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COMMUNITY FORESTS AND A PARTICIPATORY APPROACH TO THE PROTECTION OF ARCHAEOLOGICAL HERITAGE IN THE REALM OF PUBLIC ARCHAEOLOGY

LASY SPOŁECZNE A PARTYCYPACYJNE PODEJŚCIE DO OCHRONY DZIEDZICTWA ARCHEOLOGICZNEGO W PERSPEKTYWIE ARCHEOLOGII PUBLICZNEJ

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ABSTRACT: The growing interest in community forests in Poland creates new opportunities for integrating the protection of archaeological heritage with participatory approaches to forest management. As forests increasingly fulfil social, educational and recreational functions, they may also provide a suitable framework for involving local communities in the protection and interpretation of archaeological heritage. This perspective is closely aligned with the principles of public archaeology, which promotes cooperation between heritage professionals and society in the management, interpretation and protection of the archaeological record.

Within this context, the aim of this article is to discuss the relationship between community forests, public archaeology and archaeological heritage protection. From a conceptual perspective, the paper draws upon current literature, selected legal regulations and strategic documents to examine how participatory approaches may contribute to heritage management in forested areas. Particular attention is given to the potential role of citizen science and selected digital tools, including GIS and mobile applications, in supporting community engagement in archaeological heritage protection.

The discussion presented in this paper suggests that community forests may provide favourable conditions for developing new forms of cooperation between archaeologists, forest managers and local communities. Integrating public archaeology into community forest management may strengthen public awareness, encourage shared responsibility for archaeological heritage and contribute to more sustainable approaches to heritage protection. The article concludes by identifying key challenges and outlining directions for further development of participatory models for archaeological heritage management in forested landscapes.

KEY WORDS: community forests, public archaeology, archaeological heritage, citizen science, social participation, heritage management

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INTRODUCTION

Forests are complex ecosystems of key importance for the environment, economy and culture. Both in academic literature and in legislation, forests are defined in several ways, depending on the context in which the term is used (Zielony, 2008, p. 22). From an ecological perspective, a forest is defined as a dynamic form of nature, in which vegetation (mainly woody forms), animals and geological substrate, soil, water and climate are interconnected, forming an indivisible complex ecosystem (Ptak, 2016, p. 67). In turn, according to Article 3 of the Act of 28 September 1991 on Forests (Journal of Laws 1991, No. 101, item 444) in Poland[1], a forest is defined as a compact area of at least 0.10 ha, covered with forest vegetation or partially deprived of it, as well as land related to forest management. Nowadays, the social functions of forests are becoming increasingly important due to the changing expectations of society towards the forest environment (Jaszczak, 2022; Jaszczak, Zieliński, 2024). A clear distinction must be made between the definition of a forest and its functional classification. While definitions refer to its essence, the types of forests such as protective forests or forest promotional complexes, result from the functions assigned to them (Ptak, 2016, p. 67). The diversity of definitions adopted does not change the fact that forests perform multidimensional functions – from production, through ecological, to social and cultural – while at the same time constituting a space of significant importance for the preservation of heritage. Regardless of the different understandings of forests, they are a source of raw materials, a recreational space, a refuge of biodiversity, as well as a carrier of cultural values. Forests are also particularly important for the protection of archaeological heritage. Archaeological sites preserved in forested areas are protected from many forms of human activity by the tree cover, while at the same time remaining vulnerable to threats associated with forest management. The axiological foundations for the protection of cultural heritage and the environment result from the Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws 1997, No. 78, item 483)[2], in particular from Articles 5, 73 and 74, which establish the constitutional obligation to protect the environment and cultural goods within the realm of sustainable development. These provisions form the legal framework for the Act of 28 September 1991 on Forests, the Act of 16 April 2004 on Nature Conservation (Journal of Laws 2004, No. 92, item 880)[3], and the Act of 23 July 2003 on the Protection and Care of Monuments (Journal of Laws 2003, No. 162, item 1568)[4].

