



Local Agency 21 an Environmental Security in Naturally Valuable Areas

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Abstract: Areas with recognised natural values need special protection of environmental resources and cultural and architectural elements, as well as securing the living conditions of the local population and socio-economic activation. Especially in Local Agenda 21, which should consider such security, this task requires preparing comprehensive strategic documents. From an ecological and sociological perspective, this article looks at the situation of the local community in Poland. In this context, concern at sustainable development strategy, ecological security, discussion about sustainable development in national park territory, and human activities for the local environment. The article draws attention to the difficulties in local, sustainable development strategies and directions of activities involving the local community in ensuring natural and social order. In short, the analysis presents the importance of ecological security, the social situation in regions of natural protection, and the role of the local community in a strategy of sustainable development and ecological security.

Keywords: ecological security, Local Agency 21, region of natural protection, national park, sustainable development, local community, sustainable development strategy

1. Introduction

In recent years, EU legislation, especially the so-called EU taxonomy (Generowicz et al. 2023, Gronba-Chyła et al. 2024) has clarified the approach to sustainable development. This approach has clarified in many aspects, i.e. economic, environmental, waste or social (Ciuła et al. 2024, Ciuła et al. 2023). The issue of sustainable development can be considered from different research perspectives: educational, economic, ethical, political, legal, environmental, etc. Of interest is the social perspective, which combines sustainable development with ecological security and considers areas with special natural values (Gronba-Chyła 2023, Łapiński 2008). Given the above, the research problem is: does the local sustainable development strategy guarantee the residents of naturally valuable areas to maintain ecological security?

The social and economic life of people is integrally related to their surroundings – the natural environment. Meanwhile, in the development of society aimed at maximum use of environmental resources, social and economic problems arise and grow, coupled with ecological problems. Their consequences include transformations in nature and phenomena that may cause security disturbances in various dimensions, leading to stagnation or social and economic regression.

At the "Earth Summit" in Rio in 1992, the assumption was made that local governments should take responsibility for nature, economy and society in their "small homeland" to enable further, stable development. All municipalities were also obliged to develop and implement their own sustainable development program, the so-called Local Agenda 21 (Albińska 2006, Albińska 2008). Local Agenda 21 is a strategic document of a planning, financial, economic, social and environmental nature. It is also important for achieving and maintaining ecological security (Albińska 2021) in naturally valuable areas, enabling their development.

Ensuring the safe development of society is a policy area where it is very difficult to achieve immediate results. Similarly, achieving a satisfactory level of sustainable development in a specific area requires long-term actions. The article aims to draw attention to the situation of the community living in the protected area in the context of ecological safety and the adopted local development strategy.

A local strategy containing development proposals from the perspective of ecological policy should enable economic development, material well-being and the comfort of the life of people, be pro-social in nature, and guarantee the need to protect and preserve the natural environment and ecological safety. In the article, it will be important to refer to the development opportunities of the community living in the protected area and the limitations in sustainable development and ecological security.



The article analyses the challenges and difficulties of implementing the strategic goals in the context of the local community's expectations of operating in the national park. Five hypotheses were adopted:

1. the complexity of the Local Agenda 21 development process hinders its practical implementation,
2. ecological security is poorly highlighted in the eco-strategy of the naturally valuable area,
3. participation of residents in ecological safety activities is negligible,
4. there are often social conflicts over discrepancies between community expectations and strategic requirements for environmental protection, ecological security,
5. practical application of Local Agenda 21 in the national park is difficult.

To obtain answers to the given issues, the method of analysis of found data, available source materials (normative acts and documents) and scientific publications in the title area was used.

The article is of an overview nature. The proposed approach to sustainable development juxtaposed with ecological security shows the socio-environmental situation of residents of areas with special natural values in a new research perspective.

2. Environmental Security

Security is a sense of certainty, an opportunity for future development and a guarantee of its preservation. It is the objective certainty of inviolable survival developmental freedoms. (Lis 2020, Pietraś 2000). In the context of sustainable development strategies, it is worth referring to ecological security, which is the absence of environmental hazards and the certainty of societies' lives in the natural environment (Gierszewski 2013, Ściborek et al. 2020). This state of social relations promotes sustainable social action. Thus, ecological security (Mc Michael 2004, Albińska 2023):

1. refers to the anthropogenic nature of ecological threats and the possibility of counteracting them in created social behaviour,
2. emphasises the importance of ecological human activity, including international cooperation,
3. exposes social values in juxtaposition with natural values,
4. addresses the elimination of social-ecological tensions and conflicts.

