

# Katarzyna **SOBOLEWSKA-MIKULSKA** • Anna **BIELSKA** • Natalia **SAJNÓG**

# SOCIAL ASSESSMENT OF THE PARADIGM OF MULTIFUNCTIONAL RURAL DEVELOPMENT – A CASE STUDY OF THE MAZOWIECKIE VOIVODESHIP

Katarzyna **Sobolewska-Mikulska** (ORCID: 0000-0003-1685-1486) – *Warsaw University of Technology* 

Anna **Bielska** (ORCID: 0000-0001-6615-7578) – *Warsaw University of Technology* Natalia **Sajnóg** (ORCID: 0000-0001-8758-4122) – *Warsaw University of Technology* 

Correspondence address: Pl. Politechniki 1, 00-661 Warsaw, Poland e-mail: natalia.sajnog@pw.edu.pl

ABSTRACT: The objective of the paper is the identification of priority directions of activities for multifunctional rural development, followed by their social assessment in the context of the paradigm of the multifunctionality of such areas. Consequently, the current assumptions of the idea were confronted with reality, and expectations were confronted with need. The analysis also covers the activity of respondents in the scope of activities for multifunctional development. According to the obtained results, progress and activities in the scope of the economic (development and modernisation of technical infrastructure, technological progress, innovativeness) and social function (development and modernisation of social infrastructure) are of key importance. The paper is based on the results of a survey conducted in 2021. The survey covered residents of rural areas in the Mazowieckie Voivodeship.

KEYWORDS: rural areas, rural development, multifunctional development, survey, society

# Introduction

Development is a long-lasting process of directional changes involving distinguishable subsequent stages of transformation (development phases) of a given object (system), showing identifiable differentiation of the object in specified terms. Development is also a process of directional transformations in the course of which objects (systems) of a given type are transformed from simpler, lower, less perfect forms or states to more complex, higher forms or states, more perfect in specified terms (Wojnowski, 1962; Zaucha et al., 2015; Butowski & Włodarczyk, 2016). Rural development is a long-lasting process of economic and social transformations, including agriculture that lead to an increase in production, employment, income, and level of life in rural areas (Jadczyszyn, 2020). It is also a complicated process occurring in the rural space (spatial structure, relief, land management).

The paradigm of rural development is the multifunctional character of rural areas that should contribute to the improvement of the quality of life of residents, largely through providing workplaces and meeting various social needs, as well as to the improvement of the state of the environment and landscape (Mosiej, 2006; Warczewska & Przybyła, 2012; Akgün et al., 2014). The concept of multifunctionality should correlate with the principle of sustainable transformation of rural areas in the context of fast socio-economic growth and its effects on the man-earth relationship (Long et al., 2022). Multifunctionality should therefore cover mutual interactions, activities towards sustainable development, improvement of quality of life in rural areas, and respect for the natural environment (Roszkowska-Mądra, 2009; Knieć, 2012; Stanny, 2013; Burja & Burja, 2014; Buta et al., 2020). The process of transformation of rural areas, therefore, has to be in accordance with the rules of sustainable development, including spatial order (Donia et al., 2017).

According to many authors (Długosz, 2006; Argyle, 2004; Czapiński, 2002), the mental well-being of residents of rural areas is comparable with that of residents of urbanised areas. Satisfaction with the quality of life depends on the same factors, namely economic, social, and cultural capital, i.e. factors that shape multifunctional development. Mental well-being is largely determined by the ability to adapt and deal with new challenges in the form of modern development factors. The process occurs in the context of changing social, economic, and environmental realities. According to Perepeczko (2006), the local community is unified by family, territorial, cultural bonds, and professional experience. With time, social bonds in rural areas became weaker, and they "opened up" to non-rural areas, resulting in the expansion of the contact network and directly pointing to spatial expansion. Therefore, it is currently recommended to create local communities

with consideration of the idea of sustainable and multifunctional development of rural areas.

The authors of the article state the thesis that the identification of directions of multifunctional rural development that are of key importance in public opinion is crucial for adopting the priorities of their financing, consequently contributing to the improvement of the quality of life of residents. The objective of the paper is the identification of priority directions of activities for multifunctional rural development, followed by their social assessment in the context of the paradigm of the multifunctional character of rural areas. The social assessment was conducted by means of a survey that itself has a social dimension by reflecting the voice of the part of society directly related to and involved in a given research area. Surveys are, therefore, an important measurement tool because the local community is a credible source of information. Consequently, the current theoretical assumptions were confronted with reality, and the expectations were confronted with needs. The analysis also covered the activity of respondents in the scope of activities for multifunctional development. According to the obtained results, the progress and activities in the scope of the economic (development and modernisation of technical infrastructure, technological progress, innovativeness) and social function (development and modernisation of social infrastructure) are of key importance. The paper is based on the results of a survey conducted in 2021. The survey covered residents of rural areas in the Mazowieckie Voivodeship.

# Literature review

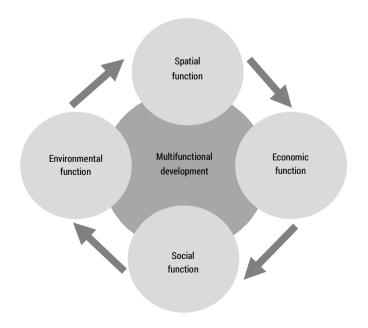
In Poland, rural areas are characterised by vast diversity and are subject to negative trends and changes, among others: the decline of the agricultural function (Kołodziejczyk, 2021; GUS, 2021), depopulation of rural areas (Jadczyszyn et al., 2020), ageing of the population (GUS, 2022), or social exclusion (Kołodziejczyk, 2021; Raczkowska & Gruziel, 2018). The implementation of the rules of multifunctional rural development is a solution counteracting this trend.

