SUSTAINABILITY INDICATORS DEVELOPMENT OF BIO-SECTOR ENTERPRISES

Valentina Nikolova-Alexieva
University of Food Technology - Plovdiv, Bulgaria, valentina_nikolova@abv.bg
Katina Valeva
University of Food Technology - Plovdiv, Bulgaria, tomika_888@yahoo.com

Abstract: In 2015, the UN adopted the Program for Sustainable Development until 2030. The program consists of 17 goals aimed at eradicating poverty, conserving the planet's resources and ensuring prosperity. Each goal contains a set of indicators that must be achieved in 15 years. Achieving them requires the joint efforts of governments, civil society and business. The bio-sector, as a segment of the circular economy, covers all sectors and systems that rely on biological and environmental resources, their functions and principles. It can lead to the discovery of new opportunities to provide food, goods and energy without depleting the planet's limited biological resources. It can turn algae into fuel, recycle plastics, produce furniture or clothing from waste, and create organic fertilizers from industrial waste products. It has the potential to create over a million new "green jobs" by 2030. This shows that bio-sector enterprises have a key role to play in accelerating the achievement of the UN's global goals. They contribute to reducing climate change and waste, creating new jobs and building sustainable development in a modern society. Achieving sustainability at the global level depends on the adoption and application of the principles of sustainability in business policy and practice, ie building business models in bio-enterprises aimed at integrated and balanced and sustainable development of the three elements in the concept of sustainable development - social and environmental and economic.
Keywords: sustainable development, bio-sector, bio-enterprises

1. INTRODUCTION

The modern understanding of the essence of the concept of sustainable development relies on a systematic approach to the basic values and the formulation of normative principles, which are the basis for consensus of the development goals. In this regard, the structure is built on the basis of united, harmonized and balanced three separate systems: environmental, economic and social. (Fig. 1) The three systems, united and complementary, form the pillars of sustainable development - economy, environment, social sphere.[285]

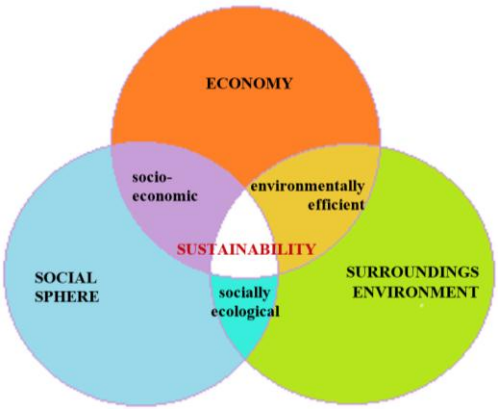

Fig. 1. Structure of the concept of sustainable development

The strategic goal of sustainable development is to satisfy human, material and spiritual needs, aspirations and dreams for a better life and prosperity. Achieving this goal requires the maintenance of such consumption standards that fit within the limits of environmental capabilities and are accessible to all participants in social and social processes. A key requirement is the exploitation of resources, the direction of technological development and changes in institutions to be in harmony and to increase both current and future opportunities to meet human needs and aspirations.

[285] Krachunov, H. Sustainable development of production systems. Color Print, Varna, ISBN 978-954-760-222-9, 2010

Ideas embedded in the concept of sustainable development:286

- Harmonious development and use of natural (natural) factors of production and environment (land, water, forests, mineral resources, etc.) on the one hand and human resources on the other;
- Combining the goals of economic and social development with the requirement to preserve and improve the quality of the environment;
- Preservation and further development of all positive, favorable for sustainable development processes and trends.
- Principles of the concept of sustainability. The transition from unsustainable, disharmonious and unbalanced development to sustainable development is a process of consciously and consistently following the following requirements and principles of sustainability:
- Achieving a level of development at which economic activity harms the environment (balance between economic and environmental aspects).
- Maximum use of resources ensuring economic development in the interest of the population (balance between economic and social aspects).
- Addressing development challenges not only in the interests of the current generation, but also of future generations who have equal rights to resources. (balance between social and environmental aspects).

