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# Conceptualising destination degrowth for sustainable tourism development in three German biosphere reserves

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## ABSTRACT

Tourism is a typical example for conflicts in society-environment-interactions, as it causes increasing pressure on natural resources and ecosystems due to growth expectations. Being especially dependent on healthy society-environment-interactions, tourism in protected areas (PAs) has gained increased attention within sustainable tourism discourses. This includes tourism in biosphere reserves (BRs) as model regions for sustainable development. However, despite a considerable body of research on 'sustainable tourism' in protected areas, its focus often lies on strategies of green growth. Notions of 'degrowth' have been weakly conceptualised for sustainable tourism in BRs. The aim of this article is two-fold: to empirically show how different key actors in three different German BRs (Wadden Sea of Lower Saxony, Spreewald and Schorfheide-Chorin) socially construct different models of sustainable tourism and notions of growth or degrowth against the backdrop of conflicts related to tourism growth and society-environment-interactions. By analysing the results of 24 semi-structured interviews with tourism and BR stakeholders, narratives about growth or degrowth in German BRs are examined. The second aim is to conceptualise degrowth-inspired sustainable tourism in BRs. We conclude that rethinking 'sustainable tourism' against the backdrop of the 'degrowth'-concept can positively contribute to preserve and restore healthy society-environment-interactions and to provide conditions for a high quality of life and good working conditions in the region.

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## Introduction

Tourism has faced rapid expansion worldwide in recent decades. While tourism has been widely considered as an opportunity for economic growth and regional development in structurally weak rural or peripheral areas (Job et al., 2017; Panzer-Krause, 2019), it also drives social and environmental problems such as freshwater depletion, landscape degradation and waste production, increasing CO<sub>2</sub>-emissions and biodiversity loss (e.g. Gao et al., 2024; Gössling & Peeters, 2015). Based on the growth expectations of global tourism, this pressure on natural resources and ecosystems is likely to increase further (ibid.). The threat of over-tourism with negative socio-ecological impacts due to accelerated tourism supply and demand (Mihalic, 2020) is becoming a critically discussed issue of tourism destinations.

Against this backdrop, new concepts and approaches for sustainable tourism are needed. Our understanding of sustainable tourism aligns with the prevalent definition of the World Tourism Organisation (UN WTO) as balancing environmental, economic and socio-cultural development dimensions (UN WTO, 2005). However, the term 'sustainable tourism' has been criticised due to the associated ideas of the 'green growth'-paradigm that are seen as incompatible with many sustainability goals (Duffy, 2015; Fletcher et al., 2019; Sharpley, 2020). Existing concepts such as ecotourism (a niche segment of natural area tourism) or responsible tourism (mainly focussing on the travel behaviour of individuals) (GSTC, 2022) do not necessarily reflect critically on the necessity of systemic change in the way degrowth-inspired sustainable tourism does.

Thus far, little research has been carried out into what such new models of sustainable tourism, that are inspired by the idea of degrowth, could look like. Andriotis (2018), for example, suggests that, by setting their own limits to development and by formulating targeted policies to control the eagerness of tourism entrepreneurs to maximize their profits, degrowth-induced destinations can be effective through the protection of local resources, staying within acceptability limits of host communities, restricting unlimiting growth or downscaling tourism activity through management and planning. Although both sustainable tourism and tourism degrowth approaches aim toward increasing the importance of, for example, more regional value chains, shorter travel distances or a greater emphasis of regionality, various research gaps still exist regarding the conceptual link between the two (Fletcher et al., 2019; Sharpley, 2020).

However, systematic approaches to degrowing mass tourism destinations or limiting destination growth in smaller touristic areas are still a small, emerging field within tourism geographies discourses (Fletcher et al., 2019; Saarinen, 2018; Sharpley, 2020).

