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Article

Sustainable development of agriculture: Theoretical aspects and their implications

Economic and Environmental Studies (E&ES)

Provided in Cooperation with:

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Suggested Citation: Kociszewski, Karol (2018) : Sustainable development of agriculture: Theoretical aspects and their implications, Economic and Environmental Studies (E&ES), ISSN 2081-8319, Opole University, Faculty of Economics, Opole, Vol. 18, Iss. 3, pp. 1119-1134, <https://doi.org/10.25167/ees.2018.47.5>

This Version is available at:

<https://hdl.handle.net/10419/193133>

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Sustainable development of agriculture - theoretical aspects and their implications

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Abstract: The objective is to provide a systematization of concepts connected with sustainable development of agriculture (SDA) as the basis for indication of directions of changes in Polish agriculture. The author applied descriptive and comparative analyses based on a survey of the literature to indicate the differences between the described concepts. Both sustainable agricultural and rural development (SARD) and multifunctional rural development (MRD) could be connected with reduced agricultural production, which would bring positive and negative environmental consequences. The multifunctional agriculture cannot exist without production, so it is more favourable for SD, however it should be based on environmental requirements. Then it is close to sustainable agriculture. Considering these concepts, the author formulated and used his own definition of the SDA and its objectives. The sensitive rule of sustainability with secured critical natural capital is the proper one for agriculture in Poland. Currently, Polish agriculture is in dual development (industrialisation and sustainable transition). For the SDA, the support for agriculture should be conditioned by compliance with basic environmental standards and by provision of public goods. It depends on properly directed and effectively implemented environmental and economic measures of the CAP.

Keywords: sustainable development of agriculture, sustainable agriculture and rural development, sustainable agriculture, rural development measures

JEL codes: O130, Q15, Q180, Q570

DOI: <https://doi.org/10.25167/ees.2018.47.5>

1. Introduction

Sustainable development (SD) is an important concept for contemporary society and economy. It is accepted globally as the layout for economic policy of international organizations (including United Nations Agendas, or the European Union). In many countries, it is also included in constitutional principles in the macro scale (for example in the Constitutional Act of

Poland)¹. Beside such a holistic approach, the SD is a concept referring to the particular sectors of economy (among others to agriculture) and to functional areas (rural areas). The goal of this paper is to elaborate a systematization of the concepts connected with sustainable development of agriculture (SDA) as the basis for indication of directions of changes in Polish agriculture. The concepts are: sustainable agriculture and rural development (SARD), sustainable agriculture, multifunctional rural development (MRD) and multifunctional agriculture. To indicate differences between them, the author used such methods as descriptive and comparative analyses based on a survey of the relevant literature and strategic documents of international organizations. It enabled formulation of the author's own definition of the SDA. It was discussed as the basis for indication of directions of changes in agriculture in Poland. A special emphasis was put on the environmental dimension of the SDA.

2. Theoretical aspects of sustainable development in rural areas

One of the first concepts connected with sustainability of particular sectors of economy or ones related to some functional areas was the SARD. Its definition was formulated during the conference organized by Food and Agriculture Organization of the United Nations (FAO) in Rome in 1989: it is a development of rural areas which is managed with the use and protection of natural resources and with introduction of technological and institutional changes which allow meeting the needs of present and future generations (FAO, 1989). Later on, the SARD was involved in the Rio Declaration and in Agenda 21 of 1992. There are three main priorities of this process (Zegar, 2003):

- food security,
- provision of sufficient income, decent living and working conditions for all people employed in agriculture,
- preservation of natural resources and environmental protection.

It is visible that such a broad interpretation refers to all the three dimensions of sustainable development (social, environmental and economic) and includes goals which are important both for people living in countryside (welfare) and outside of it (food security and environmental protection). Diverse natural and semi-natural environment, diversity of landscapes

¹ Article 5, The Constitution of the Republic of Poland of 2nd April, 1997 (*Dz. U.* No. 78, item 483).

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and culture are important factors of the economic development of entire society (Meyer Von, 1996). Consequently, the SARD is one of the tasks of the European Union (EU) in the framework of the Common Agricultural Policy (CAP), as well as within its environmental and regional policies.

