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Participation and Protected Areas Governance: the Impact of Changing Influence of Local Authorities on the Conservation of the Białowieża Primeval Forest, Poland

Krzysztof Niedziakowski^{1,2}, Jouni Paavola², and Bogumiła Jedrzejewska¹

ABSTRACT. According to the new conservation paradigm, protected areas should contribute to the socioeconomic development of host communities, and the latter ought to be included in participatory decision making concerning these areas. However, the understanding of participation is ambiguous and there are at least three major approaches, which may have different impacts on the governance of protected areas. We examine the case of the Białowieża Primeval Forest in order to trace the effectiveness of changing modes of participation as well as to discuss the limitations and problems of public participation. Between 1918 and 2010, the role of local authorities changed from no influence to limited control over decision making regarding designation and enlargement of the Białowieża National Park (BNP). As a result of these changes, attempts to enlarge the BNP over the whole forest were undermined. The evidence shows that power relations and instrumental reasons constituted the main drivers of the changing participation pattern with deliberative rationale lacking. As a result, the conservation goals were only partially achieved. We argue that when interests are clearly conflicting and win–win solutions are difficult to reach, room for constructive participation may be limited. In these circumstances, public involvement may turn into yet another venue for a power play between actors with vested interests, without bringing gains in legitimacy or new policy options. This is especially the case for countries with a relatively short democratic record where the government lacks the consistency and capacity to steer the process over the longer term.

Key Words: *Białowieża; biodiversity conservation; governance; national park; participation; Poland; protected areas*

INTRODUCTION

Today, it is accepted that a key prerequisite for sustainable management of ecosystem services is governance involving all stakeholders in the decision making (Chopra et al. 2005, Irwin and Ranganathan 2007, Blanco and Razzaque 2008). Earlier, conservation of biodiversity was mainly sought by establishing protected areas through an exclusive, top-down, government-led process (Berkes 2004). Host communities were not involved in decision making concerning protected areas and were often prohibited from using their territories. This created negative attitudes in local communities toward protected areas, which hindered their establishment and enlargement (Pretty and Pimbert 1995). These problems contributed to a shift in protected areas governance that stressed the importance of public participation in decision making (Phillips 2003).

Following on the first wave of enthusiasm concerning public input into environmental decision making and governance, there is now growing recognition that participation is not a panacea for all problems of biodiversity conservation, and that it can also bring about undemocratic and counterproductive results (e.g., Wells and McShane 2004, Rauschmayer et al. 2009). The way participation is understood by different actors and the way it is codified in law and then implemented vary considerably. Therefore, in order to assess the effectiveness of participation in protected areas

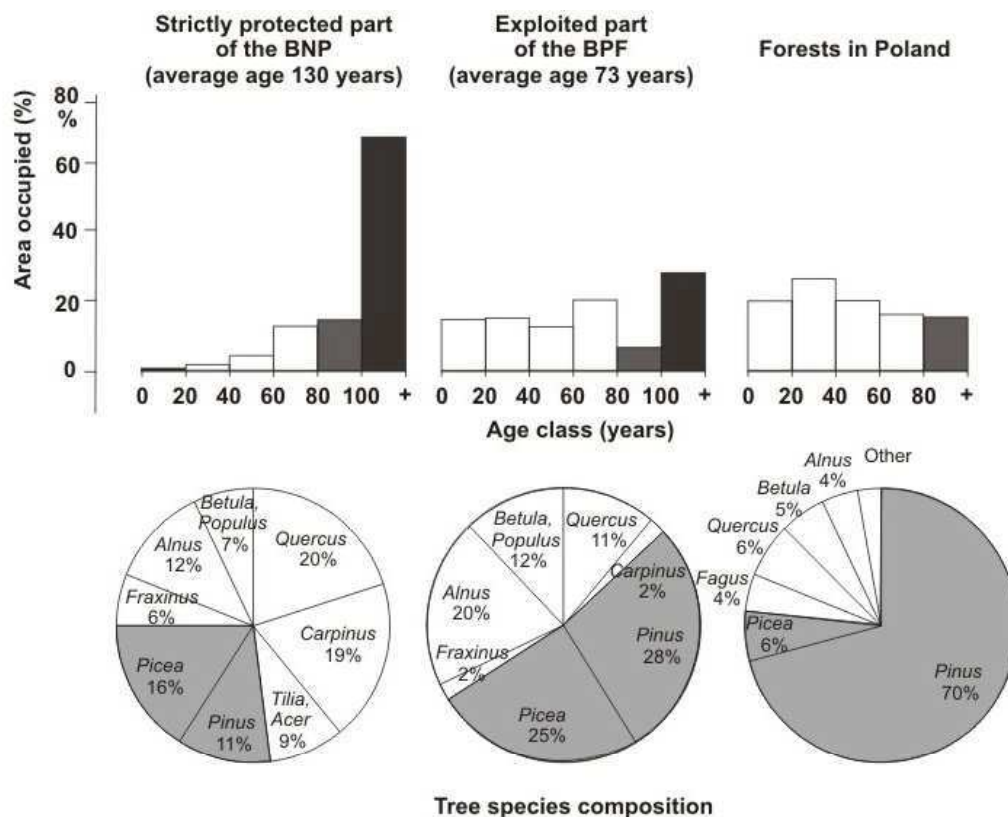
governance, different understandings of participation must be identified, and their implications for outcomes assessed.

We identify three major understandings of participation. The first one treats participation as a power-sharing exercise aimed at implementing democratic ideals into policy making (Arnstein 1969). The second—deliberative understanding of participation—in turn, sees its main purpose in improved understanding and subsequent improved quality of decisions (Renn 2006). The third way of conceptualizing participation consists of treating it as a pragmatic tool for reaching governmental objectives (Bishop and Davis 2002). These three understandings correspond to the three rationales for participation—normative, substantive, and instrumental—identified by Fiorino (1990) and subsequently developed by Stirling (2006, 2008). These incommensurable rationales, considered as distinct approaches, were used by Bickerstaff and Walker (2001), Blackstock and Richards (2007), and Wesselink et al. (2011) to analyze participant perspectives about their reasons for participation. They found that participants focus mostly on instrumental aspects of participation, with some emphasis on substantive motives, including generation of new ideas. Normative aspects such as transfer of power were mostly ignored.

