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ORIGINAL PAPER
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CITIZEN FORESTS – A NEW MANAGEMENT APPROACH FOR STATE-OWNED FORESTS

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ABSTRACT

Motives: There is a growing emphasis on assessing the value of forest social functions. There are no objective measures of the intensity and attractiveness of recreational forest use. It would be beneficial to obtain an independent expert opinion on the social value of forest complexes, based on a reliable methodology. It is imperative to ascertain how to objectively determine a forest's social function and factors influencing it.
Aim: The main objective of the conducted research was to indicate the types and sequence of activities necessary to designate areas of natural value and social importance in forest districts.
Results: The authors' procedure for designating socially important forest areas (called citizen forest) was presented and discussed.

Keywords: forests with enhanced social function, forest space management, Local Cooperation Team, public influence on forest management

INTRODUCTION

A forest is a highly organised assemblage of plants, especially woody species, growing in close proximity and playing the role of the main edificators within it. Together with the animals that inhabit forest areas, they form forest phytocoenoses. The high diversity of life in the forest is related to the growth conditions of the woody species, which are a result of the habitat and parameters such as moisture content, average annual temperatures, or amount of precipitation. Under natural conditions, these factors determine, among other things, the vertical structure of the stands as well as their species composition and age structure. The forest fulfils three fundamental functions, which are inextricably linked and mutually reinforcing, and subject to constant change over time and space (Govedar, 2022; Führer, 2020; eg. Pilli & Pase, 2018). These functions are:

1. Protective – pertaining to the stabilising effect of the forest on the natural environment, including the preservation of biodiversity and the beneficial effects on climate, soil, and water relations.
2. Productive – the forest provides society with raw timber as well as other non-timber products, including forest fruits, herbs, and wildlife meat.

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3. Social – the forest creates an environment conducive to enhancing the quality of life for local communities. It influences the local labour market and contributes to the creation of places for rest and recreation, including opportunities for the population to expand their ecological knowledge. The forest is also a cultural asset with which many communities identify, shaping their heritage.

The economic value of production functions has been the subject of considerable research and is relatively well documented. Wood has now been identified as a material with applications in more than 30.000 different contexts worldwide. The timber sector in Poland, according to the Polish Economic Chamber of the Timber Industry, generates approximately 2.5% of the national GDP, provides budget revenues in excess of PLN 30 billion per year, and directly employs approximately 350.000 individuals. Additionally, the wood industry indirectly employs tens of thousands of people in related sectors, including transportation, trade, and the manufacturing of wood harvesting and processing machinery and equipment (Newseria Biznes, (Zac), 2020).

It is challenging to assess the non-productive functions of forests. This has led to significant discrepancies between studies on this topic. Depending on the approach, mainly scale and area, some studies emphasise that the total value exceeds the value of the effects of the productive functions. However, it should be emphasised that the primary function of commercial forests is timber production, with the most sustainable approach possible (Kriström et al., 2001; Sikora & Wartecka-Ważyńska, 2017; Snarski, 2023).

Modern forest management is therefore based on the concept of multifunctionality. It is of paramount importance to identify a reasonable compromise between the aforementioned functions in order to achieve a balance that is based on parameters that are constant and clear to all stakeholders. The objective should be to develop a method that determines the value of social forests as objectively as possible. Furthermore, the method should be universal and feasible regardless of the climatic, topographical, and social conditions of the study area.

Consequently, in recent years, there has been a growing focus on the development of methodologies for the assessment of the social functions of forests (eg. Bańkowski et al., 2019). Firstly, it is necessary to establish a procedure for the designation of this type of forest. Given the novel nature of the issue pertaining to forests with particular social functions, objective measures of the intensity and attractiveness of recreational forest use have yet to be developed. It would therefore be beneficial to obtain an independent and objective expert opinion on the valuation of the "social value" of individual forest complexes within a given forest district, based on a known and reliable methodology.

It is therefore necessary to consider how the increased social function of a forest can be objectively established and what elements may influence it.

These considerations suggest that the main challenge in efforts to designate and manage forests with enhanced social function on land under the management of State Forests is to strike a balance between forest management and social expectations.

The research was conducted with a focus on two research theses that were formulated.