Beside the SARD, both Agenda 21 and the Rio Declaration indicated an important role of another process, which is coincident with the SD, that is the MRD. The MRD involves several functions of rural areas: social (employment, services for local communities, rural culture), ecological (preservation of landscape and biodiversity, water management, assimilation of pollutants), production, regional (settlements, infrastructure), touristic (Kociszewski, 2015). It is connected with diversified social and economic activities which contribute to spatial, socio-cultural, and residential aspects of development.² For inhabitants of rural areas these functions are other sources of income than agricultural production. They are conducive to maintaining viability of the countryside and – at the same time – deliver services for people from other areas (cultural and environmental values). It is worth underlining that agricultural production is not necessary for the MRD and it could have an impact on the SD (Table 1, Figure 1). That is the main difference in relation to the SARD in which agricultural production is an integral element. It also distinguishes the MRD from the next presented concept.

The multifunctional agriculture is a system integrating economic, production, social, cultural and natural environmental functions of the sector (Wilkin, 2010: 31). It cannot exist without production of food or raw materials. For this reason it is important for the SD – production is the function which can bring both negative and positive environmental consequences (Table 1). On the one hand, intensive methods of farming are destructive; on the other one – high nature value farming is one of the necessary conditions for biodiversity. Consequently, the cessation of agricultural production is dangerous for nature in rural areas.

Extensive methods of farming foster cultural values with social institutions conducive to traditional or organic farming. It is a positive feedback associated with sustainable types of production. There is also a possibility of negative feedback – connected with industrial agriculture. It occurs, when it adversely affects traditional village culture and, consequently, weakens the conditions for extensive, environmentally friendly production. That is why, right proportions between different functions of rural areas should be kept and support for

² About MRD see more: (Wilkin, 2008).

multifunctional agriculture must be targeted. Farms subsidies (from the CAP) should be conditioned by compliance with basic environmental standards for producers and by provision of services connected with public goods delivery. It is not directly expressed in relation to multifunctional agriculture (Wilkin, 2010: 31). These conditions could assure that multifunctional agriculture would be close to sustainable agriculture, which clearly stresses the need to reduce negative and to enhance positive environmental effects.

Table 1. Environmental benefits and risks associated with chosen processes in rural areas

The process/ type of agriculture	Environmental benefits	Environmental risks
SARD	Agricultural production and other economic activities could enhance rural amenities, making countryside an attractive place of residence, work and recreation. It could also contribute to a reduction in intensive production with its negative environmental consequences.	Development of economic activities other than agricultural production could contribute to replacement of local producers by entrepreneurs from other areas (income leakage from rural areas/externalities left behind there). It could result in a reduction in the extensive farming and intensification of production.
MRD	Diversification of economic activities can contribute to a reduction in intensive agricultural production. It would limit environmental pollution and prevent rural areas from negligence.	<ul style="list-style-type: none"> • Development of non-agricultural economic activities in rural areas may reduce not only intensive, but also high nature value extensive agriculture, which is crucial for preservation of traditional rural landscape. Production would be substituted by other functions and it would limit delivery of environmental public goods which are inseparable from farming. • Decline in the volume of production in one place could be offset by intensification of production in other one. It could be in different region or in the same area (village). Agricultural pressure on environment could increase both in the macroeconomic and local scale.
Multifunctional agriculture	Agricultural production is a boundary condition for functions connected with preservation of landscape, environmentally friendly land use, conservation of habitats and rural culture. ³	Possible intensification of agricultural production or development of other economic activities, could be dangerous for environment - e.g. unsustainable tourism, housing, industrial production.
Sustainable	<ul style="list-style-type: none"> • Minimization of the negative 	Too restrictive environmental requirements

³ Rural landscape consists not only of terrain but also elements of natural and anthropogenic origin. On the one hand, long-term human intervention has reduced a lot of valuable natural values; on the other hand, it contributed to the creation of new habitats and elements constituting biological diversity.

