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RENEWABLE ENERGY SOURCE FACILITIES AS A FACTOR IN LOCATIONAL CONFLICTS IN RURAL AREAS

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ABSTRACT: The main purpose of this study has been to determine the emergence of locational conflicts due to the development of renewable energy source (RES) installations. The study employed a diagnostic survey method. The respondents know what renewable energy sources are and support their development. However, the NIMBY syndrome, as well as the very modest participation of local communities in social consultations, have been detected. The fact that any conclusions reached in the course of consultations are not legally binding was emphasised. Thus, local communities seek other ways to block a contested development, which results in protests and, consequently, social conflicts. Conflicts most often arise between local residents and local authorities, and they are principally ignited by fears of an adverse impact of wind turbines on human health. The survey results can fill in the gap and expand our knowledge of RES, social participation and locational conflicts. They can also help to popularise the transition from conventional sources of energy. Legislative changes are necessary to enable people to have a real influence on the space in which they live. It is unwise to hinder the development of wind farms by excessively restrictive laws.

KEYWORDS: renewable energy sources, wind power plants, locational conflicts, social participation

Introduction

Among the sustainable development goals, point 16 mentions 'peace, justice and strong institutions' and point 11 adds 'sustainable cities and communities' (Ministerstwo Spraw Zagranicznych, 2024). It is, therefore, impossible to achieve these aims on a development pathway that raises conflicts, including ones involving localisation and use of space.

Some developments, more than others, raise concerns among local communities. Anxiety can be caused by various aspects of investments, including the fear of a negative impact on the natural environment and, consequently, on the health of the local population. Such worries arouse intense emotions, which culminate in collective protests (Bao et al., 2023).

Space is public goods, occupied by numerous entities, each of which may have a different vision of what the surrounding space should look like or what functions it should play. This diversity of opinions lies at the roots of arising conflicts (Strzałkowski & Suchomska, 2019).

Spatial conflicts can involve the conflicting interests of different parties. Five basic groups can be distinguished among the entities pursuing their interests in public space: social stakeholders, including local residents, visitors and users of the space, real estate owners, investors and developers, and spatial planners and designers (Karwińska, 2009). Each of these entities is guided by a different set of criteria, and each has a different potential to shape the space. Moreover, each group has different goals.

The literature dealing with space and spatial conflicts provides numerous definitions of the latter. In this article, we adopted the definition which maintains that a spatial conflict is the lack of consensus among entities pursuing their interests in space as regards the intended use of areas due to fears of possible negative external effects, which might have a negative impact on the quality and efficient functioning of space. Among external factors, the following are worth mentioning: the negative influence on plants and animals and all kinds of nuisances for the local community (e.g. noise, foul smell, radiation, landscape disfiguration) (Ulańska & Borowska-Stefańska, 2012).

In this article, the authors will make an effort to answer the question of whether renewable energy source installations are a factor in locational conflicts in rural areas.

An overview of the literature

Pursuant to the Act of 27 March 2003 on Spatial Planning and Development, the municipality is responsible for the determination of the purposes and directions of the development of particular areas within its boundaries. This task is accomplished by elaborating and adopting such documents as studies of conditions and directions of spatial development and local spatial development plants of the municipality. Thus, the local authorities are the key stakeholders. However, it should be borne in mind that according to the Constitution of the Polish Republic (1997), 'the supreme power in the Republic of Poland shall be vested in the Nation' (Article 4.1), and a citizen shall have the right to obtain information on the activities of organs of public authority as well as persons discharging public functions' (Article 61.1). Social consultations are a form of dialogue between the public authorities and the local population, where the aim is to gather the opinions of local residents on a problem raised. Consultations allow the public authorities to make optimal decisions on public matters and raise the sense of shared responsibility among the locals (Hajduk, 2021; Świdyński & Świdyńska, 2016). The adoption of a local spatial development plan for a municipality must be preceded by social consultations.

Among the sustainable development goals mentioned earlier, goal number 7 concerns 'clean and available energy' (Ministerstwo Spraw Zagranicznych, 2024). Renewable energy sources (RES) are an alternative to fossil fuels and contribute to the reduction of emissions of greenhouse gases. Pursuant to Article 2.22 of the Act of 20 February 2015 on Renewable Energy Sources (Act, 2015), renewable energy sources (RES) are: 'renewable, non-fossil sources of energy, including wind power, solar power, aerothermal power, geothermal power, hydropower, wave, current and tidal power, ambient energy, energy from biomass, biogas, agricultural biogas, biomethane, bioliquids, and from renewable hydrogen.' Furthermore, Article 2.13 of the same legal act states that an installation of a renewable source of energy includes 'a) devices serving to generate electricity or heat or cold described in

DOI: 10.34659/eis.2024.91.4.791

technical and commercial specifications, in which electricity, heat or cold are generated from renewable energy sources, or b) buildings and facilities which compose an entire technical and functional object serving to generate biogas, agricultural biogas, biomethane or renewable hydrogen.'