The social aspect of ecological security is important for sustainable development, seen in various dimensions (Pietraś 2000), including political, economic, and technical.

2.1. Social aspect of environmental security

Society develops in a specific space: economic, cultural, technical, etc. Human creations in these spaces form the socio-natural environment (Albińska 2013). For this reason, any modification, administrative, economic, etc., causes perturbations in nature that will change the other subsystems from technical to financial to political (Giddens 2006, Gardner 2008, Hannay 2008). To ensure ecological security, attempts are being made to build a balanced relationship between people and nature (Graż et al. 2023, Generowicz et al. 2011). This does not just involve organising a park or a conservation reserve. In the name of ecological security, efforts are being made to transform society to stop the processes of nature degradation (Gronba-Chyła et al. 2021). The transformation is expected to occur in all planes that exert pressure on the environment – in lifestyles, consumption, agriculture, spatial design, tourism, the daily choices of the individual and the group, the functioning of the local and global community, contemporary and future generations (Bajdur et al. 2023, Łapiński & Albińska 2023). Ecological security consists in maintaining such a state of the environment in which the assumptions of sustainable development are realised (Balcerzak et al. 2014).

2.2. Sustainable development

In a report under the direction of G.H.Brundtland, the essence of sustainable development is to ensure the sustainable improvement of the quality of life of present and future generations by shaping the balance between natural, human and economic capital (Our Common Future 1987, Piątek 2002, p.27). In the definition of sustainable development, there is no reference to ecological security, which expresses the order and occurrence of social-ecological balance on a local and global scale. Thus, security is not an antagonistic category to balancing natural, social, and economic development (Łapiński 2006, Generowicz et al. 2017).

In contrast, the concept of sustainable development emphasises the need to realise development that guarantees the safety of people and nature (Kozłowski 2000, Integracja 2000). The primary driving forces here are market mechanisms, laws governing social behaviour and laws related to natural conditions (Markowski 2008, Łapiński & Sadłocha 2021). In contrast, sustainable development, analysed as a strategy for improving the quality

of life, ignores the issue of environmental security. Narrowing the concept of sustainable development to a strategy at the municipal level will be crucial to analyse the procedure for preparing Local Agenda 21.

2.3. Preparation of Local Agenda 21

Municipalities are obliged to develop and implement the so-called Local Agenda 21. This strategy will be modelled on the Global Action Agenda – Agenda 21 and include guidelines for developing a comprehensive local land use plan. The document's creation includes specific elements and requires a sequence of stages (Giordano 2005, Albińska 2008). When constructing an eco-strategy, a comprehensive program for sustainable municipality development is to be created.

When developing strategic plans and programs, it is necessary to include the principles of sustainable development in the strategic objectives. Each planned general and specific activity is supposed to relate to the idea of eco-development and the goals indicated in the document (Goodland 1995, Lawrence 2005). Meanwhile, activities in the field of local eco-politics are implemented based on selected and chaotically constructed studies. There is no consistency in the adopted strategies. There is a lack of long-term indications of protection, management of local environmental resources, and ecological security. In addition, social, economic, spatial and institutional interdependencies are not considered. Only three studies are performed by municipalities on a mandatory basis (Albińska 2006). The remaining documents are optional, depending on financial resources.

A professionally executed eco-strategy does not automatically guarantee success, but it enables the community to achieve certain transformations in the municipality. These transformations are associated with exemplary benefits: a sense of socio-economic stability, the ability to realise the residents' expectations of the municipality, and mitigating conflicts (social, political, economic, etc.) (Albińska & Giordano 2011).

An important issue is the formulation of an eco-strategy adapted to naturally valuable areas. Sustainable development can be an opportunity for areas with special natural values that are, for this reason, protected by law. The scope of activities to be carried out in such areas (including the buffer zone of a national park) to implement sustainable development is currently under discussion.

3. National Park as a Naturally Valuable Area

Legal regulations indicate naturally valuable areas where human activity is restricted. These include, for example, nature reserves, landscape parks, protected landscape areas, and Natura 2000 areas (Act 2001, Act 2004). National parks stand out in this group.

A sustainable development strategy must consider the need to protect the environment in a naturally valuable area. This justification is found in the basic law, which links environmental protection to the idea of sustainable development (Constitution 1997). Relating statutory regulations to areas of special natural value, national parks should be considered regions of pioneering eco-strategy implementation (Sychut & Chmielewski 1990, Łapiński 2009).