The objective of this article is twofold: first, to empirically show how different key actors in three different German BRs (Wadden Sea of Lower Saxony, Spreewald and Schorfheide-Chorin) socially construct different models of sustainable tourism and notions of growth or degrowth against the backdrop of conflicts related to tourism growth and society-environment-interactions. Second, to provide approaches to conceptualise degrowth-inspired sustainable tourism in BRs. This paper addresses the following three research questions:

1. Which conflicts in society-environment-relations prevail in different BRs, and which roles may sustainable tourism play to mitigate them? (RQ 1)
2. Which narratives of growth or degrowth are constructed among different actors in BRs? (RQ 2)
3. In which way can sustainable tourism development approaches be conceptually linked to sustainable tourism degrowth approaches to foster a more sustainable future of tourism destinations? (RQ 3)

### ***Theoretical orientation: degrowth paradigm and sustainable tourism in BRs***

To analyse models and impacts of degrowth-oriented tourism, we lean on theoretical perspectives with origins in degrowth research. The aim of degrowth scholarship is to propose alternatives to the phenomenon of growth—‘not only economic alternatives, but also alternatives for social, political and personal change’; referring ‘to a trajectory where the “throughput” (...) of an economy decreases while welfare, or well-being, improves’ (Kallis, 2018, p. 9). Thus, degrowth approaches do not completely renunciate growth in general, but aim for qualitative development in line with social and ecological boundaries, which should not be confused with unintentional forms of negative economic growth or phases of recession (ibid.).

While the academic discourse linking (sustainable) tourism and degrowth has gained momentum in the past 15 years, it mostly stayed on a theoretical level (e.g. Andriotis, 2018; Fletcher et al., 2019; Higgins-Desbiolles et al., 2019; Murray et al., 2023). A major contribution from Hall (2009) has been to define degrowth in connection to ‘the notion of rightsizing’ rather than downsizing per se (p. 55) and steady state tourism as a ‘tourism system that encourages qualitative development but not aggregate quantitative growth to the detriment of natural capital’ (p. 57).

From a practical perspective, a degrowth lens can contribute to support tourism planning actors in critically thinking about the destinations’ scale of development, target group(s), available resources and the desired level of community participation in the tourism (planning) process (Andriotis, 2018). A recent conceptualisation of tourism degrowth synthesizes comprehensive principles that guide our empirical analysis (Murray et al., 2023): ‘(1) resistance against the *structural* (...) violence (Büscher & Fletcher, 2020) of tourism development, touristification and dispossession; (2) planned reduction of the resources used and waste produced by tourism activities; (3) de-touristification as a downsizing of tourism, particularly within very touristified spaces, combined with a process of degrowth-inspired economic diversification; (4) post-capitalist economic and social re-organisation of the tourism industry; (5) rethinking tourism, leisure and recreation in times of chronic emergencies; and (6) de-commodification of tourism, leisure and recreation’ (p. 5).

The principles of tourism degrowth serve as a thorough yet not too narrow overview of important values and underlying concepts in this field. Yet, huge potential exists to further conceptualise and operationalise these principles and investigate ways to integrate them into tourism practices and policies. We argue that BRs are a valuable starting point for this endeavour: Sustainable tourism plays an important role in fulfilling the three main functions of BRs (conservation, sustainable development and logistic support) (Leung et al., 2018). As model regions for sustainable

development, BRs explicitly consider the local community and regional economy in the wider surroundings through the concept of transition zones, which support the dual mandate of conservation and development through enhancing cooperation, e.g. between different actor groups or forms of use (Job et al., 2017). Further, while Murray et al. (2023) emphasise the potential leading role of saturated destinations as laboratories for reducing negative impacts of tourism through degrowth, we argue that degrowth-inspired tourism in BRs can enhance sustainability as precautionary principle also in emerging destinations. The analytical categories we derived from degrowth and tourism literature (see [supplementary material](#)) aim to put the topic of quality of life with a focus on residents (rather than visitors) centre stage (based on Mihalic, 2020), supplemented by the topic of working life and the overarching topic of healthy society-environment-interactions. This is done against the background of planetary boundaries, a framework identifying nine processes which are important for sustaining a resilient and stable Earth system (Richardson et al., 2023).