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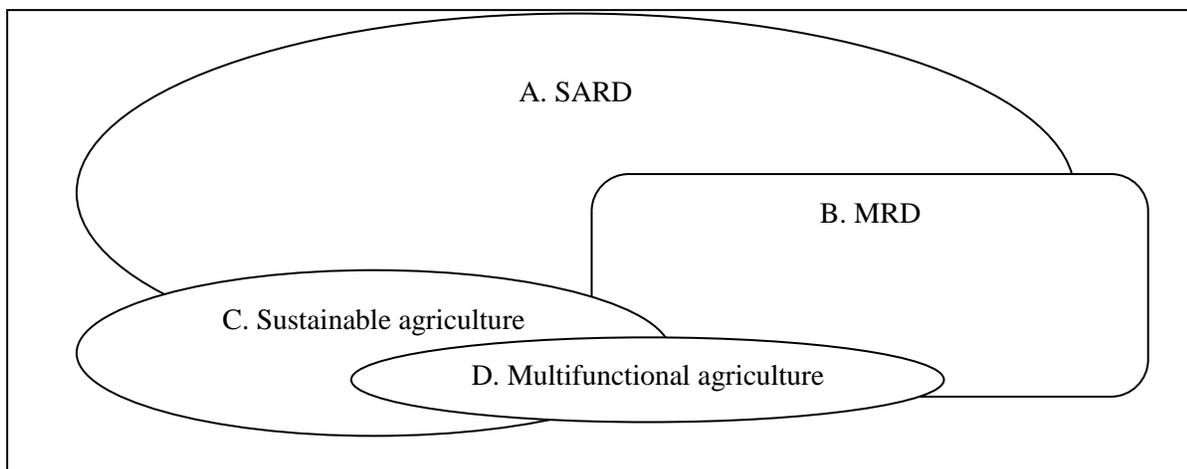
agriculture	influence on environment thanks to restriction of ecological requirements; <ul style="list-style-type: none"> • Support for natural and semi-natural elements of rural nature and landscape 	could reduce the number of extensive farms and the volume of sustainable production. Then they would be substituted by industrial production.
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Source: author's own elaboration

Sustainable agriculture is a production of high quality goods and services in the long run, taking into account economic and social structure in such a way that the base of renewable and non-renewable resources is maintained (Runowski, 1999). In the long term, it has to secure a desired level of production, as well as to meet social needs without qualitative and quantitative degradation of basic environmental resources. In the microscale, sustainable agriculture is based on environmentally friendly methods of production, it provides an adequate income for farmers and is favourable for the social situation. It is based on small and medium-sized farms, which influences a wide and relatively fair distribution of income from agriculture and other economic activities. Organic and integrated agriculture are the systems which are close to that pattern. In the macroscale, it is a system of management integrating agricultural, social, economic and environmental policies, based on sustainability principles, and it enables possibilities of economic and social existence for agricultural holdings and rural structures. According to that approach, rural communities should be engaged in global responsibility for the SD.

To summarize the considerations of the ideas and concepts relevant to the SD in rural areas, it is desirable to make a schema presenting their interactions (Figure 1).

Figure 1. The meaning and relations of chosen processes and types of agriculture in sustainable development



Source: Kociszewski, 2013: 49.

The area of ellipse A represents the SARD, and area B – the MRD. The both squares involve agricultural production and non-agricultural activity. The SARD partly includes a multifunctional development (which is essential in this process), but is not fully covered by it. Ellipse B goes outside ellipse A because of a possible reduction in the production as a result of diversification of rural activities. Consequently, it may reduce functions inseparable from agricultural production, which are related to the provision of environmental public goods. For the same reason, the MRD does not fully coincide with multifunctional agriculture. Besides, some non-agricultural functions (e.g., housing, processing industry in rural areas) can be harmful to environment. That is why area D goes beyond ellipse B. Multifunctional agriculture displays very close relationship with sustainable agriculture (C), but is not always compatible with it. The functions of agriculture can be positive and negative (e.g., food processing or unsustainable development of tourism), therefore, area D does not fully coincide with area C. In the light of the SD, they should cover each other. That would be a desirable direction of agricultural development. Sustainable farms (especially organic ones) could transform into ones running multifunctional activity, with necessary agricultural production. Food processing, gastronomy, catering, hospitality, education, tourism or craft would ensure them an additional source of income. At the same time they would deliver public goods for the part of society living outside rural areas.