We examine the results of increasing role of local communities in the governance of protected areas by using the Polish part

¹Mammal Research Institute, Polish Academy of Sciences, Poland, ²Sustainability Research Institute, School of Earth and Environment, University of Leeds, UK

Fig. 1. Age structure and tree species composition in the strictly protected part of the Białowieża National Park (BNP), managed parts of the Białowieża Primeval Forest (BPF), and in all Polish forests in the mid-1990s. Before large-scale timber extraction started in 1915, tree species composition and age structure did not differ between the two parts of the BPF. Source: Jędrzejewski and Jędrzejewska (1995) (mod.), DGLP (1997).



of the Białowieża Primeval Forest (BPF) as a case example. This state-owned woodland in Eastern Poland and Western Belarus includes the last patch of the natural temperate lowland forest of continental Europe. Its conservation history stretches back to 14th century, but in the early 20th century, it became the subject of a dispute between those promoting its conservation, mainly through designating some of its areas as the Białowieża National Park (BNP) and those interested in commercial timber production; this conflict continues today. Different management schemes affected the ecosystem of the forest and produced considerable differences between the exploited and non-exploited areas (Jędrzejewska et al. 1994, Bobiec et al. 2000). Most of the old-growth stands in the managed part of the BPF have been logged and cover some 20% of the managed part, with 50% comprising coniferous plantations. The average age of stands in the managed part has declined to around 70 years, whereas in the BPN it is 130 years (Fig. 1). Forestry practices have created new habitats of clearcuts and plantations, increased the proportion of conifers

in the former oak–linden–hornbeam (*Quercus–Tilia–Carpinus*) stands, replaced the mosaic of diversified tree stands with patches of even-aged monocultures, and decreased the amount of dead wood. As a result, habitat for endangered species, which requires old-growth forest and dead wood, has shrunk, considerably reducing some of their populations and may lead to local extinctions in the near future (Wesołowski 2005).

Despite the ongoing timber extraction in the BPF, it is still considered a unique natural area of outstanding value (Wesołowski 2005). It hosts 990 species of vascular plants, 400 lichens, 3000 fungi, more than 9000 insects, 178 breeding birds, and 58 species of mammals including European bison (*Bison bonasus*), wolf (*Canis lupus*), lynx (*Lynx lynx*), and moose (*Alces alces*). This includes a large accumulation of relict species dependent on dead wood or large trees. The BPF is considered unique in terms of preservation of interrelationships among species communities and their environment, as well as continuity of the ecological and

evolutionary processes characteristic of deciduous European forests. As such, it is regarded as a reference point for the assessment of disturbance in other European forests. The BPF is also an important national symbol to which the public attaches considerable value (Czajkowski et al. 2009).

In our research, we followed a case-study strategy (Yin 1994). Our material includes documents such as legal acts, books, research papers, and articles, which formed the basis for the description of the case of the BPF, as well as 30 in-depth interviews, carried out between May 2010 and April 2011, which supplemented the data with more personal perspectives of involved actors and allowed for triangulation of data. The interviewees included members of local communities (6), representatives of local authorities (3), non-governmental organizations (NGOs) (4), BNP staff (4); scientists (4), foresters (5), governmental officials (2), and politicians (2). The interviewees were chosen on the basis of their executive functions in the organizations or because of their direct involvement in the discussions on the BPF. Members of the local communities were randomly selected. The interviews consisted of open-ended questions aimed at clarifying: who are the actors involved, what power they hold, and what resources they have; and discourses and informal rules concerning the conflict (Arts and Leroy 2006). Interviews were carried out in face-to-face meetings that usually lasted 30–119 min. All interviews were recorded and transcribed. Coding and analysis of the transcripts were done with the QSR NVivo software, based on the methodology suggested by Kitchin and Tate (2000). Our paper focuses only on the role of participation in the enlargement of the BNP and does not investigate other designations established in the BPF (nature reserves, Natura 2000, Man and Biosphere Reserve) as they did not change the entity in charge of administering the designation and did not cause conflict. We focus on the involvement of local communities in decision making because its importance is highlighted in the literature (e.g., Phillips 2003) despite being relatively little studied. To a lesser extent, we also consider involvement of NGOs.

In what follows, we first discuss the paradigm shift in protected areas governance from the top-down, government-led approach to a participatory, bottom-up governance and distinguish three ways to understand participation in the literature on public involvement in policy making. The following sections examine the governance of the BPF between 1919, when the BPF came under the administration of a newly created Polish state, and 2010, focusing on the role of local communities in decision making on the enlargement of the BNP and using different views of participation as lenses. We assess which of them best characterizes the governance of the second oldest Polish national park, what has been their relative importance, and how they have influenced biodiversity conservation. We conclude by discussing the relationships between different understandings of participation

and the impact of identified participation patterns on conservation of the BPF.

PARADIGM SHIFT IN PROTECTED AREAS MANAGEMENT

The importance of participation has been highlighted, particularly in biodiversity conservation (Pretty and Pimbert 1995, Brechin et al. 2002). Biodiversity conservation may compete with forestry, agriculture, infrastructure development, and industry taking place in the same space (White et al. 2005). The most common instrument of biodiversity conservation—protected areas—constrains land uses and affects livelihoods. As a result, environmental conflicts emerge. Responses to these conflicts should be justified for the involved and affected parties to ensure legitimacy and effectiveness of the measures undertaken (Paavola 2004).

Views about protected areas and public participation in decision making concerning them have changed considerably over the last three decades (Phillips 2003, Berkes 2004, Wells and McShane 2004, Lockwood et al. 2006). Protected areas are no longer seen as an exclusionary conservation tool but as a way to contribute to the social, economic, and cultural objectives of their host communities (Mose and Weixlbaumer 2007). In contrast to the “traditional paradigm,” in which protected areas were managed by the central government without external input, the “new paradigm” emphasizes cooperation among the central government, regional and local authorities, indigenous communities, private companies, and NGOs in the governance of protected areas. Moreover, local communities should no longer be passive recipients of top-down guidelines, directives, and prohibitions. Rather, they are seen as economic and cultural beneficiaries of protected areas as well as active partners. As a result, traditional management of protected areas dominated by natural scientists is gradually being replaced by sociopolitical processes requiring consultations, sensitivity, and astute judgment (Phillips 2003).

This paradigm shift, despite doubts about its rationale and effects (e.g., Kellert et al. 2000, Terborgh 2004, Locke and Dearden 2005, Dressler et al. 2010), has found its way to policy documents and conservation legislation. Symptoms of this paradigm change included a modification of the UNESCO Man and Biosphere program concerning its World Network of Biosphere Reserves. The network was established to protect particularly valuable natural ecosystems. In 1995, it was re-conceptualized as protected areas representing an equilibrium between the man and biosphere, which should not only reduce biodiversity loss, but also “improve livelihoods and enhance social, economic, and cultural conditions for environmental sustainability” (UNESCO 2010). Other examples of the shift can be found in the final recommendations of the last International Union for Conservation of Nature (IUCN) World Park Congress in 2003, which state that the pressure on

protected areas will increase because of demographic shifts, greater demands for production of goods and services from protected areas, infrastructure development, and decreasing supplies of fresh water. Consequently, “conservation will only succeed if we can build learning institutions, organizations, and networks” and “empower all stakeholders to fulfill their role in protected area management” (IUCN 2003:141). In particular, it is recommended to “adopt mechanisms to enable representation and participation of all protected area stakeholders at national, regional and local levels” (IUCN 2003:141). Other international measures promoting participation in environmental governance include the Rio Declaration on Environment and Development of 1992 (principle 10), the Convention on Biological Diversity of 1992, and the Aarhus Convention of 1998.

