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Changes in Nature Conservation-Relevant Public Participation Processes Through Digitalization: The Case of Germany

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Abstract: The literature shows that limited research has been conducted on the changes induced by digital means in public participation processes on plans whose implementation could have an impact on nature conservation and landscape development. To contribute to closing this research gap, 15 expert interviews were conducted to shed light on the use of digital tools in public participation processes in Germany. The analysis examined potential changes in the quantity and diversity of participants, timing and duration of involvement, tone and content, and the influence of participation on decision-making. The experts' experiences vary widely, and knowledge must still be consolidated. The findings suggest that using digital instruments can increase the number of participants and the variety of social groups they represent. Other factors, such as personal interest and implications or potential for conflict, are more crucial to participating. However, digital tools allow for easier participation at various stages of participation if all necessary information is provided online. The tone of the discussion appears to be significantly influenced by the specific digital tool used for participation; for example, a plenary video session may unfold in an orderly manner, but the concurrent chat discussion can become chaotic or even insulting without strict facilitation. Digital tools might increase public interest in planning processes and lead to a higher relevance of citizens' opinions in decision-making. However, this does not necessarily impact its outcome, as various opinions can neutralize each other. Observing this development more intensively seems necessary to take advantage of opportunities and counteract digitalization risks. Nonetheless, it can be concluded that digital formats cannot and should not replace analog forms of participation; rather, both should be combined in hybrid forms.

Keywords: digitalization; public participation; nature conservation; landscape; planning

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1. Introduction

Since the 1970s, the importance of opportunities for the public to participate in planning procedures has increased in democratically constituted countries. This is reflected in international agreements (e.g., UN Agenda 21, Aarhus Convention, EU Public Participation Directive, EU SEA Directive, European Landscape Convention of the Council of Europe) and national laws stipulating that the public should or has to be involved in planning. Simultaneously, various informal methods and procedures have been developed that can support planning authorities in carrying out their work effectively, efficiently, and in a target-oriented manner [1,2]. Since Arnstein's [3] fundamental study on the "Ladder of

Citizen Participation", it has been recognized that public authorities may interpret citizen participation variably, resulting in significantly varied levels of power for those involved [4]. The spectrum may encompass "alibi participation" to (co)decision-making by citizens. The actual extent of participants' influence is very much determined by the legal framework, which can also restrict participation rights, particularly in expediting planning processes.

Digital tools have been increasingly used in participation processes, whether in spatial and land use planning, project planning, or the establishment of protected areas. This is predominantly executed via websites, for example, by providing access to planning documents and allowing people to comment on them. As a result of the COVID-19 pandemic, video conferencing has increased significantly. In addition, other digital formats and tools can be used in public participation, such as social media, apps, and virtual reality. However, to date, there is limited evidence on how using digital tools instead of analog ones affects character, content, and results of participation processes.

In order to contribute to closing this knowledge gap with an emphasis on participation processes relevant to nature/biodiversity conservation, this study aims to analyze whether using digital tools and formats leads to changes in public participation that has so far been conducted (predominantly) analogously. This was investigated within the context of the German planning system and legal framework regarding (1) changed number and diversity of actors, (2) timing and duration of participation, (3) tone and content, and (4) the decision-making process. The focus on Germany stemmed from the interests of the funding institution, the German Federal Ministry for the Environment and Consumer Protection, represented by the Federal Agency for Nature Conservation.

This section's sub-sections clarify key terms, summarize the literature, and formulate our research questions. Section 2 describes the methods used when conducting the study; Section 3 shows the main results. The Sections 4 and 5 summarize core insights about the risks and opportunities of digital participation formats for nature and landscape protection and formulate corresponding recommendations.

1.1. Central Terms and Investigated Planning Types

Our study focuses on planning relevant to nature conservation, including the following:

(a) Planning not conducted by nature conservation authorities or NGOs, but whose implementation usually affects the natural environment and landscape and, therefore, conservation interests (e.g., urban and land use planning, transportation planning, waste management planning, and planning of wind power plants). Frequently, environmental assessments are required for such plans and projects, including strategic environmental and environmental impact assessments per the EU SEA and EIA directives or impact assessments under the EU Habitats Directive.

(b) Planning that originates from nature conservation, such as the designation and management of protected areas, the preparation of Habitats Directive management plans, or, in Germany, the preparation of landscape plans. Landscape plans serve as sectoral plans for nature conservation while simultaneously contributing to comprehensive spatial and land use planning. They are regulated in the Federal Nature Conservation Act and the respective laws of the federal states and must be integrated into spatial and land use plans (to a certain extent) and considered in all planning procedures that could affect nature and landscape.