The multifunctional character of agriculture was recognised as desirable for implementation in rural areas in the RIO de Janeiro Convention in 1992 regarding environmental protection in the scope of the concept of sustainable development. Formally, the term was used in Agenda 21 and has been since applied in programming documents concerning agricultural policy. According to Kłodziński (1997), multifunctional development designates skilful integration of more and more new non-agricultural functions into the rural economy. The implementation of the multifunctional model of rural development

involves the creation of new diverse sources of income (workplaces) for non-agricultural populations and agricultural populations failing to find full employment on their own farms (Kłodziński, 1993). According to Wilkin (2010), the multifunctionality of rural areas is the diversification of economic activity in such areas, creating an environment friendly both to farmers and the non-agricultural rural population, strengthening the vitality of rural areas, and meeting the expectations of stakeholders of rural development (a large share of whom live in rural areas). Rosner and Stanny (2016) emphasise the importance of transforming rural areas into an environment friendly to residents, i.e. one that allows them to meet their needs and aspirations, particularly in the scope of work conditions and obtaining fair income, access to public services and broadly defined cultural goods, sense of participation in the life of the local community, and contribution to the occurring transformations. According to Stasiak and Zgliński (1997), radical structural transformations and modernisation of rural areas should not be only limited to the restructuring of agriculture itself but cover the broadly defined environment as well as the social and cultural issues of rural areas. Such an approach is in accordance with the assumptions of the EU Common Agricultural Policy, where agriculture development entails rural development, and the policy towards rural areas allows for their comprehensive and sustainable development.

Multifunctional development depends on and results from transformations occurring in the scope of mutually related development functions, namely spatial, economic, social, and environmental (Figure 1).

Figure 1. Functions of Rural Development



The spatial function results from the planning and spatial management processes, particularly from activities transforming the spatial structure, among others through land consolidation works (Act, 1923; Act, 1968; Act, 1982; Van den Noort, 1987; Van den Brink & Molema, 2008; Sobolewska-Mikulska, 2009; Pijanowski, 2013; Stańczuk-Gałwiaczek et al., 2018), designation of land for housing development (Szpura, 2020; Bielska et al., 2013; Jaroszewicz et al., 2012), programmes of the revitalisation of selected areas (Jarczewski et al., 2019), development of technical infrastructure (Sajnóg & Sobolewska-Mikulska, 2017), agricultural water resources management (Stańczuk-Gałwiaczek et al., 2018; Stańczuk-Gałwiaczek, 2019; Stańczuk-Gałwiaczek & Sobolewska-Mikulska, 2021), and restoration of the potential of forest production (Sajnóg & Wójcik, 2013).

The economic function generally involves all political strategies of economic action at the national, supralocal, and local levels, aimed at rural development in terms of improvement of entrepreneurship (Pacuszka, 2006), infrastructure (Chudy, 2011) or encouraging active attitudes among residents (Kalinowski, 2003), and individually the improvement of the wealth of residents of rural areas through an increase in their income, including nonagricultural income (Nachtman & Żekało, 2006).

The social function involves the improvement of the conditions and quality of life of residents of rural areas (Krzyminiewska, 2000; Majewski & Perepeczko, 2001; Fedyszak-Radziejowska, 2016), development of the social infrastructure (Kalinowski, 2003), development of non-material cultural heritage (Jalinik, 2006), revitalisation programmes activating the society (Zielińska-Szczepkowska et al., 2021; Sykała, 2019), and activities aimed at shaping attitudes from reactive (yielding to events, lack of engagement) towards proactive (designating and implementing goals) (Chyłek, 2007).

The environmental function covers a broad range of environmental benefits such as recreational values of rural space and preservation of the aesthetic values of rural landscape (Molnárová et al., 2017), preservation of biodiversity and protection of the natural environment (Ślusarczyk, 2019), preservation of rural cultural heritage (Mu & Aimar, 2022; Wilczyński, 2005).

The defined scope of the said development functions and their characteristics, as well as the priorities of subsequent Rural Development Programmes (EU common agricultural policy), involves priority directions of activities for rural development responding to the current conditions and challenges and corresponding with the concept of multifunctional development:

- 1) Technological progress (innovativeness) in the scope of animal, plant, and horticulture production,
- 2) Ecological agriculture (healthy and natural food, low emission agriculture, herb cultivation, special crops),

- 3) Obtaining income from environmental and cultural values (agrotourism, craftsmanship, regional products),
- 4) Digitisation of rural areas (access to broadband internet, improvement of digital competence of farmers),
- 5) Development of social infrastructure (e.g. market places, cultural, educational, and scientific venues, non-governmental organisations Associations of Rural Women, Voluntary Fire Brigades, as well as schools and kindergartens, health centres and nurseries, community centres and rural libraries, sports stadiums, swimming pools, bathing areas and campsites),
- 6) Protection of the resources and values of the environment, including climate (renewable energy sources, replacement of outdated boilers),
- 7) Modernisation and development of technical infrastructure in rural areas (e.g. roads, sewage system, water supply system, irrigation/melioration facilities).

The implementation of the identified objectives takes time. In Polish conditions, rural areas also require deep structural transformations related to the organisation of agricultural production, size of farms, and land structure, as well as the demographic, social, and institutional structure. Promoting comprehensive transformations must refer to the actual conditions of rural areas and cultivated values and social needs. The scope of promotion of desirable directions of changes and undertaking activities aimed at their implementation should involve the identification and interpretation of the state of awareness and knowledge on the problem of local communities and a clear presentation of the advantages and disadvantages, as well as potential consequences of the suggested changes and solutions.

The identification and interpretation of the state of awareness and knowledge of the problems of local communities employ various methods and techniques. One of them is the method of a survey as a source of empirical data. Surveys can be divided into several different types, and each of them will find a different application. The following main types of surveys can be distinguished:

Auditorial survey – a method employing a questionnaire distributed to a
specified group of respondents gathered in one room (for example, a conference room). The task of the interviewer is only to distribute the questionnaire to the respondents, provide them with instructions necessary
for correct filling in of the questionnaire, and collect it from respondents
after the completed survey. Its advantages primarily include a high questionnaire return level, as opposed to other types of surveys. Its disadvantage is the low potential for applying a sample representative for the
entire community subject to the survey,

- Pen-and-paper personal interviews (PAPI) constitute the most common survey method in the scope of quantitative techniques. The survey involves conducting an interview with the respondent, during which the interviewer reads particular questions included in the questionnaire and diligently writes down answers given by the respondent. PAPI is considered the most effective due to the position of the respondent in a situation of direct contact with the interviewer, obliging them to give diligent answers. This type of survey can be conducted in any place, which also facilitates their implementation,
- Computer-assisted web interviewing (CAWI) a technique of conducting quantitative surveys in which the questionnaire is supplied to the respondent online. The respondent fills in the questionnaire on their own, and the computer system responsible for processing the survey verifies the correctness of the provided answers and saves them on a hard disc for further analysis. Due to this, the analysis of the survey results is much simpler, faster, and, most importantly, much cheaper. It is also a technique ensuring lower costs of conducting surveys on groups of respondents residing in distant areas and groups largely inaccessible in geographic terms, provided they have access to the internet (Badania ankietowe, 2015).