In Central and Eastern Europe (CEE), the changing paradigm of nature conservation was accompanied by large-scale transformation from centralized socialist states to market-oriented democracies, which also entailed greater involvement of local and regional actors in decision making (Carmin 2003). At the same time, economic development became a high priority, which created new environmental conflicts (Tickle and Welsh 1998). Nature conservation in CEE during socialism resembled hierarchical and expert-based industrial production systems with networks of ministries, research institutes, and regional office branches dealing with designation and management of protected areas (Tickle and Clarke 2000). Local knowledge and local land management practices were ignored (Lawrence 2008). Democratization gradually led to the implementation of less centralized solutions, which created conflicts between the old and new structures (Klůvankova-Oravska et al. 2009). The legacy of distrust of authority, low level of social capital, and decades-long reliance on central government initiative to deal with public issues complicates public involvement in nature conservation. It is also complicated by the continued dominance of top-down thinking among policymakers, protected area staff, and experts, few of whom have expertise in collaborating with local people (Grodzińska-Jurczak and Cent 2011). As a result, joint decision making on protected areas in CEE countries is absent or underused, and participation is limited at best to informing local communities about conservation measures (Królikowska 2007, Lawrence 2008). Consequently, increased public involvement in conservation is considered one of the main challenges for nature conservation systems in CEE countries (Tickle and Clarke 2000).

THREE “FACES” OF PARTICIPATION

The meaning of participation remains contested despite its ubiquity in policy documents and scientific literature. Participation is understood as the involvement of public in decision making. However, there are different interpretations of what this means (e.g., Bishop and Davis 2002, Gauvin and

Abelson 2006). We will discuss below three conceptualizations of public participation. The first conceptualization focuses on the distribution of power to those who lie outside traditional policy-making circles (Arnstein 1969). The second one focuses on the decision-making process (Renn 2006). Finally, the third considers participation a pragmatic tool to reach particular governmental objectives (Shand and Arnberg 1996).

For Arnstein (1969), citizen participation is closely related to citizen power. It redistributes power from the government to those who have been excluded from political and economic decision making. In her “ladder of citizen participation,” Arnstein (1969) identifies eight “rungs,” starting from “manipulation” and “therapy,” which enable the government to “educate” or “cure” participants rather than to participate. The next rungs are “informing”, “consultation”, and “placation,” where citizens may hear and be heard but lack power to ensure that their views will be heeded. On the “partnership” rung, citizens can negotiate and make trade-offs with the government. Finally, the highest rungs of “delegated power” and “citizen control” provide the public with decision-making majority or full power to manage. Arnstein (1969) clearly prefers the higher ladders as more democratic and, for her, a process that does not transfer power would be mere manipulation of public opinion.

The second interpretation of participation as “a deliberative exercise” explicitly recognizes that “the public” includes different groups with varying values, preferences, and interests. In order to reach a consensus or compromise, it is necessary to carry out participatory processes that “combine technical expertise, rational decision-making, public, values and preferences” (Renn 2006:34). These processes have a deliberative character and involve discussions relying on “mutual exchange of arguments and reflections rather than decision making based on the status of the participants, sublime strategies of persuasion, or socio-political pressure” (Renn 2006:35). The processes should adhere to the rules of a rational discourse suggested by Habermas (1987): parties with equal rights and duties should present their arguments and test them in a context devoid of social or political domination to reach an agreement through communication and reasoning. In addition to generating a consensus or compromise, deliberative processes may also enhance understanding, generate new options, decrease hostility, contribute to new problem framing, and enlighten policy makers (Fiorino 1990).

The third approach to participation considers it a set of pragmatic tools to involve the public in order to achieve government objectives (Thomas 1993, Shand and Arnberg 1996, Bishop and Davis 2002). Shand and Arnberg (1996) identify five types of public involvement. “Information” can be disseminated when policy makers want to provide the

public with facts about a policy or educate them. “Consultation” provides public input into policy formulation through meetings, surveys, and discussion papers to improve policy content and acceptance. However, it is the government that makes decisions and accepts responsibility for them. “Partnership” has elements of joint decision making, for example, through advisory boards and representative committees. Partnership can take the form of co-production, co-regulation, co-management, or community-based management (Bishop and Davis 2002). In “Delegation,” policy development is handed to a group of community representatives. However, the decision-making framework is determined by the government to ensure that longer-term policy can be distinguished from day-to-day politics. The last type of participation—“Control”—stands for direct decision making by the public. This can be done through referenda, for example. The choice between different techniques of participation depends on the issue in question and the current political situation, time available, level of concern among stakeholders, available resources, and so on.

The literature on the impact of various types of participation on protected areas governance offers a fragmentary view. There are examples where a long-term participatory process including shift of power to the lower levels and attention to the quality of the process brought about consensus leading to establishment of protected areas (Leibnath 2008, Hovik et al. 2010). Other accounts indicate that where the participatory approaches were used in the wrong situations or were conducted in a half-hearted way they led to even more conflicts (e.g., Rauschmayer et al. 2009). This suggests that successful participation requires appropriate tools for appropriate situations used in a way conducive to deliberation and formation of a joint “governance view of nature” (Zwart 2008). However, even when pragmatic participatory tools are used properly and power is distributed to lower levels, the policy outcomes may prove detrimental to biodiversity (Fernandez 2008). This conflict of policy means and policy goals is sometimes seen as a paradox that can hardly be resolved (Fernandez 2008:99). Some authors are critical about participation, arguing that it compromises democratic ideals as the fate of biodiversity and broader social interests are placed in the hands of minority who lives in the countryside (van den Belt 2008, Dubbink 2008). Paraphrasing Abels (2007:112), we know how conservation governance works without participation but, despite normatively based statements, it is not clear if it works with citizen participation—or, to be more precise, “with which kind of participation, for what purpose and with which effects.” This paper provides evidence that, with regard to biodiversity conservation goals, participation transferring power may become a strategic tool to undermine conservation objectives if it is not led by an active government with clear policy goals and appropriate capacity.

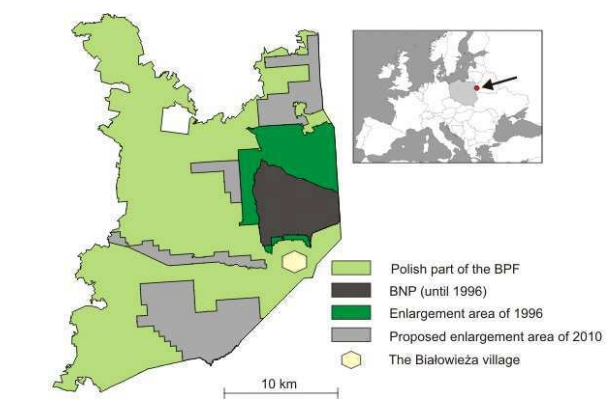
ENLARGEMENT OF THE BNP

The BNP includes the most pristine part of the BPF, the best preserved lowland forest in Europe, which hosts the largest free-ranging population of European bison (Fig. 2). Before World War II, the whole BPF fell within Polish territory. After the war, it was divided between Poland (58,000 ha) and the Soviet Union (now Belarus) (87,000 ha). The Polish part includes the BNP (10,500 ha) and exploited forests administered by the State Forests Holding (SFH) (Fig. 3). The BNP itself consists of a strictly protected zone (4,700 ha), which includes the best preserved old growth where hunting, timber exploitation, and engine use are not allowed, and a zone with less rigorous conservation rules. The Park was designated a UNESCO Man and Biosphere Reserve (1977), a World Heritage Site (1979), and awarded the Diploma of the Council of Europe (1996).

