

Plans for the development of infrastructure and tourism activities in landscape parks under the State Forests' administration

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Abstract. The aim of the study was to present plans (up to 2030) for the development of infrastructure and tourism activities in the Polish landscape parks located in the area of the State Forests' administration.

At the end of 2013, a survey was conducted the results of which were verified and their analysis completed in 2014. The questionnaire was sent to the directorates of all 122 parks. 70.5% of the directorates replied to the open question inquiring about their plans and demands for tourist activities (including educational tourism) and recreation. These were then correlated to parks in areas under the State Forests' administration.

The most commonly proposed/planned actions by the directorates in cooperation with the Forest Districts are: construction of new educational paths (in 41.9% of parks), maintaining the existing ones (24.4%) and the organization of tourism/recreation and educational events (22.1%). The largest share of proposed/planned actions without the cooperation of the Forest Districts comes from the creation of new routes/trails, parking lots, etc. along with their equipment (36.0%), construction of tourist infrastructure (bins, benches, tables, shelters, fire circles, sightseeing towers, bridges, 18.6%) and the issuing of maps, brochures, guides or other publications (17.4%).

However, it is of particular importance to take the need for nature conservation in the development of tourism and recreation in areas of landscape parks into account. The literature provides a number of helpful solutions. Furthermore, such activity requires broad cooperation supported by external funds especially between the parks, Forest Districts and municipalities.

It is also important to continue the environmental education of both, visitors and locals, as well as the promotion of eco-tourism and responsible use of the environment.

Keywords: tourism in landscape parks, tourism in the State Forests, the development of tourism, landscape parks' cooperation with the State Forests

1. Introduction

Landscape parks are one of the 10 forms of nature protection in Poland (Act of Parliament: Ustawa 2004 - art. 6.1). They cover the area protected due to its natural, historical and cultural values as well as landscape characteristics in order to protect and popularise those values in the conditions of sustainable development (Act of Parliament: Ustawa 2004 - art. 16.1). Due to the fact that

forest lands located within the borders of landscape parks remain under management (Act of Parliament: Ustawa 2004 - art. 16.6), forest districts of the State Forests (SF) can function there.

Currently, in Poland, there are 122 landscape parks, which include larger and smaller forest areas. Combined forest area within landscape parks covers more than 50.4% of their total area (Statistical Yearbook of Environment (2014) - Table (21)195). From another side, landscape parks (together with

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less forested areas of the protected landscape) cover 51% of the State Forests' area (Report 2014).

According to the Nature Conservation Act, within the areas managed by the State Forests National Forest Holding (PGLLP) located on the lands of landscape parks, a local forest district manager is responsible for implementation of nature protection activities according to agreed nature protection plan of a landscape park, which is linked to forest management plan (Act of Parliament: Ustawa 2004 - art. 105.5). However, nature protection plan of a landscape park is not limited to nature protection activities, but also includes recommendations for development of such activities as recreation and tourism (accessible areas and methods of their use) (Act of Parliament: Ustawa 2004 - art. 20.4). The content of such recommendations depends on opinion of a landscape park board or a board of a landscape parks group. Their competency from one side includes advising on a project of nature protection plan of a landscape park (Act of Parliament: Ustawa - art. 99.4.2), and from another side, it covers advising and evaluation of implemented projects and programmes conducted by a landscape park or a group of landscape parks, which include nature protection, education and also tourism and recreation (Act of Parliament: Ustawa - art. 99.4.4). Therefore, according to presented regulations, in the Nature Conservation Act (2004), forest district manager is indicated as a person responsible for implementation of tasks related to nature protection in a landscape park, while that manager is not shown to be responsible for implementation of tasks related to tourism and recreation. Nonetheless, the activities conducted by a forest district manager depend on nature protection plan of a landscape park, and more precisely on presented above recommendations on access to park areas and methods of their use (Act of Parliament: Ustawa 2004 - art. 20.4). Such regulations should be considered during preparation of forest management plans (Instruction of forest management: Instrukcja 2011 - § 116.1.3), which also concern forest tourism and recreation. Supporting social forest functions that include access to forests for recreational, health and educational purposes is one of the criteria of contemporary forest management (Instruction of forest management: Instrukcja 2011 - § 79.2.6). Specifying needs for construction and repair of forest infrastructure including that related to tourism and recreation is one of the tasks of forest management planning (Instruction of forest management: Instrukcja 2011 - § 1.2.14, § 3.1.8g, § 96.1.7, § 108-109). A map showing recreational facilities located within its area is also developed (Instruction of forest management: Instrukcja 2011 - § 109). Forest management plan has to be approved by the Minister of the Environment (Act of Parliament: Ustawa 1991 - art. 22.1). Forest district manager is responsible