Surveys permit obtaining, having, and use of information on the level of knowledge, aspirations, and goals, as well as satisfaction with functioning in societies that we currently call information societies (Kata et al., 2006).

# Research methods

The stages of research analysis are presented in the diagram in Figure 2. The survey was conducted in the scope of a 4-stage procedure (Figure 2). It started with a literature review of thematic papers regarding multifunctional rural development published over the last 30 years (stage 1). The period was adopted as accurate and sufficient due to the development of the paradigm of multifunctional rural development. Based on the literature review and the conducted analysis, seven priority directions of activities for multifunctional development were designated (stage 2). Stage 3 employed the method of quantitative research with the application of the technique of a survey (Krok, 2015; Szlenk-Dziubeki & Miśkowiec, 2018), followed by the preparation of a questionnaire (Apanowicz, 2002). The questions were divided into two parts. The first part included questions constituting a fiche covering the socio-demographic features of respondents, namely their sex, age, education, and marital status. The second part covered proper thematic questions.

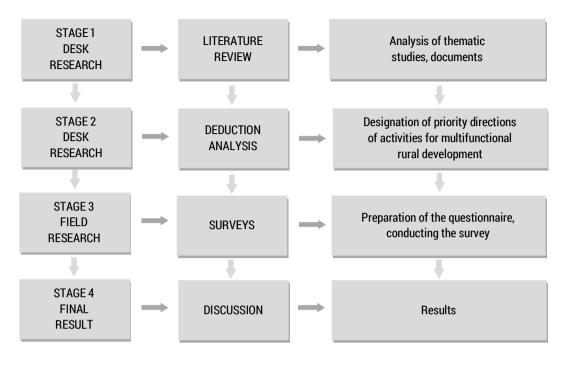


Figure 2. Stages of research

The questionnaire was shared with residents of the rural areas of the Mazowieckie Voivodeship by means of Microsoft Forms. The residents included farmers who declared providing agricultural activity (100% of respondents), whereas 98% of them reported running an agricultural farm with a surface area of more than 1 ha (formal and informal leases in total). The Mazowieckie Voivodeship is centrally located in the country, and it serves as an arena of most spatial problems affecting the possibilities of multifunctional development of rural areas. Changes in the structure of farms corresponding with those throughout the territory of Poland are also observed here (GUS, 2021), which makes it the optimal study area. The form was published with free access on the website of the Mazowieckie Centre of Agricultural Consultancy in the period from 12 May 2021 to 18 June 2021. A total of 275 responses were obtained. The final results were subject to analysis and discussion (stage 4).

# Results and discussion

The majority of respondents were men, making up 63% of the total answers. The research sample was dominated by persons aged 31-40 (28%) and 41-50 (28%), followed by age groups of 51-60 (23%), 21-30 (14%), and 61-70 (6%). The respondents were also asked about their marital status. A large majority of the respondents declared being married (72%). The answer sindicate that 20% of the respondents were single, i.e. never married. Further, 5% of respondents were widowed, and divorced persons accounted for 3%. The respondents were dominated by persons with secondary – 43% and higher education - 34%. Vocational education was declared by 21% of respondents. 2% of respondents had elementary education. The obtained answers showed that most respondents were men, young farmers aged 40or less and in the age group of 41-60, married, with secondary and higher education. The socio-demographic data show that they are the most active groups. The productive age of the respondents, including young farmers, is of key importance here, offering greater potential and possibilities for the development of both agricultural and non-agricultural activities (Agencja Restrukturyzacji i Modernizacji Rolnictwa, 2023; Łysoń, 2023).

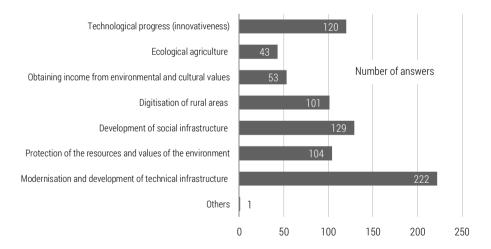


Figure 3. Understanding of the concept of "multifunctional rural development"

The main part of the survey covered 4 questions. The first question was directly related to the understanding of the concept of multifunctional rural development. In the scope of previously determined 7 priority directions of activities, respondents were asked to mark a minimum 3 answers (in any order). They could also define their own answer in the open box (Figure 3). The responses were also divided by sex and designated age groups, i.e.

respondents aged 40 or less (so-called young farmers) and those aged 41 or more (Table 1). Further, two questions concerned the assessment of whether communes constituting the place of residence of respondents undertake such activities (Figure 4) and the assessment of the activity of respondents in the scope of activities undertaken for multifunctional rural development (Figure 5).

| Table 1. | Percent values regarding the understanding of the term "multifunctional rural |
|----------|---|
|          | development" by respondents in groups with division by sex and age            |

| Understanding of the term "multifunctional rural          | All respondents       | Men | Women | Young farmers<br>(up to 40 years old) | Other farmers (aged41 and more) |  |
|---|-----------------------|-----|-------|---------------------------------------|---------------------------------|--|
| development"  | Number of answers [%] |     |       |                                       |                                 |  |
| Modernisation and development of technical infrastructure | 81%                   | 78% | 84%   | 80%                                   | 81%                             |  |
| Protection of the resources and values of the environment | 38%                   | 34% | 44%   | 34%                                   | 41%                             |  |
| Development of social infrastructure                      | 47%                   | 47% | 48%   | 43%                                   | 49%                             |  |
| Digitisation of rural areas                               | 37%                   | 39% | 33%   | 39%                                   | 35%                             |  |
| Obtaining income from environmental and cultural values   | 19%                   | 17% | 23%   | 20%                                   | 19%                             |  |
| Ecological agriculture                                    | 16%                   | 16% | 16%   | 17%                                   | 14%                             |  |
| Technological progress (innovativeness)                   | 44%                   | 47% | 39%   | 47%                                   | 42%                             |  |