The term "planning" includes the planning process and documents. Planning can refer to both preparatory plans and programs and specific construction projects still in the planning stage. In this study, the "participation process" encompasses all activities that enable the general public, stakeholders, or affected citizens to express their views on a

plan and contribute ideas and suggestions. Planning and participation processes can be formal, meaning they are legally regulated, typically mandatory, and often legally binding. Alternatively, they can be informal, lacking a legal foundation, and, therefore, are voluntary (for instance, urban master plans or biodiversity strategies).

Consequently, we did not focus on a certain type of planning or planning authority since different plans and their implementation can positively or negatively impact the natural environment. Potentially, this applies to any kind of planning intending spatial changes, be it through new buildings, new infrastructure elements, or habitat management. Therefore, the results presented in Section 3 potentially apply to any spatially oriented sectoral planning and participation processes.

The German planning system is overly complex, with its variety of such sectoral plans and overarching, comprehensive spatial and land use plans. To a certain extent, public participation is required for all statutory planning processes. Often, however, participation possibilities are offered beyond the "legal minimum standard", especially within informal planning. However, the final decision on formal plans, their design, and content remain with the approval authority. The opinions and interests submitted during participation are not legally binding, especially as they may contradict each other. Nonetheless, the planning and approval authorities must consider all comments in a legally mandated process of weighing up different interests and explain how they were incorporated into the plan or why they could not be considered.

Initially, all possibilities of digital communication were considered digital tools, including websites, web GISs, participation portals, online consultations and forms, apps, video conferencing, immersive technologies (augmented and virtual reality), blogs, e-mails, and others. They can be used for internal collaboration and data sharing of agencies and non-governmental organizations (NGOs), unidirectional information provision to the interested public, bidirectional consultation and commenting, and multidirectional exchange and discussion. Digital formats are understood as more comprehensive applications, allowing for the integration of many technologies in participation processes.

1.2. Current State of Knowledge

The literature on the role of digital tools and formats in public participation and the effect of their use is still young and often relates to political participation in general. If it addresses planning processes, it is mainly in the context of urban planning [5–9] and occasionally also other sectors, e.g., energy transition [10]. We could find hardly any studies that explicitly address nature conservation or conservation planning in this context except for Afzalan and Muller [11]. Furthermore, Münster et al. [7] emphasize that the effects of digital tools on planning and participation are still insufficiently analyzed. Moreover, many studies cited here focus only on selected, sometimes only one, digital tool or format. Nevertheless, the existing literature offers insights and assumptions we could build upon.

Some publications address how using digital tools and formats in several types of participation processes can change the number and variety of participating stakeholders. For example, this may occur if more people become informed about the plans and can participate more readily than with solely analog offerings. In principle, online information, discussion formats, and voting procedures enable citizens who own a digital device to obtain low-threshold information about planning and to contribute to (or fight) it [9]. In addition, professional social media strategies can reach more people and population groups and attract them to participation processes [11,12]. Hence, digital tools and formats potentially offer a more diverse group of people the opportunity to participate in planning decisions, making participation more inclusive and representative [13–15]. In practice, these potentials may be constrained by the "digital divide" [13,16–18]: insufficient digital

skills, limited access to digital devices, or poor internet connectivity can pose challenges for certain people, especially those with low socioeconomic status, limited education, and older age. Consequently, it can be assumed that the views of wealthier, more educated, and younger people are overrepresented in digital participation processes [16,19,20]. De Siqueira et al. [6] assert that their study of digital urban development workshops challenges the assumption that digital tools enhance participation. Münster et al. [7] also highlight challenges in engaging people in participation processes that fully represent public opinion. However, they showed by a prototypical experiment that online tools, combined with offline tools, can contribute to this.

Key factors determining the success or failure of participation processes can be the timing and duration of participation opportunities: the earlier citizens are involved, the greater the opportunities for influencing the final decision, and hereby increasing its legitimacy and acceptance, can be [18]. Accordingly, the EU SEA Directive (Art. 6, para. 2) requires that public participation occurs "early and effectively . . . within appropriate time frames". Digital information and participation channels could allow interested parties to obtain planning information more effortlessly and promptly and spread this information through digital channels [9,21]. The multiplication of planning relevant information is, thus, no longer exclusively in the hands of the planning authorities and classic media but in the hands of every citizen [22]. In addition to gaining a higher number of stakeholders, this could also contribute to earlier public discussion on planning, thus leading to earlier participation and higher satisfaction of the people involved [9].