The most popular renewable energy sources are wind power, hydropower, solar power, as well as biogas and biomass (Witkowska et al., 2023). Wind and water supply most renewable energy (as much as 2/3 of all renewable energy). In 2022, renewable energy sources provided 41.2% of gross electric energy consumed in the EU. Wind power made up 37.5% of this energy (Eurostat, 2024).

It is planned that 40% of energy consumption in the European Union by the year 2030 should originate from renewable sources (Parliament Europejski, 2023), and the goal of the European Green Deal is to make the EU a climate-neutral economy by 2050 (Communication, 2019).

Nowadays, wind power supplies 12.5% of electricity in Poland, and the law permits the development of wind farms only in non-urbanised areas – rural or offshore areas (Witkowska-Dąbrowska et al., 2021).

Among location theories, the behavioural theory deserves special attention in relation to the localisation of wind farms (Pred, 1967; Pilewicz & Sabat, 2018) – an investor looks for a satisfactory rather than the optimal location (Hektus, 2020). The importance of this theory stems from the fact that the localisation of wind turbines depends on the decisions made by the local authorities and the attitude of the local community (Hektus, 2020). This, in turn, should be linked to the concept of networking, which purports that a decision on the siting of wind turbines depends on a consensus reached by various entities in a given area. The availability of natural resources such as wind must not be neglected – wind farms should be developed in areas with sufficient winds.

RES developments are the most common cause of spatial conflicts (cf. Witkowska-Dąbrowska et al., 2021; Bednarek-Szczepańska, 2023). It needs to be highlighted that local communities do not oppose the development of renewable energy sources per se. Their negative attitude arises from the investors planning to locate RES facilities near their place of residence. This type of approach has earned its own term, and is referred to in the subject literature as the NIMBY syndrome ('not in my backyard'). NIMBY is a negative phenomenon, implicating irrationality and narrow-mindedness (McClymont & O'Hare, 2008; Owens, 2000; Eranti, 2016; Burningham, 2000; Petrova, 2016), the opposite of which is YIMBY ('yes in my backyard') (Wyly, 2022). The local community objects to the implementation of a development project, being worried about an adverse impact on their lives – nuisance, reduced attractiveness or depreciated value of real estate (Ratnasingham & Hebert, 2007; Wassmer & Wahid, 2018). This objection is a manifestation of civic engagement, and it can be reflected in taking part in public consultations during spatial planning procedures (Kafka, 2022).

NIMBY conflicts are described in both international (cf.: Bao et al., 2023; de Souza et al., 2023; Tian & Han, 2022; Wu et al., 2021; Yang et al., 2019; Schumacher & Schultmann, 2017; Evans, 2021; O'Neil, 2020; Jarvis, 2021; Uji et al., 2020.), and Polish literature (cf.: Kultys-Grabowska, 2022; Wróblewski, 2023; Herudziński, 2021; Tomaszewski, 2020; Witkowska-Dąbrowska et al., 2021). Bednarek-Szczepańska and Dmochowska-Dudek (2015) and Milczarek-Andrzejewska et al. (2020) write broadly about NIMBY conflicts in the Polish countryside.

The results of our study can help to fill in a cognitive gap on this subject and deepen the knowledge of RES, civic engagement and locational conflicts. They may also be beneficial to the dissemination of energy derived from renewable resources, with the simultaneous shift away from conventional sources. The current energy crisis, as well as the economies striving to secure energy independence in the face of the Russian Federation's ongoing expansion, are two other aspects worth mentioning (Lorek & Lorek, 2023; Hebda, 2022). The public should be educated, and the benefits of building a RES power plant in a given location need to be pointed out. The development of RES installations can enable economies to achieve energy independence, which is ever more important nowadays in the era of military conflicts.

DOI: 10.34659/eis.2024.91.4.791

Research methods

The main purpose of this study has been to determine the emergence of locational conflicts due to the development of RES facilities. The research question was posed: does the society know what renewable energy sources are, and does it support their development? As the distance from one's place of residence to a RES power plant decreases, does the support to its development decrease as well? To what extent do the local residents participate in social consultations? Does the development of a RES power plant cause social conflicts? If yes, what parties and what energy sources are involved?

