

THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT CONCEPT IN AGRIFOOD COMPANIES

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Abstract. The principle of sustainable development is a fundamental assumption of Ecological National Politics that compels agri-food companies to protect natural environment. According to the principle of sustainable development, companies in their activity should follow equally economical targets as well as social and environmental ones. Practical implementation of these purposes demands the introduction of ecological management systems into agri-food companies, which enlarge the efficiency of proecological activities in those units.

Key words: sustainable development, the environmental management, companies of agri-food, ecological politics.

INTRODUCTION

The creation of sustainable development idea is directly connected with exhausting of nature resources and considerable pollution of each environmental component. This concept assumes the balance necessity between economical targets as well as social and environmental ones. In order to create the full-balanced life model the activity integration in three crucial areas is necessary: achievement of long-term economic growth, nature resources and environment protection as well as social development which assures the realization of basic public needs.

The activities that should ensure the implementation of sustainable development rules have to come from integration of state administration, scientific circles, companies and citizens. The role of administration consists in creation the law conditions for economic entity proper to introduction the principles of ecological development. Scientific circle has to intensify the works on proecological projects and technologies, and busi-

nessmen should be prepared for that introduction. Citizens after informative actions and courses should be inclined to changing the life model, in which the main target is also the functioning that can be described as ecological one.

The aim of this work is to present the implementation of sustainable development principles in agri-food companies on the background of Ecological Politics in Poland. The main tool for assuring the introduction of that principle by processing industry is the environmental management which is the instrument stimulating every ecological change in a company.

ECOLOGICAL POLITICS OF POLAND

In Poland the beginning of stable and well-balanced development falls in 90s, and a considerable date was the year 1991, when the parliament passed the document under the title "National ecological politics". It has been based on the following documents, which have defined sustainable development concept [Sidorczuk 2001]:

- Stockholm Declaration – issued during UN conference in Stockholm in 1972,
- World Charter for Nature from 1982 – it defined the fundamental people behaviour rules towards biosphere,
- "Our Common Future" – commission report made in 1987 lead by G.H. Brundland for World Conference of Economic Development (WCED),
- Declaration from Caracas in 1991 – presented the strategy for protected areas.

Simultaneously the Europe Agreement, which was the base for establishment the association between Poland and European Communities and their countries signed in 16.12.1991, laid Polish authorities under the obligation to implement the sustainable development principle. In 1992 there II Conference in Rio de Janeiro took place- the so-called Earth Summit, what was the initiative of UN, 20 years after the I Conference in Stockholm. The leading watchword on conference was "Environment and Development", within a framework of that 5 documents were passed which reflected the fundamental principles of social and economic politics taking into account the nature environment protection [Nowak 2001]:

- Earth Charter,
- Agenda 21, i.e. a global plan of activity in order to achieve the sustainable development, with division of roles and responsibilities for all participants,
- The United Nations Framework Convention on Climate Change,
- Convention on Biological Diversity,
- Forest Principles.

The superior targets of European Union ecological politics comes from the general declaration of Conference in Rio de Janeiro, which defined 27 rules and conditions, that should be followed by countries implementing the principle of the sustainable development. Because of that the primary aim of EU ecological politics is to ensure such long-term economic growth and stable life quality improvement, which will not cause the deterioration of the nature environment condition and will make possible to use its resources and values for the future generations.

Single European Act formulates the following purposes of the Communities in the range of environment protection [Fiedor and Poskrobko 2000]:

- preservation, protection and improvement of environment quality,
- activity aiming at human health protection,
- assurance of reasonable and rational nature resources utilization.

This document specifies also the rules of ecological politics of European Union that is e.g. the principles of pollution prevention “at the source”, the principle “polluter pays”, as well as the principle of well-balanced and stable development.

In 2000 Polish government passed “Long-term strategy of stable and well-balanced development – Poland 2025”. This document lays out the politics aims in the range of all three pillars of balanced social, economic and environmental development. The superior target of this strategy is to assure increase of prosperity for polish families, strengthen their material independence and sense of security.

Document Poland 2025 assumes that Polish economy structure will be making alike the structures of economies in high-developed West and formulates the following tasks in that range [Sidorczuk 2001]:

- 1) the considerable share increase of high-developed techniques in gross national product,
- 2) increase of economy absorptive power towards scientific research results,
- 3) specialization in development of chosen advanced technologies,
- 4) promoting modern proecological technologies and management methods.