1. The management of forests with enhanced social function on land under the management of State Forests represents a significant social, economic, and scientific challenge in the context of biodiversity conservation and sustainable development of areas.
2. There is a need to develop specific guidelines for the designation of forest areas with enhanced social function. Furthermore, the study aimed to illustrate the potential challenges that may arise for those developing local conservation action programmes and the institutions responsible for implementing them.

The author's proposed approach to the designation of socially important forest areas was outlined, accompanied by an examination of the potential difficulties that could occur at each stage of the process. Additionally, suggestions were put forth for addressing these challenges.

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LITERATURE REVIEW

In light of the accelerated pace of societal development observed in recent decades, coupled with the constraints imposed by the recent pandemic, there has been a discernible shift in societal attitudes towards a renewed appreciation for the natural environment. This phenomenon is associated with the rising incidence of civilization-related illnesses, including allergies, respiratory insufficiency, and mental health disorders. These conditions are prompting individuals to seek respite from the demands of modern life by immersing themselves in the natural environment and even relocating to less populated areas. It is paradoxical that the fulfilment of these needs is facilitated by advances in civilisation. For example, the possibility of working remotely or a good network of communication links enables quick contact with culture or medical care. Furthermore, the best place to live is on the outskirts of large cities, which offer the possibility of daily contact with nature and at the same time enable a quick return to the benefits of civilisation. The current trends in the property market indicate that the optimal locations for establishing a settled residence are developed plots situated within approximately 20 km of the administrative boundaries of cities. These locations are characterized by good communication, proximity to housing estates or other single-family developments, and a topographical feature that allows for an unobstructed view of fields, lakes, or forests. It is anticipated that the surrounding area will comprise accessible green spaces and recreational facilities, offering a respite from the urban environment (Ciesielski et al., 2022; Immich & Robl, 2023; Źróbek et al., 2015; Źróbek-Różańska et al., 2017).

Over time, areas that have such functions are often regarded by local communities as "their place and property." As a result, these communities assert their right to determine the trajectory of developments in areas that are not de facto theirs, yet to which they frequently feel emotionally attached. It is pertinent to recall the promotion of the concept of "civil society" in European Union countries (Vandor et al., 2017). Article 15 of the Treaty on the Functioning of the European Union recognises the importance of civil society for the good governance of European Union. Article 11 of the Treaty on European Union stresses the need for regular, open and transparent dialogue with civil society organisations, for example when drafting proposals for European Union legislation. These activities are reflected in the content of numerous legal instruments pertaining to spatial management and nature protection, which stipulate the obligation to conduct public consultations on planned activities and investments. Polish society is becoming increasingly aware of the significance of these provisions and the opportunities they offer. This may be the reason for the increased number of public actions and "protest committees" observed in recent years, aimed at blocking, or at least moving linear or cubic investments away from their property boundaries. However, it is important to emphasise that in places where the density of development is high (especially around large cities), it is practically impossible to carry out an investment that would not cause changes to the landscape. This also applies to forest space. The implementation of forestry operations in close proximity to human settlements frequently gives rise to public controversy and opposition. Currently, the public associates forestry work associated with timber harvesting with the term "felling", which is perceived as the destruction of walking routes and a significant alteration of the landscape (Cidrás, 2022; eg. Lawrence et al., 2021; Niedziałkowski & Chmielewski, 2023; Nieto-Romero et al., 2023).

The instrument that defines the forest is sustainable forest management. In accordance with Article 6.1a of the Forest Act of 28 September 1991, sustainable forest management is defined as an "activity aimed at shaping the structure of forests and their use in a manner and at a rate ensuring the permanent preservation of their biological richness, high productivity and regeneration potential, vitality and capacity to fulfil, now and in the future, all important protective, economic and social functions at local, national and

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global levels, without detriment to other ecosystems." Forests owned by the State Treasury, subject to Articles 26(2) and 26(3) of the Forest Act, are open to the public, thereby allowing for the utilisation of over 7 million hectares of land for recreational or tourist purposes. The growing significance of forests in urbanised areas underscores the necessity for the implementation of suitable environmental policies and the modification of forest resource management practices.