Based on combining the theoretical perspectives on sustainable tourism, tourism degrowth and tourism in BRs we propose to frame degrowth-inspired sustainable tourism in BRs as follows:

Sustainable, degrowth-inspired tourism in BRs aims to preserve and restore healthy society-environment interactions in the BRs' region, provide the conditions for a high quality of life and good working conditions, thereby keeping negative impacts of tourism within limits of local to global ecological carrying capacities, and enhancing positive social impacts of tourism within the region.

This framing serves as the conceptual basis for our analysis.

## Materials and methods

The analysis follows a deductive-inductive approach and builds upon a comparative case study approach of three German BRs. In Germany, 17 BRs (covering 3.9% of the country's land mass) are part of the 'Man and the Biosphere'-program, aiming to develop innovative ideas for sustainable human-environment-relations<sup>1</sup> (German Commission for UNESCO, 2023). We therefore consider BRs as model regions in terms of real-world-laboratories (Dabard et al., 2024; Kratzer, 2018) where new approaches of sustainable tourism development could be envisioned, developed and tested. Kratzer (2018) also highlights the strong potential of BRs as model regions for linking regional-scale processes with broader social change. For our study, we selected three BR case studies representing a range of different socio-ecological conditions, regional economic prosperity, and tourism types and intensities and a high variety in the respective share of day visitors and overnight guests (see map and figures in [supplementary material](#)). The BR Wadden Sea (1992 with extension of transition zone in 2023; 2,400 km<sup>2</sup>) in north-western Germany features islands and marshes. Noteworthy is the Wadden Sea's simultaneous designation as a UNESCO biosphere region, UNESCO World Natural Heritage site and national park, which can be explained by its importance for global biodiversity and the area's unique size (among others)<sup>2</sup>. The BR Spreewald (1991; 475 km<sup>2</sup>) southeast of Berlin is a flood plain and characterised by its distinctive cultural landscape with high habitat and species diversity but also great

attractiveness for tourism. The BR Schorfheide-Chorin (1990; 1,292 km<sup>2</sup>), located north-east of Berlin, is a top moraine landscape shaped by the last ice age and one of Germany's largest protected areas. It is a sparsely populated area with forests, lakes, and agricultural land (German Commission for UNESCO, 2023). More information comparing the three BRs can be found in the [supplementary material](#).

The analysis starts with the deductive a priori-categories based on the principles of touristic degrowth as formulated by Murray et al. (2023). To assess the role of sustainable tourism for the selected BRs, a qualitative content analysis (Mayring, 2014) of (1) of semi-structured expert interviews and (2) selected documents was undertaken. In sum, we conducted 24 interviews with regional actors representing a broad range of different interests and perspectives: ten interviews for BR Wadden Sea (five touristic actors, five BR and nature conservation actors), five interviews for BR Spreewald (two tourism actors, two BR actors and one nature conservation actor) and nine interviews for BR Schorfheide-Chorin (four BR actors, two actors involved in regional administration and planning and three touristic actors). The number of interviewees varies in size due to structural factors and differences in the three BRs. Thus, for the Wadden Sea, the number is larger due to the division between the island of Spiekeroog (municipal level) and the mainland (regional level) while in the BR Spreewald the number is smaller due to a different actor constellation on the representative expert level. Still, each case study sample covers a similar broad range of actors and perspectives. Most interviews were conducted between March 2021 and July 2024 and lasted around one hour. They were conducted and analysed until data saturation was reached. The interview guideline covered positive and negative aspects of (sustainable) tourism in BRs, prevailing conflicts regarding human-nature-interactions and the role of innovations and growth for future tourism development (see also [supplementary material](#)).