Fig. 2. The Białowieża National Park (Photo: P. Fabijański)



Fig. 3. A map of the Polish part of the Białowieża Primeval Forest (BPF) with the Białowieża National Park (BNP) and enlargement areas



The first “modern” conservation efforts in the BPF started in 1919, soon after Poland regained its independence in November 1918 following 123 years of Russian, Prussian, and Austrian occupation. In 1921, a 45-km² reserve was established (Okolów 2009). The conservation efforts were led by a group of biologists who were also later involved in the management of the reserve, which however, remained within organizational structures of the SFH. The decision to create the reserve was taken at the central level. Local administration of the SFH opposed the creation of the reserve as a limitation of its management authority over the BPF. It also perceived conservation practices to be against proper forest management and tried actively but unsuccessfully to block the designation (Kossak 2001).

In 1947, about 10% of the post-war Polish part of the BPF, an area of 5,100 ha, was formally declared as the BNP by the Council of Ministers. Under the Nature Conservation Act of 1934, such a designation decision had to be proposed by the Minister of Education and agreed to by the Minister of Agriculture and Forestry. The rest of the Polish part of the BPF remained commercially exploited. Over the following 50 years, the methods and scale of logging in the commercial part of the BPF were continuously debated (Graniczny 1957, 1979, Więcko 1984). Both foresters and scientists appealed to central authorities for the implementation of new management rules. In the 1980s, scientists from the BNP’s scientific council proposed the enlargement of the BNP to include valuable parts of the exploited forest (Sokołowski 1983, 1986, Faliński 1992), but the initiative did not resonate with decision makers.

Political and economic changes in 1989 brought new attempts to enlarge the park. These were led by scientists and new environmental NGOs, which could now legally operate under the new democratic legislation. The new Nature Conservation Act of 1991 did not change the way of establishing national parks, which still required a unilateral decision by the Council of Ministers. In 1994, scientists officially proposed enlarging the BNP over the whole BPF (Jędrzejewski and Jędrzejewska 1995). This proposal was accompanied by a large campaign of national and international NGOs, widely reported in the media, which attracted wide public support. Scientists and NGOs were opposed by forestry groups and local authorities, who began collecting signatures against the enlargement of the BNP.

Locals were concerned about the state of the BPF but they did not associate these concerns with the need to enlarge the BNP (Adamczyk 1994, Kossak 2001). Their attitude toward the BNP was negative (Adamczyk 1994) because its territory was strictly protected as a “nature sanctuary”: access was allowed only for scientific and educational reasons or for guided tours. Interviews with local people indicate that they were afraid that the enlargement of the Park would mean similar restrictions in other parts of the BPF. The local

resentment also stemmed from the forestry’s role as a key economic activity. Many people worked either for the SFH or for associated timber companies. The foresters’ standpoint was thus easier for locals to adopt than that of the scientists and NGOs, who were considered “outsiders” acting on behalf of their own interests and those of tourists (Adamczyk 1994). Interviews showed that local people had a largely utilitarian view of the BPF and that they shared the foresters’ vision of a “properly managed woodland.” Lack of information about the goals and benefits of enlargement gave rise to false information and rumors. Ethnic divisions contributed to the above perceptions: many locals are of Belarusian and Ukrainian origin.

Public pressure on the Ministry contributed to the decision to double the size of the BNP in 1996: it now covered about 17% of the Polish part of the BPF. Affected local authorities consented to the enlargement of the Park in exchange for financial assistance for municipal investments. Local people were also allowed to pick mushrooms and berries in the new park territory. For a couple of years, they were also able to buy for private purposes, and at a preferential price, timber logged as part of conservation measures from the newly annexed areas. However, financial assistance for the municipalities did not materialize: a new government did not feel bound by the promises of its predecessor. The NGOs and scientists regarded the 1996 enlargement of the BNP as unsatisfactory and continued demands to stop the exploitation of the BPF and to designate the whole forest as a national park. They proposed dividing the expanded territory into zones where traditional forest uses, tourism, and protection of most valuable habitats would take place (Rada Naukowa Białowieskiego Parku Narodowego 2000).

The Ministry of Environment attempted to enlarge the BNP again in 1998. The Minister declared that his goal was to extend the BNP over the whole BPF by the year 2000 and promised considerable financial assistance over the next 4 years. The Ministry initiated a program called “Contract for the BPF” to offer “organizational and financial support for the sustainable development of local communities, which is necessary for the effective protection of values and resources of the BPF” (MOŚZNiL 1998). The support package was to be detailed by a commission consisting of representatives from the local authorities, the Ministry, NGOs, the BNP, and the SFH. Although the commission was assisted by mediation specialists, it encountered difficulties. The SFH opposed the enlargement and did not want to discuss details of local financial support (Bobiec 1998). The “Contract” became a one-sided declaration, which was not binding on local authorities. Under the Contract, local authorities and the BNP received 30 million PLN (around 7.5 million Euro) in 1999–2000. Half of this was given to the Park administration and another half to local authorities for building and improving schools, water treatment works, and sewage systems. At the

same time, local authorities appealed to the government to postpone the planned enlargement, arguing that it would undermine the economic viability of the region and seriously affect local communities, 80% of whom were argued to be against the enlargement.

The Minister of the Environment signed the formal enlargement order in February 2000, but it still needed to be endorsed by the Council of Ministers. When the Minister visited Białowieża to inform people about the plans for enlargement, representatives from the local authorities, the SFH, and local timber companies organized a public protest against the enlargement. In the end, the government withdrew from the planned enlargement. Following these controversies, the SFH lobby and local and regional authorities managed to amend the Nature Conservation Act in Parliament so that, after 2000, the enlargement or establishment of a national park required acceptance by all affected local and regional authorities. This has practically halted the creation and expansion of national parks in Poland.