Establishing a national park in an area inhabited by a specific community is a challenge, representing a social experiment. Implementing an eco-strategy in a demarcated area makes it possible to observe the organisation in practice of various forms and planes of community functioning in the natural environment. Proponents of eco-development assume that sustainable socio-economic development is possible, which will secure the protected area from further degradation of nature and allow rational use of its resources. Opponents and those sceptical about the above issues assume that it will not be possible to achieve the goals of eco-strategy in the national park.

Due to the specific nature of the natural area where the eco-strategy is being introduced, it is crucial to detail from the social factor, among other things, the expectations in the lives of national park residents.

3.1. Dilemmas of national park residents

Society has value systems linked to different needs and social interests. This means that actions that are "desirable" for one group may become "undesirable" for others (Nowak 1985, p.451).

In the procedures for establishing national parks, mostly no consideration is given to the social communities that live in the area. Nor does the park management anticipate the need to organise community life in the protected area. Meanwhile, in the existing conditions of the local community's life, prohibitions and orders are imposed "from outside", which it is necessary to adapt to quickly. The realities of the operation of the protected site force the site's occupants to adopt regulations, and there is a need to establish repressive institutions (guards) to enforce the law. This, of course, causes dissatisfaction and anxiety among the residents of such an area.

The territorial boundaries of the park are "top-down" established by officials, based on the delineated ranges of rare and valuable species of flora, fauna, geological and landscape systems, etc. Often, parks are created in areas of traditional cultures and historical places whose inhabitants are unprepared for change and immediate assimilation. The social problem then becomes the non-adaptation of the park's administrative structure to social expectations. Conflicts arise between residents and officials, investors and tourists. They have urbanisation, financial, and emotional reasons. The growth of hostile and demanding attitudes of the local community then threatens the existence of the national park. Another reason for the reluctance of the local population towards the created national park is that it is treated as an economic area subordinated to the conservation of nature (Sychut & Chmielewski 1990, p.8). Preserving such an area requires the implementation of economic projects, but to a minimum extent – strictly subordinated to the needs of environmental protection (National Parks 1992, p.10). Since the area is excluded from industrial activity, activities of a service nature are undertaken to provide funding sources, focused on the realisation of the tourist and recreational function. This means a reduction in existing development opportunities for the community. The lack of alternative offers related to the functions of such an area intensifies the negative attitude of local residents towards the national park. Social unrest is also rooted in opinions, stereotypes and attitudes formed before the park was established. The protected area does not fulfil the inspirational and creative functions the local community expects, especially financially. Among other things, residents suffer material losses (e.g., in crops) related to the fact of living in or adjacent to a protected area. These losses are not always accounted for. In addition, local homesteaders want the right to unrestricted activity in their households, farms, etc. This is especially true regarding restricting property rights (cutting trees in their forest, arbitrary disposal of land, construction rights). Among the causes of social conflicts, low environmental awareness is also cited. Sociological research in this regard, conducted in the 1980s and 1990s (Grabowski & Marmuszewski 1985, Nature Conservation 1990, Osiniak et al. 1993), confirms – also manifested after 2000 – the reluctance of local communities to live in the national park. Negative attitudes refer to unfulfilled expectations of improved living conditions, prosperity, increased living standards, also a lack of compensation for material losses and difficulties associated with living in a naturally valuable area. A similar situation exists today.

Given the above, special importance should be given to the possibility of sustainable social progress, which boils down to meeting people's needs, providing them with equal opportunities for development and guaranteeing ecological order.

3.2. Prospects for the community

Residents of the municipality do not have proposals for solving the problems of civilisation, including environmental problems. For this reason, they are looking for different models of life and principles of organising social relations inside the "small homeland." Above all, they are looking for a safe place to live. Observations of people's activities to protect the natural environment or ensure ecological safety indicate that "they would like to do something, but they do not know how." (Ray 2006, Albińska 2016). In their daily functioning, the average Pole is focused on "ordinary issues and problems" and is not worried about environmental issues. Cases of public participation in solving ecological problems are much more often associated with protesting against health and economic dangers and less often concern safe activity in a naturally valuable environment.

Controlling the social behaviour of park residents by presenting scientific arguments is insufficient. People should feel benefits and pride in the fact of existence in a legally protected area. To this end, organising economic mechanisms to guarantee adequate prosperity for the local community is advisable.