Due to "hate speech", "shitstorms", or "cyber-mobbing" via "social" media [23,24], one could expect that the use of digital media and formats in participation processes will have a negative impact since discussions will become more personal and less objective. The brutalization of communication on the internet, especially on social media, is often attested to [21,25,26]. This is also known for controversial planning issues such as wind energy development [25]. The threshold for inappropriate behavior and aggressive language may be lower in the digital space compared to direct contact, as individuals may not fear immediate social consequences due to the possibility of remaining anonymous. This creates a potential environment for verbal boundary violations and defamatory posts, which could be exacerbated by misunderstandings stemming from a lack of nonverbal signals and fragile social connections, ultimately undermining mutual understanding and consensus formation [21,26]. In extreme cases, organized hijacking of comment sections, hate speech, or online harassment have been observed [25]. According to Toukola and Ahola [9], the danger that misinformation might spread more easily through social media misleads stakeholders and results in decisions based on false information. Additionally, Koenig and McLaughlin [26] emphasize that controversial digital debates can stimulate participation and activity, as people may be able to argue their point of view more vehemently [27].

An older meta-study by Freschi et al. [28] suggests that participation patterns, decision-making, and the influence of the public on the final decision in online processes generally differ little from those of analog ones. De Siqueira et al. [6] and Thoneick [14] also state that digital forms of participation do not lead to higher stakeholder influence. Mouter et al. [29] assume that policymakers and administrators also view the results and opinions from analog participation with caution, as, due to the limited number of participants and the predominance of the 'usual suspects', they do not necessarily regard them as reflecting the attitudes of a broader population. Mouter et al. [29] argue that digital participation formats may have the potential to counteract this skepticism if they reach more diverse participants.

These findings could allow for the interpretation that results from (predominantly) online participation processes are more trusted by decision-makers and are, therefore, more

likely to be considered by them. However, there is a lack of empirical evidence in this regard: in their meta-study, Santini and Carvalho [30] state that most online participation platforms mainly served to inform about the plan or project in question, and citizens had little to no influence on the decision as a result. Moreover, only 30% of studies analyzed by Santini and Carvalho [30] examined the influence of participation on the final decision, and only approximately a quarter of these studies found a small corresponding influence.

1.3. Research Questions

In summary, there are hardly any studies on digital participation in planning processes with relevance for nature conservation, and assumptions and findings on the impact of digital tools are remarkably diverse. Furthermore, there is no evidence that the findings of the studies are transferable to the field of planning or have an impact on nature conservation. To contribute to closing this research gap, the following research questions were derived:

How do experts assess the potential impacts of digital tools and formats on participatory planning processes concerning (1) the number and diversity of actors, (2) the timing and duration of the stakeholders' participation, (3) the tone and content of the process, and (4) the associated decision-making processes? The following sub-research questions delineate the primary question.

1. Number and diversity of actors: How does using digital tools and formats affect the number and type of actors involved?
2. Timing and duration of stakeholders' participation: Do digital tools lead to earlier and longer-lasting participation of people?
3. Tone and content: How does the use of digital communication channels influence the tone and content of discussions?
4. Decision-making processes: How significantly do digital tools and formats influence and alter decision-making processes?

Ideally, answering the research questions would allow us to compare entirely analog participation processes and formats with those aided by digital tools. However, this comparison is only possible to a certain extent, as participation processes are strongly context-dependent, regardless of whether they are entirely analog or digitally supported. As it is impossible to study the same process in an entirely analog and digitally supported format, we chose a qualitative, explorative approach. This approach allowed us to build upon the experts' extensive experience and gather their context-sensitive insights regarding possible differences and interactions between digital and analog participation tools and formats (refer to the next section). Consequently, we chose a qualitative, explorative research design. Despite the inability to draw a direct comparison between an analog and a digital 'version' of the same participation process, the interviews expand our knowledge about the possible effects of the use of digital instruments in public participation or at least provide indications of the need for further research in a rapidly developing field.

