-out tank on wheels, applied to the products, and means that the waste of these products does not belong to household waste and cannot be thrown out at the same time as household waste.
3. The Nordic Swan eco-label is the first international eco-labeling system created by the Council of Ministers of the Nordic countries in 1989. To date, this is one of the most common ecological signs operating in the Scandinavian countries (Finland, Sweden, Denmark, Norway).
4. The most popular sign in Europe is the "Blue Angel", which was first used by the Federal Republic of Germany in 1977. It is interesting that "Blue Angel" was most widely used among manufacturers of such product groups as: paper made from waste paper and paper waste, toilet paper, computers, printer cartridges, heating devices. It should be noted that most buyers pay attention to the absence or presence of ecological labeling of such products as varnishes and paints, paper and packaging made from secondary raw materials, furniture, office printing devices [6].
5. Marine Stewardship Council (MSC) mark - The Marine Stewardship Council established in 1996 for seafood. Today, four fishing companies carry the MSC logo [7].

The world's most famous eco-labels are shown in Fig. 2:



"Northern Swan"
(Finland, Sweden, Denmark, Norway)



"Flower of the EU"
(European Union countries)



"Blue Angel"
(Germany)



"Green Sign"
(USA)



"Ecosign"
(Japan)



"Ecological choice"
(Canada)

Fig. 2. Signs of ecological labeling of the leading countries of the world [8]

Manufacturers are recommended to specify the percentage of "recyclability" next to the sign, for example: "Made from 95% recycled cardboard." The sign "Do not throw away! Hand over to a special reception point" indicates the need for separate collection and disposal of used power sources (batteries and accumulators) containing some dangerous substances, for example, mercury, cadmium, lead. "Green dot" is a symbol of financing, collection, use, sorting and recycling of packaging.

One of the main criteria for choosing environmentally safe products is the ecological labeling of products that have passed ecological certification. Environmental labeling is a voluntary method of certification and labeling of environmental indicators, practiced all over

the world, a sign that can be found on the packaging of domestic and foreign goods. Environmental labeling is intended not only to help manufacturers of environmentally safe products promote their products and increase competitiveness in the market, but also identifies products or services that have proven to be environmentally superior in a certain category [9].

Ecolabelling is actually a sign of environmental friendliness, not a sign of quality or safety, although these aspects are also taken into account. The purpose of environmental labeling is to stimulate the influence of the market to improve the state of the environment - to prevent environmental pollution during production, use, and even during processing, products have lost their properties. International standards ISO 14021, 14024 and 14025 establish requirements for the development of voluntary environmental labeling of three main types - depending on the criteria and degree of involvement in the environmental labeling process of a third party. There is a distinction between type I environmental labeling (own environmental labeling), type II environmental labeling (environmental self-declaration), and type III environmental declaration (environmental declaration).

There are many third-party labeling systems that go further than conventional ecolabeling. For example, they focus only on one branch of production or one environmental criterion (for example, energy saving) or take into account one stage of the life cycle. An example of such an environmental label is the German "Blue Angel" label.

When it comes to organic products and the development of their markets, an extremely large role is played by the "organic" guarantee system, which includes specialized inspection and certification bodies. In its activity, this system uses both legal norms that establish mandatory requirements within the framework of state regulation, and certain defined standards that are voluntary agreements — the result of reaching a certain consensus of consumers and producers of goods and services. In today's world, the prevailing trend is to replace legal norms regarding organic products with standards, because the latter are easier to apply and more easily amenable to international harmonization, as well as due to the deregulation policy that is resorted to in many countries.

The system of inspection of ecologically clean products in most EU countries is mixed - public-private. State bodies carry out accreditation of private certification institutions and supervise their activities. Those, in their turn, control the producers of agricultural products and processing enterprises and certify their products according to one or another "organic" standards, which must be coordinated with the basic standards of the International Federation of Organic Agricultural Movement IFOAM. Export of organic products to the EU from other countries requires the mandatory presence of a certificate issued by a certification body accredited in the EU.

In this way, this guarantee system (certification, inspection and labeling) ensures compliance with organic standards of the entire process of agricultural production and processing up to the level of the final product, including its packaging, labeling and delivery to consumers. From July 1, 2012, for all packaged organic products produced in the EU, it is mandatory to apply a special unified logo on the packaging, parallel to which private, regional or national logos of organic products can be placed. The unified logo of organic products adopted in the EU, on a voluntary basis, can also be used for marking organic products not packaged for the final consumer, as well as for organic products imported into the EU from third countries [10].