for implementation of the plan (Act of Parliament: Ustawa 1991 - art. 35). Due to the fact that activities conducted by the State Forests are implemented on the basis of financial self-reliance (Act of Parliament: Ustawa 1991 - art. 50.1), the costs of maintenance of public access and use of forests for touristic, recreational and educational purposes are covered from incomes of forest districts. It should, however, be mentioned that other financial means could be used for these purposes such as European Union (EU) financing, especially in the Natura 2000 areas (<http://www.ckps.lasy.gov.pl/realizowane-projekty>). In case of landscape parks, it would be hard to discuss their own profits, as they do not have legal regulations for receiving profits from those areas or collecting fees for park access (Act of Parliament: Ustawa 2004). Park activities are financed from subsidies received from province administrations (mostly intended for covering salaries), supported by means received from provincial funds of environmental protection and water management, and in lesser degree, by means received from Regional Operational Programmes or Operational Programme for Infrastructure and Environment, which could be allocated for extension of educational infrastructure, publishing and nature protection activities. However, such situations as, for example, illegal waste dumping or burning of vegetation (effects of presence of tourists and forest visitors) are reported by landscape park services to appropriate municipal services and organisations (Annual Report of The Supreme Audit Office of Republic of Poland: NIK 2012). This occurs due to regulations of the Nature Conservation Act (2004), according to which landscape park services should 'submit application on necessary activities' in case of existing hazards, and not 'undertake activities' related to them (art. 107.2.2).

There are no current nationwide data on touristic and recreational use of landscape parks in the Statistical Yearbook of Environment (2014). Presented below available fragmented pieces of information indicated that such form of nature protection plays a very important social role. According to Harabin and Wrona (1999), in the end of the 1990s, the number of Polish tourists visiting landscape parks was more than 21 million people annually. They also present more specific data for selected landscape parks that were visited more intensively: Beskid Śląski and Popradzki Landscape Park - 2.5 million people/year, Nadmorski and Żywiecki Landscape Park - 1.2 million people/year, Szczeciński Landscape Park - 1 million people/year.

Forest environment, especially within the borders of protected areas, has special attractiveness for tourists and forest visitors (Mandziuk, Janeczko 2009). Additionally, development of recreational resources in protected forests enriches labour market (Gołos, Referowska-Chodak 2011). Due to that, such areas experience large pressure from visitors as

well as recreational managers. It could result in rise of various hazards for environment.

The main goal of current work is to discuss plans for development of infrastructure and recreational activities on the lands of landscape parks managed by the State Forests presented by the administrations of landscape parks with the outlook to year 2030. Those plans include wide range of recreational activities, including educational tourism. Some specific goals presented by park managers cover recreational and educational infrastructure, special events intended for forest visitors, transfer of information to visitors, control of negative effects of recreation on natural environment. Such information has significant importance for foresters due to overlapping of landscape park areas with forest district territories and responsibility of foresters for those areas.

The data was collected at the end of 2013 as part of wider questionnaire research. A survey was sent by regular mail services to administrations of all landscape park groups as well as independent park administrations, which are not part of any group. The respondents had to describe their plans on organisation of tourism and recreational activities in their landscape park. The question was stated as following: Which actions do you plan in relation to organisation of touristic and recreational activities in your landscape park (on the areas managed by the State Forests within each forest district)?

Such planned activities were presented by some of the landscape park managers within their reply to the question: Do you plan cooperation in the area of nature protection in

the State Forests with organisational units as well as legal and physical entities? From the total of 122 landscape parks, the information was obtained from 86 (70.5% of parks). In 2014, the surveys were verified and supplemented by electronic correspondence and telephone conversations. In cases, when landscape park administration is divided between groups of landscape parks located in neighbouring provinces, the results showed the origin of a given proposal through indication of a province name in parenthesis. Proposals presented by park administrations were divided into specially created for that purpose general categories. Additionally, proposals were divided according to foreseen cooperation with local forest districts and those where such cooperation was not directly indicated. The share of landscape parks, where specific group of activities is planned was presented for each category in relation to the number of parks from which surveys were received. The results are discussed based on the literature related to this subject.

2. Results

Plans regulating organisation of touristic and recreational activities on the territories managed by the State Forests were stated by the directors of 77 landscape parks (89.5% of parks surveyed). Remaining parks, which took part in the survey (10.5%) currently, do not foresee such activities. That concerns such landscape parks as: Cisowsko-Orłowski, Jeleniowski, Kozubowski, Nadmorski, Nadnidziański, Sieradowicki, Suchedniowsko-Oblęgorski and Szaniecki.