The most recent attempt by the Ministry of Environment to enlarge the BNP in 2008 included an unprecedented offer of financial support. The Minister proclaimed his openness to negotiations with local authorities on the level and content of support, as well as on the delineation of the area to be annexed to the BNP or any other matters of interest for the local communities. Several meetings between Ministry officials and local authorities took place. The head of the SFH declared his support for the plan and forbade local foresters from taking any action against the enlargement. The proposed agreement between the Ministry and local authorities would have doubled the area of the BNP, to cover one-third of the Polish part of the BPF in exchange for financial assistance consisting of more than 70 million PLN (around 17 million Euro). However, the NGOs, who were not included into the negotiations, criticized the agreement and claimed that the proposed addition to the BNP was not threatened as it already enjoyed a level of protection and was not used for timber extraction. In their view, the enlargement would not affect local communities so there was no need to provide financial assistance to them. The NGOs also argued that the SFH would continue timber extraction in the BPF outside the BNP. In the end, local authorities rejected the proposal in November 2010 as most of the local people who participated in public consultations proved to be against any attempt to enlarge the BNP. The predominant concerns were problems with buying firewood, limited employment opportunities, and an expected increase in damage caused by wildlife. The local public questioned the economic viability of the BNP where “trees are wasted” and had limited trust toward governmental promises (Interview 25/2010 with a representative from the local authorities).

PATTERNS OF PARTICIPATION

The following section describes changing patterns of participation of interested parties, and especially of local communities, in the designation of the BNP. It aims at tracing

the relationships among the three different understandings of participation introduced above. Our analysis highlights that when power-focused understanding of participation becomes more prominent, there is less room for deliberative participation. We also demonstrate how the pragmatic use of participation as a tool to enlarge the park in the end becomes a tool to stop it.

During most of the period between 1919 and 2010, the decision-making authority over the designation of national parks belonged to the government. The decisions to create the reserve in 1921 and the BNP in 1947 were taken at the central level after campaigning by scientists. Local people and the general public were not included and were only informed about the rules they should obey with regard to the protected area. The situation best corresponds with the “information” rung of Arnstein’s (1969) participation ladder. When providing information on rules pertaining to the BNP, policy makers and managers also made modest use of “participation as a pragmatic tool.”

The centralization process initiated by the post-war communist government included changes to conservation legislation in 1949, but the top-down character of decision making remained. Establishment and expansion of national parks still required a decision by the Council of Ministers, after proposal by the Minister of Forestry and consultation with the State Council for Nature Conservation. There were relatively few changes to these rules even after the transition to democracy in 1989. However, in the 1990s, the Ministry of Environment acknowledged that the designation of national parks requires the consent of local authorities. Chief Nature Conservator (Sejm 2000) explained that “local authorities are consulted about plans concerning enlargement of protected areas and no one plans to send army or police in order to expand a national park or establish a new one. We humbly accept the positions of municipalities and we try to negotiate with them until consensus is reached (...) We have to remember that the narrow, expert-led and science-based nature conservation cannot be realized anywhere in the world. The crucial thing is mediation. The crucial thing is to acknowledge the rights of local authorities, the rights of local people, private ownership (...).”

Negotiations concerning the 1996 enlargement were informed by this new informal rule regarding the role of local communities in decision making concerning national parks. It suggested a shift from the top-down, command-and-control nature conservation toward a more participatory approach, which acknowledges the relevance of local interests. There were several reasons for the shift, but none of them had to do with conservation policy or paradigms as such. First, it was increasingly acknowledged that democratically elected representatives of local communities have a right to take part in decision making that affects the livelihoods of their constituents. This had to do with the growing political power of local authorities, in part because local representatives were

members of parties in power nationally, or had close ties with them. Politicians were also wary of creating negative impressions in local communities—potential voters for their parties. In the new democratic reality, central imposition of locally unwanted restrictions became increasingly difficult.

The shift in the Ministry's position constituted a move toward a higher rung of Arnstein's participation ladder: "nobodies" became "somebodies" "with enough power to make the target institutions responsive to their views, aspirations, and needs" (Arnstein 1969:217). Local authorities now received an informal veto and could, in theory, negotiate and make trade-offs with the government coming close to "partnership" in Arnstein's vocabulary. However, partnerships work when partners have financial, technical, and professional resources that enable genuine bargaining. In the case of the BPF, local authorities did not have those resources and thus had limited capacity to negotiate. The area to be annexed was already delineated by the government, and local authorities could not ensure the agreement was formulated so that the government was bound by it. The decision was to be made by the government, and local authorities were only asked the price of their consent.

If we consider the case from the perspective of "participation as a pragmatic tool," decision making on the enlargement of the BNP in 1996 clearly put more emphasis on public participation than earlier decisions did. It included aspects of consultation to improve the legitimacy and acceptance of enlargement and to defuse conflict, which could undermine the enlargement. The consent was finally given in exchange for financial assistance, although local leaders hardly embraced it. The process was far from deliberative as decision making was still characterized by political domination and sociopolitical pressure. There was no informed discussion on the merits of the decisions and their potential outcomes. The decision and the way it was introduced actually deepened division between proponents and opponents of nature conservation, of whom the latter had to be "compensated" for their consent. In the end, the 1996 enlargement process strengthened opposition to conservation. The government's failure to deliver on its promises was later used by local authorities as an argument against negotiations with the government.

Lack of trust, poor preparation by the Ministry of Environment, and undermining of negotiations by the SFH contributed to the failure of enlargement initiatives in 2000 and in 2010. Local authorities and the SFH stopped a top-down initiative and were also able to ensure that such attempts would not happen again. Legal changes provided local communities with a formal veto power concerning national park designation. The legislative change, despite official declarations of concern about local communities, seems a result of the lobbying by the SFH determined to keep the BPF in its domain. The SFH had a strong position in local

communities around the BPF, and many foresters were elected as members of municipal boards. For decades they had provided jobs and timber for construction and heating. They also formed a local elite in the relatively poor and uneducated communities of the BPF. The foresters were also important voters whom the local politicians had to consider. Thus, their influence in local communities was considerable and long lasting.

From the viewpoint of "participation as a redistribution of power," the situation after 2000 corresponds with the "delegated power" rung in Arnstein's (1969) ladder. On this rung, citizens achieve decision-making authority and the government has "to start the bargaining process rather than respond to pressure from the other end" (Arnstein 1969:222). If disagreements cannot be resolved, the citizens have a veto. The power of local authorities in BPF increased and they were offered an unprecedented level of financial assistance in exchange for their consent to expand the BNP. They were also involved in delineating the annexed area to ensure that forest administration and timber extraction would not be affected. It might be argued that local authorities followed Connely's (2006:22) assertion that the community representatives should become more active players in the "larger policy-making game" and form alliances to increase their leverage and engage in controlling public involvement process. However, local authorities still lacked resources to independently represent local interests, as is often the case (Connely 2006). As a result, they remained dependent on the SFH in several ways, and their policy options became limited to choices in line with the priorities of their powerful ally. Local players were presented with a generous offer by the government that would not have materialized if local communities had not engaged in the "larger policy-making game," but they turned it down because they were influenced by forestry discourses. Surprisingly, the new powers of the local authorities negatively affected their willingness to engage into the policy-making process. When provided with a veto, they have taken an increasingly passive position, knowing that they can stop unwanted ministerial plans.

If, however, we consider participation as "a pragmatic tool," negotiating with local authorities becomes a legal obligation and is not based on conviction in its effectiveness or legitimacy. The formal nature of participation was highlighted by the fact that negotiations were limited to formally recognized actors, i.e., the government and local authorities. Scientists, NGOs, and the SFH were excluded from talks to make the fulfillment of legislative requirements easier. No wonder the outcome of the talks was challenged by NGOs as unsatisfactory. Ironically, the NGOs began opposing the enlargement of the BNP.