A total of 773 answers were marked. According to most respondents, the concept of "multifunctional rural development" particularly involves the following:

- modernisation and development of technical infrastructure (e.g. roads, sewage system, water supply system, irrigation/melioration facilities) – 222 answers,
- development of social infrastructure (e.g. market places, cultural, educational, scientific venues, non-governmental organisations buildings for the purposes of Associations of Rural Women, Voluntary Fire Brigades, as well as schools and kindergartens, health centres and nurseries, community centres and rural libraries, sports stadiums, swimming pools, bathing areas and campsites) 129 answers,
- technological progress (innovativeness) in the scope of animal, plant, and horticultural production 120 answers,

- protection of the resources and values of the environment, including climate (renewable energy sources, replacement of outdated boilers) 104 responses,
- digitisation of rural areas (access to broadband internet, improvement of digital competence of farmers) – 101 answers.

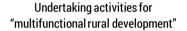
Lower values were obtained for issues related to obtaining income from environmental and cultural values (agrotourism, craftsmanship, regional products) and ecological agriculture (healthy and natural food, low emission agriculture, herb cultivation, special crops), namely 53 and 43 answers, respectively. Only one responder provided an additional answer: "Support of farmers through offering higher prices of harvested produce".

The first direction of activities (modernisation and development of technical infrastructure), which accounted for approximately 81% of all answers, is a basic need. It directly results from and depends on all four rural development functions (spatial, economic, social, and environmental). The second most frequently selected direction of activities (development of social infrastructure) reached a result considerably lower than the first one, although it was significantly high, i.e. 47% of answers. This result suggests that for approximately one in two respondents, meeting various social needs is of key importance from the point of view of multifunctional rural development. The third direction of activities (corresponding with the economic development function), with a result approximate to that of the second one (44% of answers), expresses expectations of residents in the scope of innovative and modern solutions that can facilitate management in the scope of plant and animal production, and make it more efficient. The fourth activity pointed to by respondents involved the environmental function, i.e. protection of resources and values of the environment, including climate (38% of answers). 37% of respondents indicated digitisation of rural areas as an important activity for multifunctional rural development, including access to broadband internet and improvement of digital competence of farmers. The aforementioned direction corresponds with the economic and social function of development.

In the case of the division of respondents by sex, the greatest difference (10%) concerned the answer "Protection of the resources and values of the environment" as the understanding of the term multifunctional rural development. 44% of such answers were provided among women and 34% among men. This was followed by the answer "Technological progress (innovativeness)" with a difference of 8%, yielding 47% of such answers among men and 39% among women, respectively. Further answers showed differences at a level of 0-6%. The analysis of answers of respondents within the division by age groups (young farmers and farmers aged 41 or older) also showed that the greatest difference (7%) concerned the answer "Protection of the

resources and values of the environment". 41% of such answers were provided among farmers aged 41 or older and 34% among young farmers. This was followed by the answer "Development of social infrastructure", with a difference of 6%, yielding 49% of such answers among older farmers and 43% among young farmers, respectively. Further answers showed differences at a level of 1-5%. It generally suggests that men aged 40 or younger, in comparison to answers of women and older farmers, gave more importance to the technological-digital aspects, i.e. Technological progress (innovativeness) and Digitisation of rural areas. They particularly pointed to the aspect of the protection of resources and environmental values as less important.

Respondents also assessed their own engagement (Figure 4) and the engagement of the authorities of their commune (Figure 5) in the context of activities undertaken for multifunctional rural development.



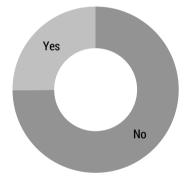


Figure 4. Undertaking activities for "multifunctional rural development"

# Undertaking activities for "multifuntonal rural development" in the commune

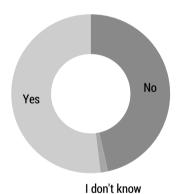
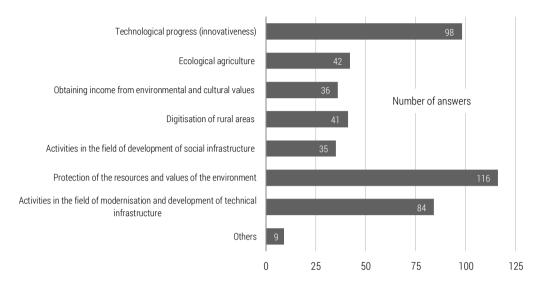


Figure 5. Undertaking activities for "multifunctional rural development" in the commune

The survey points to considerable passiveness of residents of rural areas in terms of activities personally undertaken for functional rural development. Only 25% of respondents declared undertaking such activities. Asked about undertaking such activities by commune authorities, respondents were extremely divided, with a slight advantage of undertaking such activities (52% of respondents).

Respondents were also asked to indicate the intention to undertake activity in the future in the scope of the previously identified 7 directions of development activities (Figure 6). The question was not limited to provided answers. Respondents could also define their own answers in the open box.

The answers of the respondents were also presented in division by sex and designated age groups (Table 2).



**Figure 6.** Intention of undertaking activities for "multifunctional rural development" in the future

**Table 2.** Percent shares of declarations of undertaking activities in the scope of "multifunctional rural development" by respondents in groups with division by sex and age

| Declaration of undertaking activities for "multifunctional rural   | All respondents       | Men | Women | Young farmers<br>(up to 40 years old) | Farmers aged<br>41 and more |  |
|--|-----------------------|-----|-------|---------------------------------------|-----------------------------|--|
| development"   | Number of answers [%] |     |       |                                       |                             |  |
| Activities in the field of development of technical infrastructure | 31%                   | 33% | 26%   | 29%                                   | 32%                         |  |
| Protection of the resources and values of the environment          | 42%                   | 40% | 46%   | 41%                                   | 44%                         |  |
| Activities in the field of development of social infrastructure    | 13%                   | 11% | 16%   | 11%                                   | 14%                         |  |
| Digitisation of rural areas  | 15%                   | 15% | 15%   | 15%                                   | 16%                         |  |
| Obtaining income from environmental and cultural values            | 13%                   | 12% | 16%   | 16%                                   | 11%                         |  |
| Ecological agriculture   | 15%                   | 13% | 19%   | 15%                                   | 16%                         |  |
| Technological progress (innovativeness)                            | 36%                   | 37% | 33%   | 42%                                   | 31%                         |  |
| Others   | 3%                    | 3%  | 3%    | 0%                                    | 6%                          |  |