The above questions led to the following research hypotheses:

- H1: the 21st century society supports the development of RES, although as the distance from one's place of residence to the location of a RES power plant decreases, so does the support to its development.
- H2: Although the development of a RES power plant causes locational conflicts, participation in social consultations is scarce.

The research employed the diagnostic survey method, with a questionnaire used as the research technique. The sample was carefully selected, and the questionnaire was addressed to the residents of a municipality in which RES facilities are located. The questionnaire was constructed according to the subject literature. The data were verified in terms of their formal aspect and completeness, and then the research material was submitted for analysis.

The minimum size of the sample was calculated from the equation given below, bearing in mind that the Polish law allows the development of wind power plants only in non-urbanised areas – in this case, in the rural part of the urban-rural municipality:

$$n = \frac{u^2 x\, p\, (1-p)}{ep^2}. \quad (1)$$

where:
n – the size of the sample,
u – coefficient dependent on the assumed level of confidence; at the confidence level 0.95, u = 1.96,
ep – prediction error is assumed to be +/−5% (ep = 0.05),
p – relative frequency (structures of p trait).

The questionnaire was constructed so as to first identify respondents' knowledge and degree of support for renewable energy sources. Next, the respondents were asked about their support to the construction of a wind farm – generally, in the territory of the municipality in which they lived, on a real estate property adjacent to theirs, and on a land parcel they had leased for this purpose. The aim of these questions was to determine whether the NIMBY syndrome was present. Next, in order to identify the degree of public participation, the respondents were asked if they had participated in social consultations – ever and specifically in connection with the development of wind farms in their municipality. The persons who had not taken part in the public consultations carried out in order to build wind farms in the Korsze municipality were then requested if they would have participated had they known such public consultations were held and whether they would have attempted to block the development; also, they were asked to explain the reason for their absence. Afterwards, an attempt was made to determine if the construction of wind turbines caused locational conflicts. This question was constructed according to the division presented in the subject literature into stakeholders pursuing their interests in a given space, and each time, the municipality residents were on one side of the conflict while the other one was composed of residents, real estate owners, developers, and spatial planners and designers. Next, the respondents were asked to identify the roots of a locational conflict, if any had arisen. Finally, the respondents had to choose the statement which was closest to their opinion: (1) negative externalities caused by the presence of wind turbines outweigh benefits, (2) benefits from the presence of wind turbines outweigh negative externalities. The study discarded the question of when a locational conflict arose for fear that the vast majority of the surveyed population might not have precise information in this regard. The demographic questions pertained to the respondent's sex, age and education. Pearson's linear correlation coefficient was calculated to determine the relationship between the phenomena studied and the characteristics included in the metric.

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Results of the research

In January 2024, a survey study was conducted among the residents of the municipality Korsze. The Korsze municipality is an urban-rural type of municipality situated in the warmińsko-mazurskie province. According to the Statistics Poland (2024) data, the population of the municipality is 8,831 people, and 55% of this population lives in the countryside. The area of the municipality is 24,985 ha, of which 98% is the rural area. The municipality is the regional leader in RES use, with two large wind farms located in its territory. In year 2020, a new wind farm was constructed, composed of 15 new wind turbines (Urząd Miejski w Korszach, 2021). The Town Hall in Korsze reports that there are 51 wind turbines operating in the municipality. All the wind power plants in the municipality are connected to the ENERGA OPERATOR S.A. power grid (Westmor Consulting, 2021).

382 people took part in the study. The data obtained were verified formally and in terms of their completeness. After that, they were submitted for analysis. In total, 372 questionnaires were analysed.

The majority of respondents (59%) were men. Most respondents were 26-36 and 37-50 years old (32% each) and with higher education (36%) (Table 1).

Table 1. Demographics of the respondents

		%
Gender	Women	41
	Men	59
Age (years)	18-25	9
	26-36	32
	37-50	32
	Over 50	27
Education	Primary	9
	Vocational	20
	Secondary	34
	University	36

Knowledge of the term 'renewable energy sources' and the degree of support to their development depending on the distance from one's place of residence