It turns out that the potential of the social environment located in the national park is not fully utilised. Patterns of socio-economic life in naturally valuable areas are lacking. Compliance with the rules of behaviour in the protected area will not be achieved without changing the mentality (including specific behaviour) of people, their ecological awareness, and the reconstruction of the entire life of local communities, which is connected with relations within the broader social structures.

Sometimes, residents of a national park undertake environmental protection, sustainable development or ecological security activities without waiting for help from research institutes, the ministry, local government authorities, etc. Such grassroots initiatives manifest community involvement but of minimal territorial scope.

Suppose local communities living in a national park area, for example, do not have development prospects or opportunities to become rich. In that case, the area will become an open-air museum without people. To remedy this, it is necessary to provide residents with various forms of active assistance and advice, indications of so-called "eco-careers" that they can use, including proposals enabling them to develop safely and sustainably. Ecological regionalism is an interesting perspective. At its core, local residents desire to be secure through activities that consider the peculiarities of the natural area in the "small homeland." Such

activities will be beneficial when implementing an effective, sustainable development strategy in a naturally valuable area (Łapiński 2014a).

4. Effectiveness of Eco-strategy in a Protected Area

The implementation of sustainable development in a municipality located in a protected area is determined by:

1. the state of balance between the economy, environment and society,
2. the environmental awareness of governmental authorities, local governments and residents,
3. the readiness of the local community to participate in the eco-management of the municipality.

Local Agenda 21 will be implemented by the municipality when the appropriate legal, economic and organisational tools are used. These primarily include (Nowicki 1993, p.145) an effective structure of environmental management bodies, economic mechanisms that enforce and support investment activities for nature protection, and an effective environmental law with a system for controlling its observance. Good co-governance will be provided to the municipality through efficient administration (central and local), partnership in solving problems, and cooperation between authorities and residents.

Correctly constructed sustainable development plans at the municipal level will meet the needs of financial, social, and environmental security. On the other hand, a balanced relationship between society and the economy and nature will solve local environmental problems and guarantee the economic stability of the municipality. Correctly constructed sustainable development plans at the municipal level will meet the needs of financial, social, and environmental security. On the other hand, a balanced relationship of society and economy to nature will solve local environmental problems and guarantee the economic stability of the municipality (Łapiński 2014b).

It is important to strive for social progress by taking advantage of the region's geographical location and natural assets. At least two conditions must be met to ensure the implementation of an eco-strategy in a naturally valuable area. The first is linked to the apt, practical use of natural assets. The second condition is the participation of the local community. It should be noted in this context that national parks have, in addition to a cadre of specialists, local residents who are worth recruiting for the tasks identified in the sustainable development strategy.

Naturally valuable areas, including national parks, can become model areas for practical implementation of the assumptions of sustainable development, taking into account ecological security.

5. Concluding Remarks

It can be noted that sustainable development adopted as part of local ecological policy is considered as a strategy to improve the quality of life. This strategy includes a group of economic, social and environmental determinants.

Indicators from the first group focus on the need to pursue economic development. These include changes in the consumption and production model, resources and financial mechanisms, and international cooperation. In the social dimension, the determinants of sustainable development come down to guaranteeing social order by meeting people's needs and providing them with equal development opportunities. There are, among others, unemployment rate, poverty, social exclusion, ageing society. In turn, environmental determinants diagnose environmental problems and determine methods of solving them in the long term. These include, for example, climate change indicators, threats to biodiversity, waste, soil degradation, etc.

It is significant that in the groups of determinants mentioned above, the ecological dimension of security is not emphasised. Partially, the need to consider ecological safety can be isolated from the statutory tasks performed by the commune.

It is part of the activity of municipal local authorities to develop a strategy for sustainable development. Its multi-stage preparation has a special character in the field of naturally valuable areas. In areas with recognised natural values, the process of constructing Local Agenda 21 and its implementation limits activities at the following levels: territorial, institutional, financial, economic, environmental, and social.

Based on the analysis carried out in the article, it is concluded that the local eco-strategy does not provide the residents of the national park with guarantees for maintaining ecological security. The following facts contribute to this:

1. ununified, inconsistent process of developing the document hinders its practical application,
2. in the municipality's eco-strategy, ecological security is marginalised,

3. the participation of the municipality's residents in environmental protection, ecological safety, etc. activities is weakly marked,
4. there are conflicts of interest, needs of the local community and the need for legal protective restrictions on the environment, ecological safety, tasks of a socio-economic nature,
5. difficulties in the practical application of Local Agenda 21 in the national park area.