Table 1. Plans and proposals from landscape park directorates related to tourism and recreational infrastructure (with no comment on cooperation with forest district)

Action	Landscape park (% share in the group of respondents)
Renovation and complementation of infrastructure, in existing routes and viewpoints	Chęcińsko-Kielecki, Chełmy, Dolina Jezierzycy, Lasy nad Górną Liswartą, Rudawski, Ślężański, Zaborski (8.1%)
Construction of tourist infrastructure (bins, benches, tables, shelters, campfire places, sightseeing towers, bridges)	Cedyński, Drawski, Gostynińsko-Włocławski, Iński, Beskidu Małego, Beskidu Śląskiego, Dolina Jezierzycy, Doliny Dolnej Odry, Lasy nad Górną Liswartą, Ujście Warty, Popradzki, Rudawski, Szczeciński PK Puszcza Bukowa, Welski, Załęczański, Żywiecki (18.6%)
New tourist routes, bicycle paths, hiking trails, walking areas, parking lots along with their equipment	Gryżyński, Kazimierski (ew.)*, Kozłowiecki (ew.), Krasnobrodzki, Krzczonowski (ew.), Łagowsko-Sulęciński, Łomżyński PK Doliny Narwi, Nadwieprzański (ew.), Beskidu Małego, Cysterskie Kompozycje Krajobrazowe Rud Wielkich, Dolina Baryczy, Dolina Bobru, Dolina Bystrzycy, Dolina Słupi, Gór Słonnych (ew.), Lasy nad Górną Liswartą, Orlich Gniazd (woj. śląskie), Pojezierze Łęczyńskie (ew.), Puszczy Solskiej (woj. lubelskie), Stawki, Południoworoztockański (woj. lubelskie), Popradzki, Rudawski, Skierbieszowski, Sobiborski, Szczebzeszyński, Ślężański (korekta przebiegu szlaku rowerowego), Wdzydzki, Welski, Wrzelowiecki (ew.), Załęczański (36.0%)

* (ew.) = possibly

The administration of the Nadgoplański Millenium Park (Kujawsko-Pomorskie Province) indicated in the survey that they foresee activities according to the nature protection plan, however, it did not describe them more specifically.

Proposals and plans presented by the directors of landscape parks significantly varied in number of details specified. Some were very general as, for example, ‘collectively conducting activities with the Chojnów Forest District’ (Chojnowski Landscape Park), and some were more detailed such as ‘preparing firewood for campfire’ (Landscape Park Gór Słonnych). Tables 1–5 compile those proposals according to general categories used, as well as present share of landscape parks linked to given category. Selected propositions were singled out in text due to their wider geographical cover or due to indicated cooperation with organisations other than forest districts (Referowska-Chodak *et al.* 2015).

Plans and propositions on development of tourism and recreational infrastructure were indicated by 44 landscape parks (51.2% of parks surveyed). In four of them (Krasnobrodzki, Puszczy Solskiej, Południoworoztockański and Szczebrzeszyński), infrastructure development would con-

tribute to recreational infrastructure of a larger complex - Geopark ‘Kamienny Las na Roztoczu’.

Another six landscape parks (Wrzelowiecki, Kazimierski, Krzczonowski, Nadwieprzański, Kozłowiecki, Pojezierze Łęczyńskie) specified previous cooperation with non-governmental organisations (Polish Association of Bird Protection, Lublin Ornithological Association) in creating educational trails.

Plans and proposals on organisation of events for forest visitors were mentioned by 11 landscape parks (12.8% of surveyed landscape parks). In case of preparing educational trails and also while preparing exhibitions on environmental topics, Wrzelowiecki, Kazimierski, Krzczonowski, Nadwieprzański, Kozłowiecki and Pojezierze Łęczyńskie Landscape Parks used assistance of non-governmental organisations such as Polish Association of Bird Protection and Lublin Ornithological Association.

Plans and proposals related to distribution of information to park visitors were mentioned by 33 landscape parks (38.4% of surveyed parks). Directorates of some of the landscape parks noted undergoing cooperation in this area with

Table 2. Plans and proposals from landscape park directorates with regards to events dedicated to forest visitors (with no comment on cooperation with forest district)

Action	Landscape park (% share in the group of respondents)
Organization of rallies and tours on the park trails	Chełmski, Koziński, Mierzeja Wiślana, Poleski, Strzelecki (5.8%)
Exhibitions	Kazimierski, Kozłowiecki, Krzczonowski, Nadwieprzański, Pojezierze Łęczyńskie, Wrzelowiecki (7.0%)

Table 3. Plans and proposals from landscape park directorates related to transfer of information to forest visitors (with no comment on cooperation with forest district)