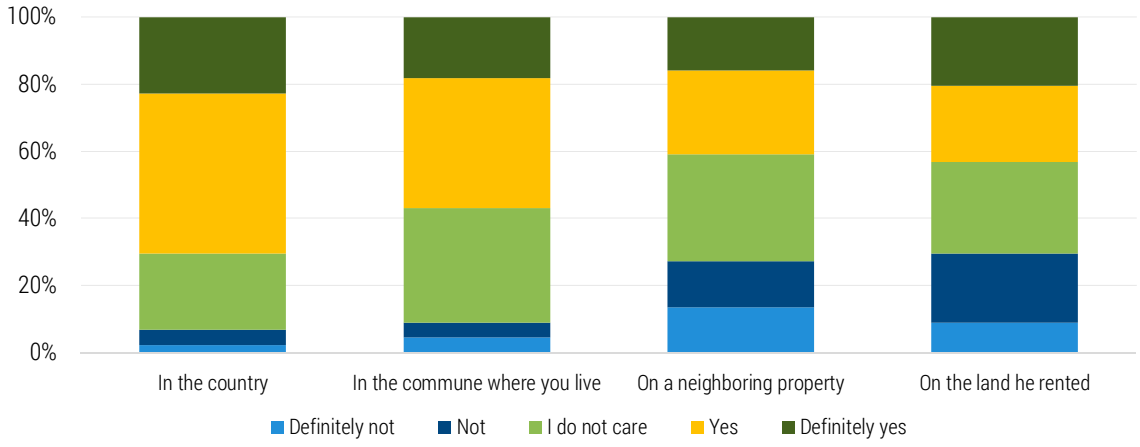

Figure 1. Support for the construction of wind turbines

Nearly all respondents (89%) declared that they were familiar with the term 'renewable energy sources'. Most respondents (71%) expressed support for the development of RES facilities, with ¼ claiming 'strong support'. Approximately the same percentage declared a neutral attitude. Only 2% indicated a complete lack of support.

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In the subsequent question, the respondents declared their degree of support for the development of wind turbines depending on location (Figure 1). Over 2/3 of the respondents declared support for the construction of wind turbines in the country (23% expressed strong support). Nearly ¼ had no opinion on this issue, and 7% did not support it (2% strongly opposed the development of wind farms). Next, the respondents were asked about their support for the development of wind turbines in the municipality in which they lived. As many as 75% (18% strongly) support it. But as many as 1/3 had no opinion, and 1/10 declared a complete lack of support (5% strongly opposed it). Afterwards, the respondents were asked about their support for the construction of wind turbines on a land plot adjacent to their place of residence. A decrease in support was observed. The lack of support was expressed by 28% of the respondents (14% strongly opposed). Again, 1/3 of the surveyed Korsze municipality residents had no opinion, of which 41% would support the construction of turbines on an adjacent land plot (16% would strongly support it). Next, the respondents were asked if they would be willing to lease some of their own land to have wind turbines built there. 43% of respondents (20% strongly) would agree to lease their own land for the development of wind turbines. Unwillingness to do so was declared by 30% (9% definitely). 27% had no opinion.

Civic engagement – participation in social consultations

As many as 93% of the respondents never participated in social consultations – 61% did not take part because they did not know about such consultations, and 32% did not attend them despite knowing that they were held. 95% did not partake in social consultations concerning the localisation of wind turbines in the municipality they lived in – 77% because they were unaware such consultations were organised, and 18% despite having such knowledge (Figure 2).

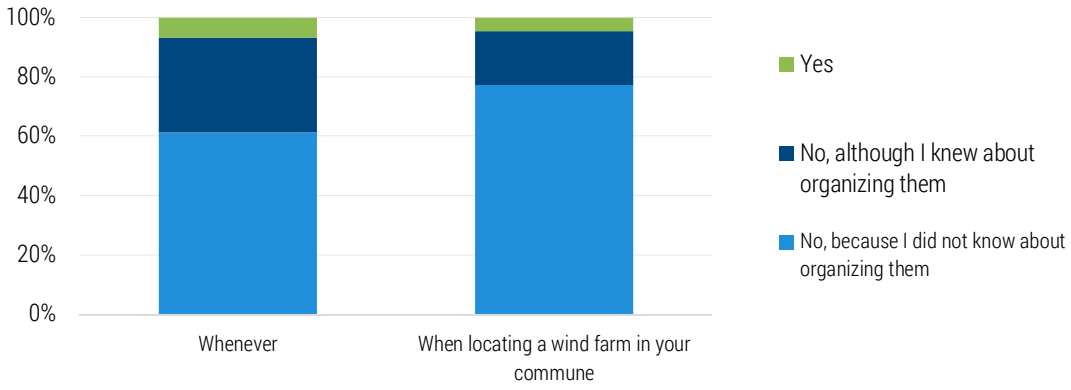

Figure 2. Participation in social consultations (%)

The respondents who did not know about social consultations being organised were asked if they would engage in a public debate in order to block a planned investment had they known about the development plans. Over 2/3 admitted they would not take part (44% definitely would not participate) in social consultations, 26% had no opinion, and 6% expressed their willingness to participate thereof (nobody opted for 'strongly willing to participate') (Figure 3).