The State Forests are implementing a systematic approach to address the challenges associated with forests in urban areas and other locations where there are expressed concerns about reduced timber harvesting, the development of recreational infrastructure, or the organisation of mass events. Consequently, on 14 December 2023, the Director General of the State Forests, by virtue of the pertinent Order No. 116, amended the Forest Management Instruction, thereby establishing the principle of public participation in the preparation of forest management plans on a permanent basis. In accordance with the Forest Act, the forest management plans represents the fundamental planning document within the State Forests, delineating the economic objectives to be pursued by the forest district over a ten-year economic period. In the context of the economic division of forests under the administration of a given forest district, the designation of a "citizen forest holding" is a possibility. This designation entails the implementation of special management methods, defined in collaboration with a Local Cooperation Team comprising representatives of local communities, with the objective of prioritising the social function. The Order in question provides the heads of the State Forests' organisational units (in this case, the Forest District Managers) with the necessary tools to develop a social dialogue in cooperation with the Local Cooperation Team, with the objective of determining the extent of the "citizen forests". The Local Cooperation Teams are officially established, and their findings are legally binding for the management of forests in the selected areas. In essence, the category of "citizen forests" is designed to encompass areas that are intensively utilized by individuals for recreational, sporting, health-related, and other social activities. The management principles of these forests, situated in close proximity to resorts, spas or urban agglomerations, prioritise sustainability, visitor safety and the maintenance of landscape values. It is important to note that these forests will not be reduced to the role of suburban parks or inaccessible reserves for recreation. Forestry work will still be carried out in such forests, but in a highly individualised manner with a minimum of logging. It is also important to highlight that the developed solutions will be granted the status of local legislation, as each forest management plan undergoes a process of strategic environmental impact assessment and is ultimately approved by the minister responsible for environmental matters.

The new regulations will be implemented gradually, with the introduction of new forest management plans. On an annual basis, plans are devised for approximately 40 forest districts, which collectively represent 10% of the country's total forest area. Nevertheless, in justified cases related to public necessity, "forests with enhanced social function" may be established by forest districts during the 10-year management cycle, thus circumventing the necessity to await the expiration of the current plans.

The Ministry of Climate and Environment is currently engaged in efforts to exclude 20% of the most valuable forest areas from felling. On 26 April 2024, the Ministry issued instructions to the Director General of the State Forests to enhance the protection of forests with a leading social function in approximately a dozen Polish cities. The following cities are included in this designation: The cities of Warsaw, Kraków, Gdańsk – Sopot – Gdynia, Wrocław, Łódź, Poznań, Katowice, Bydgoszcz, Toruń, Szczecin, Kielce, and Bielsko-Biała have been identified as requiring particular attention. Concurrently, the formulation of comprehensive proposals for forests with a leading social function has commenced .

As announced on 30 July 2024 by Minister Paulina Hennig-Kloska and Deputy Minister Mikołaj Dorożała, the initial point of reference for the

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establishment of social forests is the so-called Map of Disputed Forests, which was created by non-governmental organisations. The map illustrates the areas where, in previous years, local communities and environmental activists have exerted significant pressure for the protection of forests, while logging operations have elicited the strongest public opposition (Lasy i Obywatele, 2024).

In accordance with the schedule adopted at the National Council on Forests (a forum comprising all relevant stakeholders, from non-governmental organisations to state forests and the timber industry), the results of the Citizen Forests project are to be produced by 31 October 2024. By that time, a map of citizen forests is to be created, indicating the specific locations and areas in question.

European legislation does not prescribe uniform regulations for forest land management across all member states. Consequently, the responsibility for formulating forest policy resides with the member states. Nevertheless, the European Union has established a European Forest Strategy and provides substantial support for activities that exert a considerable influence on forests within the European Union and beyond. In the year 2021, The European Commission has adopted a new European Union Forestry Strategy for the year 2030. It constitutes one of the flagship initiatives of the European Green Deal, building on the European Union Biodiversity Strategy 2030. It is anticipated that the Forestry Strategy will contribute to the achievement of the European Union's biodiversity targets by reducing greenhouse gas emissions by a minimum of 55% by 2030 and achieving climate neutrality by 2050. The strategy acknowledges the pivotal and multifaceted role of forests, which, in collaboration with stakeholders in the forest and timber industries, will facilitate the development of dynamic and prosperous rural communities. The objective is to achieve this goal by 2050. The European Parliament, in collaboration with the Council of the European Union, plays a pivotal role in shaping the European Union's developmental trajectory across a multitude of domains, including those pertaining to forest areas. In this context, the Parliament resolved to produce two own-initiative reports: one on the intensification of European Union action to protect and restore the world's forests (European Parliament resolution of 16 September 2020 on the European Union's role in protecting and restoring the world's forests) and the other on a new European strategy on forests (European Parliament resolution of 8 October 2020 on a European forestry strategy – the way forward). In conjunction with the aforementioned report, the Parliament also adopted an own-initiative report on legislative issues pertaining to global deforestation (European Parliament resolution of 22 October 2020, which sets forth recommendations to the Commission on an European Union legislative framework to halt and reverse European Union-induced global deforestation). Furthermore, on 13 September 2022, In response to the Commission's 2021 adoption of the European Union Forest Strategy 2030, the Parliament has adopted a resolution on the new European Union Forest Strategy 2030 – Sustainable forest management in Europe.