2. Materials and Methods

Since we wanted to better understand the changes associated with digital participation processes in the specific context of planning relevant to nature conservation, we chose a qualitative approach. This allows for examining the contextual conditions of the object of study as they are presented by experts from different fields of activity. On the one hand, data collection by semi-structured expert interviews offers the necessary openness to activate implicit knowledge and experience gained in practice. On the other hand, the thematically pre-structured interviews ensure that the interview's focus remains on the expert's context-specific experiences and expertise (Bogner and Menz, 2002) [31].

To answer the above research questions, 15 guided expert interviews were conducted with experts with many years of experience in participatory processes relevant to nature conservation. This was based on the assumption that the selected persons would be able to make comparative statements about entirely analog and digitally supported processes based on their experience, and thus, statements about the effects of digitalization in participation processes while at the same time reflecting on how different contexts interact with analog and digital formats. The aim was to obtain a broad overview of respective changes observed by the experts.

To adequately represent the diverse plans and planning processes outlined in Section 1.1 and to capture the various related perspectives, experts who fulfilled different roles in the participation process were selected: nature conservation stakeholders, representatives of public planning authorities, persons from different planning sectors that could impact nature and landscapes, facilitation, and academia (cf. Table 1). Additional selection criteria sought to achieve a balance among the interviewees regarding gender, experiences in rural vs. urban areas, and experiences in western and eastern Germany.

Table 1. Interviewed experts (IPs) and their role in participation processes (due to different roles or several functions, I01 and I13 are mentioned twice).

Role in Participation Processes	Professional Context	Code Interview Partner (IP)
Nature conservation stakeholders	Regional nature conservation administration in western Germany (higher nature conservation authority), the public body responsible for third-party procedures and procedural body leading the protection of nature and landscapes.	I01
	Environmental and Nature Conservation Association, state level, partly regional involvement, eastern Germany.	I02
	National Park Authority, West Germany.	I03
	Regional nature conservation administration in eastern Germany, the public body responsible for third-party procedures and procedural body leading the protection of nature and landscapes.	I13
Public planning authority	Regional nature conservation administration in western Germany (higher nature conservation authority), the public body responsible for third-party procedures and procedural body leading the protection of nature and landscapes.	I01
	Regional nature conservation administration in eastern Germany (higher nature conservation authority), the public body responsible for third-party procedures and procedural body leading the protection of nature and landscapes.	I13
	Public planning agency at the municipal level, landscape planning/urban development in an eastern German state capital.	I07
	Public planning authority at the regional level (regional planning association), eastern Germany.	I14
Stakeholders from concrete application fields of nature conservation planning	Grid operator, reference to projects in northeast Germany.	I06
	Federal authority with tasks in the control and approval of spatially significant plans.	I12
	Scientific expert in the context of participation in wind energy development.	I09

Table 1. *Cont.*

Role in Participation Processes	Professional Context	Code Interview Partner (IP)
Moderation	Participation in landscape planning, landscape architecture, and urban planning concepts.	I05
	Participation in landscape planning at municipal, regional, and state planning levels.	I08
	Participation in digital processes, face-to-face events, and cross-media.	I11
	Conflict management and facilitation in traffic, mobility, and nature conservation planning.	I15
Scientific experts	Citizen participation in integrated urban planning, district development, sustainable settlement, and open space development.	I04
	Scientific monitoring of conflicting nature conservation-related approval procedures.	I09
	Participation in research, testing communication, and participation strategies in planning and conflict resolution.	I10

The interviews were prepared using a short questionnaire in which the experts provided background information on their previous relevant experiences (Supplementary File S1). On this basis, the interviews took place between 14 September 2021 and 23 November 2021. They lasted about 60 min and were conducted following a semi-structured interview guide (Supplementary File S2). The interview guide was structured according to the four sub-research questions, amended by a general introduction, a more specific coverage of the interviewee's background in participation processes, and an open question at the end that allowed the interviewees to provide further important information. The interviews were recorded and transcribed, and the analysis was carried out according to the principles of qualitative content analysis [32,33].

3. Results

The main findings show that developing digital participation formats and respective knowledge and experience is ongoing. This is evident because the experts frequently referred to possible or assumed potential rather than lived experience of digital formats. Consequently, there is a need for further research on digital practices in participation and their effects.

Several IPs discussed the use of digital formats in comparison to analog formats. Digital formats are not always regarded as being useful or efficient (I01, I03, and I07), for example, in early phases of participation and/or in case of conflict issues, such as grid or wind power expansion. Particularly in this context, establishing trust between participants at an early stage is important, for which better opportunities are seen in analog formats (I09). For this reason, several IPs (I04, I07, and I08) emphasized the advantages of hybrid participation formats that combine the benefits of offline and online tools.