Action	Landscape park (% share in the group of respondents)
Promotion/information on park/nature/its protection	Barlinecko-Gorzowski, Chęcińsko-Kielecki, Gryżyński, Krzesiński, Łagowsko-Sulęciński, Dolina Jezierzycy, Łuk Mużakowa, Stawki, Ujście Warty, Pszczewski, Ślężański (13.0%)
Preparation of maps, brochures, guides and other publications	Cedyński, Drawski, Gostynińsko-Włocławski, Iński, Krasnobrodzki, Dolina Słupi, Doliny Dolnej Odry, Puszczy Solskiej (woj. lubelskie), Ujście Warty, Południoworoztockański (woj. lubelskie), Skierbieszowski, Szczebrzeszyński, Szczeciński PK Puszcza Bukowa, Wdzydzki (17.4%)
Mounting of official and information boards	Cedyński, Drawski, Cysterskie Kompozycje Krajobrazowe Rud Wielkich, Dolina Słupi, Doliny Dolnej Odry, Mierzeja Wiślana, Orlich Gniazd (woj. śląskie), Ujście Warty, Szczeciński PK Puszcza Bukowa, Trójmiejski, Zaborski (12.8%)
Promoting sustainable tourism	Mazurski, Lasy nad Górną Liswartą, Załęczański (3.5%)
Marking of paths and trails	Cedyński, Drawski, Iński, Dolina Słupi, Doliny Dolnej Odry, Ujście Warty, Szczeciński PK Puszcza Bukowa, Trójmiejski, Welski, Zaborski (11.6%)

non-governmental organisations. As an example, staff of the Dolina Słupi Landscape Park and the Ecological Club ‘Słupia’ cooperate in marking natural trails. Cooperation in the area of preparing public information on protection of natural features was indicated between the staff of the Rudawski Landscape Park and the Local Action Group (LGD) Mountain Spirit Partnership, Polish Association of Nature Friends pro Natura, Polish Tourist and Sightseeing Society (PTTK) Sudety Zachodnie, PTTK Kamienna Góra and municipal administrations. Similar cooperation was noted in case of the Dolina Bobru Landscape Park and the Goduszyn Association, Sudeckie Horyzonty Association, Karkonoskie Association and municipal administrations.

Plans and proposals from landscape park directorates related to control of negative effects of recreation on natural environment were presented by the directorates of 16 landscape parks (18.6% of landscape parks participating in the survey).

Plans and proposals of landscape park directorates that foresee cooperation with forest districts were specified by 70 landscape parks (81.4% of surveyed landscape parks). Within that group of parks, 51 of them (59.3% of surveyed parks) plan activities related to infrastructure development, 19 parks (22.1%) - activities related to various events, 11 parks (12.8%) - activities related to information dissemination and 10 parks (11.6%) - activities controlling effect of recreation on environment. Some landscape parks indicated wider cooperation, not only with forest districts, but also with other organisations. Such cooperation involved questions related to recreational management (Dolina Baryczy Landscape Park with local municipalities; Dolina Bystrzy-

cy Landscape Park with local municipalities), recreational infrastructure (Dolina Bobru Landscape Park with PTTK Sudety Zachodnie; Chełmy Landscape Park with Provincial Fund for Environmental Protection and Water Management in Wrocław and also Wrocław Regional Directorate of the State Forests; Rudawski Landscape Park with PTTK Sudety Zachodnie and PTTK Kamienna Góra), trail marking (Dolina Słupi Landscape Park with PTTK Słupsk and LGD Foundation Partnership Dorzecze Słupi), event organisation (Wdecki Landscape Park with Brotherhood of Black Water) and also, restoration of natural environment damaged due to recreational activities (directorate of the Wdzydzki Landscape Park proposes financial participation of municipalities).

3. Discussion of the results

Landscape parks are organised in order to, first of all, protect local qualities of the natural and cultural landscape, and the use of such parks (including recreational) should not harm the values of such protected areas. While planning the recreational use of landscape parks such factors as purpose of park creation, their goals and functions, legal and formal basis of their functioning, current state of natural and landscape resources, use and management as well as possible negative effects on environment and landscape should be carefully considered (Baranowska-Janota 2001). Recreational activities could cause various damages to the environment such as damage to green vegetation on trails and nearby area, compaction and widening of trails (a.o. Skłodowski *et al.* 2009), changes in species composition along the trails (Latowski 2000, Sikorski 2009), forest fires.

Table 4. Plans and proposals from landscape park directorates related to control of negative effects of recreation on natural environment (with no comment on cooperation with forest district)

Action	Landscape park (% share in the group of respondents)
Monitoring impact of tourism (including educational tourism) on environment/ecosystems	Gryżyński, Krasnobrodzki, Łagowsko-Sulęciński, Łomżyński PK Doliny Narwi, Puszczy Solskiej (woj. lubelskie), Południoworostoczański (woj. lubelskie), Skierbieszowski, Szczepieszki, Ślęzański (10.5%)
Analysing recreational capacity of forests, establishing places of special value and trails	Gryżyński, Łagowsko-Sulęciński (2.3%)
Improvement of existing trails	Dolina Bobru, Dolina Jezierzycy (2.3%)
Exclusion of degraded/sensitive forest fragments	Wdecki, Wdzydzki (2.3%)
Modernization of camping areas for the needs of environmental protection	Wdzydzki (1.2%)
Restrictions on the location of tourist infrastructure harmful for nature	Wdzydzki (1.2%)
Marking various forms of nature protection, monitoring of this marking	Nadbużański, Trójmiejski, Wdecki, Zaborski (4.7%)