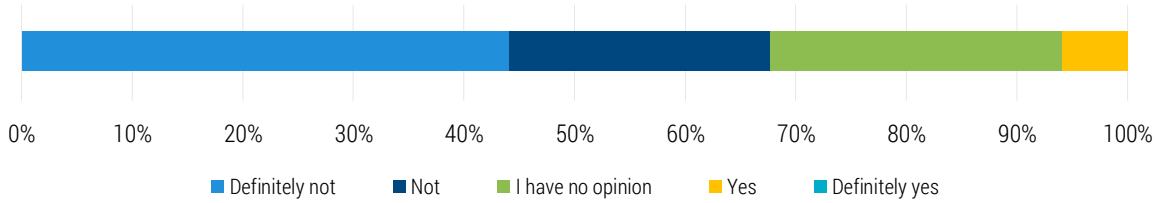

Figure 3. Engagement in public debate in order to block an investment provided one knew about the planned social consultations (%)

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The respondents who did not participate in social consultations despite knowing they were held were asked about the reasons for their absenteeism. Nobody claimed it was due to the shortage of time. Most respondents (57%) maintained they did not attend social consultations because they supported the investment, and 43% believed that their opinion was not going to change anything because the investment would be carried out anyway.

Parties involved in locational conflicts and the background of such conflicts

The subsequent part of the study focused on the determination of any occurrence of locational conflicts, including an attempt to identify the parties involved and the sources of conflicts.

None of the respondents pointed to a conflict between residents and the architect/designer or the owners of the real estate where wind turbines were to be raised. As many as 45% implicated a conflict between residents and the local authorities (11% were certain there was such a conflict), 1/3 suggested a conflict between residents and the developer, and slightly fewer (30%) indicated a conflict with other local residents (Figure 4).

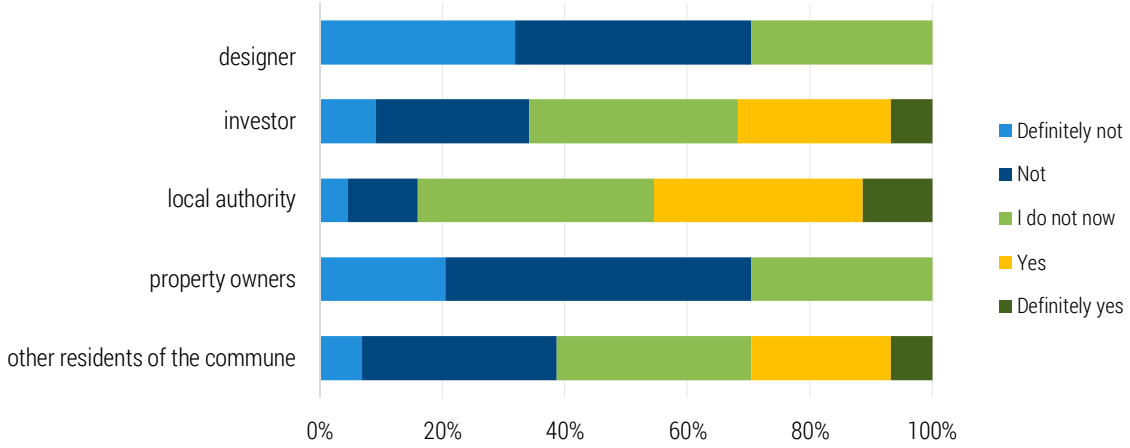

Figure 4. Conflicts between residents and any subjects pursuing their interests in the space (%)