A new understanding of forests is brought by the concept of community forests, which is a response to the growing importance of social expectations regarding the way forest resources are managed. Although the concept of a community forest does not appear in the current legislation in Poland, its foundational principles are discern-

[1] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=wdu19911010444
[2] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19970780483
[3] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20040920880
[4] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=wdu20031621568

ible in Articles 7 and 13 of the Forest Act, which stipulate the social and educational function of forests. This concept assumes a departure from the dominant economic model in favour of a participatory approach, in which local communities play an important role, and, in consultation with public institutions, participate in decision-making processes. In this approach, the forest is no longer perceived solely as an economic resource, but becomes a social space, performing recreational, educational and community-building functions. The concept of community forests is part of a broader approach to space management, based on the principles of social participation, sustainable development and multifunctionality of the use of environmental resources. Its development is associated with the growing need to take into account the interests of different groups of forest users and the search for management models that combine environmental, social and economic aspects.

The concept of community forests opens up new perspectives for the protection of cultural heritage by introducing the formula of sustainable heritage management. It involves integrating the protection of cultural values with their practical application in social and economic development, based on three key principles: intergenerational justice, social participation, and an integrated approach (Legutko-Kobus, 2016, p. 221–222). Community forests fit into this model, enabling active participation of residents in the management of forest resources, and consequently supporting the protection of archaeological sites and the development of educational programmes. In this context, they correspond with the framework of public archaeology, which postulates the inclusion of local communities in protection, educational and public outreach activities related to cultural heritage (McGimsey, 1972). Such an attitude not only strengthens the sense of regional identity but also affects the effectiveness of the protection of cultural resources through the cooperation of various stakeholders. The involvement of local communities in the management of archaeological heritage contributes to increasing their historical awareness and long-term care for archaeological sites, making them an integral element of the cultural landscape.

One of the approaches supporting these activities is the citizen science perspective (Vohland et al., 2021), which enables residents to actively participate in documenting and monitoring archaeological sites. Digital technologies such as GIS, mobile applications and social mapping can support these processes, making heritage conservation more accessible and engaging. Their integration into community forest management creates new opportunities for strengthening cooperation between heritage professionals, forest managers and local communities.

Within this context, the aim of this article is to discuss the relationship between community forests, public archaeology and the protection of archaeological heritage in forested areas. The paper adopts a conceptual perspective, drawing on current literature, selected legal regulations and strategic documents to examine how participatory approaches may contribute to heritage management in community forests. The first part outlines the concept of community forests and the legal and strategic framework for their development in Poland. The following section discusses public archaeology and the potential role of citizen science in supporting community involvement in

archaeological heritage protection. Finally, the paper identifies the main challenges associated with integrating heritage protection into community forest management and proposes recommendations for strengthening cooperation between heritage professionals, forest managers and local communities.

The discussion presented in this article suggests that community forests may provide a favourable framework for integrating participatory approaches into archaeological heritage protection. Rather than presenting an empirical evaluation, it offers a conceptual discussion of the opportunities and challenges associated with combining community forest management, public archaeology and citizen science. In doing so, the paper aims to contribute to the broader discussion on sustainable and socially engaged models of archaeological heritage management in forested landscapes.

COMMUNITY FORESTS AS A SPACE FOR THE PROTECTION OF ARCHAEOLOGICAL HERITAGE

In forestry literature it is emphasised that in addition to their production and ecological functions, forests also perform important social functions including recreation, education, wellbeing and shaping the identity of local communities. Forests provide a space for interaction between people and nature, positively influencing physical and mental health and shaping cultural foundations and aesthetic experience of respective communities (Jaszczak, 2022, p. 137–139; Jaszczak, Zieliński, 2024, p. 323–325).

Community forests are forested areas that constitute an important space for local communities, serving recreational and educational purposes. These are mainly forests located near cities, spas and recreational areas. The creation of community forests involves the identification of forested areas of particular importance for local communities, and this process is carried out primarily in the form of consultations during which residents, local government officials or non-governmental organisations are actively involved in the identification and designation of areas of high social value, for which management plans are then developed to adapt forest management to social needs.