Table 5. Plans and proposals from landscape park directorates which foresee cooperation with forest districts

Action	Landscape park (% share in the group of respondents)
Cooperation with forest districts in maintaining/restoration/establishment of tourist infrastructure	Gryżyński, Kozienicki, Łagowsko-Sulęciński, Lasy nad Górną Liswartą, Suwalski, Trójmiejski, Welski, Załęczański (9.3%)
Maintenance of existing educational trails, their repair and modernization	Ciężkowicko-Rożnowski, Ciśniańsko-Wetliński, Drawski, Jaśliski, Kozienicki, Krzesiński, Łagowsko-Sulęciński, Łomżyński PK Doliny Narwi, Nadbużański, Dolina Słupi, Doliny Sanu, Gór Słonnych, Lasy Janowskie, Lasy nad Górną Liswartą, Pasma Brzanki, Pogórza Przemyskiego, Strzelecki, Wiśnicko-Lipnicki, Wdzydzki, Zaborski, Załęczański (24.4%)
New educational trails	Bieleńsko-Tyniecki, Ciężkowicko-Rożnowski, Dłubniański, Gryżyński, Kazimierski (ew.), Kozienicki, Kozłowiecki (ew.), Krasnobrodzki, Krzczonowski (ew.), Łagowsko-Sulęciński, Nadwieprzański (ew.), Beskidu Małego, Cysterskie Kompozycje Krajobrazowe Rud Wielkich, Dolina Baryczy, Dolinki Krakowskie, Gór Słonnych, Lasy nad Górną Liswartą, Mierzeja Wiślana, Orlich Gniazd, Pasma Brzanki, Pogórza Przemyskiego, Pojezierze Łęczyńskie (ew.), Puszczy Solskiej, Południoworożtoczański, Popradzki, Przemkowski, Rudawski, Rudniański, Skierbieszowski, Sobiborski, Suwalski, Szczebrzeszyński, Tenczyński, Wiśnicko-Lipnicki, Wrzelowiecki (ew.), Załęczański (41.9%)
Providing access to interesting fragments of forest stands (in agreement with the SF administration)	Kazimierski, Kozłowiecki, Krzczonowski, Nadwieprzański, Pojezierze Łęczyńskie, Wrzelowiecki (7.0%)
Organization (together with forest districts) of tourism/recreational and educational events (tours, rallies, Children's Day, Earth Day, Clean Up the World etc.)	Barlinecko-Gorzowski, Brudzeński, Chojnowski, Ciśniańsko-Wetliński, Czarnorzecko-Strzyżowski, Jaśliski, Kozienicki, Mazowiecki, Doliny Sanu, Gór Słonnych, Mierzeja Wiślana, Pogórza Przemyskiego, Puszczy Solskiej (woj. podkarpackie), Ujście Warty, Południoworożtoczański (woj. podkarpackie), Pszczewski, Strzelecki, Wdecki, Zaborski (22.1%)
New information and education boards	Beskidu Śląskiego, Mierzeja Wiślana, Welski, Żywiecki (4.7%)
Publications and/or informational and educational campaigns, promotion of the park/nature	Cysterskie Kompozycje Krajobrazowe Rud Wielkich, Gostynińsko-Włocławski, Gryżyński, Łagowsko-Sulęciński, Łuk Mużakowa, Mierzeja Wiślana, Orlich Gniazd, Stawki (9.3%)
Consultation/giving opinions on draft plans for tourism development in forest districts, cooperation in such initiatives on the part of a park	Barlinecko-Gorzowski, Gostynińsko-Włocławski, Kaszubski, Mazurski, Dolina Baryczy, Dolina Bystrzycy, Ujście Warty, Pszczewski, Wdecki (10.5%)
Restoration of forest fragments damaged by tourists	Wdzydzki (1.2%)

Due to the fact that landscape parks and forest districts of the State Forests are located in the same area, their activities and influences are interlinked. One of the mutual topics is development of tourism and recreation. Presented research results of the conducted survey underline main courses of infrastructure and recreational activity development in landscape parks with the management of the State Forests. The survey covers 70.5% of Polish landscape parks with the perspective to year 2030.