The main documents for the document analysis were: (1) Results of the thematic working groups in the consultation phase on the establishment of a transition zone for the UNESCO Wadden Sea Biosphere Reserve of Lower Saxony (Nationalparkverwaltung Niedersächsisches Wattenmeer, 2019); and (2) Action framework for a sustainable tourism development in the BR Schorfheide-Chorin (Landesamt für Umwelt (LfU) Biosphärenreservat Schorfheide-Chorin, 2019). A clear definition of the coding categories including anchor examples (see [supplementary material](#)) was used to minimise researcher bias in data interpretation.

## Results

We begin by presenting our findings along RQ1 and RQ 2 before we turn to discuss these results and derive our conceptualisation of degrowth as an alternative way of sustainable tourism development in BRs (RQ 3).

### ***Socio-environmental conflicts in BRs in relation to (sustainable) tourism (RQ 1)***

The analysis shows that tourism growth and development can both cause and contribute to solving conflicts related to society-environment-interactions.

In the BR Wadden Sea, the biosphere region and the national park cooperate with regard to the partner initiative. Both BR and tourism actors emphasise the good partnership and recognise an intact nature as the foundation for tourism. Still, a recurring conflict is the relation between nature conservation goals and other sectors' interests. Opinions diverge for topics such as modes of transport and related infrastructure (e.g. negative environmental impacts of high-speed ferries) or assessing the value of natural processes vs. the landscapes' recreational value (e.g. for the question if and where humans are allowed in the dune landscape at the coast). The region's designation as a UNESCO World Natural Heritage Site can enhance the recognition of nature conservation measures, although the status as a national park is perceived as more critical for effective governance and law enforcement. Interviewees highlighted divergent interests between the national park's goal of strictly protecting natural processes and the BR's objective of actively conserving biodiversity. Other mentioned conflicts touch upon social issues such as the relation between the number of guests and the number of inhabitants in mature destinations and social imbalances between those who profit from tourism and those who don't.

In the BR Spreewald, over the last years, tourism has become the most important source of income and economic sector in the region. With the enormous growth in tourism figures (doubling over the last 15 years, see [figures in supplementary material](#)), the challenges for visitor management and acceptance among the inhabitants are also increasing. However, from the BR's point of view, the conflicts resulting from tourism are still perceived as limited. Thus, from a nature conservation perspective, tourism is not perceived as problematic despite the high numbers of tourists at peak times. Instead, tourism in the BR Spreewald is seen as having the potential to minimise the ongoing conflicts between nature conservation and land use. An interesting model solution for a new form of 'sustainable tourism' has developed here, which we call 'Collaborative Landscape Management'. The approach is an answer to the problem of landscape transformation: The traditional landscape is about to lose its typical half-open scenery, with unfavourable consequences for biodiversity conservation and landscape-aesthetic aspects, both of which are important for regional identity and tourism. Increasingly, the wetlands typical of the region can no longer be cultivated and managed profitably. Due to the high moisture and small scale, many meadows require a manual mowing. In addition, many sites are only accessible by boat. As a result, more and more land is being abandoned, and there is a serious threat that it will be released from utilisation in the future. In many areas, the process of natural succession (growth of sedges and reeds, as well as reforestation) has started, and the BR estimates that ~1500 to 2000 ha are already affected. Due to the lack of financial resources for sustainable landscape management and the preservation of the open landscape, local actors from nature conservation, agriculture and tourism are looking for innovative solutions to support the maintenance of the typical historical cultural landscape. The idea is that tourism, which benefits from the landscape in particular, should contribute to its preservation through the marketing of various 'landscape products' (for further explications see Zscheischler et al., 2019). In general, it can be stated that tourism is seen as a central collective actor for sustainability developments in the BR Spreewald, but that cooperation between BR and tourism and activities for the development of model innovations are still developable. This does not only seem to be due to insufficient resources on

the part of the BR. It also seems to lie in the understanding of the concept of sustainable tourism that appears to be reduced to 'visitor guidance and management', 'waste avoidance', 'regional marketing of sustainable products' and 'learning for sustainability'. However, the interviews also reveal that the BR itself represents a limitation to growth in tourism. Due to its conservation status, there are restrictions on land uses and access, e.g. with regard to the development of new tourism infrastructure such as further accommodation. This regulatory function of the BR is accompanied by a high number of conflicts. The management of the BR is largely perceived as paternalist and a threat responsible for restrictions of economic activities. This critically undermines the potential as a neutral coordinator of sustainability transformations.