Direct quotes shall highlight certain aspects the interviewees brought up. They were translated from German to English by the authors.

3.1. Number and Variety of Actors

This section addresses the research question of whether and how digital tools and formats affect the number and variety of participants involved.

The vast majority of interviewees agreed that using digital elements increases the number of participants and statements regarding planning, as participating online at home is much simpler, more convenient, time-saving, and more flexible than visiting a planning

authority to obtain access to planning documents. In addition, the rapid dissemination of the necessary information, for example, in and through NGOs, could achieve multiplication effects, which would also lead to a higher number of people participating, as the following quotes illustrate:

> *"I remember that we used to scan data in paper form en masse in order to send them. This effort is not negligible if it is a matter of several folders. [. . .] So, in this respect, it's easier to involve more and different people today."* (I02)

> *"Without social media, we certainly wouldn't have reached so many people so quickly—we really had immediate responses from a lot of people on the same day. [. . .]. If you want to activate people, you can now do that more quickly through social media and online offerings."* (I04)

Regarding the variety of the participants' backgrounds, for example, according to socio-demographic characteristics, no uniform result emerged. The experience of some IPs indicates that private individuals, those with limited time, and people not affected by the plan are increasingly taking part in digital participation processes. Participation of the latter offers the opportunity to expand the range of perspectives (I02) but also poses the risk of irrelevance and a digression from the discussion (I09).

The problem of the "digital divide" was also touched on. Several interviewees pointed out that people from rural areas (due to poor internet connections), those with low income, and older people with limited familiarity with digital media remain underrepresented when digital tools and formats are used. One IP (I04) indicated that even the accessibility of digital tools via (cheaper) smartphones, as opposed to expensive devices such as laptops, can significantly affect participation:

> *"For certain issues [. . .] the potential of online formats has become very high [. . .] especially if you enable access via smartphones. Because smartphones are very common [. . .] while [. . .] access [to a laptop] [. . .] is not available to everyone. So, poorer households only own one laptop, and whether I can attend an event in the evening or give priority to [other family members] [. . .] is of course a trade-off. I think it's very important to be aware that the accessibility and availability of these media varies greatly in our society. That's where we are creating a new division in society if we do not sufficiently take care."* (I04)

Overall, experiences suggest that online participation can also exclude certain groups. For example,

> *"[t]here were people who said 'I don't feel comfortable with those [digital tools]. I can't cope with it, even with technical help. [. . .] These were the people we finally lost."* (I10)

It should be noted that in some cases, employees of public administrations have difficulties using digital tools due to internal data protection guidelines and/or outdated technical equipment.

According to some IPs, using digital tools and formats does not affect the number or diversity of participants. They consider other factors decisive for participation, such as interest, affectedness, or potential for conflict (I06, I08, and I11). However, some interviewees (I08 and I11) also emphasized that the digital preparation and visualization of information (e.g., through 3D simulations, interactive maps, or virtual reality) have the potential to trigger or strengthen concern and interest among citizens.

3.2. Timing and Duration of Participation

The results are also ambiguous regarding the second research question (Do digital tools lead to earlier and longer-lasting participation?).

Some experts perceive early stakeholder participation as more accessible due to digital information and participation options, citing low-threshold and time-optimized processes; NGOs could also benefit from this. The possibility of using multiplication effects of social media for faster and broader dissemination of information and, thus, an earlier activation of the population, played a role in the interviews but was not discussed prominently. Two IPs pointed out that the online availability of data facilitates early participation and allows for a more accessible entry later, as participants can inform themselves comprehensively at any stage of the process. It could also mitigate potential frustrations about missed opportunities for participation (I07 and I06). Despite the advantages of digital tools and formats, there seems to be a consensus that the will and the available resources of responsible authorities or project sponsors, as well as individual interests and concerns, are more crucial for the decision to participate (e.g., I01, I04, and I08).

One interviewee (I08) observed that participation could vary at different planning stages due to digital or face-to-face formats. For example, those who had participated in an online consultation were "*totally different people*" (I08) than those who had participated in later face-to-face events; thus, participation was limited to the "usual suspects" as the process progressed.