3. Sustainable development of agriculture

Taking into account the remarks given above, it is possible to attempt to sort out the terms connected with the SDA, and then to formulate its synthesized interpretation related to Poland. It should be taken into consideration that agriculture can generate both positive and negative externalities, as well as provide or downgrade public goods. It depends on the type and the method of production. Consequences of agricultural production may be deferred – in some cases the current losses in landscape of diversity are underestimated, but they could prove severe for future generations. In this context, they should be included in analyses connected with the economic optimum in terms of inter-temporal Pareto optimum – presumed as maximum of

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welfare of all actors involved in a particular situation in the given time period. (Fiedor, 2002).⁴ Thus, a complex layout should be referred to the concepts of the SDA.

In the characteristics of the SDA, there is a need for an analysis of four basic principles of sustainability.⁵ They are connected with conditions for welfare of future generations. The key questions are: How to divide the capital into two parts – natural and anthropogenic ones? Are they substitutable? Management of the capital in the long run can be adjusted to the following rules:

- The weak rule of sustainability (connected to neoclassical economics) – destruction of the natural capital is compensated (substituted) by creation of the anthropogenic capital. Substitution is not limited as long as the whole value of the capital is sustained, without paying attention to its structure: to the natural and anthropogenic capital. According to Turner, Pearce and Bateman (1994), it is an extremely techno-centric approach which ensures only a very low degree of sustainability. It is assumed that free market mechanisms and accompanying technological progress would allow for the replacement of consumed environmental resources by new achievements. In the opinion of the author, the implementation of this rule may lead to the depletion of the critical natural capital.⁶
- The sensitive rule of sustainability (connected to Keynesian economics, accepted in environmental economics, partly accepted in the theory of sustainable development) – the substitution of different types of the capital is limited thanks to institutional and political solutions/policies. These solutions are aimed at sustaining a safe (not necessarily equal) proportion of capitals for future generations. According to this rule, the SD requires not only the maintenance of the entire volume of the overall capital, but also stability of its structure (in practice substitution is possible only within particular elements of the capital – for example within the natural capital). Particular elements of the natural capital should be maintained in a secure proportion in relation to the anthropogenic capital. A boundary condition is to preserve the critical natural capital (Kociszewski, 2015). This approach is moderately techno-centric, ensuring low levels of sustainability, but to some extent takes into

⁴ It is worth noting that preferences of future generations must be described in an arbitrary manner. A discount rate, that reflects the benefits which will be achieved by future generations are not known. Thus, the economic theory – in spite of the advanced concepts, such as Chichilnisky criterion [Chichilnisky, 1996] – still has not developed a strict formula of intergeneration justice possible to full operationalization [Żylicz, 2010: 7].

⁵ In some classifications there are only two principles – strong and weak ones [Rogall, 2010: 225, 226].

⁶ The critical natural capital includes these elements of the natural environment which are necessary to maintain the ecosystems, and consequently, are impossible to be replaced by any other capital [Ekins et al., 2003: 159–163].

account the category of intra and intergenerational justice. It is based on the system of economic incentives so that market mechanisms are adjusted to requirements of such management of natural resources, which reduces serious cavities in the environment.

- The strong rule of sustainability (connected to ecological economics, fully accepted in the theory of sustainable development) – the natural and anthropogenic capitals are non-substitutable. The value, structure and quality of the whole capital should remain unchanged. We can destroy certain elements of the natural capital, but we must reconstruct what we have taken directly in the section we have taken it from (e.g., compensation of specific natural values in one area by the reproduction or development of similar values in another place). It requires conservation of all the types of the capital, both as to quantity and quality (substitution is impossible between species, for example). This is a moderately eco-centric approach, ensuring a high degree of sustainability. It is based on the postulate of heavily-controlled economy, with a reduced economic and demographic growth (according to some, even to zero growth).
- The restrictive rule of sustainability (connected to radical ecological movements, to extremely high regulations) – all the elements of the natural capital must be sustained (both quantity and quality), cannot be reduced or destroyed. We cannot use non-renewable elements of natural resources, but can use renewable resources only when they can be renewed/replenished at the same time as they are used. This rule is associated with the extremely eco-centric approach. The level of sustainability is very high, yet requires reduction of economic activity and population.