The system of local institutions serving to organise collective life is responsible for ecological safety in the environment and shaping residents' quality of life. Local development strategies usually assume the priority of economic growth over social needs and ecological reasons. Implementing obligations arising from the local ecological policy translates into ensuring, for example, comprehensive spatial development solutions in the commune, environmental protection, with particular emphasis on waste management, air and land protection, water management, etc.

The multifaceted nature of economic, social and natural issues makes it essential to provide the inhabitants of a given area with social stability and ecological security. An important function of the commune is to meet the collective, non-material needs of the people living in a specific territory at the highest possible level. For this local community, technical and social infrastructure should be built, new jobs should be created, a security system should be organised, etc. Important tasks are related to, for example, the cleanliness of water and air and the liquidation of illegal waste dumps, as well as to increase the ecological awareness of residents and their social activity in the area where they live.

Meanwhile, the implementation of activities in the field of sustainable development, including ecological security, especially in protected areas, depends on, among others, from restrictions resulting from legal regulations, poor financial capabilities, including competitive ones, and the adopted policy of local governments. Issues related to the social environment, including the activity and creativity of the local community, are most often of minor importance.

The situation can be improved, among other things, by activating and awareness-raising activities in environmental protection and ecological safety aimed at national park residents, local government bodies, tourists, etc.

By proposing various forms of socio-economic participation to residents tailored to the requirements of the operation of the protected area, it is possible to ensure sustainable development and socio-ecological security. It is important to include the following in the eco-strategy: the protected area, the local community, and the economy. The result of safe and sustainable development will be the process of creating jobs, services, and goods at the municipal level that meet local and supra-local demand, as well as utilitarian and natural values.

The principles of sustainable development indicate specific directions of ecological policy (e.g. nature protection, shaping spatial order), and are also justified by the need for ecological security. Since local development is necessary for improving the quality of life of residents of naturally valuable areas, it is necessary to support local entrepreneurship. The prepared development strategies and documents should encourage the inhabitants of naturally valuable areas to manage in an ecologically safe manner and enable them to engage in professional activity in line with the requirements of sustainable development.

In preparing and implementing local sustainable development strategies, especially in naturally valuable areas, it is important to guarantee comprehensive and coherent goals and tasks that guarantee ecological safety. In such documents, attention should be paid to, among others, ecological agriculture, agritourism, forest management, infrastructure (water supply, sewage, waste management, sewage treatment), supporting activities that do not burden nature and ecological education.

The analyses undertaken in the article also show that the relationship between residents and the natural environment is important in shaping the local policy of sustainable development and ecological safety. This involves finding new qualities, combining, e.g. tradition with modernity, undertaking business activities while preserving natural values, raising awareness of the protection of the local natural environment and consolidating pro-environmental attitudes (e.g. saving water and electricity, separating waste).

Adopting an extended perspective of the local development strategy, which also relates to ensuring ecological safety, may contribute to sustainable development in naturally valuable areas. Such development should consider the specificity of local socio-economic structures, diverse forms of activity and residents' involvement, ecological awareness, possibilities of using natural and cultural resources, etc. The basis should be efficient strategic management of common goals for the future joint responsibility for the quality of life and the environment.

The comments contained in the article regarding the process of development (including practical implementation) of a local strategy for sustainable development in protected areas, especially concerning the need to ensure the ecological safety of the local community, may become additional guidelines for representatives

of local government authorities, non-governmental organisations, etc. Moreover, they may contribute to defining another dimension of theoretical research in this area. As part of the proposed research directions on the development of naturally valuable areas which will be sustainable and ecologically safe, it is worth paying attention to the social bonds connecting individuals and social groups in a given local community. Meeting development needs requires guaranteeing social dialogue and maintaining cultural and social identity. Meeting security needs, increasing social participation, and making better use of the potential of the local community are of particular importance here.

The document that defines the directions of sustainable development policy today is the Strategy for Responsible Development, adopted in 2017. Strategy for Responsible Development to 2020 (with an outlook to 2030). It formulates responsible development, which, among other things, is intended to ensure the participation and benefits of all social groups living in different places in the country (Strategy 2017, p.7). The document recognises the importance of residents in the eco-development of "small homelands".