The changes that took place in the role of local authorities correspond to "partnership" in the terminology of Shand and Arnberg (1996), with some elements of "control" because,

although decisions were made after discussion between officials and local representatives, the latter controlled the final outcome. It can be said that the democratic legitimacy of the decision to enlarge the BNP would have increased due to this procedure. However, because of the preference of local leaders for the status quo, the effectiveness of this way of making decisions decreased considerably. The negative views of local people expressed during local consultations in 2010 indicate that the governmental strategy of dealing only with local authorities, without trying to directly involve the local community, failed, and locals were not convinced that the enlargement would provide benefits.

At no time after the First World War did the governance of the BPF include genuine elements of deliberation and rational discourse. Local veto over designation and expansion of national parks actually discouraged deliberation: local authorities did not have to present their case against park expansion because their opposition was enough to halt the plans. Also, negotiations did not include all stakeholders, only local authorities and the government. The process was about bargaining over the level of assistance, delineation of the park annex and rules for its use, rather than mutual exchange of arguments and reflections. This supports van den Belt's (2008) assertion about the bargaining rather than arguing character of the consultation process. In the end, the process did not bring about substantive benefits in terms of new policy options, new problem framings, or enhanced understanding.

CONCLUSIONS

The case of the BPF provides an example of the increasing influence of local communities in decision-making concerning the designation of a national park. In the BPF, this process did not have its origin in the changing role of protected areas but rather was a consequence of a democratization process in Poland after 1989 and the political struggles between actors with different visions of the BPF and its management. Poland's EU accession in 2004 had little impact on the process as, by that time, the decision-making venue had already shifted from the central to the local level. Local authorities did not favor increased conservation, preferring the political and economic status quo and strongly allying themselves with the SFH. A shift toward increased public input into decision making mainly hindered conservation initiatives and enabled continuing exploitation of the BPF.

In terms of Arnstein's (1969) vocabulary, the transfer of power toward local communities took place and the mode of participation was moving up on Arnstein's participation ladder. However, local communities lacked resources and they became influenced by the powerful SFH, who had vested interests in the future of the BPF. Despite apparently "higher levels of participation," top-down decision making persisted. Local people remained recipients of external initiatives, which they could accept or reject. Local authorities were not ready

to disturb the political and economic status quo and were not willing to consider alternative options. Lack of information and trust in the local community toward new policy options, as well as a generally low level of local activism characteristic of the post-socialist relations also prevented elected bodies from trying new, potentially advantageous solutions.

The process could have been smoother if more attention had been paid to the quality and consistency of the participatory process, that is, if both instrumental and deliberative "faces" of participation had been considered. In the 1990s, participation was mostly used as a pragmatic tool for defusing conflict and facilitating implementation of conservation measures. However, these goals were hardly reached, and local attitudes remained negative. The reasons for that were to a large extent connected with governmental failures. Frequent changes in the parties in power, characteristic for countries in transition, contributed to the lack of continuity in the policy of the Ministry for the Environment and to broken promises. Those governments that were determined to enlarge the BNP lacked the capacity and know-how concerning participatory processes, and this was further compounded by the prevalence of "top-down" thinking among public officials. The dominance of the Ministry did not encourage "power-free" deliberation. Determined to make quick decisions, it just asked other parties for their support for its plans and offered financial "carrots" for compliance. Another reason for the lack of meaningful deliberation was the activity of the SFH, the main producer and economic actor within the Ministry of Environment's domain. It repeatedly tried to diverge from or dilute ministerial initiatives both at the central and local levels. Finally, the composition of parties included in the process was questionable. At some point, NGOs and scientists were left out of the ministry-led activities in order "not to inflame the conflict." This limited public input concerning with national interest. Additionally, there was no consistent official policy to inform local people, other than local leaders, about the potential options and ministerial plans. As a result, they could hardly challenge the views of the local authorities and foresters and revise the image of a "closed" national park they knew for decades. Repeated attempts to enlarge the BNP in a "top-down" fashion and prolonged conflict depreciated trust, which further complicated the reaching of consensus.

The case of the BPF shows that increasing participation in terms of power transfer to local communities does not necessarily lead to improved biodiversity conservation. On the contrary, it may lead to the persistence of practices harmful to the natural characteristics of the area. Moreover, increasing power of local communities did not contribute to serious deliberation on the locally most beneficial options. Instead, negotiations focused on power play regarding whose interests and visions would and should prevail and be implemented. The government, caught between the contending actors, on one hand, involved the local authorities in the decision making,

which strengthened the participatory element, but on the other hand, limited the input from actors representing national and international interests, which made the process less “public.” There was a strong link between a power-oriented perspective on participation and an instrumental one. The deliberative component was lost among contending interests and conflicting goals.

Participation in protected areas governance and management appears to be a permanent element of contemporary conservation strategies. However, it should not be regarded as a panacea. The evidence shows that participation of local communities in decision making concerning protected areas, which entails considerable transfer of power, may compromise biodiversity conservation by balancing it with economic and political goals. The evidence suggests that, in cases of clearly conflicting interests and a limited power and capacity of the government to steer the process over the longer term, participation may become yet another field for power play between actors with competing interests and visions. These limits on participation should be considered particularly in countries that have a limited record of democracy and in the least disturbed areas of high biodiversity where human activity cannot necessarily be reconciled with conservation objectives.

Responses to this article can be read online at:
<http://www.ecologyandsociety.org/vol17/iss1/art2/responses/>

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LITERATURE CITED

Abels, G. 2007. Citizen involvement in public policy-making: does it improve democratic legitimacy and accountability? The case of pTA. *Interdisciplinary Information Sciences* 13 (1):103–116.

Adamczyk, W. 1994. *Rezerwat biosfery Puszczy Białowieskiej a jego mieszkańcy - Diagnoza współdziałania. Studium socjologiczne*. Instytut Badawczy Leśnictwa, Warszawa-Białystok-Lublin, Poland.

Arnstein, S. R. 1969. A ladder of citizen participation. *Journal of the American Planning Association* 35(4):216–224. <http://dx.doi.org/10.1080/01944366908977225>

Arts, B., and P. Leroy, editors. 2006. *Institutional dynamics in environmental governance*. Springer, Dordrecht, The Netherlands. <http://dx.doi.org/10.1007/1-4020-5079-8>

Berkes, F. 2004. Rethinking community-based conservation. *Conservation Biology* 18(3):621–630. <http://dx.doi.org/10.1111/j.1523-1739.2004.00077.x>

Bickerstaff, K., and G. Walker. 2001. Participatory local governance and transport planning. *Environment and Planning A* 33(3):431–451. <http://dx.doi.org/10.1068/a33173>

Bishop, P., and G. Davis. 2002. Mapping public participation in policy choices. *Australian Journal of Public Administration* 61(1):14–29. <http://dx.doi.org/10.1111/1467-8500.00255>

Blackstock, K. L., and C. Richards. 2007. Evaluating stakeholder involvement in river basin planning: a Scottish case study. *Water Policy* 9(5):493–512. <http://dx.doi.org/10.2166/wp.2007.018>

Blanco, E., and J. Razzaque. 2008. Ecosystem services and human well-being in a globalized world: assessing the role of law. *Human Rights Quarterly* 31(3):698–720.