Both the weak, poor and restrictive rules are incompatible with the SD. It can be proved thanks to two interpretations of the three-pillar model. According to the first approach, there is a need to maintain or achieve the appropriate balance between economic development, social needs and protection of environment and its resources. None of these orders (pillars) should violate the balance in other ones. For example, economic growth should not affect the quality of environment (which may occur according to the weak principle). At the same time, environmental protection should not be overly restricted, because it would reduce the possibility of economic and social development. Consequently, the weak and restrictive principles are unacceptable.

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The second way of the interpretation refers to the applicable balance within each of these pillars, which means an equilibrium in natural environment, macroeconomic balance and social stability at the same time. Implementation of the weak rule, even if it provided a macroeconomic balance, would not guarantee an ecological and social equilibrium. On the other hand, a stopped exploitation of non-renewable resources (according to the restrictive principle) combined with a very strong reduction in the usage of renewable resources does not seem possible in the economic or social dimensions. In practice, it would result in a minus or zero growth. It is inconsistent with the SD which is designed to provide opportunities for the economic development of future generations (Górka, 2007).

In practice, the real choice is between the sensitive and strong rule of sustainability. There is a need for pragmatism in the approach because an adequate policy should be accepted in society. Otherwise, its implementation would be ineffective. It depends – among others – on the level of welfare. Society is evolving from the stage called "control of pollution" (essentially similar to the economic growth based on excessive use of natural resources), through the weak and sensitive sustainability, towards the model close to destination point (based on the strong principle) (Baker, 2006). According to the author, the equivalence of the three pillars in the SD, according to the sensitive rule of sustainability combined with the secured critical natural capital, is the nearest approach to the category of intra- and intergenerational justice. It is the basis for further existence and prosperity of humankind in the long run. It does not excessively limit needs of current or future generations. In addition, it is a kind of compromise and therefore can have a greater chance for social and political acceptance than the approach based on primacy of the environmental dimension. There is a need for participation of all actors involved in shaping rural and environmental policies (Hardaker, 1997), that should be accepted in society. Thus, it has a greater possibility of effective implementation.

Taking into account the above-mentioned considerations, it is possible to define sustainable development of agriculture (SDA). It is a process based on agricultural production ensuring safe and secure food supply, meeting satisfactory ecological, economic and socio-cultural standards for all people in rural areas and outside of them (nowadays and for future generations). That process has to ensure stability within ecosystems, whose status depends on agricultural activities. The environment and natural resources in rural areas (recognized as a whole) should not be worsened, which means that socioeconomic activities should be shaped according to the sensitive

rule of sustainability enforced by the condition that the critical natural capital is maintained in the long run. According to the author, the SDA should contribute not only to internal sustainability of rural areas (protection of water, soil and biodiversity as the base for production and consumption in rural areas), but also to external sustainability which is based on environmental values and services for the rest of society:

- The quality of environmental components in rural areas depends on pollution from agricultural sources (surface water and groundwater) and has an impact on the quality of rivers, lakes and seas (water catchment area) outside countryside.
- Agriculture could be conducive to climate change mitigation (afforestation, soil protection, care for grasslands, agricultural production for renewable energy).
- The high-nature value farming contributes to the maintenance of landscape and biodiversity which are important to the welfare of part of residents in urban areas.

To ensure intra- and intergenerational justice, there is a need for integration of internal and external sustainability.

Table 2. Objectives of processes conducive to sustainable development of rural areas

Process Dimension	SD		SARD	SDA
	Overarching social objectives (Pearce et al., 1990).	Practical goals (Pearce, Turner, 1990).		
environmental	security, intra- and inter-generational justice	fair access to environmental resources	preservation of natural resources and environmental protection	<ul style="list-style-type: none"> • preservation of natural resources and protection of environment in safe, satisfactory quantity and quality for future generations, • supply of raw materials and biomass used in renewable energies,
social	welfare, security, intra- and inter-generational justice	<ul style="list-style-type: none"> • health improvement, • improving the level of 	food security	<ul style="list-style-type: none"> • security and safety of food supply,⁷ • employment and eradication of poverty,

⁷ It is worth differentiating the terms: food security and food safety. Both of them are crucial for the objectives of the SDA. Security means that food products should be provided in adequate quantities for society and ensure competitiveness of agriculture. Food safety means that they should have high quality and contribute to positive health effects.