2. LITERATURE REVIEW

Bio-enterprises perceive the concept of sustainable development as a balance between the economic interests of business, the environment, employees, society and future generations. The extent to which they contribute to the achievement of the global goals for sustainable development depends to a large extent on the results they achieve in their production and economic activity.

The result of the operation of bio-enterprises depends on the impact of various factors on the internal and external environment, therefore the stability of the enterprise can be divided into internal and external.

Internal sustainability depends on all functional units, providing a positive trend in the main production and financial indicators.

External sustainability is achieved through conflict-free interaction with the environment: consumers, competitors, suppliers, financial institutions, tax and other regulatory authorities.

The interaction of internal and external sustainability forms the sustainability of the enterprise as a whole. On the one hand, the external environment affects the internal stability of the enterprise, on the other hand, ensuring internal stability has a favorable effect on the external, providing the enterprise with high competitiveness and a suitable image in the business sphere.

It can be said that the main tool for managing the sustainable development of bio-enterprises is the analysis of the factors of the internal and external environment in which they operate, and the implementation of a system for monitoring their condition and development will ensure timely detection of deviations and taking the necessary measures to maintain sustainability.

The contribution of bio-sector enterprises to achieving global goals, in the context of the concept of sustainable development, depends on their internal sustainability, and in order to characterize internal sustainability, three internal interconnected components are identified: economic, social and environmental. In Fig. 2 presents a model of the relationship between the goals of global sustainability, as an external factor influencing enterprises and their internal sustainability, achieved through the development of the three elements of sustainability - economic, social and environmental.

[286] Vasileva, E., Business Environment and Sustainable Development of the Regions, UNWE Publishing House, S.2019, p.19

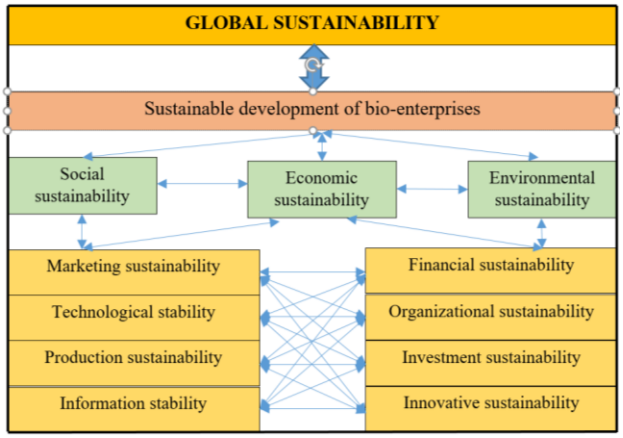

Fig.2. Model for sustainable development of bio-enterprises

Social sustainability - shows the degree of social protection of the company's staff. It is determined by the level of remuneration and social security of employees in enterprises, the degree of their participation in the distribution of profits, their influence on internal management processes. In addition, social sustainability shows the ability of enterprises to maintain a stable number of jobs and create new ones.

Environmental sustainability as a component of the sustainable development of the enterprise is related to the environment and minimizing the harmful impact of production and economic activities of the enterprise on the environment. It is characterized by the need to anticipate and prevent problems in the field of ecology and the environment at the design stage of production, as well as the choice of technologies - saving natural resources, using renewable resources and technologies that do not harm the environment.

Economic sustainability - is established by analyzing the financial results of the activity. It is associated with increasing the profitability of the financial and economic activities of the enterprise, with the growth of business activity, with maintaining solvency and creditworthiness, increasing investment and innovation activity. In Fig. 3 presents the factors influencing the economic sustainability of enterprises. Among them are:

Fig. 3. Elements of economic sustainability

- *Financial sustainability* - is associated with the ability of enterprises to provide resources to increase revenues and reduce costs in the bio-enterprise.
- *Investment sustainability* is manifested in the ability of enterprises to achieve economic growth and expand their production and economic activities, taking into account risk factors and uncertainty in investment planning.
- *Innovation sustainability* - aims to ensure the systematic development and implementation of innovations (product, technical, technological, organizational and managerial, marketing) aimed at achieving planned goals for sustainable development - economic, social and environmental.