The concept of forests with an enhanced social function is also recognised internationally.

In the context of international forestry, the term "citizen forests" is primarily associated with urban and suburban forests, as well as the concept of the "tiny forest", which is exemplified by the forest in Poland (Cárdenas et al., 2022; Egerer & Suda, 2023; Galati et al., 2023; Greenleaf & Ries, 2020). In this particular case, citizen forests and urban forests are distinct categories of forests. By contrast, the defining feature of these various forms of community forestry is the involvement of the public in the protection and management of a forest that is important to a particular social group.

MATERIALS AND METHODS

A critical literature review was conducted in accordance with the methodology set forth by Pickering & Byrne (2014) and Gruas et al. (2020). The method is in accordance with the Preferred Reporting Items for Systematic Review Recommendations (PRISMA) guidelines.

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A review of the literature, legislation, websites dedicated to forests with enhanced social function, and environmental reports by the authors of the article confirmed the validity of the research theses formulated. Furthermore, interviews conducted by the article's authors with forest land managers and their own observations and experience in the field of spatial management and nature conservation served to corroborate the lack of formal guidelines for the designation of forest areas with enhanced social function. It was discovered that, with regard to their designation, in a multitude of countries, only general recommendations (termed "good practices") are typically in place, without consideration of the particularities of this type of forest function in relation to the sustainable development of the areas (Bańkowski, et al. 2019; Landry, 2022; eg. McElhinney et al., 2018; Order No. 58 of the Director General of the State Forests of 5 July 2022). This observation has prompted the authors to put forward a set of guidelines to assist those responsible for the designation and management of forests with enhanced social functions.

The objective of the literature analysis was to illustrate the economic, social, and scientific relevance and timeliness of research on the designation of forests with enhanced social function in the context of biodiversity conservation and production functions and their sustainability. Furthermore, it aimed to demonstrate the necessity for systemic actions aimed at preserving all forest functions. In addition to English-language sources, studies published in Polish were also consulted. The selection of pertinent sources of information was conducted through the utilisation of keyword searches within publicly accessible library catalogues, electronic publication databases (e.g. Science Direct, Scopus, Web of Knowledge; Google Scholar, Research Gate), printed bibliographic studies, internet repositories and digital libraries. The principal focus of the search was on recent papers published over the past 10 years. The content of scientific and practical items, European Union law and Polish law (including regulations, conventions, etc.) was analysed in order to ascertain their relevance to the issue of creating and managing forests with enhanced social functions.

The websites dedicated to the issue of social forests were visited and subjected to analysis.

The collected material was subjected to a process of verification and interpretation of the content of individual sources in accordance with the thesis and research hypotheses.

RESULTS AND DISCUSSION

Proposed guidelines for the development and implementation of criteria for the designation of forest areas with enhanced social function

The study's findings provide a framework for the designation of forest areas with an enhanced social function. The requisite actions for the implementation of an appropriate selection process are illustrated in Figure 1. Should the Local Cooperation Team be able to reach an agreement on the boundaries and location of the citizen forest proposed by the public party, the decision-making process will proceed in an orderly and efficient manner. Subsequently, the Forestry Commission accepts the proposal. Following approval by the Regional Directorate of State Forests, an appropriate entry is made in the taxation description of the Forest Management Plan, accompanied by economic indications. In the event that the Local Cooperation Team is unable to reach a consensus on the proposal, the team may elect to support the proposal with the analytical evidence outlined in the comprehensive algorithm (Fig. 2). In the event of further disagreement and disagreement on the proposals within the community proposal, it would be advisable to invite an independent auditor to contribute to the process. This could be a team of specialists not associated with the Local Cooperation Team. It is recommended that the independent auditor be an academic with interdisciplinary research experience in the disciplines of social and economic geography and spatial management, forestry and biological sciences, and Earth and related environmental