References

- Act of April 27, 2001, Environmental Protection Law* (Dz.U. 2008, Nr 25, poz. 150, z późn. zm.) (in Polish: Ustawa z dnia 27 kwietnia 2001 roku Prawo ochrony środowiska)
- Act of April 16, 2004 on nature protection* (Dz. U. 2004, Nr 92, poz. 808) (in Polish: Ustawa z dnia 16 kwietnia 2004 r., o ochronie przyrody)
- Albińska, E. (2006). *Implementation of the assumptions of Agenda 21 (sustainable development) by local government*. In: *Samorząd w polskiej myśli politycznej XX wieku*. Radomski G. (Eds.), Wydawnictwo Uniwersytetu im. M. Kopernika, Toruń, 329-341 (in Polish: Realizacja założeń Agendy 21 (zrównoważonego rozwoju) przez samorząd terytorialny)
- Albińska, E. (2008). *Organization of the commune's functioning in accordance with the principle of sustainable development*. In: Partycki, S. (Eds.), *Kultura a rynek*. t.2, Wydawnictwo KUL, Lublin, 310-316 (in Polish: Organizacja funkcjonowania gminy zgodnie z zasadą rozwoju zrównoważonego)
- Albińska, E. (2013). *Social responsibility for the natural environment*. In: *Strategie działań w warunkach kryzysowych*. Partycki, S. (Eds.), Wydawnictwo KUL, Lublin, 373-380
- Albińska, E. (2016). *Assessment of the level of ecological awareness of the inhabitants of the Lublin region*. [w] *Społeczeństwo, technologia, gospodarka w świecie sieciowych rozwiązań : ku przyszłości. Księga jubileuszowa dedykowana Profesorowi Sławomirowi Partyckiemu*, Betlej A., Błaszczak D., Górka M. (Eds.), Wydawnictwo KUL, Lublin, 439-482 (publ. w j.pol.: Ocena poziomu świadomości ekologicznej mieszkańców Lubelszczyzny)
- Albińska, E. (2021). Responsibility for the natural environment in legal and ethical aspects. *Edukacja Etyczna*, 18, 178-199. Retrieved from: <http://edukacjaetyczna.pl/wp-content/uploads/2021/12/10.pdf> (in Polish: Odpowiedzialność za środowisko przyrodnicze w aspekcie prawnym oraz etycznym)
- Albińska, E. (2023). Social and political ethics and the directions of sustainable development. *Edukacja Etyczna*, 1, 192-230. Retrieved from: <https://czasopisma.uken.krakow.pl/index.php/edukacjaetyczna/numer2023> (in Polish: Etyka społeczna i polityczna a kierunki rozwoju zrównoważonego)
- Albińska, E., Giordano, K. (2011). *Seven wishes: cooperation with citizens and ecological education*. In: *Friendly Lublin*, City Office of Lublin, Lublin, 43-53.
- Bajdur, W., Zielińska, A., Gronba-Chyła, A. (2023). Product Life Cycle Assessment (LCA) as a Tool for Environmental Management. *Rocznik Ochrona Środowiska*, 25, 389-398. <https://doi.org/10.54740/ros.2023.040>
- Balcerzak, W., Generowicz, A., Mucha, Z. (2014). Application of a multi-criteria analysis for selection of a method of reclamation method of a hazardous waste landfill. *Polish Journal of Environmental Studies*, 23(3), ISSN 1230-1485, 983-987.
- Ciuła, J., Bajdur, W., Gronba-Chyła, A., Kwaśnicki, P. (2023). Transformation of Municipal Waste Management in Poland Towards a Circular Economy. *Rocznik Ochrona Środowiska*, 25, 374-382. <https://doi.org/10.54740/ros.2023.038>
- Ciuła, J., Generowicz, A., Wiewiórska, I., Gaska, K., Gronba-Chyła, A., Golonka, M., Makara, A. (2024). Environmental aspect of waste to energy installation: quality of waste generated by technology. *Clean Techn Environ Policy*, <https://doi.org/10.1007/s10098-024-02788-0>
- Constitution of the Republic of Poland of April 2, 1997*. (Dz.U. 1997, NR 78 poz. 483) (in Polish: Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997 r.)
- Gardner, D. (2008). *Risk: The Science and Politics of Fear*, Virgin, London
- Generowicz, A., Gronba-Chyła, A., Kulczycka, J., Harazin, P., Gaska, K., Ciuła, J., Ocloń, P. (2023). Life Cycle Assessment for the environmental impact assessment of a city cleaning system. The case of Cracow (Poland). *Journal of Cleaner Production*, 382(1), 135184. <https://doi.org/10.1016/j.jclepro.2022.135184>
- Generowicz, A., Iwanejko, R. (2017). Environmental risk related to the recovery and recycling processes of waste electrical and electronic equipment, (WEEE). *Problems of Sustainable Development*, 12(2), 181-192.
- Generowicz, A., Kowalski, Z., Kulczycka, J., Banach, M. (2011). Assessment of technological solutions of municipal waste management using technology quality indicators and multicriteria analysis. *Przemysł Chemiczny*, 90(5), 747-753; ISSN 0033-2496
- Giddens, A. (2006). *Europe in the Global Age*. Polity, Cambridge.