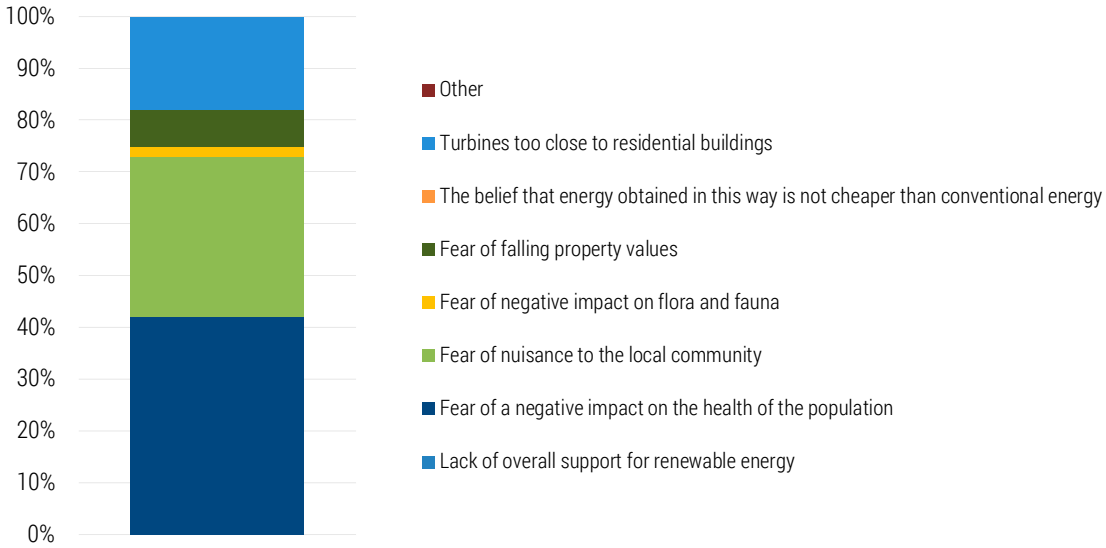

Figure 5. Roots of locational conflicts (%)

Among the causes of locational conflicts, the following were most often suggested: fear of a negative effect on human health (42%), fear of nuisance to the local community (31%), and turbines located too close to residential buildings (18%). None of the respondents suggested that the overall

DOI: 10.34659/eis.2024.91.4.791

support for RES or the fact that energy from RES is less expensive than energy from conventional sources played any role in these conflicts. Nobody took advantage of the option to give their own reasons (Figure 5).

Finally, the respondents were asked to choose the statement which was closer to their opinion. 2/3 concluded that the benefits of wind turbines outweigh the negative consequences. The remaining population chose the contrary statement.

Discussion/Limitation and Future Research

The fact that the knowledge of what renewable energy sources is so widely shared among the general public can be attributed to their popularisation in mass media, which in turn responds to the obligations imposed on the European Union member states with respect to energy policy. The key to achieving the EU's climate goals and long-term strategy is decarbonisation of the energy system. The European Union's economies are to become neutral in terms of carbon dioxide emissions by the year 2025 (Krishnamurthy et al., 2021; European Commission, 2020). The transition to a low-emission economy requires the development of RES. This is the pathway to permanent and sustainable growth (Kan et al., 2021; Daly, 2007; Szyja, 2019; Witkowska-Dabrowska, 2022).

The high support for RES can also arise from the growing social awareness of such issues as climate change, for instance, the need to forgo conventional energy sources for the advantage of RES (Sikora & Zimniewicz, 2023), or else from the fact that RES creates an opportunity to secure the country's energy independence (Seroka, 2022). According to the results of the survey, "What do Poles think about RES? (Osadnik, 2024), the greatest benefit from RES is lower electricity bills (Sidorczuk-Pietraszko, 2015). Thus, the financial aspect of RES is what the Polish society deems most pervasive.

It should be noted that the very high support for the construction of wind turbines in Poland (70%) declines when a given wind farm is to be localised in the municipality where the respondents live (57%) or on a land plot adjacent to their own (41%). Thus, the NIMBY syndrome occurs there, although society is in favour of developing RES facilities, and people know and understand the reasons underlying such investments. They also realise that such investments need to be localised somewhere. But they oppose having them situated in their place of residence (this is also dealt with in Wolsink, 2000; Bell et al., 2005; Van der Horst, 2007; Bednarek-Szczepańska & Dmochowska-Dudek, 2016). However, a small increase was noticed in the support for the construction of wind farms on the land leased for this purpose by respondents. The revenue from leasing the land is definitely higher than the income from farming this land for plant production (Przygodzka et al., 2023). In a developing country, the economic factor, such as a chance to secure above-average revenues, is decisive.

Civic engagement features more prominently in NIMBY-type of conflicts (Bednarek-Szczepańska & Dmochowska-Dudek, 2016). A possible way to stimulate public participation also to raise the scale of participation in social consultations is to use an electronic means of communication (Hajduk, 2021; Kapsa, 2017; Świtał, 2021). Noteworthy, Generation Z (born between 1995 and 2009) is the first generation growing up in a completely digital society. The role of social media in their lives and the time spent online indicate the need to digitise social participation. Lubik-Raczek (2024) writes more about the social participation of the young generation.