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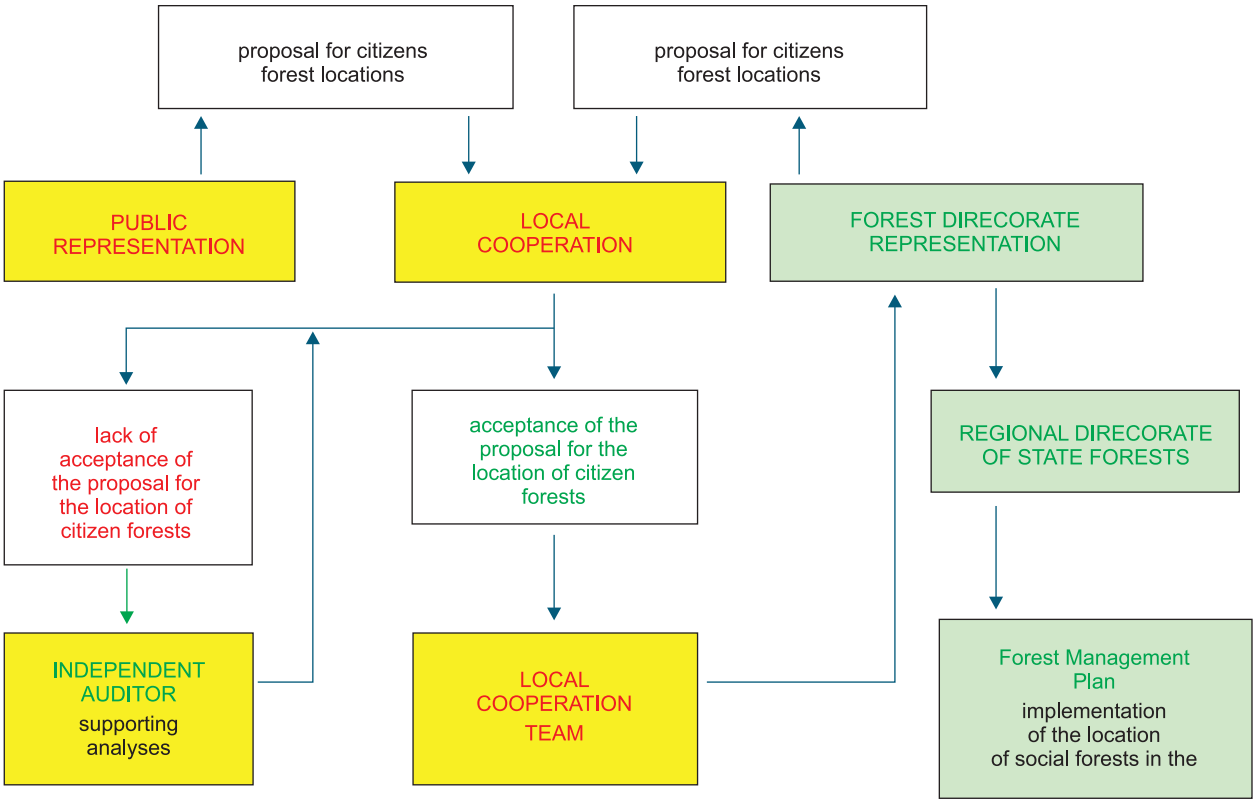

Fig. 1. General outline of entities and activities leading to the establishment of the citizen forest
Source: own elaboration.

sciences. The findings of the independent auditor should be accepted by the Local Cooperation Team and agreed upon by the Regional Directorate of State Forests, in accordance with the relevant provisions set forth in the Forest Management Plan.

The following section presents a comprehensive algorithmic approach to the designation of forest areas as citizen forests. The proposed algorithm of activities was divided into four stages (Fig. 2). Stage I concerns preparatory work, namely a preliminary selection of forest areas for further analysis. Stages II and III concern inventory and analytical work, enabling an assessment and valorisation of the selected areas to be carried out and a decision to designate all areas in the forest district or in the analysed area that could be converted into community forests. Stage IV includes legal and technical activities related to the final selection of the location of the forest with increased social function.