- Gierszewski, J. (2013). *Social security. A study in the theory of national security*, Difin, Warszawa (in Polish: Bezpieczeństwo społeczne. Studium z zakresu teorii bezpieczeństwa narodowego)
- Giordano, K. (2005). *Planning for sustainable development of a commune in practice*, Wydawnictwo KUL, Lublin (in Polish: Planowanie zrównoważonego rozwoju gminy w praktyce)
- Goodland, R. (1995). The concept of environmental sustainability. *Annual Review of Ecology and Systematics*, 26, 1-24. <https://are.berkeley.edu>
- Grabowski, T., Marmuszewski, S. (1985). Ecological awareness of highlanders and their attitudes towards the Tatra National Park. *Studia Socjologiczne*, 1(96), 241-258 (in Polish: Świadomość ekologiczna górali i ich postawy wobec Tatrzańskiego Parku Narodowego)
- Graż, K., Generowicz, A., Kwaśny, J., Gronba-Chyła, A., Kwaśnicki, P., Ciuła, J., Łapiński, Ł., Bajdur, W. (2023). Microplastics from Plastic Waste as a Limitation of Sustainability of the Environment. *Rocznik Ochrona Środowiska*, 25, 367-373. <https://doi.org/10.54740/ros.2023.037>
- Gronba-Chyła, A. (2023). Experimental investigation on the properties of street and sidewalk cleaning waste. *Architecture, Civil Engineering, Environment*, 16(4), 149-153. <https://doi.org/10.2478/acee-2023-0058>
- Gronba-Chyła, A., Generowicz, A., Alwaeli, M., Mannheim, V., Graż, K., Kwaśnicki, P., Kramek, A. (2024). Municipal waste utilisation as a substitute for natural aggregate in the light of the circular economy. *Journal of Cleaner Production*, 440, 140907. <https://doi.org/10.1016/j.jclepro.2024.140907>
- Gronba-Chyła, A., Generowicz, A., Kramek, A. (2021). Using selected types of waste to produce new light ceramic material. *Pol. J. Environ. Stud.* 30(3), 2073-2083. <https://doi:10.15244/pjoes/126496>
- Hannay, D. (2008). *New World Disorder*, Tauris, London.
- Integration of European Union sectoral policies with ecological policy. How the European Union treats sustainable development* (2000), Instytut na rzecz Ekorozwoju, Warszawa. (in Polish: Integracja polityk sektorowych Unii Europejskiej z polityką ekologiczną. Jak Unia Europejska traktuje ekorozwój)
- Kowalski, Z., Makara, A. (2021). The circular economy model used in the Polish agro-food consortium: A case study. *Journal of Cleaner Production*, 284, 124751. <https://doi.org/10.1016/j.jclepro.2020.124751>
- Kozłowski, S. (2000). *Eco-development. The challenge of the 21st century*, PWN, Warszawa (in Polish: Ekorozwój. Wyzwanie XXI wieku)
- Lawrence, G. (2005). *Promoting Sustainable Development. The Question of Governance*. In: Buttel, F.H., Mc Michael, P. (Eds.), *New Directions in the Sociology of Global Development. Research in Rural Sociology and Development*, t.11, Elsevier, Amsterdam
- Lis, S. (2020). *Social structure and types of security*. In: Szylar, A., Maciaszczyk, P. (Eds.). *Bezpieczeństwo a perspektywy przemian globalizującego się świata*. Wydawnictwo Państwowej Uczelni Zawodowej im. prof. Stanisława Tarnowskiego w Tarnobrzegu, Tarnobrzeg, 11-39. (in Polish: Struktura społeczna a typy bezpieczeństwa)
- Łapiński, J.L. (2006). *Man and social space – main determinants*. In: Maik, W., Rembowska, K., Suliborski, A. (Eds.), *Człowiek w badaniach geograficznych*. seria: Podstawowe idee i koncepcje w geografii, T: 2, Wydawnictwo Uczelniane WSG, Bydgoszcz, 149-167. (in Polish: Człowiek a przestrzeń społeczna – główne determinanty)
- Łapiński, J.L. (2008). Semantic-pragmatic meaning of nature. *Studia Ecologiae et Bioethicae*, 6, 107-116. (in Polish: Semantyczno-pragmatyczne znaczenie natury)
- Łapiński, J.L. (2009). Sustainable development and the political level of defining nature. *Problemy Ekorozwoju – Problems of Sustainable Development*, 4(1), 77-81. (in Polish: Rozwój zrównoważony a polityczny poziom definiowania natury)
- Łapiński, J.L. (2014a). *Post-Industrial culture as a source of transformation of space and landscape*. *Prace Komisji Krajobrazu Kulturowego*, 23, 57-72.
- Łapiński, J.L. (2014b). The Technical Man's Existential Space. *Chemik*, 68(3), 171-174.
- Łapiński, J.L., Sadłocha, Ł. (2021). Sustainable Development and Transhumanism – Enlightenment Visions of Future Generations. *Problemy Ekorozwoju – Problems of Sustainable Development*, 16(2), 166-170.
- Łapiński, J.L., Albińska, E. (2023). The society of near future: reasons and possible scenarios. *Zeszyty Naukowe WSNS*, 1(12), 33-47. Retrieved from: <http://www.wsns.lublin.pl/nauka/zeszyty-naukowe-wsns> (in Polish: Społeczeństwo nieodległej przyszłości: przesłanki i możliwe scenariusze)
- Markowski, T. (2008). *Theoretical foundations of local and regional development*. In: Strzelecki, Z. (Eds.), *Gospodarka regionalna i lokalna*. Wydawnictwo Naukowe PWN, Warszawa. (in Polish: Teoretyczne podstawy rozwoju lokalnego i regionalnego)
- Mc Michael, P. (2004). *Development and Social Change. A Global Perspective*, Pine Forge Press, Thousand Oaks – London – New Dehli
- National parks in Poland. Annual report 1991* (1992). Krajowy Zarząd Parków Narodowych, Izabelin-Białowieża (in Polish: Parki narodowe w Polsce. Sprawozdanie roczne 1991)
- Nature conservation and landscape protection in the municipal government system* (1990). Polski Klub Ekologiczny, Kraków. (in Polish: Ochrona przyrody i krajobrazu w systemie samorządów gmin)
- Nowak, S. (1985). *Social research methodology*. PWN, Warszawa. (in Polish: Metodologia badań społecznych)
- Nowicki, M. (1993). *Poland's eco-development strategy*. Agencja Reklamowo-Wydawnicza A. Grzegorzczak, Warszawa. (in Polish: Strategia ekorozwoju Polski)
- Osiniak, T., Poskrobko, B., Sadowski, A. (1993). *Wigry National Park and its residents*. Wydawnictwo Ekonomia I Środowisko, Białystok. (in Polish: Wigierski Park Narodowy a jego mieszkańcy)