A total of 461 answers were obtained. Respondents predominantly declared the intention of undertaking activities for multifunctional rural development in the scope of protection of resources and values of the environment, including climate (116 answers), technological progress in the scope of agricultural production (98 answers), and modernisation and development of technical infrastructure (84 answers). Contrary to the question regarding the understanding of the concept of multifunctional rural development, two activities, namely the development of technical infrastructure and technological progress, remain important (second and third place, respectively). A key change was observed in the scope of assessment of the importance of protection of resources and values of the environment, including climate, i.e. in the scope of the environmental function (first place against fourth). In the scope of "other" activities, respondents usually indicated no intention of undertaking any activities.

In the case of answers of respondents with division by sex, the greatest difference (7%) concerned the answer "Activities in the field of development of technical infrastructure" as the understanding of the term multifunctional rural development. 33% of such answers were provided among men and 26% among women. That was followed by the answer "Protection of the resources and values of the environment" and "Ecological agriculture" with a difference of 6%, yielding 46% and 19% of such answers among women and 40% and 13% among men, respectively. Further answers showed differences at a level of 0-5%. This suggests that women perceive greater agency and activity in the areas of ecological agriculture and environmental protection than in the development of technical infrastructure. In the case of answers of respondents with division by age groups (young farmers and farmers aged 41 or older), the greatest difference (11%) concerned the answer "Technological progress (innovativeness)". 42% of such answers were provided among young farmers and 31% among farmers aged 41 or older. This may confirm the greater openness of young people to novelty and innovation. Further answers showed differences at a level of 1-5%.

The obtained results were compared with the results of a survey conducted in 2005 on a sample of 109 farmers, users of individual agricultural farms from the Podkarpackie Voivodeship, characterised by low production capacity and economic weakness (Kata et al., 2006). The groups of respondents are comparable because, in both cases, they concern farmers. In 2005, the questions concerned interest in subsidies from agricultural-environmental and animal welfare programmes, adjustment of farms to the EU requirements, investments in agricultural farms, and diversification of agricultural activity. Currently, these issues, in somewhat different wording, provide the basis and criteria for multifunctional development. The considerable amount of time between the surveys and territorially different study areas provides a

good background for information on the level of interest of farmers in multifunctional development in the time scale, from Poland's accession to the EU to 17 years past that date. A change in wording and terminology in the questions to respondents does not change the substantive content of the obtained information. The comparison of results is presented in Table 3.

Table 3. Comparison of answers of farmers in the scope of surveys from 2005 and 2021

| Mazowieckie Voivodeship – survey from 20  | 21                   | Podkarpackie Voivodeship – survey from 2005                                 |                      |  |
|---|----------------------|---|----------------------|--|
| Understanding of the term multifunctional rural development                     | Number of answers /% | Knowledge of the rural<br>development issues under<br>EU subsidy programmes | Number of answers /% |  |
| Protection of resources and values of the environment, including climate        | 104 / 37.8%          | Agricultural -environmental and animal welfare programmes                   | 23/ 21.1%            |  |
| Activity in the scope of modernisation and technical development of rural areas | 222/ 80.7%           | Adjustment of farms to EU requirements                                      | 20/ 18.3%            |  |
| Digitisation and access to the internet   | 101/ 36.7%           |   | 19/ 17.%             |  |
| Technological progress (innovativeness) in the scope of agricultural production | 120/ 43.6%           | Investments in agricultural farms   |                      |  |
| Ecological agriculture and healthy food production                              | 43/ 15.6%            | - Diversification of agricultural   | 11/10.1%             |  |
| Agrotourism, craftsmanship, regional products                                   | 53/ 19.3%            | activity  |                      |  |
| Other   | 130/ 47.3%           | Other   | 86/ 78.9%            |  |

Source: authors' work based on Kata et al. (2006).

The comparison of survey results over a period of approximately a dozen years shows that the key factors of comprehensive rural development particularly include: (i) efficient technical infrastructure that improves the standard of life and facilitates work in agriculture, (ii) environmental protection and preservation of natural resources, and (iii) investments in agricultural farms (digitisation, technological progress). The above findings are also confirmed by results of a survey conducted in 2012 on a sample of 92 respondents from agricultural farms providing diversified income-generating activity (where each activity generates less than 30% of sales) from the following regions: Pomorze, Mazury, Mazowsze, Podlasie (Bórawski & Gotkiewicz, 2012). In the survey, the questions concerned indicating environmental and social factors and separately economic solutions favouring rural development. In the first group of factors, a large majority of respondents pointed to landscape values (78.3% of respondents), and in the second group,

expenditure for technical infrastructure (68.5% of respondents). Elements indicated in the surveys as priorities by respondents guarantee growth and revival also towards no-agricultural production, providing residents of rural areas with a considerable source of alternative income. Multifunctionality increases the resistance of society to unfavourable changes and offers a possibility of diversification, which is crucial for ensuring stability and development (Wilson, 2010).

# Conclusions

Multifunctional rural development involves transformations and progress resulting from varied historical past, tradition, spatial situation, socio-economic development, or environmental conditions. The direction of development results from the specialisations of particular areas and the possibility of their most rational use and management with consideration of the environmental conditions, natural resources, human resources, but also needs.

Although the potential of development results from the local conditions and possibilities, depending on the existing circumstances and needs, the concept of multifunctional rural development covers recommendations for appropriate directions of development. As shown in the study, the directions are also important to rural communities to various degrees. According to the results, progress and activities in the scope of the economic (development and modernisation of technical infrastructure, technological progress, innovativeness) and social function (development and modernisation of social infrastructure) are of key importance. Respondents show the least interest in the environmental function if landscape or environmental protection functions are defined separately. The environmental function is perceived somewhat better in the context of diversification of income of agricultural families (e.g. development of agrotourism, ecological agriculture, regional products). Generally, however, respondents showed a high degree of passiveness in terms of activities for multifunctional development. This suggests insufficient knowledge of the scope of the subject of the survey or "fear" against presenting "their" observations.