STAGE I – preparatory work

The preliminary stage of the preparatory work entails the identification of a preliminary location, which may be one or more areas within the forest district that are characterised by an increased level of social functionality. The precise algorithmic approach to be employed at this stage of the decision-making process is illustrated in Figure 1. The initial stage is a social proposal, wherein society (comprising local communities and non-governmental organisations) requests the creation of such an area. Additionally, the State Forests may act as the applicant, conducting an analysis of the indicated areas within the Local Cooperation Teams. In the event of discrepancies in the categorisation of forest areas of particular social value, it would be prudent to conduct a more comprehensive consultation process, utilising geomatics tools where appropriate. In specific

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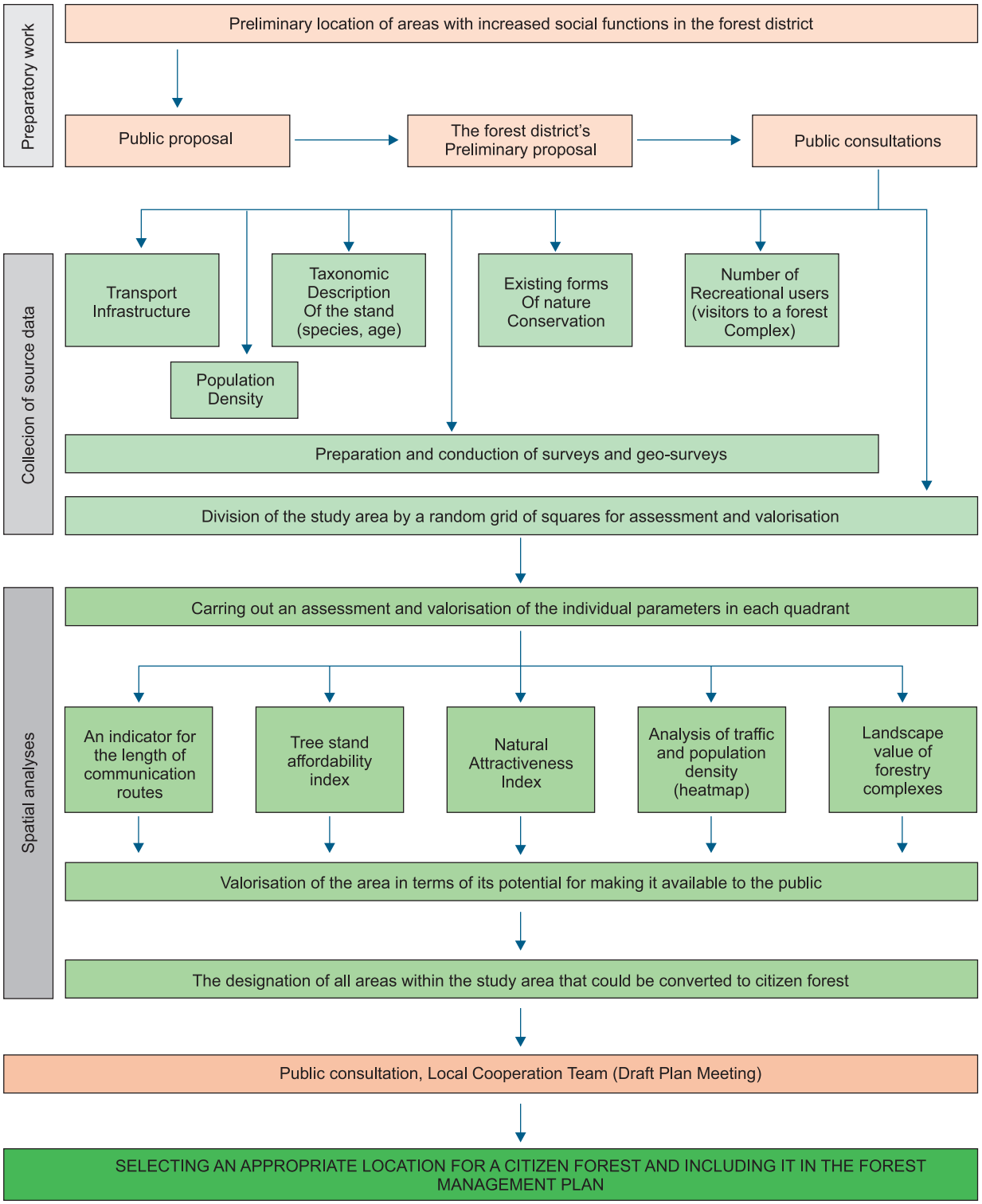

Fig. 2. Guidelines for demarcating potential areas for establishing citizen forests
Source: own elaboration.