> *"I assume that only [. . .] eight, nine, ten per cent or so were identical [in participating through digital and analogue meetings]. But otherwise it's completely different people who feel addressed by both, yes. These were people who responded [to digital formats] who would otherwise not have taken part. They came out of nowhere."* (I08)

3.3. Tone and Content

Research question 3 on the effects of digital communication channels on the tone and content of discussions, in particular, whether the tone becomes harsher and more unobjective through social media, cannot be answered simply and generally, as one interviewee pointed out.

> *"Well, I mean, if you do a citizens' dialogue in a gym, a citizens' information event with 200 people, some of whom are really directly affected, they're also seething. They stand up and want the microphone, get a bit excited, talk into it. [. . .]. It would be too simple a view for me to say: everything is out of control online and somehow everything is getting worse and worse."* (I11)

Rather, increasing experience with digital formats shows that communication differs depending on the digital tool or format and the quality of facilitation. Therefore, a distinction must be made between different formats (video conferences, chats, forums, etc.):

> *"So, I wouldn't say that there is a flattening of debate, rather than it perhaps is even a little more open in terms of finding a joint perspective. There are also voting tools and things like that. It's super exciting when you do them. And sometimes it's even surprising for people how diverse viewpoints are."* (I07)

In terms of tone, discussions in video conferences tend to be characterized by more discipline, objectivity, openness, and diversity compared with face-to-face events. In contrast, channels for written communication (chats in video conferences, forums, social media) are more likely to be used for unobjective and unfair attacks due to the anonymity of the communication—the more anonymous, the higher the risk of slipping into unobjective arguments and personal insults.

> *"We have already experienced that the plenary session is very well behaved and orderly, but then there is an exchange of blows in the chat."* (I15).

For this reason, interviewees with experience in facilitating participation processes (e.g., I05, I10, and I15) recommend deciding in advance of a video conference whether and how to work with a chat channel in order to prevent personal attacks on the one hand, but to ensure that statements in the chat are appropriately considered on the other so that no negative group dynamics develop.

Social media (Facebook, Twitter, etc.) do not play a significant role in the context of properly structured and designed participation processes in the view of the interviewees. In part, social media serves to publicize projects or communicate results. However, when discussion on planning topics continues in social media, "bashing" happens quickly (I09). Fact-oriented exchange of arguments becomes more difficult than in live events or video conferences, and simple argumentation templates are often used repeatedly, sometimes to *"create a mood"* (I09). Conversely, respondents whose organizations post information on social media as part of their communication strategy also receive few responses. They assume the topics are too complex to evoke discussion on social media (I12).

Regarding content, the IPs perceive few differences between digital and analog participation formats. Nevertheless, some specific configurations can contribute to an accentuation of the content. For example, a few experts observe a higher relevance of nature conservation arguments when participants talk about their individual concerns, which seems less frequent in digital formats or when participation is carried out in a natural setting, such as in outdoor site visits:

> *"But when you see that there's a whole habitat affected by it, it has a completely different effect. No matter how much you talk about it, you have to see it, right? I think visibility is very, very important."* (I10)

On the other hand, two IPs (I07, I14) stated that NGOs or citizens' initiatives had gained more influence through digitalization, as they can better disseminate their concerns in social media since the responsible authorities certainly would take note of this and respond to it. Furthermore, postings on social media by conservation organizations are reflected in the conventional media, as they scan social media in terms of newsworthiness and use them for their reporting (I07). In addition, a broader range of participants can lead to a broader range of topics. This was the case with an online consultation:

> *"There was a conflict. We had actually asked about cultural landscape.... And then a wind energy topic popped up and that was then a focus."* (I08)

Participants can thus strategically influence the content of digital participation processes.

This is a double-edged sword: On the one hand, one IP (I11) criticized participation platforms in which only comments can be submitted, but no visible discussion and no public transparency are created. On the other hand, special challenges arise in digital participation formats when interest or political groups attempt to pursue their interests covertly. However, lacking transparency is not the domain of digital processes; one IP (I06) even assumes that informal communication plays a smaller role in the digital than in the analog sphere:

> *"I don't think the more sensitive issues are discussed in digital formats. This opportunity to chat in the back or something like that, I think, is used less than when you have a cup of coffee together afterwards or somehow stand at the table at lunch. So, these informal conversations, where you can take a bit more of a risk, that's what I think you miss more in the digital world."* (I06)

Nevertheless, from the perspective of other IPs (I10, I05, and I15), the combination of open digital channels, anonymous communication, and written procedures remains susceptible to "backroom conversations". Especially if the participation process is publicized,

groups can become active and use it to propagate their interests and opinions covertly and strategically (I10).