The obtained results should constitute a key finding in adopting priorities for financing particular areas of development. This does not mean, however, that the remaining directions of activities are unimportant. On the contrary, due to a lower assessment of their importance, they should be promoted and propagated more intensively. It should be emphasised, however, that the survey was of semi-open character, i.e., it included suggested answers but also offered the possibility to express one's own opinions. Most respond-

ents failed to use the possibility to provide their own answer in the scope of the analysed issues, suggesting a lack of developed personal approach to the concept of multifunctional rural development and its practical applicability.

# Acknowledgements

The survey was conducted in the scope of research-implementation undertaking "Implementation of the Smart Villages concept in the Mazowieckie Voivodeship" implemented in the years 2021/2023, financed from the resources of the budget of the Mazowieckie Voivodeship.

### The contribution of the authors

Conceptualization, K.S-M., A.B. and N.S.; literature review, K.S-M., A.B. and N.S.; methodology, K.S-M., A.B. and N.S.; analysis and interpretation of data, N.S.; formal analysis, K.S-M., A.B. and N.S.; writing, K.S-M., A.B. and N.S.; conclusions and discussion; K.S-M., A.B. and N.S.

The authors have read and agreed to the published version of the manuscript.

# References

- Act from 24 January 1968. Act on Land Consolidation and Exchange. Journal of Laws No. 3, item 13.
- Act from 26 March 1982. Act on Land Consolidation and Exchange. Journal of Laws No. 11, item 80.
- Act from 31 July 1923. Act on Land Consolidation. Journal of Laws No. 92, item 833.
- Agencja Restrukturyzacji i Modernizacji Rolnictwa. (2023). *Plan Strategiczny dla Wspólnej Polityki Rolnej na lata 2023-2027*. https://www.gov.pl/web/arimr/plan-strategiczny-dla-wspolnej-polityki-rolnej-na-lata-2023-2027 (in Polish).
- Akgün, A. A., Baycan, T., & Nijkamp, P. (2014). Rethinking on Sustainable Rural Development. European Planning Studies, 23(4), 678-692. https://doi.org/10.1080/09654313.2014.945813
- Apanowicz, J. (2002). Metodologia ogólna. (pp. 91-93). Gdynia: Wydawnictwo Diecezji Pelplińskiej "Bernardinum". (in Polish).
- Argyle, M. (2004). Przyczyny i korelaty szczęścia. Tłum. J. Radzicki. In J. Czapiński (Eds.), *Psychologia pozytywna. Nauka o szczęściu, zdrowiu, sile i cnotach człowieka* (pp. 165-203). Warszawa: Wydawnictwo Naukowe PWN. (in Polish).
- Badania ankietowe. (2015). *Badania ankietowe.* https://www.badania-ankietowe. com.pl/ (in Polish).
- Bielska, A., Barcikowska, P., & Witkowska, M. (2013). Scalenie i podział nieruchomości jako proces wspomagający planowanie przestrzenne na przykładzie wybranych obszarów. Infrastruktura i Ekologia Terenów Wiejskich, 2/III, 17-26. (in Polish).
- Bórawski, P., & Gotkiewicz, W. (2012). Rola integracji europejskiej i Wspólnej Polityki Rolnej w rozwoju gospodarstw rolnych posiadających alternatywne źródła dochodów. Zeszyty Naukowe SGGW Polityki Europejskie, Finanse i Marketing, 8(57), 82-93. (in Poliish).

- Burja, C, & Burja, V. (2014). Sustainable development of rural areas: a challenge for Romania. Environmental Engineering and Management Journal, 13(8), 1861-1871.
- Buta, A., Neculiță, M., Cristea, D., Petrea, S., Mogodan, A., & Simionov, I. (2020). Opportunities of Sustainable Development in the Rural Area at the Level of Galati County, Romania. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, 20(2), 101-118.
- Butowski, L., & Włodarczyk, B. (2016). Miary rozwoju przestrzeni turystycznej. Folia Turistica/ Akademia Wychowania Fizycznego im. B. Czecha w Krakowie Zarządzanie i transfer wiedzy w turystyce, 41, 261-282. (in Polish).
- Chudy, W. (2011). Rozwój infrastruktury obszarów wiejskich. Infrastruktura i ekologia terenów wiejskich, 10, 97-106. (in Polish).
- Chyłek, E. (2007). Ocena procesów innowacyjnych w Unii Europejskiej. Zagadnienia Ekonomiki Rolnej, 3, 64-73. (in Polish).
- Czapiński, J. (2002). Quo vadis homo? Zrównoważony rozwój, jakość życia i złudzenie postępu. In M. Marody (Ed.), Wymiary życia społecznego. Polska na przełomie XX i XXI wieku (pp. 356-380). Warszawa: Scholar. (in Polish).
- Długosz, P. (2006). Dobrostan psychologiczny mieszkańców zamieszkałych na obszarach wiejskich. Wieś i rolnictwo, 4, 42-58. (in Polish).
- Donia, E., Mineo, A. M., Mascali, F., & Sgroi, F. (2017). Economic development and agriculture: Managing protected areas and safeguarding the environment. Ecological Engineering, 103, 198-206. https://doi.org/10.1016/j.ecoleng.2017.04.010
- Fedyszak-Radziejowska, B. (2016). Kapitał ludzki i społeczny polskiej wsi. In J. Wilkin & I. Nurzyńska (Eds.), *Polska wieś 2016 Raport o stanie wsi* (pp. 66-68). Warszawa: Wydawnictwo Naukowe Scholar. (in Polish).
- GUS. (2021). *Powszechny Spis Rolny 2020. Raport z wyników.* https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/psr-2020/powszechny-spis-rolny-2020-raport-z-wynikow,4,1.html (in Polish).
- GUS. (2022). *Narodowy Spis Powszechny Ludności i Mieszkań 2021. Raport wstępnych wyników.* https://stat.gov.pl/spisy-powszechne/nsp-2021/nsp-2021-wyniki-wstepne/raport-zawierajacy-wstepne-wyniki-nsp-2021,6,1.html (in Polish).
- Jadczyszyn, J. (2020). Dlaczego wielofunkcyjny rozwój obszarów wiejskich? http://biper.iung.pulawy.pl/images/pdf/2020/Wielofunkcyjny\_rozwoj\_2020\_Jan\_Jadczyszyn\_.pdf (in Polish).
- Jadczyszyn, J., Nieróbca, A., Fogel, P., Łysiak, M., & Wójtowicz, U. (2020). Trendy zmian zaludnienia na obszarach wiejskich w Polsce z uwzględnieniem typów funkcjonalnych gmin (badania ankietowe). Polish Journal of Agronomy, 42, 14-23. (in Polish).
- Jalinik, M. (2006). Rozwój działalności agroturystycznej w województwie podlaskim. Zagadnienia Ekonomiki Rolnej, 4, 117-129. (in Polish).
- Jarczewski, W., Dawid, W., Janik, A., Jadach-Sepioło, A., Janas, K., Koj, J., & Ziółkowska, M. (2019). Rewitalizacja. Warszawa-Kraków: Instytut Rozwoju Miast i Regionów. (in Polish).
- Jaroszewicz, J., Bielska, A., & Szafranek, A. (2012). Wykorzystanie algebry map dla wyznaczenia terenów przydatnych pod zabudowę. Archiwum Fotogrametrii, Kartografii i Teledetekcji, 23, 127-137. (in Polish).
- Kalinowski, J. (2003). Społeczno-zawodowa aktywność rolników modernizujących swoje gospodarstwa. Wieś i rolnictwo suplement, 3. (in Polish).