Current survey was mostly concentrated on recreational infrastructure, which also included educational infrastructure. Directorates of 8.1% of landscape parks plan activities,

which will maintain existing trails and viewpoints. 18.6% of landscape parks propose extension of recreational infrastructure, while 36.0% of landscape parks plan construction of new trails and various facilities. 9.3% of landscape park directorates plan activities with regard to recreational and tourist infrastructure in cooperation with local forest districts. Such cooperation is also foreseen in providing access to more interesting forest stand fragments by 7.0% of landscape parks (hiking trails).

Listed activities direct and channel more orderly recreational activities while limiting excessive and chaotic use of the whole park territory. Although landscape park use is not

restricted by such limitations as it obliges in national parks and nature reserves (such as prohibition to leave the marked trails - Act of Parliament: Ustawa 2004 - art. 15), existence of valuable and rare natural features also requires species care and protection. Activities related to maintenance and development of tourism and recreational infrastructure also bear certain amount of costs. Landscape park directorates in such cases have to apply for external financing, while the State Forests could use their own means or also search for additional funding from different sources. During the last years, the EU funding for construction of recreational infrastructure, which protects natural values, especially in Natura 2000 areas became available, however, so far, landscape park directorates were using them on a small scale (<http://www.ckps.lasy.gov.pl>). It would be important to mention that part of the State Forests' projects financed from that source is at the same time implemented in landscape parks. Installation of new parking lots, biking, hiking and horse riding trails, as well as camping sites requires close cooperation between landscape parks, local forest districts managing given area and also with municipal administrations. Landscape park directorates, which indicated cooperation with local forest districts with regard to recreational infrastructure development, also indicated cooperation with other organisations such as tourism organisations, provincial funds of environmental protection and water management as well as the bodies responsible for forest districts (regional directorates of the State Forests).

While in case of proposals indicated in the survey with regard to development of touristic and recreational infrastructure, only about 16% had a comment about cooperation in that area with local forest districts, such cooperation was more common in case of planning of educational trails. 24.4% of landscape parks plan cooperation in maintenance of educational trails, their repair and modernisation, and 41.9% of landscape parks plan cooperation in establishing new objects of such type.

Educational trails as well as other educational objects improve attractiveness of visits to landscape parks. At the same time, they present a link between tourism and recreation from one side and nature protection on another, which is one of the main tasks of landscape park functioning. Such educational facilities could channel the movement of visitors limiting the access to environmentally valuable areas. Moreover, they increase the level of environmental knowledge and awareness of targetted audience, which includes local residents and park visitors. There is no national statistics describing the number of educational trails in landscape parks, including those created from the means of the parks themselves. Financial situation of landscape parks in these cases requires cooperation with, more commonly, the State

Forests that, on the national scale, created the most of such trails - 981 (Chrzanowski 2014). As a matter of fact, directorates of the state forests also use the support of specialised non-governmental organisation such as ornithological, which was also shown in questionnaires.

The second group of plans and proposals presented in the survey by the directorates of landscape parks is directed to events prepared for park visitors. The organisation of rallies and trips on park trails were indicated by 5.8% of directorates, while organisation of exhibits - another 7.0%. Those numbers concern events, for which park directorates did not declare cooperation with local forest districts. While cooperation with forest districts in preparation of recreational and touristic events, which included educational (such as Children's Day, Earth Date, Cleaning of the World), was planned by 22.1% of landscape parks.

Such types of activities, including educational makes visiting for people travelling around forest sites within landscape parks more attractive and simultaneously, in case of educational activities, it raises environmental awareness of the society. Conducting natural education belongs to responsibilities of landscape parks staff (Act of Parliament: Ustawa 2004 - art. 107.2.6). Environmental (forest) education is one of the tasks implemented on the same area by the employees of the State Forests. Educational activities are implemented through wide cooperation between various organisations, which was also shown in questionnaire replies provided by the directorates of landscape parks. In 2013, State Forests' units implemented 265 shared educational projects with national and landscape parks (Chrzanowski 2014), however, only part of them concerned events and the rest of them related to infrastructure discussed above. Besides cooperation 'landscape park - forest district', park directorates noted cooperation with non-governmental organisations (which were oriented on bird protection, tourism, protection of natural environment and regional development). Research literature recommends contacting forest tourism operators, who, from one side, will improve attractiveness of tourism offers, and from another, will implement them with higher environmental awareness (Skłodowski, Ożga 2013).