3.4. Decision-Making Processes

Considering the fourth research question (How significantly do digital tools and formats influence and alter decision-making processes?), the IPs assume that there are potential differences between digital and analog participation processes (I02, I05, I07, I09, I15). If the number of participants increases because of digital participation offerings, this leads to a greater quantity, variety, and detail of information that must be considered by the responsible authorities. This leads to new demands regarding the efficiency and speed of the process. It is, therefore, necessary to use digital tools correctly and to configure them appropriately so that data processing can be carried out quickly and easily. In principle, it must be positively judged that digital tools facilitate the submission of opinions, the scope and speed of data exchange, and the networking of stakeholders, consequently allowing more knowledge to be communicated and obtained quickly. However, the opinions and interests of participants are not homogeneous; hence, a higher participation rate could also lead to more and stronger conflicts of interest, including unobjective and insulting statements, which have to be managed by the responsible authority and/or the moderators.

In the IPs' view, an increased number of participants due to digitalization leads to a higher relevance of citizens' interests within decision-making because a high number cannot be easily neglected:

> *"Sensitivity within the administration and politics (...) is greater if it is simply a large number [of participants]. Because otherwise it's quickly dismissed: 'How many were there? And who was there?' But if you now can say, 'okay, 800 people have responded', then it's more difficult for politicians and authorities to say, 'We don't care about it'."* (I04)

However, this does not necessarily affect the outcome, as an increasing diversity of opinions and interests can neutralize each other. In addition, the way by which citizens' interests are expressed does not play a role:

> *"No, it doesn't matter whether someone participates digitally or in analogue form. That must not influence the decision or the consideration at all."* (I14)

Finally, authorities are bound to legal regulations, which do not change because of the public's opinions.

> *"My statements are exclusively written from a professional point of view. So, I refer to a state as it is given by protected areas, by the occurrence of animals and plants and so on, and I present it as it is. And I do not allow myself to be impressed by any moods of citizens."* (I01)

According to the IPs, social media does not play a key role in decision-making and content.

4. Discussion

The interview results match the findings of the literature in many aspects (cf. Section 1.2 on current state of knowledge). It became obvious that different experiences have been made in different planning and participation processes, which points to a strong contextual dependence on the suitability of digital formats and the right choice of means. Furthermore, we agree with Münster et al. [7] that analyzing the effects of digital tools and formats in participation processes is still preliminary and insufficient. This gap could, of course, not fully be filled by our study. However, our analysis based on expert interviews

shows that digital tools are currently used in different ways and that there is a broad spectrum of what digital participation entails. The experiences and assessments of the interviewees are equally diverse, which indicates that the suitability of digital instruments is highly context-dependent.

As is the case with qualitative interviews, they reflect subjective experiences and evaluations. Nevertheless, these insights are valuable in that they reflect the level of experience of experts at a particular point in time in a constantly and rapidly evolving area. They indicate opportunities and risks associated with using digital formats and tools in public participation. This information forms a basis for further developing participation in nature conservation planning.

Other key findings of our study support arguments from the existing literature. These include the following:

- Digital tools and formats can facilitate access to participation processes inter alia because information can be distributed more easily and widely, enabling individual independence in time and space. However, whether this actually happens and increases the number and variety of participants depends on other factors, as also stated by De Siqueria et al. [6]. Accordingly, some IPs also reported that they did not notice any impact on the number and variety of participants.
- Whether digital formats enhance contact between social milieu and reduce social barriers can be doubted. Social groups that are underrepresented in analog participation (low formal education, lower social status, younger or older age, migration background, etc.) do not seem to be reached by online formats, partly due to the digital divide, as described by Jankowski et al. [13] and Lieven [17].
- This study also supports the findings of Feschi et al. [28] and Santini and Carvalho [30] that digital formats have a minor impact on the influence of the public on the outcome of planning. However, some IPs emphasize that processing stakeholder comments changes significantly.
- There is consensus that digital forms of participation will not simply replace analog ones, as these still have advantages that cannot be replaced. This aspect was increasingly discussed during and because of the COVID-19 pandemic and its consequences on the possibility of face-to-face workshops and meetings. Earlier studies might not have seen the need to discuss this in depth. Building upon these experiences, many interviewees, however, pointed out that hybrid participatory processes that combine the advantages of analog and digital tools and formats will gain importance in the future.