In the Polish legal system, community forests are not defined as a separate category, but their functions and management can be identified in the respective forest management regulations. Guidelines for the designation and management of forests with an enhanced social function are regulated by internal and strategic acts. These are, in particular, Ordinance No. 58 of the Director General of the State Forests of 5 July 2022 on the introduction of the "Guidelines for the management of forests with an increased social function on land managed by the State Forests"[5] and the document "Strengthening the protection of socially important forests around cities based on se-

[5] https://sip.lex.pl/akty-prawne/dzienniki-resortowe/wprowadzenie-wytycznych-do-zagospodarowania-lasow-o-zwiekszonej-38496470

lected recommendations and guidelines of the National Council on Forests"[6] (Ministry of Climate and Environment, 2024), which was created as part of the National Council on Forests organised by the Ministry of Climate and Environment and was submitted to the Director General of the State Forests on the 10th of September 2024. The document has the status of a set of recommendations rather than a legally binding act but reflects the current direction of discussions on the development of community forests in Poland.

From the perspective of the protection of archaeological heritage, the selected management mechanisms outlined in the above documents are of key importance. The most important of these comprise: (i) reducing the intensity of forest management, (ii) preferring methods of selective use of tree stands, (iii) landscape protection and (iv) development of participatory mechanisms. Reducing the use of clear-cutting and promoting forest management practices based on selective harvesting and natural regeneration contribute to preserving the integrity of archaeological sites, which are particularly sensitive to mechanical disturbance associated with forestry operations. The landscape approach, present in both analysed documents, assumes maintaining the continuity of the forest structure and avoiding rapid changes in its spatial arrangement, which is of direct importance for the protection of archaeological assets that comprise cultural landscape. In this context, the forest ceases to be only a natural environment and becomes a carrier of multi-layered historical values. At the same time, recognising the importance of participatory activities such as public consultations or the functioning of local cooperation teams, allows for the involvement of local communities in decision-making processes, which in turn can be conducive to the identification and protection of archaeological sites, especially in a situation where local knowledge complements the information obtained as part of scientific research.

However, the analysis of Ordinance No. 58 of the Director General of the State Forests indicates that issues pertaining to archaeological heritage have not been addressed comprehensively or systematically. The document focuses primarily on the social and natural functions of forests, while references to cultural heritage are general in nature and are not linked to specific mechanisms for the protection of archaeological sites. This may lead to a situation in which heritage protection remains dependent on the interpretation of individual management units.

In contrast, the recommendations of the National Council on Forests indicate the need to take cultural values into account in forest management and forest protection. They introduce a category of forests important for the cultural identity of local communities and recommend adapting management rules, including limiting interference in selected areas, which may be conducive to the preservation of elements of cultural heritage present in the forest landscape. The document also emphasises the importance of preserving cultural elements and their inviolability as part of economic activities.

[6] https://www.gov.pl/web/klimat/wytyczne-i-rekomendacje-dot-lasow-spolecznych-wokol-aglomeracji

A comparison of the two documents indicates significant differences in approaching archaeological heritage. Ordinance No. 58 represents an adaptive model, in which the protection of cultural values is one of many elements of forest management, while the recommendations of the National Council on Forests offer a more integrated approach, taking cultural heritage as an important component of forest policy into account. These differences are of direct relevance to the possibility of implementing effective mechanisms for the protection of archaeological sites in community forests.

Finally, it should be noted that the effectiveness of the implementation of both approaches depends on the broader legal context, in particular the regulations resulting from the Protection of Monuments Act, the Forests Act and the Nature Conservation Act. The absence of an explicit link between these regulations and the concept of community forests may constitute a significant limitation for the practical implementation of the declared standpoints in relation to the protection of archaeological heritage in forest space.