There are already more than 120 "organic" farms in Ukraine, but the majority of them are certified by foreign certification companies in accordance with European "organic" standards. Ukrainian participants of the organic movement, with the support of the Swiss Agency for Cooperation and Development (SDC) and the Swiss State Secretariat for Economic Affairs (SECO), created a national certification body - "Organic Standard". In 2018, Ukraine adopted the Law "On Basic Principles and Requirements for Organic

Production, Circulation and Labeling of Organic Products", which defines the basic principles and requirements for organic production, circulation and labeling of organic products, the principles of legal regulation of organic production, circulation and functioning of organic products market of organic products, legal bases of activities of central executive bodies, subjects of the market of organic products and directions of state policy in the specified areas [11]

Environmental labeling affects the achievement of sustainable development goals. Ecological signs take into account the entire life cycle of a product: from the extraction of raw materials to the processing of packaging. Euromarking is a set of standards according to which the product receives the required certificate.

The strict standards of the ecological certificate motivate manufacturers to make their production more ecological, and give consumers a simple and understandable tool for choosing products. In order to obtain an environmental certificate, companies must: carefully use natural resources and reduce waste, use recycling water supply systems and return possible waste and waste to the production cycle for this - transition to rational models of consumption and production (CSD 12); monitor electricity consumption - a contribution to the fight against climate change (SDG 13); to use woodworking products from sustainable sources of forest use (CSR 14); reclamation of land for the development of quarries for the extraction of mineral raw materials - a contribution to the preservation of ecosystems and biodiversity (CSR 15).

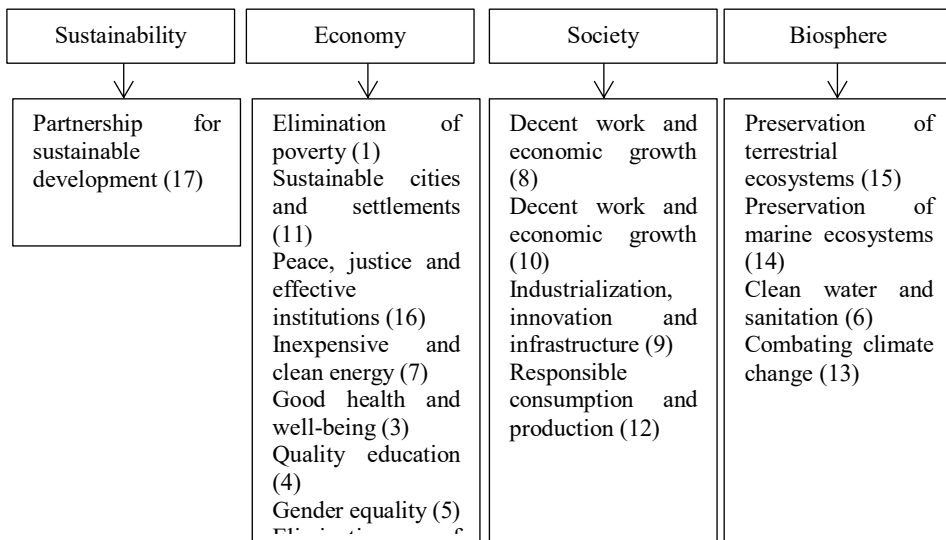


Fig. 3. Compliance of the number of certification standards with the Sustainable Development Goals (SDG) [12]

Products with ecological labeling must not contain dangerous components that can harm human health - this is a direct contribution to the UN's concern for a healthy lifestyle of the population (SDG 3). Environmental certificate contributes to sustainable economic growth and business competitiveness (SGD 8).

When receiving an environmental certificate, the company-owner receives the following benefits of environmental labeling: legitimate and demonstrable use of the term "environmental product" and other statements about environmental friendliness in communications at various levels (b2b, b2c, b2g); separation from competitors who have not yet had time to respond to new market challenges; strengthening the image, increasing loyalty on the part of consumers, partners and retailers; cost reduction thanks to resource-saving production technologies, optimization of packaging and logistics; growth of the consumer audience with the help of

environmentally responsible buyers; participation in private and public tenders with an environmental component [12].

The experience of developed countries in Europe, America and Asia shows that environmental labeling has enormous potential. According to the World Ecolabelling Association, there are more than 1 million names of products certified according to the life cycle around the world. Of GEN's 30 member ecolabelling programs, 85% are included in national green procurement plans. Improving environmental labeling standards will help reduce the impact of certified products on the environment. Increasing the environmental literacy of buyers and building requirements for the presence of an ecological certificate into the procurement system of retail and government bodies will provide the necessary support for the ecological labeling tool and improve the quality of the environment [13].