In principal all of these transformations should bring our country closer to sustainable development model; however it is worth to notice that relative decrease of traditional branches of industry significance should be connected with increasingly application information technologies with the purpose of boosting efficiency, especially the most efficient utilization of environment resources. The crucial role for implementing stable and balanced development plays the industry restructuring. Especially it concerns branches strongly burdensome for environment – coal-mining, metallurgy, some branches of chemical industry. One postulates to introduce production patterns featuring a minimum burdensome for people and environment, international competitiveness and the best utilization of nature and human resources, as well as fixed assets. It must be connected with utilization the best available technologies in international scope and management method, and after all with limiting the activity of heavy industry and growth the significance of the high-tech industries.

The realization of the national politics according to sustainable development in recent years in Poland manifested itself in e.g. reduction of sulfur dioxide emission (almost 50%), nitrogen compounds (almost 37%), decrease consumption of water (nearly 25%), decrease of energy-consumption, decrease of raw material consumption, growth of protected areas [Jaśkiewicz and Kurdziel 2004].

THE SUSTAINABLE DEVELOPMENT OF AGRIFOOD COMPANIES

Since 2001 in European Union the VI Program called “Sixth Environment Action Programme. Environment 2010: Our future, our choice” has been valid, where the Directorate General for Environment has proposed five the so-called strategic movement streams [Sixth... 2001]:

1. Improvement existing legislatives:
 - introduced changes in legislation,
 - admitting a new strategy for introducing environmental law: “name, shame and fame”,
 - pursuit of inspection systems improvement,
 - acting in the range of the fight with environmental crime.
2. Integration the matters of environment with politics towards other economy sectors:
 - bringing into effect the requirements from Nice,
 - establishing additional new integrating factors and mechanisms,
 - intensive development of instruments for monitoring the integration process of ecological politics with politics realized in other spheres of social and economic reality.
3. Cooperation based on partnership with companies:
 - supporting the processes in environment management and ecological audits, as well as encouraging companies to publishing their achievement in this field,
 - promoting on a large scale the so-called green companies and products,
 - launching the integrated product policy,
 - widening the application of legislatives concerning ecological responsibilities.
4. The assistance at creation of proecological behaviors, as well as consolidating the activity of non-governmental organizations, citizen movements within a framework of common union policy.
5. Considering environmental demands in town and country planning and management:
 - publishing and making information available about the importance of taking into account the environment demands in town and country planning,
 - including the sustainable development principle into regional politics,
 - the exchange of experience concerning proecological cities development,
 - introduction of strong ecological accents into agro-policy and expanding the partnership in realizing the tasks of balanced tourism.

Within the confines of the sustainable development specified several principles and method referring to do companies sector that is [Polska... 2000]:

1. Consistent principle implementation of pollution liquidation at the source through:
 - change of energy carriers,
 - clean technology dissemination,
 - minimization of energy and raw material consumption,
 - common emission standardizing in industry, power engineering and transport,
 - introduction of product standards restricting pollution emission into environment during the full-life product cycle.
2. Incorporating environmental costs into account, especially with respect to energy- and material-consuming producing processes and products, as well such form of transport, which cause considerable deterioration of environment quality.
3. Development and implementing new economic instruments for the environment management, i.e. common ecological insurances, authorization markets and flat-rate ecological charges for household small family companies.
4. Creation of coherent and stable law and financial system compatible with the rule “polluter pays”, ensuring efficiently financing the environment protection.

5. Implementing solutions designated for assurance the ecological safety, i.e. biological and chemical ones, in the form of notification or licensing procedures for productive and commercial activity, working out the rescue plans and population advising.
6. The source of energy diversification coherently to ecological demands, i.e. more energy produced from renewable sources.
7. Widening the range of estimation system for impact on environment and introducing strategic procedures of estimations for impact on environment.
8. Realization of research programs used to boost the efficiency with nature resources utilization in productive processes, especially the development of alternative fuels technologies, making possible to replace petrochemical fuels with ones based on carbohydrates.
9. The development of mechanism applicable to gather information, control environment state and keeping emission standards as well as including the additional processes and phenomena to monitoring and statistics system.
10. Common implementation of companies' certification system.

An important role in creating the sustainable development is assigned to small and medium companies, featuring flexibility, creativity and ability to adaptation for changes in local, national and world markets. It is considered as necessary to remove law and institutional barriers, which hinder the operating of small and medium companies sector, stimulating their creativity and facilitating access for technology. For the sake of large amounts of entities in this sector the control and execution of environment protection regulation is hindered. Therefore the promoting of environment-friendly production and management methods is particularly important. These methods aim at preventing negative environmental consequences from their activity.

The most important purpose of ecological politics is to reduce resource consumption of productive process, because this is the only way to realize the principle of liquidation the pollution, burdensome and dangers at their source. Decreasing of resource consumption allows additionally to achieve economical benefits in the form of decreasing inputs on production, and as a consequence the decreasing the burdens which come from exploiting nature resources. The strategy for production balancing as the result of decreasing resources utilization embraces the creation of system for control the resource consumption by introducing indicators for water-, material-, and energy consumption as well as for wastes generation into public reporting and statistics system, into national environment monitoring, into the local and regional sustainable development and environment protection systems and into sector strategies.