PUBLIC ARCHAEOLOGY AS A TOOL FOR THE PROTECTION OF ARCHAEOLOGICAL HERITAGE IN THE FOREST ENVIRONMENT

Public archaeology refers to the social commitment to the protection and interpretation of archaeological heritage. Its basic premise is that archaeological heritage is a common good, belonging not only to scientific and conservation institutions but also to local communities. Accordingly, it seeks to strengthen the relationship between archaeological heritage, its interpretation and contemporary communities, to promote historical awareness, and to integrate heritage protection with the needs of local communities. It emphasises the co-creation of knowledge and the active participation of society in heritage management. It is an interdisciplinary approach that encompasses both research and educational, social and political aspects. However, public archaeology is not a uniform concept but encompasses a wide range of activities – from initiatives involving volunteers in excavations, through educational programmes and historical reconstructions, to activist activities aimed at preventing the destruction of archaeological sites (McGimsey, 1972; Zalewska, 2018; Pawleta, Kobiałka, 2024).

Public archaeology can take different forms, depending on the cultural and social context. In Western Europe and North America, initiatives based on cooperation with local communities and archaeological education prevailed, while in Central and Eastern Europe, public archaeology is only developing as a tool for democratising heritage (Pawleta, Kobiałka, 2024). In this context, community forests can be an important testing ground for the development of this discipline in Poland, offering an opportunity to develop and test new methods of integrating the protection of archaeological heritage with the legal framework governing forest areas. Their participatory nature based on co-management by local communities and public institutions creates conditions conducive to the inclusion of archaeological heritage in landscape management processes. Community forests can serve as a laboratory for new methods of heritage

conservation and interpretation, in which archaeological sites are not isolated objects but elements of a wider landscape, subject to both natural processes and social forms of use. Thus, public archaeology can be an important tool to support conservation activities in forest spaces including areas referred to as community forests.

However, implementing the principles of public archaeology in community forests requires the development of appropriate mechanisms for the effective management of archaeological heritage. One of the key tools in this regard may be citizen science, understood as a form of cooperation between scientists and lay people involving the joint collection, analysis and interpretation of data. While this kind of involvement has been around for a long time, the very concept of *citizen science* only appeared in the 1990s and has been gaining popularity ever since. It is increasingly recognised both in the scientific community and in politics, education and among the general public (Vohland et al., 2021, p. 1–2). In the context of the protection of archaeological heritage, *citizen science* enables the involvement of a wide range of people in documenting and monitoring archaeological sites, thus fitting into broader metascientific narratives accompanying contemporary community-based research (Shirk et al., 2012; Haklay, 2013; Vohland et al., 2021). One of the key narratives is the postulate of the "democratisation of science", embedded in the concept of multi-level governance. Citizenship, understood in the context of civil society and participatory attitudes, assumes engagement in previously inaccessible or hard-to-reach areas, and the effect of such an approach should be not only the legitimacy of scientific activities by embedding them in "real" social needs, but also mechanisms of social control and transparency (Jakubowski, Jańczak, 2024, p. 135–137).

Accordingly, specific actions aimed at effective management of cultural and natural heritage are required. By implementing an interdisciplinary approach, it is possible to develop strategies that combine the protection of archaeological sites with social activism and civic participation, as well as the use of modern technologies. One of the fundamental areas of activity is the development of educational and social programmes that will allow for public outreach focused on archaeological heritage and its importance for contemporary communities. The organisation of workshops, lectures and field lessons in cooperation with schools and educational institutions will enable building archaeological and ecological awareness. In addition, educational trails can be set out in community forests, taking both archaeological sites and their natural context into consideration, enriched with historical reconstructions and events popularising the past. Equally important is cooperation with local communities which can contribute to the documentation and protection of archaeological heritage through active participation in citizen science projects. Organising teams of volunteers to support field research and monitoring archaeological sites can increase social responsibility for their state of preservation. The use of modern technologies such as GIS tools, as well as mobile applications, allows the precise mapping and monitoring of archaeological sites, facilitating their identification and protection while strengthening mechanisms of social control and transparency in heritage management.

As a result, public archaeology supported by citizen science tools and modern technological solutions can be an important component of activities for the protection of archaeological heritage in community forests, enabling its better recognition, documentation and protection.