The third group of plans and proposals presented in the survey by the landscape park directorates concerned transfer of information to park visitors. On one hand, promotion of landscape parks could increase interest of possible park visitors (more visitors, higher profits from tourism, larger impact on environment), on the other hand, better awareness could improve quality of contacts with nature (higher responsibility). Spreading information about natural and touristic values of landscape parks is included into responsibilities of park services (Act of Parliament: Ustawa 2004 - art. 107.2.6). Activities promoting parks, their nature

and/or its protection are foreseen (with no listing of cooperation with forest districts) in 13.0% of landscape parks; publishing activities (maps, folders, guides, etc.) - in 17.4% of parks; mounting of official and educational boards - in 12.8% of parks; promotion of sustainable tourism - in 3.5% of parks; and marking of paths and trails - in 11.6% of parks. Cooperation with local forest districts is indicated relatively rare by park directorates. In case of new informational and educative tables - in 4.7% of parks and in case of publications and/or informational and educational campaigns, park and nature promotion - in 9.3% of parks. It should, however, be remembered that State Forests' units that conduct educational activities on the same territory in reality also provide information about environmental values of parks, the need for and principles for nature protection. The survey also lists other organisations currently cooperating or planned for cooperation with landscape park administrations in the future, which includes non-governmental organisations (with activities directed on tourism, protection of natural environment and local development/publicity) and municipal administrations.

Around the world, and more and more often in Poland, environmentally friendly tourism models are being promoted. In the literature, one could meet the term educational tourism, which could be in its scope and idea identified with the notion of ecotourism described below. The concept should be directed not only on visitors coming from other places, but also on local residents and tourist agents. It requires development of educational guidebooks on nature, establishment of educational paths and trails and also preparation of practical informational boards (Tworek, Cierlik 2003; Symonides 2008), which is mentioned in plans presented by directorates of landscape parks.

The model of ecotourism is also considered to be safe for environment (nature-oriented and environmental tourism). It is understood as conscious and active sustainable tourism based on close contact with nature, which pays special attention to preservation and responsible use of natural values (exploring, admiring, enjoying landscape beauty, silence and calm). Such tourism directed mostly on individuals or small groups causes smaller damages than massive tourism, especially because it should be implemented on a small scale under control and care of special guides (Dudek, Kowalczyk 2003; Kasprzak 2005). Practicing of environmental tourism (and recreation) in all forests (not only in landscape park) is promoted by foresters of the State Forests (Marszałek 2010). Effective initiation of the ecotourism model demands cooperation of local administrations, society, administrators of protected areas (in this case, landscape parks), land managers (in this case, forest districts), tourism agencies, social environmental organisations and tourists; and if viewed

wider - the whole society, media and governmental authorities (Baranowska-Janota 1995; Gałązka 2009). It would be important to promote tourism, which is safe for environment (Harabin, Wrona 1999; Dudek, Kowalczyk 2003; Tworek, Cierlik 2003; Kasprzak 2005; Staniewska-Zątek 2007; Symonides 2008), and promotion of environmental tourism should not be based exclusively on traditional, but also on modern media such as Internet (Jaska, Krzyżanowska 2009). Simultaneously, special attention should be paid to local media (Rutkiewicz 2009).

The fourth group of plans and proposals presented in questionnaire replies by landscape park directorates relates to control of tourism and recreation impact on nature. 10.5% of landscape parks envisage preparation of plans/strategies of tourism development, while in all the cases, cooperation between park administrations and forest districts is mentioned (consulting, expertise of projects prepared by forest districts or cooperation related to such projects from a landscape park). At the same time, some of the landscape park directorates additionally declared cooperation with local municipal administrations. Such cooperation is essential due to the fact that at the municipal level strategies concerning tourism are also being prepared. If cooperation does not occur, there could be several different versions of tourism strategies prepared for the area of the same landscape park. As a result, differently prepared networks of tourist trails could appear or same parts of trails would be marked for different use functions (Cieszewska 2009). While formulating the concept of recreational development in landscape parks, several basic rules should be abided: 1) development of recreational use should agree with basics of sustainable development so that landscape park resources and values would be preserved, 2) recreational use and management should be well planned and organised, 3) development of recreational use requires special organisational planning of a park and its surrounding area, 4) new attitudes and behaviour of both park visitors and managers of recreational use should be shaped within the borders of landscape parks. These basics are discussed more deeply in the paper of Baranowska-Janota (2001) and also, in publication of Staniewska-Zątek (2007).

Such activities as establishing recreational capacity of forests, places of special value and trails, improvement of existing trails (due to the need of nature protection), exclusion of degraded/sensitive forest fragments, modernisation of camping areas for the needs of environmental protection and restrictions on the location of tourist infrastructure harmful for nature were mentioned only by a few (1–2) landscape parks, while cooperation with forest districts in such cases was not indicated. Establishment of recreational capacity of forests and places of special value allows definition of social strategy for park accessibility: which park areas (ecosystems)

should be excluded from areas open for recreation or should have restricted access and in which park areas (ecosystems), recreational impact will not have such a negative effect on environment. Tolerance of various forest ecosystem types to recreational pressure was a subject of research of a.o. Krzymowska-Kostrowicka (1997), Staniewska-Zątek (2007) and Turkowiak (2009). While replying to questionnaires, landscape park directorates mentioned the need to introduce limitations on placing of recreational infrastructure damaging for environment. One of the solutions suggested in the literature is to allocate a network of hotels, restaurants and other concentrated infrastructure within more populated areas or in areas already altered located outside the park borders, for example, in its surrounding area (Staniewska-Zątek 2007, 2009; Hurba 2009). It would also be important to pay more attention to organisation of alternative activities, which would draw tourists away from the most sensitive park fragments (Graja-Zwolińska 2009). Besides the limitations related to infrastructure location, there is also a need for development of specific regulations related to active forms of recreations (hang gliding, rafting, survival, cave exploration, etc.), which concerns regulations themselves, selection of acceptable places for such practices as well as supervision of certified instructors (Staniewska-Zątek 2007, 2009).