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		education		
economic	welfare	to increase real income per capita	<ul style="list-style-type: none"> • provision of sufficient income, • decent living and working conditions of all the employed in agriculture 	a satisfactory level of income of all employees in the sector

Source: author's own elaboration based on: Pearce et al., 1990; Pearce, Turner, 1990; FAO, 1989.

To characterise the SDA we should select its priorities. They could be formulated on the basis of definitions of the SD and objectives of the SARD according to FAO (Table 2). Overarching social objectives of the SD – according to Pearce, Markandya and Barbier, (Pearce et al., 1990) – are security, intra/intergenerational justice and welfare. Furthermore, Pearce and Turner (1990) indicated practical goals: increase in the income per capita, accompanied with other important qualitative elements of social welfare in the long run.

The environmental target of the SDA requires environmentally friendly agricultural practices and provision of public goods. Furthermore, methods of production are to be adjusted to regional and local specificities of rural areas. In such a sense it is connected with sustainable agriculture, however it is not the same as the SDA. Sustainable agriculture, is commonly interpreted in the microscale, the SDA refers to the macroscale. Taking into consideration time perspective, sustainable agriculture is static. It is the system of production, which functions at present (now and here). The SDA is based on a dynamic approach. It refers to the changes in the entire sector involving most of the types and methods of agricultural production (organic, integrated, industrial).

3. Implications for agriculture in Poland

The author is of the opinion that the sensitive rule of sustainability is the proper one for the agriculture in Poland. It would ensure an appropriate level of the socio-economic welfare and would not negatively affect the environmental balance. However, that rule should be enforced by

the condition that the critical natural capital should be sustained. Consequently, there is a need for effective regulations in the framework of agricultural and environmental policies, but they should also be enforced by environmental education to effectively raise ecological awareness. People living in countryside should know that Polish rural areas still have a significant reservoir of biodiversity or other natural and cultural values, which should be used as an asset, not a burden on possibilities of development. Therefore, it is vital to preserve these resources and use them for increasing widely comprehended social welfare in the long run. Actions, according to the strong principle of sustainability, are supported by arguments on the basis of ecological economics and sustainable economics, however – for now – they do not seem to be realistic in the light of Polish social conditions and political circumstances – the low level of welfare and the weak environmental awareness in rural areas. They are connected with the risk that the policy based on the strong rule could cause undue burden for people living in countryside and – consequently – would encounter resistance of involved groups of interest.

Changes in the agriculture in Poland towards its sustainable development involve an overall transition in the sector with the complexity of its structure. When we take into consideration the objectives of the SDA, there is a need to achieve a large production volume in the macroscale. Consequently, only a part of the total number of farms could converse into sustainable agriculture. The volume of production would not be enough for security and safety of food supply. The SDA should include evolution of other important types of agricultural production: industrial agriculture, integrated and organic farming. The key questions are related to their shares in the total farms numbers and in utilised agricultural area, as well as to environmental requirements for producers. Probably, eventual changes in the agriculture in Poland will run along two parallel trendlines:

- the industrialisation of conventional agriculture,
- environmentally sustainable transition – the development of sustainable farming types (especially organic farming).

This process can be recognized as a dual development, that is close to the strategy of bipolar polarisation. Due to the impact of the EU policy, this complex process can be regarded as an induced one – strongly influenced by external factors like the CAP and competition in the Single European Market. The dominant role of direct payments in the CAP creates preferential conditions for the first of the indicated trends. It is associated with the transformation of the

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sector in the direction "from agriculture to agribusiness". Industrial agriculture is based on microeconomic efficiency in the short term (efforts to maximize profits). Many farms will probably transform into that type of production and those which already are industrial will deepen their intensification. Industrial agriculture is destructive for the environment – it contributes to increased emissions of pollution to water, to climate change, soil contamination and erosion, as well as to losses in biodiversity.

Regardless of the negative impact of industrial agriculture on the social and ecological dimension of sustainable development, it cannot be excluded from the SDA. In some countries there are modern intensive farms, functioning in a relatively environmentally friendly way under the condition of following obligatory environmental criteria. It could also be connected with precision and/or integrated agriculture; however, when we observe legal regulations and market institutions, greater expansion of these types of agriculture does not seem possible in the short and medium time perspective. Generally, if agriculture in Poland is to evolve towards the SDA, industrialization has to be combined with the greening of conventional farming. It is conditioned by an effective implementation of the EU measures – both economic instruments (the so-called greening component of direct payments) and environmental standards for farmers (cross compliance).