The continuation of national ecological politics form 1991 represents the II Ecological Politics, that brings the sustainable development principle, generally defined in documents of higher standing, to the level of implementation targets, that are laid in particular fields of economy [II Polityka... 2000]. Thus appointed medium-term targets (for realization in the years 2003-2010), directly referring to companies, concern:

- introduction of water consumption standards in the most water-consuming fields of production on the basis of the principle about application of best available techniques (BAT),
- elimination the exploiting of groundwaters for industry usage,
- introduction into practice voluntary agreements between administration bodies and economy chambers as well industry associations or specific plants in the

- scope of implementation of restricting programs for material consumption and wastes generation,
- withdrawal out of the production and utilization or at least limiting the utilization of dangerous substances and materials, specified in EU directives and international law regulations,
 - propagation of the ecological estimations for product life cycle and introduction a legal obligation of carrying out such estimations for products demanding high material consumption, wastes generation and containing the dangerous substances,
 - doubling the utilization of the energy from renewable sources with the ratio to 2000.

THE ENVIRONMENT MANAGEMENT SYSTEMS AS A TOOL FOR IMPROVEMENT THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT PRINCIPLE

The implementation of the sustainable development principle in agri-food companies is possible only through The environment management, that is introduction a number of government body activity, taking aim at creation the appropriate foundations in order to every employee may plan and fulfill his duties, taking into account environment protection, in the highest possible degree. The environment management in ford industry consists in such production activity, in the framework of that permanent control and reduction of nature resources consumption go on, what leads to systematic reduction the pollution forming and emission.

After the domination environment protections methods such as “end of pipe” one and preventive strategies of pollution liquidation “at the source”, now the “environment management” doctrine, in the level of factory and service-plant as well as in the level of every work-stand, is increasingly applied. It has a positive effect for eco-development process because of the obligation to permanent rising of requirements level and self-improvement mechanism (ISO 14000 standard and EMAS directive).

There can be in the environmental management process in Poland several stages distinguished related to preferring different activity strategies .They are as follows [Ejdys 2005]:

- dilution strategy (since 1960) – consisting in decreasing pollution concentration disposed with waste water through increasing flows,
- filtration strategy (1961-1989) – “end of pipe” appliances were applied (e.g. waste water treatment plants, dust filters),
- cleaner production strategy (since 1990) – there were pollution generation restricted, which had been emitted previously,
- product life cycle management strategy (since 1995) – based on a simple rule, that on the every stage of product life cycle it is necessary to try to reduce or minimize the pollution emission connected with its production, sale, consumption or operating,
- environment management strategy (since 1997) – based on the implementation, by organization units, the environmental management system, integrated with general unit management system, which consists in activity’s environmental aspects recognition, elaborating, introducing and maintaining environmental policy of the company.

Among companies, which take up ecological challenges, different activity strategies may appear depending on the way of treatment environmental purposes: as danger or as market chance. A passive approach concentrates only on obedience the regulations in order to protect the company against excessive costs. A defense approach focuses on withdrawal products from the market and partly resignation from the most environmental burdening technology and improvement the utilized technologies and manufactured products. An innovative approach consists in adopting new technological and productive solutions, which favour nature environment. An offensive strategy consists in applying modern environment management systems according to norm ISO 14 001 standard or EMAS [Łuczka-Bakuła 2005].

ISO 14 000 is the best known Environment Management System, that as the main aim has the improvement of general environmental activity effects, according to ecological politics of the company. Unlike environmental audits and impact estimations, his norm can treated as an innovative approach to the environment management for the sake of promoting the continuous improvement process. All of the standards from 14 000 series, except ISO 14 001, are a collection of instructions, the guide with descriptive documents. Therefore companies can apply for the certification only within the confines of ISO 14 001. The number of Polish companies, that have certificates confirming the implementation of Environment Management System according to ISO 14 001, has been increasing every year. At the end of 2002 there were already over 400 such units. The reason of so large interest in implementing that standard and obtaining relevant certificate is simultaneously obtaining the warranty for customers, recipients, co-operating parties, shareholders and other partners, that the effective quality assurance system works, which let satisfy their needs and be up to growing demands coming from competitors [Wąsikiewicz-Rusnak 2003]. The implementation of this environmental management system first of all should bring to lower the company pressure on environment, and as the further consequence to improve its state. Of course besides improvement company image on market and material effect achievement, it ought to prevent from deterioration society health and dangers related to permanent excessive exploiting natural raw materials in management processes.