- *Production and technical sustainability*. The sustainability of production aims to ensure resources and their efficient allocation and use. To a large extent it depends on the degree of mechanization and automation of production processes.
- *Organizational and managerial sustainability* is characterized by a stable level of organization of production and labor of staff, internal management and external relationships with customers and suppliers, partners, competitors and government institutions.
- *Marketing sustainability* reflects the integrity of marketing strategies to meet the company's goals.
- *Technological sustainability* is characterized by the use of progressive and advanced technological processes, introduction of new technologies.
- *Information stability* - to provide the necessary information in the form, volume and quality necessary to ensure the activities of the enterprise.

In Fig. 4 presents a system of indicators and criteria for monitoring and control of the activity in the enterprises of the bio-sector, taking into account different directions of their activity. It can be used for complex monitoring and control of the results of the activity of the individual enterprise, taking into account both the economic and the social and ecological activity. The advantage of the system is that:

- fully covers the responsibilities of the enterprise;
- ensure compatibility with world standards and recommendations in the field of sustainable development;
- the data from the annual financial statements could be used as a source of information for the estimates.

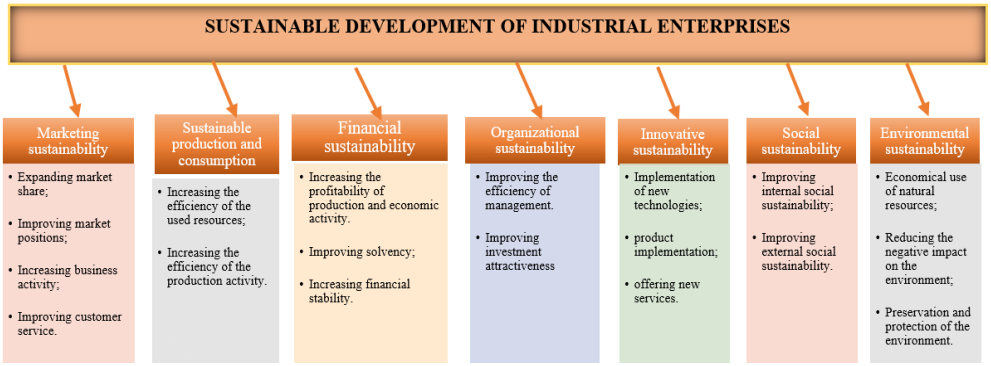

Fig. 4. System of indicators for achieving balanced sustainable development of the enterprises from the bio-sector

3. CONCLUSION

The system of indicators allows for quantitative and qualitative assessments of the results of activities on each indicator and criteria that affect the sustainable development of bio-enterprises, and sustainable enterprises are the basis of global sustainability. Industrial enterprises perceive the concept of sustainable development as a balance between the economic interests of business, the environment, employees, society and future generations. In this regard, their commitment to the concept is focused on the following areas: *Products and packaging* must be designed in such a way as to ensure their safety throughout their life cycle. *It is necessary to increase* the relative share of recyclable materials used in the production of products and packaging. In parallel, *the energy used in the production process* must be generated from renewable and environmentally friendly energy sources. Services to be organized and implemented in order to meet real human needs. They must be based on the principles of justice and equality. Waste and environmentally incompatible products must be reduced, destroyed or recycled. *Chemical and physical substances*, agents and conditions in the production and sale of products that pose a danger to human health must be eliminated. The products must not contain substances harmful or dangerous to human health or to the ecological balance. *Achieving energy and resource efficiency*. Workplaces and ongoing technological processes in enterprises must be designed in a way that ensures minimization or elimination of chemical, ergonomic, physical and other types of risk. The organization of the business should be oriented towards increasing the efficiency of the use of human capital. Safe, healthy and dignified working conditions must be ensured in enterprises. Enterprise staff must be paid fairly for their work and supported through economic incentives, cultural diversity and social engagement. The long-term economic and financial stability of the production enterprises is ensured.

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