CHALLENGES AND LIMITATIONS OF THE NEW MODEL OF ARCHAEOLOGICAL HERITAGE PROTECTION IN COMMUNITY FORESTS

Despite the potential of participatory initiatives, their implementation may encounter numerous obstacles that could limit the effective application of public archaeology and citizen science in community forests. These challenges arise from both the diverse interests of users of these spaces and existing legal, organisational, social and technological barriers.

Community forests, despite being a platform for common actions, are a space for the coexistence of different user interests and potential conflicts between them which potentially hinders the effective protection of archaeological sites. Diverse expectations towards forests – including both their economic and social functions – are indicated in the literature as an important element of contemporary changes in forest resource management (Marozau, Wołkowycki, 2022). Traditionally, forests in Poland have been managed primarily for their production functions, but nowadays there is a growing awareness of many other functions, which can lead to tensions between different stakeholders. In this context, the protection of archaeological heritage may be in conflict with other management objectives, especially in situations where it may entail restrictions on economic activities. The intensification of the use of community forests as recreational spaces may result in uncontrolled tourist traffic leading to the degradation of archaeological sites. Unorganised access to forests, the construction of recreational infrastructure and the organisation of mass outdoor events may have a negative impact on the condition of the sites. Community forests, as local initiatives, are co-managed by communities which may treat archaeological sites as an obstacle to the implementation of their own plans, which in turn may lead to actions contrary to the interest of heritage protection. Conflicts between different forms of use are observed in studies on urban and peri-urban forests in Europe, where increasing user pressure and the need to reconcile the conflicting functions of these spaces are indicated (Lawrence et al., 2013, p. 465–466). In the analysed case studies, including Belgium, Sweden and the United Kingdom, the need to implement management mechanisms to reconcile conflicting interests and reduce the negative impact of use on the natural and cultural values of these areas is emphasised (Lawrence et al., 2013, p. 468–469).

An additional challenge may be the limited level of user awareness of the presence and importance of archaeological heritage in the forest landscape. In contemporary approaches to heritage, it is emphasised that its meaning is not immanent but

results from the processes of social recognition and valorisation of their assets by different stakeholder groups. The absence of such recognition may influence the perception and use of heritage, thereby limiting the social foundation for its protection (Pawleta, 2020, p. 171–173).

One of the key challenges in the protection of archaeological heritage in community forests is the lack of coherent legal regulations clearly defining the rules for the protection of archaeological sites in these areas. In Poland, the protection of archaeological heritage is a subject to the provisions of the Protection and Care of Monuments Act, while forest management is regulated by the Forest Act. However, there are currently no regulations precisely defining the methods of protection of archaeological sites within community forests. In addition, the protection of archaeological heritage in forests is subject to the competences of various institutions, including the Voivodeship Offices for the Protection of Monuments, State Forests, local governments and non-governmental organisations. The lack of a clear division of competences causes delays in decision-making processes and a lack of coordinated protective measures.

Although community forests are intended to strengthen social participation, there are significant barriers to the effective involvement of local communities in the protection of archaeological heritage. One of the key challenges may be the low level of archaeological awareness, which may reduce local interest in heritage protection. In addition, participatory initiatives may vary in the level of community engagement, depending on the quality of participation and the extent to which activities address the needs and expectations of participants (Shirk et al., 2012, p. 1–4). Furthermore, local communities are rarely homogeneous, and different groups of residents may have different expectations regarding the use of community forests. Those interested in the protection of archaeological heritage may represent only a minority of stakeholders, while others may prioritise the recreational, social or economic functions of these forest areas.

Citizen science can be an important tool supporting public archaeology, but its implementation in community forests may face several practical difficulties. One of the main challenges is the availability of technology. The use of modern tools, such as GIS systems, mobile applications for site documentation and drones, requires access to appropriate equipment, which may not always be available in rural communities and smaller towns. An additional limitation may be the low level of digital competence among residents, which may limit participation in citizen science initiatives to a relatively small group of users (Vohland et al., 2021, p. 60–65).