The system supported by Clean Production strategy is another environment management system, which is based on voluntary commitment of the company to continuous decreasing its impact on environment. The purpose of Clean Production is to limit the risk for people and environment both from processes and products. This strategy is geared for preventing the unneeded phenomena "At the source", that is in the place of generation. It features a total approach that is expressed through considering the impact on the whole environment and on its individual elements in every stage of product life cycle and through including this idea into general strategy of company development. What else, the Clean Production concept assumes integration of activities of all entities taking part in the whole manufacturing and utilization chain for a given product in order to decrease negative impacts on environment. Clean Production is also characterized by systematic activities to achieve a steady improvement of product features, compatible to growing requirements and occurring new possibilities. Thanks to that the activity on behalf of cleaner products manufactured with cleaner method, is characterized by systematic improvement along with scientific advance, sharpening the environmental requirements, growth of ecological consciousness of producers and consumers. Distinct from the control and rendering harmless of generated pollution, the Clean Production

rule has a principle “predict and prevent”. It aims not only at obedience the standards in the range of pollution concentrations, but also preservation the nature resources. The implementation of the Clean Production principles is profitable, causes decreasing raw material and energy purchase expense, lowering charges and fines for environment exploiting, as well as improvement company competitiveness. The Clean Production strategy allows applying continuity and graduation of proecological activities for obtaining effects on higher and higher level of realization the crucial purpose, which in the global scale is the sustainable development [Rauba 2000, Jabłoński et al. 2005].

Along with the admission o Poland as a member of European Union it was necessary to adopt into legislation and practical activity in the field of environmental protection the voluntary forms of self-limiting by companies their environmental impact. To his groups there should be rated the implementation of environment management systems, with the forefront in Eco-Management and Audit Scheme – EMAS, fixed in European Union legislation since 1993 by decree of Council of Europe. The legislatives concerning EMAS are different from union directives, because they do not have to be transferred to legislation of a member of European Union, but owing to the form of decree it automatically became Polish legislatives in the day of Polish entrance to the European Union. The assumption of EMAS is the promotion of the sustainable development principle with respect to production and consumption and generating frameworks for efficient, continuous improvement, consisting in minimization the companies influence on environment. This is a utility adapted to demands of market economy and from the beginning it assumed voluntary participation of interested economic entities in that system. However, the companies, which will decide to register in EMAS system, are obliged to implement the effective environment management system and fulfill all requirements specified in the decree. Especially important is to accept the principle, that voluntarily applying to EMAS principles means that it is necessary in companies to implement “self-control” systems, supplementing the traditional methods and forms of environment protection, which consists in executing the relevant law requirements by inner control [Sobiecki 2002].

CONCLUSIONS

The sustainable development concept, as the basis of II Polish Ecological Politics, assumes the balance between economic, environmental and social targets. This approach should ensure fulfilment the development needs of the present generation, along with the possibility to fulfil the same needs by future generations. Practical implementation of the sustainable development concept is possible with engagement all social groups, also with food industry companies.

Productive companies utilize the environment resources, and thus in progress of production cause the pollution each of its components. Environment protection strategy applied in agri-food companies aims to restrict their negative influence on environment and to implement practices reducing resources and energy consumption of production process. Indispensable aid in realization of these assumptions is to apply the environment management, often organized in companies as the systems of environment management. Polish food companies see to an increasing degree the necessity for the implementation of new organization and technological solutions compatible with the sus-

tainable development idea, because they want to maintain their position towards competitors. The most frequently chosen way to achievement this purpose is to implement and certify Environment Management System according to ISO 14 001 standard and EMAS system.

The management of productive companies is aware, that now there is no other possibility to remain on the market, despite of the costs, which are inseparably connected with environment management systems. The implementation of the sustainable development principle assures them the compatibility with ecological political directives, as well as it causes, that the company is perceived by the consumers as an environmental friendly one.

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Streszczenie. W artykule zostały przedstawione podstawowe założenia koncepcji zrównoważonego rozwoju oraz polityki ekologicznej kraju opartej na idei ekorozwoju. Ponieważ przedsiębiorstwa sektora rolno-spożywczego mają duży wpływ na degradację środowiska naturalnego, zaprezentowano również strategię ochrony środowiska w tych przedsiębior-

stwach. Strategie prośrodowiskowe wymagają skutecznego instrumentu do prawidłowego funkcjonowania, którym jest właściwa organizacja działań środowiskowych, czyli zarządzanie środowiskiem. Może ono przybierać formy systemu zarządzania środowiskowego, np. według norm ISO 14001 lub wg EMAS.

Słowa kluczowe: zrównoważony rozwój, zarządzanie środowiskiem, przedsiębiorstwa rolno-spożywcze, polityka ekologiczna

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