- Our Common Future* (1987). World Commission on Environment and Development, Oxford University Press, Oxford
- Piątek, B. (2002). *The concept of sustainable development of Poland*. Wydawnictwo Naukowe PWN, Warszawa. (in Polish: Koncepcja rozwoju zrównoważonego i trwałego Polski)
- Pietraś, M. (2000). *Ecological security in Europe. Political science studies*. Wydawnictwo UMCS, Lublin (in Polish: Bezpieczeństwo ekologiczne w Europie. Studium politologiczne)
- Ray, CH. (2006). *Neo-endogenous rural development in the EU*. In: Clocke, P., Marsden, T., Mooney, P. (Eds.), *Handbook of Rural Studies*, Sage, London.
- Strategy for Responsible Development until 2020 (with a perspective until 2030.)*, przyjęta uchwałą Rady Ministrów w dniu 14 lutego 2017 r., Warszawa. (in Polish: Strategia na Rzecz Odpowiedzialnego Rozwoju do roku 2020 (z perspektywą do 2030 r.))
- Sychut, W., Chmielewski, T.J. (1990). *Protected areas covered so far by research on the ecological awareness of residents*. In: *Świadomość ekologiczna mieszkańców obszarów chronionych*. IGPiK, Lublin. (in Polish: Obszary chronione objęte dotychczas badaniami świadomości ekologicznej mieszkańców)
- Ściborek, Z., Wiśniewski, B., Kuc, R.B., Dawidczyk, A. (2020). *Internal security. Academic textbook*. Wydawnictwo Adam Marszałek, Toruń (in Polish: Bezpieczeństwo wewnętrzne. Podręcznik akademicki)