The reliability of data collected through citizen science is also a significant challenge. These data are characterised by varying quality and heterogeneity, resulting from differing levels of knowledge and participant involvement, which in turn lead to uncertainty in assessing their scientific value and make them difficult to use for scientific and conservation purposes. As a consequence, although citizen science offers a potentially effective tool to support the protection of archaeological heritage, its effective implementation requires overcoming several technological and educational barriers (Haklay, 2013, p. 105–106, 108).

CONCLUSIONS

The discussion presented in this article indicates that public archaeology and the concept of community forests share a common participatory foundation, based on the involvement of local communities in the management and protection of archaeological heritage. In both approaches, the participation of local residents, public institutions and heritage professionals reflects an understanding that the social dimension is an essential component of heritage management. This convergence is also evident in their objectives and practical activities. Community forests promote the sustainable management of forest spaces by recognising their social, recreational and environmental functions, while public archaeology seeks to strengthen the protection, interpretation and public understanding of archaeological heritage. Both approaches also emphasise the importance of education, public outreach and the application of modern technologies, including GIS, remote sensing and digital tools supporting the documentation and monitoring of archaeological resources. In this context, the integration of solutions developed within public archaeology into the management of community forests may contribute to more effective identification, documentation and protection of archaeological heritage in forested landscapes. The convergence of these approaches provides a valuable basis for developing more integrated strategies for the protection of both cultural and forest heritage.

At the same time, the discussion presented in this article demonstrates that the practical implementation of such an approach faces a number of legal, organisational and social challenges. The discussion of selected legal regulations and strategic documents indicates that archaeological heritage has not yet been fully integrated into the emerging framework of community forest management in Poland. The dispersion of competences among institutions responsible for cultural heritage and forest management, together with the multifunctional character of forest landscapes, may hinder the development of coherent conservation strategies. These observations are consistent with broader discussions on the governance of multifunctional forest landscapes. Forest management, particularly in urban and peri-urban areas, involves the interaction of multiple actors with diverse competences and interests, making the coordination of management activities particularly challenging. At the same time, the growing social and recreational functions of forests increase pressure on these areas and require balancing often competing management objectives (Konijnendijk et al., 2005, p. 82–85; Lawrence et al., 2013, p. 464–466). Taken together, these broader perspectives support the view that archaeological heritage should be considered an integral component of contemporary forest governance rather than a separate conservation issue.

The discussion also highlights the potential contribution of public archaeology and citizen science to strengthening archaeological heritage protection in community forests. Community participation, supported by educational activities and appropriate digital tools, may facilitate the identification, documentation and monitoring of archaeological sites while also strengthening public awareness and shared responsibility for their protection. At the same time, the effectiveness of these approaches depends

on the development of appropriate legal, organisational and educational frameworks, reliable procedures for community participation, and access to digital technologies that support the collection and verification of information.

The considerations presented in this article also indicate that the integration of archaeological heritage into community forest management requires closer cooperation between archaeologists, forest managers, public institutions and local communities. Rather than prescribing a single management model, the discussion points to several areas that deserve particular attention in future practice. These include the development of coherent legal and organisational frameworks, the strengthening of long-term educational activities, the establishment of mechanisms for cooperation between institutions responsible for heritage protection and forest management, and the wider use of participatory approaches that enable local communities to become active partners in archaeological heritage protection.

Citizen science may become an important component of this process, provided that community involvement is supported by appropriate methodological standards, educational programmes and accessible digital tools. Reliable procedures for documenting and verifying information, together with appropriate training for participants, may significantly increase the usefulness of community-generated data while strengthening public engagement in heritage protection.

To sum up, community forests may provide a valuable framework for developing a more integrated and participatory approach to archaeological heritage management in forested areas. Rather than offering a comprehensive solution, this article presents a conceptual perspective on the opportunities and challenges associated with combining community forests, public archaeology and citizen science. The discussion presented in this paper is intended to contribute to further research and practical initiatives aimed at strengthening the role of archaeological heritage within emerging models of community forest management.

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