Dialogue between local government units and the community living in a given area is crucial for reaching a consensus regarding the pathway of its development. It is worrying to observe such little interest and scarce participation in social consultations. As noted by Kafka (2022), a prerequisite for effective participation is 'to ensure the actual impact of society on decisions'. There are numerous gaps in the Polish law in this area – everyone can submit a comment on the planned development, but it is the responsibility of the municipality's authorities to process this complaint. Being aware of the fact that despite the action taken, one will not have a real impact on the implementation of a given development project discourages the public from participating in consultations. Thus, this is not an effective tool. It only gives the public an opportunity to express their opinion, but that opinion is not binding on anyone. This is the source of locational conflicts.

The resolution of the Mayor of Korsze of 20 May 2023 on the submission of the report on the state of the Korsze Municipality in the year 2022 (Resolution, 2023), attention as drawn to the lack of participation of the municipality's inhabitants in consultations, 'despite effective notifications of res-

DOI: 10.34659/eis.2024.91.4.791

idents, the interest in consultations is poor', which leads to the situation where 'after the Municipal Council approves the local spatial development plan, comments, claims and complaints are submitted concerning the inappropriate development of functions of land use in the land parcels that the interested persons are in possession'. These actions, again, are a source of locational conflicts.

The location of a RES installation is a source of numerous conflicts. Bednarek-Szczepańska (2023) perused 321 articles from 19 regional media titles, which substantiated the conclusion that wind power generation is most often presented as a source of locational conflicts. Although wind power attracts many proponents, it has just as many opponents. This problem is not exclusive to Poland (cf.: Johansen, 2021; Lintz & Leibenath, 2020; Giordano et al., 2018). The subject literature presents an approach which divides the local community into two groups: land parcel owners and local authorities, who hope to gain measurable benefits, and opponents, who will lose out on an investment due to its proximate localisation to their real estate property (Jabłonski & Mazurkiewicz, 2014). The results obtained from this study suggest that conflicts between residents and local authorities are the most common ones. Because the outcome of public consultations is not binding, local residents are searching for other possibilities of blocking the investment.

As mentioned before, wind farms are mostly located in rural areas – hence, the opposition to their construction may be a result of the mindset of the local community, namely the reluctance to change and a conservative approach (Bukraba-Rylska, 2000). In Poland, after the political and economic changes, the attractiveness of the countryside as a place to live increased. At the same time, there have been profound changes in agriculture, and the multifunctionality of the area has been strongly marked. The majority of rural residents are no longer farmers (Halamska, 2013). Only about 10% of rural residents make a living exclusively from agriculture (Wilkin, 2011). However, this situation does not apply to the studied municipality. The municipality is depopulating (in 10 years, the population has decreased by 15%; by 17% in the rural area) (Statistics Poland, 2024). The rural area is mostly inhabited by farmers. In addition, the ageing of the population is evident in the municipality (in 10 years, the number of people of post-working age increased by 27%; by 25% in the rural area) (Statistics Poland, 2024). Older people approach change with greater detachment.

Opponents of the construction of wind turbines point to the numerous disadvantages of such facilities, mainly the noise they emit. The results of this study coincide with the ones reported by other authors, where the following causes of conflicts were identified:

- the negative effect on the health of local residents (Pawlas et al., 2012; Pawlaczyk-Łuszczyńska et al., 2023),
- fear of nuisance to the local community, mainly due to the noise (cf.: Hansen & Hansen 2020; Pawlaczyk-Łuszczyńska et al., 2023; Pleban, 2022).

As regards the close proximity of wind turbines, the rule of 10H specified in Article 4.1 of the Act of 20 May 2016 on investments in wind power plants needs to be mentioned. According to this law, the distance of a wind turbine should be no less than the tenfold height of this turbine. Hence, this issue should no longer evoke locational conflicts. The distance was reduced in 2023 to 700 m.

Negative consequences of RES were not the subject of our study, although this question is broadly described in the subject literature (Sobieraj, 2023; Mędraś, 2021; Bartczak, 2022).

There were no statistically significant correlations between the phenomena studied and the gender, age and education of the respondents.

Among the difficulties and limitations encountered during the research, the anxiety among representatives of local communities is worth noting. It arises from the belief that wind turbines have a negative impact. Contrary to this belief, the extent of their adverse effects is much smaller than attributed to wind farms. 'The development of power generation based on renewable energy sources to this date and the prospects of its further growth indicate that the proper pace and form of energy transformation will not be achievable without a considerable share of RES, and particularly onshore wind energy' (more in: Jasiński et al., 2022).