At the same time, part of the farms transform towards environmental sustainability (the second indicated trend). It would not dominate in Polish agriculture; nevertheless, it is important for mitigation of negative environmental and social effects of industrialization in the sector. The development of various forms of more or less sustainable production systems is supported from the second pillar of the CAP. It mainly refers to the subsidies within agri-environmental programme and payments for organic farming (the type of agriculture, which is the closest to the SDA). Furthermore, some rural development instruments are also beneficial to multifunctional agriculture. These changes depend on the shape of the CAP and on implementation of its instruments, so the Polish authorities should enforce activities aimed at increasing the share of the second pillar measures in the CAP expenditures in Poland – especially in the next financial perspective (2020-2027). At the same time effectiveness of practical measures should be improved.

4. Conclusions

Both the SARD and the MRD could contribute to the reduction of intensive production with its negative environmental consequences. In the MRD agricultural production is not necessary – it could be dangerous because of the risks to the environment connected with resignation from high nature value farming and development of harmful non-agricultural activities. The multifunctional agriculture cannot exist without production, so it is more favourable for the SD – under the condition that production is not unfavourable for environment. Considering these concepts, it is possible to define the SDA with its objectives. That process should be based on external and internal sustainability. It was proven that the sensitive rule of sustainability is the proper one for the agriculture in Poland; however, it has to be enforced by the condition that the critical natural capital is sustained. To keep right proportions between different functions of rural areas, the support for multifunctional agriculture must be targeted. Farms subsidies (from the CAP) should be conditioned by compliance with basic environmental standards and by provision of services connected with public goods delivery.

Under the conditions of the EU membership, the agriculture in Poland is in a dual development: part of the farms are evolving towards industrial agriculture, whereas another part are in an environmentally sustainable transition. In the both trends, environmental requirements are very important. On the one hand, they should be effectively respected in industrial farms, which are the most responsible for pollution. On the other hand, they constitute organic farming as the most important type for the SDA. For the rest of the farms (especially small and medium-sized) these standards should not be too restrict – they could reduce extensive agriculture. The SDA strongly depends on properly directed and effectively implemented environmental and economic measures of the CAP. This is an important task for the Polish authorities and rural agencies.

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Zrównoważony rozwój rolnictwa – aspekty teoretyczne i ich implikacje

Streszczenie

Celem artykułu jest systematyzacja pojęć związanych ze zrównoważonym rozwojem rolnictwa jako podstawy dla wskazania kierunków zmian w polskim rolnictwie. Autor zastosował analizę opisową i porównawczą w oparciu o przegląd literatury, aby wskazać różnice między opisywanymi pojęciami. Zarówno zrównoważony rozwój rolnictwa (ZRR) i obszarów wiejskich jak i wielofunkcyjny rozwój obszarów wiejskich mogą się wiązać ograniczaniem produkcji rolnej, co przynosi pozytywne i negatywne skutki dla środowiska. Rolnictwo wielofunkcyjne nie może istnieć bez produkcji, więc jest bardziej korzystne dla SD – pod warunkiem, że produkcja opiera się na wymogach ochrony środowiska. Wówczas jest bliskie rolnictwu zrównoważonemu. Biorąc pod uwagę te koncepcje autor sformułował własną definicję ZRR wraz z jego celami. Dla polskiego rolnictwa właściwa jest wrażliwa zasada zrównoważonego rozwoju z zapewnieniem krytycznego kapitału naturalnego. Obecnie polskie rolnictwo znajduje się w rozwoju dualnym (w stronę przemysłowienia i równoważenia środowiskowego). Dla ZRR wsparcie dla rolnictwa powinno być uwarunkowane przestrzeganiem podstawowych norm ochrony środowiska i zapewnianiem dóbr publicznych. W tym celu należy odpowiednio ukierunkować i skutecznie wdrażać instrumenty ekologiczne i ekonomiczne WPR.

Słowa kluczowe: zrównoważony rozwój rolnictwa, zrównoważony rozwój rolnictwa i obszarów wiejskich, rolnictwo zrównoważone, instrumenty rozwoju obszarów wiejskich.