Bobiec, A. 1998. Kontrakt dla Puszczy. *Biuletyn Informacyjny TOPB* 2(8):10–13.

Bobiec, A., H. van der Burgt, K. Meijer, C. Zuyderduyn, J. Haga, and B. Vlaanderen. 2000. Rich deciduous forests in Białowieża as a dynamic mosaic of developmental phases: premises for nature conservation and restoration management. *Forest Ecology and Management* 130(1–3): 159–175. [http://dx.doi.org/10.1016/S0378-1127\(99\)00181-4](http://dx.doi.org/10.1016/S0378-1127(99)00181-4)

Brechin, S. R., P. R. Wilshusen, C. L. Fortwangler, and P. C. West. 2002. Beyond the square wheel: toward a more comprehensive understanding of biodiversity conservation as social and political process. *Society and Natural Resources* 15 (1):41–64. <http://dx.doi.org/10.1080/089419202317174011>

Carmin, J. 2003. Resources, opportunities and local environmental action in the democratic transition and early consolidation periods in the Czech Republic. *Environmental Politics* 12(3):42–64. <http://dx.doi.org/10.1080/09644010412331308274>

Chopra, K., R. Leemans, P. Kumar, and H. Simons, editors. 2005. *Ecosystems and human well-being: policy responses. Volume 3*. Island Press, Washington, D.C., USA.

Connely, S. 2006. Looking inside public involvement: how is it made so ineffective and can we change this? *Community Development Journal* 41(1):13–24. <http://dx.doi.org/10.1093/cdj/bsi046>

Czajkowski, M., M. Buszko-Briggs, and N. Hanley. 2009. Valuing changes in forest biodiversity. *Ecological Economics*

- 68(12):2910–2917. <http://dx.doi.org/10.1016/j.ecolecon.2009.06.016>
- DGLP. 1997. Las w liczbach. Dyrekcja Generalna Lasów Państwowych, Warsaw, Poland.
- Dressler, W., B. Büscher, M. Schoon, D. Brockington, T. Hayes, C. A. Kull, J. McCarthy, and K. Shrestha. 2010. From hope to crisis and back again? A critical history of the global CBNRM narrative. *Environmental Conservation* 37(1):5–15. <http://dx.doi.org/10.1017/S0376892910000044>
- Dubbink, W. 2008. Vindicating arrogant ecologists. Pages 47–53 in J. Keulartz and G. Leistra, editors. *Legitimacy in European nature conservation policy: case studies in multilevel governance*. Springer, Dordrecht, The Netherlands. http://dx.doi.org/10.1007/978-1-4020-6510-1_3
- Faliński, J. B. 1992. Białowiecki Park Narodowy (1921–1991) - próba 70 lat. *Chrońmy Przyrodę Ojczyznę* 48(3):5–15.
- Fernandez, S. A. 2008. Legitimacy problems in Spanish nature policy. Pages 83–100 in J. Keulartz and G. Leistra, editors. *Legitimacy in European nature conservation policy: case studies in multilevel governance*. Springer, Dordrecht, The Netherlands. http://dx.doi.org/10.1007/978-1-4020-6510-1_6
- Fiorino, D. J. 1990. Citizen participation and environmental risk: a survey of institutional mechanisms. *Science, Technology and Human Values* 15(2):226–243. <http://dx.doi.org/10.1177/016224399001500204>
- Gauvin, F.-P., and J. Abelson. 2006. Primer on public involvement. Health Council of Canada. [online] URL: http://www.healthcouncilcanada.ca/docs/papers/2006/PublicInvolvementPrimer_EN.pdf
- Graniczny, S. 1957. Blaski i cienie naszej gospodarki w Puszczy Białowieckiej. *Las Polski* 5–6.
- Graniczny, S. 1979. Zmiany zasad zagospodarowania lasów Puszczy Białowieckiej w latach 1929–1976. *Sylwan* 11:27–37.
- Grodzińska-Jurczak, M., and J. Cent. 2011. Expansion of nature conservation areas: problems with Natura 2000 implementation in Poland? *Environmental Management* 47(1):11–27. <http://dx.doi.org/10.1007/s00267-010-9583-2>
- Habermas, J. 1987. *The philosophical discourse of modernity*. Polity Press, Cambridge, UK.
- Hovik, S., C. Sandstrom, and A. Zachrisson. 2010. Management of protected areas in Norway and Sweden: challenges in combining central governance and local participation. *Journal of Environmental Policy and Planning* 12(2):159–177. <http://dx.doi.org/10.1080/15239081003719219>
- Irwin, F., and J. Ranganathan. 2007. Restoring nature's capital: an action agenda to sustain ecosystem services. World Resources Institute. [online] URL: http://pdf.wri.org/restoring_natures_capital.pdf
- International Union for Conservation of Nature (IUCN). 2003. Recommendations, Vth IUCN World Parks Congress, Durban, South Africa, 8–17 September 2003. IUCN. [online] URL: <http://cmsdata.iucn.org/downloads/recommendationen.pdf>
- Jędrzejewska, B., H. Okarma, W. Jędrzejewski, and L. Milkowski. 1994. Effects of exploitation and protection on forest structure, ungulate density and wolf predation in Białowieża Primeval Forest, Poland. *Journal of Applied Ecology* 31(4):664–676. <http://dx.doi.org/10.2307/2404157>
- Jędrzejewski, W., and B. Jędrzejewska. 1995. Projekt utworzenia Parku Narodowego Puszczy Białowieckiej. *Chrońmy Przyrodę Ojczyznę* 51(3):16–35.
- Kellert, S. R., J. N. Mehta, S. A. Ebbin, and L. L. Lichtenfeld. 2000. Community natural resource management: promise, rhetoric, and reality. *Society and Natural Resources: an International Journal* 13(8):705–715. <http://dx.doi.org/10.1080/089419200750035575>
- Kitchin, R., and N. J. Tate. 2000. *Conducting research into human geography*. Prentice-Hall, Harlow, UK.
- Klůvanková-Oravská, T., V. Chobotová, I. Banaszak, L. Sláviková, and S. Trifunovová. 2009. From government to governance for biodiversity: the perspective of Central and Eastern European transition countries. *Environmental Policy and Governance* 19(3):186–196. <http://dx.doi.org/10.1002/eet.508>
- Kossak, S. 2001. *Saga Puszczy Białowieckiej*. Muza S.A., Warsaw, Poland.
- Królikowska, K. 2007. *Konflikty społeczne w polskich parkach narodowych*. Impuls, Krakow, Poland.
- Lawrence, A. 2008. Experiences with participatory conservation in post-socialist Europe. *International Journal of Biodiversity Science and Management* 4:179–186. <http://dx.doi.org/10.3843/Biodiv.4.4.1>
- Leibnath, M. 2008. Legitimacy of biodiversity policies in a multi-level setting. Pages 233–250 in J. Keulartz and G. Leistra, editors. *Legitimacy in European nature conservation policy: case studies in multilevel governance*. Springer, Dordrecht, The Netherlands. http://dx.doi.org/10.1007/978-1-4020-6510-1_18
- Locke, H., and P. Dearden. 2005. Rethinking protected area categories and the new paradigm. *Environmental Conservation* 32(01):1–10. <http://dx.doi.org/10.1017/S0376892905001852>