Differences between the literature and interviews tended to appear in the following points:

- The brutalization of digitally conducted communication, especially in social media, which is described in the literature by Baek et al. [21], Frohn and Rosebrock [25], and Koenig and McLaughlin [26], is not confirmed by the interviews, at least not in a simple form. Rather, it is necessary to distinguish between different digital formats, and the quality of the moderation of the process must not be overlooked. Some IPs reported that video conferences were even more disciplined than meetings conducted in person, whereas channels used for written communication tended to be more prone to unobjective attacks, especially when they allowed anonymous comments.
- According to the interviews, the risk of increasing disinformation, as was addressed by Toukola and Ahola [9], hardly seems to play a role in participation processes so far, although using digital tools can lead to attempts of agenda-setting by participants, thus trying to influence the process. However, this does not significantly distinguish digital processes from analog ones.

These findings lead us to the following reflections. Digital participation formats and how they are currently used often seem like replicas of the analog in the digital world. Video conferences correspond to the logic of face-to-face events; e-mails and the possibility of uploading documents to platforms replace correspondence; SMS, chats, and voice messages replace short conversations or telephone calls. Therefore, digital participation formats can be seen as a "doubling" of the analog world [34]. The quality standards that experts set for digital participatory processes are also similar to those for analog formats, which is reasonable in many respects since the legitimacy and fairness of digital participation processes are based upon similar standards as analog ones: clear definition of objectives, transparency about opportunities to exert influence and competences of decision-making, target group orientation, ensuring access for all affected groups and interests, professional moderation, and efficient and transparent processing of statements. However, this alone is unlikely to be sufficient in the long term. It is much more important to use the specifics of the "digital world" and to develop innovative formats that represent a new quality compared to analog ones and can complement them meaningfully. This also requires increasing the "digital literacy" of all stakeholders.

Despite the explicit emphasis on the importance of the "specifically digital", we are not advocating a complete replacement of analog formats with digital ones. The literature and interviews show enormous potential in combining both in hybrid forms, for example, in combining digital and analog meetings, techniques, and methods in a targeted manner according to objectives, topics, and actors involved in each specific case. Particularly when discussing topics relevant to nature conservation and landscape development, participants must have a concrete picture of the situation onsite in the field. This can only be performed in an analog way. Wagner et al. [35] also argue that experiencing nature in real life is a prerequisite for experiencing nature in a holistic, sensual, and satisfying way, even in the digital world.

Our results are initially to be seen and interpreted against the background of the German planning culture. Nevertheless, there are similarities with the (international) literature, which, like the interviews conducted, is by no means homogeneous or consistent and reflects vastly different experiences and views. This suggests that the results of our study could also offer useful information for professional and targeted planning of participatory processes with the help of digital tools, also, at least partly, in other countries.

5. Conclusions

In summary, the effects and relevance of digital tools and formats for (the representation of nature conservation concerns in) participation processes have not been systematically researched. Interviews and a literature analysis show the knowledge and assessments of experts in a state of flux in a constantly and rapidly developing subject area. Because of this speed, knowledge about the possibilities and risks of using digital tools will likely lag behind their practical application. Nevertheless, or precisely for this reason, it seems necessary to further consolidate knowledge and experiences and to accompany and reflect on this development more intensively, not at least from a nature conservation perspective, to take advantage of opportunities and to counteract risks related to the digitalization of participation processes.

Supplementary Materials: The following supporting information can be downloaded at https://www.mdpi.com/article/10.3390/land14020305/s1, File S1: Short questionnaire; File S2: Interview guide.

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Institutional Review Board Statement: This study was designed as a non-interventional research initiative. Therefore ethical approval was not required for this study.

Informed Consent Statement: Informed consent was obtained from all interview partners involved in the study. Before administering the questionnaire, participants were informed that their anonymity would be guaranteed throughout the study. They were provided with information regarding the purpose of this study, the utilization of the information provided, and any potential associated risks.

Data Availability Statement: Supplementary to this text, a short questionnaire for selecting suitable interview partners and interview guidelines for expert interviews will be made available. However, confidentiality prohibits us from disclosing the full transcripts of the interviews since anonymity agreements have been made with the interviewees. Therefore, we cannot make the original transcripts of the expert interviews publicly available. The promises of anonymity are based on a data protection questionnaire that the interviewees had to complete before the interview. Due to the agreements made therein, we can only publish anonymized excerpts from the interviews, not all transcripts.

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