- Kata, R., Grzebyk, M., & Pierścieniak, A. (2006). Znaczenie informacji w absorpcji funduszy unijnych przez rolników. Zagadnienia ekonomiki rolnej, 4(309), 78-89. (in Polish).
- Kłodziński, M. (1993). Wielofunkcyjny rozwój obszarów wiejskich. In M. Kłodziński & J. Okuniewski (Eds.), Wielofunkcyjny rozwój obszarów wiejskich na terenach przygranicznych. Studium na przykładzie gminy Myślibórz. Wyniki badań prowadzonych w ramach IRWiR PAN i Fundacji F. Eberta (pp. 11-27). Warszawa: Wydawnictwo SGGW. (in Polish).
- Kłodziński, M. (1997). Istota wielofunkcyjnego rozwoju terenów wiejskich. In M. Kłodziński & A. Rosner (Eds.), *Ekonomiczne i społeczne uwarunkowania i możliwości wielofunkcyjnego rozwoju wsi w Polsce* (pp. 41-67). Warszawa: Wydawnictwo SGGW. (in Polish).
- Knieć, W. (2012). *Wspólna Polityka Rolna a zrównoważony rozwój obszarów wiejskich Polski.* Toruń: Wydawnictwo Naukowe Uniwersytetu M. Kopernika. (in Polish).
- Kokoszka, K. (2011). Czynniki determinujące zrównoważony rozwój terenów wiejskich w Polsce. Annals PAAAE, 13(1), 183-188. (in Polish).
- Kołodziejczak, A. (2021). *Obszary wiejskie w zintegrowanym planowaniu rozwoju.* Poznań: Bogucki Wydawnictwo Naukowe. (in Polish).
- Krok, E. (2015). Budowa kwestionariusza ankietowego a wyniki badań. Zeszyty Naukowe Uniwersytetu Szczecińskiego Studia Informatica, 37, 55-73. https://doi.org/10.18276/si.2015.37-05 (in Polish).
- Krzyminiewska, G. (2000). *Mentalność ekonomiczna mieszkańców wsi.* Poznań: Wydawnictwo Akademii Ekonomicznej w Poznaniu. (in Polish).
- Long, H. L., Zhang, Y., & Qu, L. (2022). Multifunctional rural development in China: Pattern, process and mechanism. Habitat International, 121, 102530.
- Łysoń, P. (2023). Konsekwencje zmian demograficznych dla rozwoju rolnictwa. Warszawa: Rzadowa Rada Ludnościowa. (in Polish).
- Majewski, E., & Perepeczko, B. (2001). Rolnicy ich postawy i poglądy. In E. Majewski (Ed.), *Jakość zarządzania w gospodarstwach rolniczych w Polsce w świetle badań* (pp. 164-184). Warszawa: Wydawnictwo SGGW. (in Polish).
- Molnárová, K. J., Skřivanová, Z., Kalivoda, O., & Sklenička, P. (2017). Rural identity and landscape aesthetics in exurbia: Some issues to resolve from a Central European perspective. Moravian Geographical Reports, 25(1), 2-12. https://doi.org/10.1515/mgr-2017-0001
- Mosiej, J. (2006). Problemy rozwoju zrównoważonego w kształtowaniu obszarów wiejskich. Problemy Ekologii, 10(5), 253-258. (in Polish).
- Mu, Q., & Aimar, F. (2022). How Are Historical Villages Changed? A Systematic Literature Review on European and Chinese Cultural Heritage Preservation Practices in Rural Areas. Land, 11(7), 982. https://doi.org/10.3390/land11070982
- Nachtman, G., & Żekało, M. (2006). Efektywność ekonomiczna gospodarstw ekologicznych na tle konwencjonalnych w 2004 r. Zagadnienia Ekonomiki Rolnej, 4, 91-105. (in Polish).
- Pacuszka, R. (2006). Perspektywy rozwojowe polskich gospodarstw rodzinnych po 1 maja 2004 r. Analiza modelowa. Zagadnienia Ekonomiki Rolnej, 2, 79-90. (in Polish).
- Perepeczko, B. (2006). Zmiany w rolnictwie a stan więzi lokalnych na wsi. Wieś i Rolnictwo, 4 (133), 28-41. (in Polish).