- Lockwood, M., G. Worboys, and A. Kothari. 2006. Managing protected areas: a global guide. Earthscan, London, UK.
- Mose, I., and N. Weixlbaumer. 2007. A new paradigm for protected areas in Europe? Pages 3–20 in I. Mose and N. Weixlbaumer, editors. *Protected areas and regional development in Europe: Towards a new model for the 21st century*. Ashgate, Aldershot, UK.
- MOŚZNIŁ. 1998. *Kontrakt dla Puszczy Białowieskiej. Działania na rzecz powiększenia parku narodowego w obrębie polskiej części Puszczy Białowieskiej*. Ministerstwo Ochrony Środowiska, Zasobów Naturalnych i Leśnictwa, Warsaw, Poland.
- Okolów, Cz., K. 2009. Historia ochrony. Pages 10–16 in Cz. K. Okolów and A. Bolbot, editors. *Białowiecki Park Narodowy: Poznać, zrozumieć, zachować*. Białowiecki Park Narodowy, Białowieża, Poland.
- Paavola, J. 2004. Protected areas governance and justice: theory and the European Union's habitats directive. *Environmental Sciences* 1(1):59–77. <http://dx.doi.org/10.1076/evms.1.1.59.23763>
- Phillips, A. 2003. Turning ideas on their head: the new paradigm for protected areas. *George Wright Forum* 20:8–32.
- Pretty, J. N., and M. P. Pimbert. 1995. Beyond conservation ideology and the wilderness. *Natural Resources Forum* 19(1):5–14. <http://dx.doi.org/10.1111/j.1477-8947.1995.tb00588.x>
- Rada Naukowa Białowieskiego Parku Narodowego. 2000. *Zasady funkcjonowania Białowieskiego Parku Narodowego powiększonego na cały obszar polskiej części Puszczy Białowieskiej*. Białowiecki Park Narodowy, Białowieża, Poland.
- Rauschmayer, F., S. van den Hove, and T. Koetz. 2009. Participation in EU biodiversity governance: how far beyond rhetoric? *Environment and Planning C-Government and Policy* 27:42–58. <http://dx.doi.org/10.1068/c0703j>
- Renn, O. 2006. Participatory processes for designing environmental policies. *Land Use Policy* 23:34–43. <http://dx.doi.org/10.1016/j.landusepol.2004.08.005>
- Sejm, 2000 Minutes of the Parliamentary Sitting of 14.09.2000. Sejm Rzeczypospolitej Polskiej. [online] URL= <http://orka2.sejm.gov.pl/Debata3.nsf>.
- Shand, D., and M. Arnberg. 1996. Background paper. Pages 15–38 in *Responsive government: service quality initiatives*. Organisation for Economic Co-operation and Development (OECD), Paris, France.
- Sokołowski, A. W. 1983. Konieczność zwiększenia powierzchni Białowieskiego Parku Narodowego. *Parki Narodowe i Rezerwy Przyrody* 4(2):29–37.
- Sokołowski, A. W. 1986. Kompromis w zakresie ochrony przyrody Puszczy Białowieskiej. *Parki Narodowe i Rezerwy Przyrody* 1(7):17–20.
- Stirling, A. 2006. Analysis, participation and power: justification and closure in participatory multi-criteria analysis. *Land Use Policy* 23(1):95–107. <http://dx.doi.org/10.1016/j.landusepol.2004.08.010>
- Stirling, A. 2008. “Opening up” and “closing down”. *Science, Technology and Human Values* 33(2):262–294. <http://dx.doi.org/10.1177/0162243907311265>
- Terborgh, J. 2004. Reflections of a scientist on the World Parks Congress. *Conservation Biology* 18(3):619–620. <http://dx.doi.org/10.1111/j.1523-1739.2004.01837.x>
- Thomas, J. C. 1993. Public involvement and governmental effectiveness: a decision-making model for public managers. *Administrative Science and Society* 24(4):444–469. <http://dx.doi.org/10.1177/009539979302400402>
- Tickle, A., and R. Clarke. 2000. Nature and landscape conservation in transition in central and south-eastern Europe. *European Environment* 10(5):211–219.
- Tickle, A., and I. Welsh, editors. 1998. *Environment and society in Eastern Europe*. Longman, New York, New York, USA.
- UNESCO. 2010. About MAB. [online] URL: <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/man-and-biosphere-programme/about-mab/>.
- van den Belt, H. 2008. The local implementation of nature policy. Pages 227–231 in J. Keulartz and G. Leistra, editors. *Legitimacy in European nature conservation policy: case studies in multilevel governance*. Springer, Dordrecht, The Netherlands.
- Wells, M., and T. O. McShane. 2004. Integrating protected area management with local needs and aspirations. *Ambio* 33(8):513–519.
- Wesołowski, T. 2005. Virtual conservation: how the European Union is turning a blind eye to its vanishing primeval forests. *Conservation Biology* 19(5):1349–1358. <http://dx.doi.org/10.1111/j.1523-1739.2005.00265.x>
- Wesselink, A., J. Paavola, O. Renn, and O. Fritsch. 2011. Rationales for public participation in environmental policy and governance. A practitioners’ perspective. *Environment and Planning A* 43(11) 2688 – 2704. <http://dx.doi.org/10.1068/a44161>
- White, R., A. Fischer, H. P. Hansen, R. Varjopuro, J. Young, and M. Adamescu. 2005. Conflict management, participation, social learning and attitudes in biodiversity conservation. AlterNet. [online] URL: <http://www.alter-net.info/SITE/UPL>

[OAD/DOCUMENT/outputs%5CANet_WPR4_2005_03_Confl_Part_SL_Attitudes2.pdf](#)

Więcko, E. 1984. *Puszcza Białowieska*. Państwowe Wydawnictwo Naukowe, Warsaw, Poland.

Yin, R. K. 1994. *Case study research. Design and methods*. SAGE Publications, Thousand Oaks, California, USA. <http://dx.doi.org/10.1177/107554708100300106>

Zwart, H. 2008. Animal governance: the cormorant case. Pages 75–81 in J. Keulartz and G. Leistra, editors. *Legitimacy in European nature conservation policy: case studies in multilevel governance*. Springer, Dordrecht, The Netherlands. http://dx.doi.org/10.1007/978-1-4020-6510-1_5