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instances, it may also be necessary to conduct surveys or a series of meetings with the local community. The data gathered on the social requirements is then collated into a proposal for a specific area or multiple areas, which are then subjected to further analysis for potential designation as this type of forest.

STAGE II – collection of source data

It is important to note that the designation of socially important areas is a more complex process, as it requires the use of data from a variety of sources, including those outside the information system of the State Forests. It is therefore evident that the implementation of spatial information systems (GIS) will facilitate the delineation of areas where social expectations and forest management may conflict. These systems are capable of rapidly conducting a multitude of analyses based on existing data, which can be identified in geographical space. Furthermore, this solution will facilitate the visualisation of areas that meet specific criteria. It would be beneficial to integrate the communication infrastructure into the GIS as a layer, thereby establishing a foundation for the monitoring of tourist traffic. This would constitute a further, significant piece of information regarding the actual scale of public penetration of a given forest area. Furthermore, the issue of population density is also pertinent in this context. The presentation of the concentration of both the local community and those periodically staying in the area (tourists) on the background of the forest area map will provide a basis for further spatial analyses of potential or existing conflict sites.

The delineation of socially significant zones could be founded upon the valuation of the area in question, employing a grid of squares with dimensions of 500 metres by 500 metres (equivalent to 25 hectares). The initial anchor point could be selected at random to guarantee objectivity.

Surveys represent a valuable tool for the collection of reliable data pertaining to the public's preferences and expectations regarding community forests. It would be beneficial to precede the distribution of surveys with an information campaign, disseminated via social media and websites, in order to reach a vast array of stakeholders and gauge the extent of interest in the subject matter addressed in the survey. A survey constructed on a geo-server, wherein each individual would be afforded the opportunity to delineate on a map a square that they consider "attractive/important" with a brief justification selected from a list of options, would facilitate the precise identification of the most attractive areas. Such surveys could be created by the relevant bodies within the State Forests, for example the Information Centre or the Department of Information Technology. Additionally, the public should be queried regarding their expectations regarding the type of forest they desire. In conclusion, this will provide insight into the extent of the requisite changes in management and the "adjustment" of the provided forest fragments to align with the expectations of the majority of respondents. Furthermore, the open dialogue would serve a PR function, thereby demonstrating the openness of the State Forests to the needs of the public.

STAGE III – Spatial analyses

A value would be attributed to each square, calculated as the sum of the individual components. A grid of squares with sides of 500 x 500 m provides sufficient precision in determining the attractiveness of an area and is capable of capturing its variability, particularly in densely populated areas. The analysis may thus be conducted at the municipal, county, or forest disrtict territorial level, with the grid of squares appropriately designed to avoid the so-called "boundary effect". This entails enlarging the study area to account for the impact on squares located beyond the boundary of the analysed area.

As previously stated, each quadrant would have numerical component values in the attribute table, derived from the individual analyses. The average of these values would represent the value of the asset, determining the recreational potential of the area.

In order to ascertain the component values for each quadrant, it is necessary to consider at least the following:

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1. An indicator for the length of communication routes

It is established that the recreational appeal of forest complexes is contingent upon the presence of primary and secondary transportation routes. An area devoid of visible and passable roads, for instance those suitable for cyclists, is unlikely to garner significant public interest. Accordingly, the parameter of the density of roads and existing hiking trails (the indicator of the length of communication routes) defined for a given forest complex and then replicated in each quadrant would serve as an authoritative value indicating the accessibility of the area to the public.

The number of people utilising a specific forest complex for recreational purposes can be ascertained through the analysis of the road network. In this instance, the utilisation of so-called traffic counters (pedestrian, bicycle) situated at the point of ingress to the principal traffic arteries could prove an efficacious methodology for the determination of the number of individuals utilising the route. There are companies on the market that are specialised in the installation of such devices and the subsequent analysis of the data they provide. Furthermore, the data can be correlated with so-called heat maps, which visualise the attractiveness of traffic routes for people practising sports activities (e.g. Strava). Furthermore, it is important to note that in order to obtain a reliable estimate of the number of individuals utilising a specific forest complex for recreational purposes, the survey must be conducted throughout the entire calendar year. During the summer months, there is a tendency for a concentration of people in specific locations, such as along the shores of lakes or in the vicinity of resorts. Conversely, these areas may be visited with less frequency during the off-season. In such cases, the annual average can serve as a valuable indicator of the typical usage patterns.