- Pijanowski, J. (2013). Systemowe ujęcie planowania i urządzania obszarów wiejskich w Polsce. Zeszyty naukowe Uniwersytetu Rolniczego w Krakowie Rozprawy, 386, 118. (in Polish).
- Raczkowska, M., & Gruziel, K. (2018). Ubóstwo i wykluczenie społeczne w Unii Europejskiej w relacji miasto-wieś. Zeszyty Naukowe SGGW Polityki Europejskie, Finanse i Marketing, 20(69), 172-185. (in Polish).
- Rosner, A., & Stanny, M. (2016). *Monitoring rozwoju obszarów wiejskich. Etap II.*Warszawa: Fundacja Europejski Fundusz Rozwoju Wsi Polskiej. (in Polish).
- Roszkowska-Mądra, B. (2009). Koncepcje rozwoju europejskiego rolnictwa i obszarów wiejskich. Gospodarka Narodowa, 10, 83-102. (in Polish).
- Sajnóg, N., & Sobolewska-Mikulska, K. (2017). Oddziaływanie infrastruktury przesyłowej na przestrzeń rolniczą. Infrastruktura i Ekologia Terenów Wiejskich, I(1), 119-128. (in Polish).
- Sajnóg, N., & Wójcik, J. (2013). Możliwości zagospodarowania gruntów marginalnych i nieużytków gruntowych w scalaniu gruntów. Infrastruktura i Ekologia Terenów Wiejskich, II(2), 155-166. (in Polish).
- Sobolewska-Mikulska, K. (2009). *Metodyka rozwoju obszarów wiejskich z uwzględnieniem wybranych procedur geodezyjnych w aspekcie integracji z Unia Europejska*. Warszawa: Oficyna Wydawnicza Politechniki Warszawskiej. (in Polish).
- Stanny, M. (2013). *Przestrzenne zróżnicowanie rozwoju obszarów wiejskich w Polsce.*Warszawa: Instytut Rozwoju Wsi i Rolnictwa PAN. (in Polish).
- Stańczuk-Gałwiaczek, M. (2019). *Propozycja metodyki prac scaleniowych w zakresie gospodarowania zasobami wodnymi na obszarach wiejskich w Polsce* [Doctoral dissertation]. Politechnika Warszawska. (in Polish).
- Stańczuk-Gałwiaczek, M., & Sobolewska-Mikulska, K. (2021). *Problematyka integracji* prac scaleniowych z pracami z zakresu gospodarowania zasobami wodnymi w kontekście polityki rozwoju obszarów wiejskich. Warszawa: Oficyna Wydawnicza Politechniki Warszawskiej. (in Polish).
- Stańczuk-Gałwiaczek, M., Sobolewska-Mikulska, K., Ritzema, H., & Van Loon-Steensma, J. M. (2018). Integration of water management and land consolidation in rural areas to adapt to climate change: Experience from Poland and the Netherlands. Land Use Policy, 77, 498-511. https://doi.org/10.1016/j.landuse-pol.2018.06.005
- Stasiak, A., & Zgliński, W. (1997). Podstawowe problemy obszarów wiejskich na przełomie XX-XI wieku. In A. Stasiak & W. Zgliński (Eds.), *Wpływ przekształceń strukturalnych rolnictwa na zagospodarowanie przestrzeni wiejskiej* (pp. 11-70). Warszawa: Polska Akademia Nauk Instytut Geografii i Przestrzennego Zagospodarowania. (in Polish).
- Sykała, Ł. (2019). Rewitalizacja a odnowa wsi. In W. Jarczewski & A. Kułaczkowska (Eds.), *Rewitalizacja* (pp. 123-137). Warszawa-Kraków: Instytut Rozwoju Miast i Regionów. (in Polish).
- Szlenk-Dziubek, D., & Miśkowiec, M. (2018). Przestrzeń do dialogu. Praktyczny podręcznik o tym, jak prowadzić partycypację społeczną w planowaniu przestrzennym. Warszawa: Ministerstwo Inwestycji i Rozwoju. https://partycypacjaobywatelska.pl/wp-content/uploads/2018/07/Przestrzen\_do\_dialogu\_publikacja.pdf (in Polish).
- Szpura, A. (2020). Bilansowanie terenów pod zabudowę-praktyka sporządzania. Problemy Rozwoju Miast, 66, 123-133. (in Polish).

- Ślusarczyk, Z. (2019). Rosnąca potrzeba innowacyjnego podejścia w ochronie środowiska naturalnego w świetle zobowiązań Unii Europejskiej. Zarządzanie Innowacyjne w Gospodarce i Biznesie, 2(29), 41-53. (in Polish).
- Van den Brink, A., & Molema, M. (2008). The origins of Dutch rural planning: study of the early history of land consolidation in the Netherlands. Planning Perspectives, 23(4), 427-453. https://doi.org/10.1080/02665430802319005
- Van den Noort, P. C. (1987). Land consolidation in the Netherlands. Land Use Policy, 4(1), 11-13. https://doi.org/10.1016/0264-8377(87)90004-4
- Warczewska, B., & Przybyła, K. (2012). Implikacje wielofunkcyjnego rozwoju obszarów wiejskich w strefie podmiejskiej Wrocławia. Infrastruktura i Ekologia Terenów Wiejskich, 2(III), 89-100. (in Polish).
- Wilczyński, R. (2005). Odnowa wsi jako środowisko zachowania i zgodnego z dziedzictwem kulturowym kształtowania krajobrazu wiejskiego. Architektura Krajobrazu, 1, 10-17. (in Polish).
- Wilkin, J. (Ed.). (2010). *Wielofunkcyjność rolnictwa. Kierunki badań, podstawy metodologiczne i implikacje praktyczne.* Warszawa: IRWiR PAN. (in Polish).
- Wilson, G. (2010). Multifunctional 'quality' and rural community resilience. Transactions of the Institute of British Geographers, 35(3), 364-381. https://doi.org/10.1111/j.1475-5661.2010.00391.x
- Wojnowski, J. (1962). Wielka Encyklopedia Powszechna PWN. Warszawa: PWN. (in Polish).
- Zaucha, J., Brodzicki, T., Ciołek, D., Komornicki, T., Szlachta, J., Zaleski, J., & Mogiła, Z. (2015). *Terytorialny wymiar wzrostu i rozwoju*. Warszawa: Difin. (in Polish).
- Zielińska-Szczepkowska, J., Jaszczak, A., & Žukovskis, J. (2021). Overcoming Socio-Economic Problems in Crisis Areas through Revitalization of Cittaslow Towns. Evidence from North-East Poland. Sustainability, 13(14), 7984. https://doi. org/10.3390/su13147984