A quantitative sociological study of the need for environmental labeling was conducted through personal street interviews. The purpose of the survey was to find out whether there are consumer preferences for ecologically safe products and the level of awareness of citizens in this field.

Respondents were tasked with identifying:

- peculiarities of residents' understanding of the term "environmentally safe products";
- the motivation for its purchase, as well as to determine the level of popularity of voluntary environmental certification and various types of environmental labeling and consumer preferences for environmental labeling.

The conducted survey showed that 52% of buyers know about the ecological labeling of products or have heard something about it. At the same time, it can be confidently asserted that this not too high level of awareness is connected with the lack of a broad advertising campaign, since most of those who "don't know" belong to such population groups for which the main source of information is mass media (workers, employees, pensioners, housewives). It turned out that the majority of respondents associate the concept of "environmentally safe products" with safety for human health (55%), and only 12% know that the basis of environmental safety is the minimization of the negative impact on the environment.

At this stage of the development of the consumer market, when choosing products, the client is primarily guided by information about the composition of the product. 74% of respondents called this criterion a priority (which is especially interesting, this is the largest indicator for people with both high and low income levels). It should be noted that the price is only the third most important factor affecting the buyer's choice. That is, according to the buyer's ideas, today it is the composition of the product that can provide him with the most reliable information about the quality of the selected product, its naturalness. It is this information that enables citizens to make a choice in favor of one or another product in accordance with the main principle — taking care of their health.

According to the survey, the concept of "environmentally safe products" (which means the presence of ecological labeling) has a stable association with the fact that such products are safe for human health.

Answering the question, what would be most important to you when buying ecologically safe products, 73% (!) of respondents indicated that they take care of their health in this way. Buyers believe that the presence of an ecological label on the package - a sign certifying the safety of the product for health and the environment - gives an opportunity to come to a conclusion about the quality of the product (41% reported that this factor is of great importance). At the same time, such indicators as the presence of exhibition and competition medals, trademarks, product advertising in the media and on the street, brand popularity do not play an important role and almost do not affect the choice of products (12–25%). Yes, the ecological labeling itself can increase the loyalty of the buyer to a certain brand of goods. A company that cares about the health of the consumer will undoubtedly form more trust in the latter than a company that invests huge amounts of money in advertising.

Therefore, the factor that now ranks fourth in importance — the presence of an eco-label — has real potential to increase its rating in the eyes of the consumer. When strengthening the already existing association "presence of ecological label = verified composition", most consumers will focus directly on the composition of the product, but on the presence or absence of ecological labeling on the packaging. This makes it possible to significantly facilitate the consumer's choice of products and save time spent on the search for a quality product.

Studies have shown that the main obstacle to increasing the demand for economic products is the small amount of such products. Despite the lack of awareness about the environmental safety of products, already today 85% of citizens agree to buy it, even if it will be 10% more expensive compared to untested similar products, and the willingness to pay more for ecological products is high both among those who know about ecological labeling, and among those who have not heard of her. And even if ecologically safe goods are 30% more expensive, 28% of buyers will purchase such products. These are very high indicators, which indicate that the consumer expects only high-quality, environmentally safe products from the manufacturer, and one of the guarantors of this high quality is ecological labeling.

One of the tasks of the survey was to determine the degree of popularity of various environmental labels. Unfortunately, for 44% of the respondents, none of the signs on the product packaging were known. However, these figures only indicate that there are still very few products with ecological labels on our market. It should be especially noted that for only 19% of consumers, the presence of an ecological label will have no meaning, and for others, an ecological label on the package will increase trust in the quality of the product.

4 Conclusion

"Responsible consumption" requires an urgent reduction of environmental impacts through changes in the production and consumption of resources and goods. The One Planet Sustainable Consumption and Production Strategy and Action Plan, covering such areas as sustainable lifestyles and education, sustainable public procurement, is a global platform for capacity building and partnerships to achieve this Goal. Informing consumers; development of sustainable tourism, ensuring sustainability in the field of construction and operation of buildings and structures; sustainable food systems, etc. [14]. Environmental labeling is one of the reliable tools for the transition to sustainable production through consumer demand. Focusing on products marked with ecological labeling, the consumer makes a conscious choice in favor of products with improved characteristics regarding their impact on the environment and health during the life cycle. Under the influence of consumer demand and a competitive environment, manufacturers are forced to meet the requirements of voluntary environmental standards and systematically work on improving the environmental characteristics of products, improving technology and modernizing production.

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