The research results implicate the need for legislative changes – with respect to both social consultations and restrictions on the distance of wind turbines from residential buildings. Otherwise, locational conflicts due to RES investments will intensify, and the development of wind farms will be halted.

DOI: 10.34659/eis.2024.91.4.791

Conclusions

The main goal of the study, which was to identify the emergence of locational conflicts caused by the development of RES installations has been achieved. The study results showed that the most common were conflicts between local residents and the municipality's authorities. This phenomenon has been confirmed by other authors.

In the course of this study, answers were obtained to the research problems:

- the society knows that renewable energy sources are and supports their development,
- as the distance to the localisation of a RES facility to one's place of residence decreases, so does the support for its development,
- local residents participate in social consultations only to a small degree,
- the construction of RES installations causes social conflicts,
- the local residents and local authorities are the most common parties engaged in conflict situations, and the most significant causes of conflicts are the negative impact on human health, fear of a RES facility being a nuisance to the local community, short distance from turbines to residential buildings.

Both research hypotheses have, therefore, been verified positively. H1: the 21st-century society supports the development of RES, although as the distance from one's place of residence to the location of a RES power plant decreases, so does the support for its development. H2: Although the development of a RES power plant causes locational conflicts, participation in social consultations is scarce.

The RES development is a consequence of the gradual abandonment of conventional sources of energy. People are aware of the benefits of the presence of RES facilities, but their support diminishes as the distance from RES facilities to their place of residence decreases. It is, therefore, justified to implicate the occurrence of the NIMBY syndrome.

Local communities also realise that the decisions made in the course of social consultations are not binding. Hence, they are reluctant to participate in such consultations and search for other ways to block RES developments. It is, therefore, crucial to ensure the actual impact of society on decisions. Social consultations should begin to perform their intended role. Society must have a real influence on shaping the environment in which they live. Then, the degree of their civic engagement will rise. In the age of digital technologies, it is also necessary to modify the form of public consultations. Generation Z is the first generation that has grown up in a completely digital society. Their expectations need to be met.

The 10H rule specified in Article 4.1 of the Act of 20 May 2016 on investments in wind power plants was another considerable limitation (Act, 2016). According to the Polish Wind Power Association, the fact that such a restrictive law was passed means that as much as 99% of Poland's territory has been excluded from wind power plant investments (Hebda, 2022). The 10H rule was liberalised in 2023. Currently, the minimum distance of wind turbine locations from buildings is 700 m. This is still more than the announced 500 m, which would free up another 47% of onshore wind power expansion potential (Instrat, 2023). Therefore, it is necessary to liberalise the law.

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Natalia ŚWIDYŃSKA

INSTALACJE ODNAWIALNYCH ŹRÓDEŁ ENERGII JAKO CZYNNIK KONFLIKTÓW LOKALIZACYJNYCH NA TERENACH WIEJSKICH

STRESZCZENIE: Głównym celem badań było określenie występowania konfliktów lokalizacyjnych w wyniku powstawania instalacji odnawialnych źródeł energii (OZE). W badaniu zastosowano metodę sondażu diagnostycznego. Ludność wie czym są OZE i popiera ich rozwój. Zaobserwowano występowanie syndromu NIMBY i niewielki udział ludności w konsultacjach społecznych. Zwrócono uwagę, że ustalenia dokonane w ich toku nie są wiążące. Społeczność poszukuje zatem innych sposobów zablokowania inwestycji, czego skutkiem często są protesty i pojawiające się w ich następstwie konflikty. Do najczęstszych konfliktów dochodzi między mieszkańcami a lokalną władzą i wynikają one z obawy przed negatywnym oddziaływaniem turbin wiatrowych na zdrowie ludności. Uzyskane wyniki badań mogą wypełnić lukę poznawczą i przyczynić się do pogłębienia wiedzy na temat OZE, partycypacji społecznej i konfliktach lokalizacyjnych. Może to mieć korzystny wpływ na popularyzowanie odchodzenia od konwencjonalnych źródeł energii. Niezbędne są zmiany legislacyjne umożliwiające ludności realnie wpływać na otaczającą ich przestrzeń. Nie należy również zahamowywać rozwoju energetyki wiatrowej przez zbyt restrykcyjne ograniczenia.

SŁOWA KLUCZOWE: odnawialne źródła energii, elektrownie wiatrowe, konflikty lokalizacyjne, partycypacja społeczne