In order to limit conflicts between recreation and nature protection, it would be crucial to conduct systematic observations and control of recreational impact on environment and ecosystems, so that in case of necessity trail, routes could be modified or temporarily closed for recreational use. Plans with regard to implementation of such observations were presented by 10.5% of landscape parks, while cooperation with forest districts was not mentioned in that case. In four parks, it was mentioned that various forms of nature protection should be specially marked (and later inspected). It would help to avoid law violation due to lack of awareness about existence of protected areas. Although ‘informing visitors of protected areas and areas where protected nature elements are located about nature protection regulations’ is mentioned among the tasks of landscape park services (Act of Parliament: Ustawa 2004 - art. 107.2.5), due to lack of sufficient number of park employees, it is not possible to prevent all the negative effects of recreational activity in parks. In such cases, necessary support could come from selected services of the State Forests, which have special jurisdictions for issuing warrants and giving mandates in cases when forest use regulations are being violated (Act of Parliament: Ustawa 1991 - art. 47.2 i art. 48).

While discussing the need of cooperation on touristic and recreational infrastructure development in landscape parks between administration of the State Forests, landscape parks and local administrations, the directorate of the Wdzydzki

Landscape Park believes that input from local administrations should also cover participation in regeneration costs of forest damaged during over excessive invasive walking activities. It could be justified by the fact that in landscape parks, revenues from tourism and recreation are one of the important income sources of local society and municipalities (np. Staniewska-Zątek 2007). Therefore, municipalities should also be interested in supporting high standards of natural resources, which define attractiveness of a touristic region (Szpilko, Ziółkowski 2010). Also, Kapuściński (2004) acknowledged the need of dividing costs of managing forests for tourism and recreation between the State Forests and other organisations, especially those that receive profits from such activities.

The publication presents main directions of planned development of infrastructure and also touristic and recreational activities in landscape park areas, which are managed by the State Forests. Implementation of such projects could result in improvement of area attractiveness, subsequent growth in numbers of park visitors exploiting such a rich offer as well as their pressure on environment (Hołowiecka i Grzelak-Kostulska 2013). Mentioned above solutions, which could help to reconcile recreational development and nature protection in landscape parks, present only a part of propositions described in the cited literature. However, their implementation often presents a number of difficulties related to lack of sufficient financial means (np. Graja-Zwolińska 2009). More effective execution will benefit the environment both from the perspective of a landscape park as well as the State Forests. It is quite important due to observed trends in recreation such as ‘close to nature’ or ‘caring about health’, which brings with it larger social pressure on forests, including areas under protection (Hołowiecka i Grzelak-Kostulska 2013).

5. Conclusions

1. Plans and proposals related to development of recreational infrastructure and activities on lands managed by the State Forests were presented by directorates of 77 Polish landscape parks. In case of 70 landscape parks, bigger or smaller number of initiatives is foreseen for implementation in cooperation with local forest districts.

2. Besides maintaining existing infrastructure, landscape park directorates plan its extension. It concerns both traditional touristic and recreational infrastructure (in about half of the parks), and also educational infrastructure (in almost 42% of the parks). It will improve attractiveness of the area for park visitors and will also channel recreational movement and, therefore, will limit recreational pressure on the environment.

3. Initiatives planned by the directorates of landscape parks in the area of education concern both the above-mentioned infrastructure and also events prepared for park visitors. Almost all of them will be implemented in cooperation with local forest districts often with financial support from other organisations (such as municipalities and non-governmental organisations).

4. Landscape park directorates plan to conduct informational and promotional activities with regard to about 57% of park areas. Similar to mentioned above initiatives in the area of education, that will result in wider use of the model considering environmental and educational tourism and recreation, which is more responsible and safe for environment.

5. Consideration of the need for nature protection has a special meaning for development of tourism and recreation in landscape parks. Directorates of almost 38% of landscape parks declared the future initiation of activities that include control and limitation of negative impact of recreational use on nature of protected areas. Such initiative requires wide cooperation, especially between parks, forest districts and municipalities with the use of external financial means.

Conflict of interests

The author declares absence of potential conflicts.

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