2. Tree stand Affordability Index

The inclusion of stand parameters in the taxonomic description created for the purposes of forest management plans (e.g. dominant species, forest site type, stand age and others) when appropriately correlated would provide a meaningful indicator of the "attractiveness" of a stand. However, it is possible that the public's expectations in this respect may differ and be mutually exclusive, potentially due to personal preferences and ideas of a "picture forest". It is evident that oak-hornbeam habitats are incompatible with pine or spruce as the dominant species, which may give rise to certain expectations. The public's awareness of the impact of the habitat on the shape and appearance of the stand is a significant factor in shaping expectations. Therefore, at any stage where the public has the opportunity to articulate their preferences, efforts should be made to increase knowledge of broader ecological relationships.

3. Landscape value of forest complexes and Natural Attractiveness Index

The numerical terrain model data for each square allows the terrain roughness to be determined, thereby providing information on the terrain diversity of the study area. This process has already been completed as part of the establishment of valuation points for management works. In this context, the terrain diversity coefficient has been defined for each forest district in Poland in accordance with the provisions set forth in the DGLP Order 41/2012. This value can be further recalculated with a specific value resulting from the presence of additional "landscape values" in the area, such as lakes, high-aged forests, or forest habitat types "attractive" for human presence (fresh coniferous forest, fresh mixed coniferous forest, fresh mixed deciduous forest, fresh broadleaved forest). By correlating this parameter with the natural attractiveness of the area, based on information obtained from the Regional Environment Protection Directorate, it will be possible to describe each of the analysed squares in terms of landscape and nature value.

4. Traffic and Population Density Index

The aggregation of data for the European Commission permits the download of population density data (GHSL – Global Human Settlement Layer). The data are provided in raster format, with a resolution of 100 x 100 m, and contain information on the

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number of people residing in a given area. A value is attributed to each pixel, representing the population density.

The final stage of the spatial analysis process is to perform a summary valuation of the site in terms of accessibility, taking into account all of the elements that have been analysed in the individual grid boxes. A variety of spatial analyses may be employed to identify the areas exhibiting the highest values, including the Jenks method, natural dividing boundaries, and the distance-weighted average (IDW).

The outcome of the concluding spatial analyses will facilitate the identification and commendation of all areas that may satisfy the prerequisites for social forest status. The collated analytical and cartographic material will serve as an invaluable resource in the final stage (**IV STAGE**) of the algorithm, namely the public consultation.

CONCLUSIONS

The appropriate decision-making process for determining the location of citizen forests is a complex one that necessitates the collection of sufficient source data.

An error in the spatial analyses or the omission of any of the steps may result in an erroneous location that will fail to fulfil its functions. Consequently, certain sections of the forest will be excluded from effective forest management, despite their social functions.

In citizen forest areas, forest management must be carried out in a manner that takes into account the expectations of the public, which will often diverge from one another. The priorities of those advocating broad nature conservation, which most often takes the form of reserve protection, differ from those of those with sporting preferences and from ordinary walkers wishing to travel a short distance from a vehicle stop in safety and comfort. Furthermore, it is important to consider the forest as a workplace for various professional groups, including forest service companies, foresters, and those employed in other sectors directly or indirectly related to the timber industry. For these parties, a reduction in the area to be harvested will be associated with professional challenges and potential income opportunities. Furthermore, it is important to acknowledge that the implementation of economic procedures associated with the maintenance of stands and their reconstruction in a more socially beneficial manner is conducted through the utilisation of harvesting equipment. In many instances, the mere appearance of such equipment in the area gives rise to concerns and protests.

It is thus evident that a suitable procedure for determining the location of citizen forests (Fig. 2) should be preceded by a preliminary analysis of the application for the establishment of such areas by each forest district (Fig. 1). Involving the local community in consultations on the shape and extent of forests of special social value will facilitate a more nuanced understanding of the multifaceted aspects related to the public perception of forest functions.

This will facilitate the ability to respond to the public's expectations regarding the visual presentation and character of the forest areas visited, while simultaneously educating the public and promoting a positive image of the State Forests as a responsible and environmentally conscious administrator of state forest areas.

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