Schorfheide-Chorin has become an important week-end destination for recreation and tourism from the city due to its proximity to Berlin. This enhances conflicting perspectives on the capital city as either over-using the BR's resources, or as a chance for sustainable development. Indeed, interviewees often mentioned Berlin as a source of resentment. Conflicts are related to 1) resentment about day or weekend tourists coming and going, sometimes leaving waste or damaging natural and land use areas, without spending much in the local economy; 2) frustration that the region produces energy and resources, notably for the capital city, while benefiting too little from it and threatening the cultural landscape with, e.g. increasing wind and solar production areas; and 3) increasing prices for houses and land, arguably due to increasing numbers of neo-rurals (mostly viewed as Berliners), moving to rural areas but working in Berlin or remotely, or buying second homes. Tourism is at the core of society-environment conflicts, some seeing tourists as a chance for regional development, notably through the development of public transportation and other services—some seeing tourism as a challenge for nature conservation and land users, and for maintaining accessible housing. To address these budding conflicts, tourism development in Schorfheide-Chorin has been conceived as 'regional and sustainable tourism'. The 'Action framework for a sustainable tourism development' (Aktionsrahmen für eine nachhaltige Tourismusentwicklung) proposed a shared vision to develop regional and sustainable tourism through: (1) improving and expanding public transportation to guide tourist flows and provide climate-friendly and reliable alternatives to private cars; (2) improving services around nature-based tourism (e.g. guiding systems and marketing for hiking, biking and water sports), as well as education and awareness-raising about conservation (e.g. in information centres or through nature guided tours); (3) developing offers around cultural heritage (e.g. about traditional and picturesque architecture and cultural centres) and; (4) building up regional networks of local businesses, service providers, producers and relevant organisations to widen opportunities for small-scale economic development (e.g. through local partnerships, labelling and informal network-building). As such, regional tourism development should benefit a broad range of local actors and thus mitigate potential conflicts.

### ***Narratives of growth and degrowth in BRs (RQ 2)***

Both tourism growth and degrowth are not only contested concepts within tourism research. Our comparative study revealed a wide range of the interviewees' viewpoints on the concept of tourism growth, on limits to growth, and on different leverage

points for developing future sustainable tourism strategies within the field of tension between development and degrowth as a critical debate on prosperity. Tourism development was not only understood as an increase in visitor numbers or revenue in general, but also in terms of capacity limits regarding social, ecological and spatial issues, the possible extension of the touristic season, the quality and presence of (touristic) infrastructure, the total number of businesses or a special type of businesses. Also, a differentiated view on visitor numbers (e.g. between day visitors and overnight guests), the number of working hours and the amount of staff needed to cater to the guests' needs, accelerated processes (e.g. high speed ferries bringing more guests, but also more unrest to the (ecological) system) or the amount of fixed costs were described as important when evaluating tourism development. Differences were also seen between a quantitative (in terms of guest numbers) and qualitative (in terms of guests' ability to pay) increase of demand.

In BR Wadden Sea the attitudes and narratives of different tourism and BR-related actors (mainly from the island of Spiekeroog) regarding tourism development vary depending on their respective framing. One framing concerns the often and controversially discussed issue of increasing touristic infrastructure or not, e.g. constructing new accommodation facilities versus preserving or building housing for locals. With regard to seasonality, there is consent among actors that (infrastructural and social) capacities are exhausted during the main season. While the tourism authority supports year-round tourism, the opinion of other actors varies in this regard, e.g. by inhabitants favouring a calmer winter period. When it comes to the number of guests, actors from the touristic operational level emphasise a need for differentiation between day and overnight guests (with overnight guests usually generating higher revenue due to greater spending) and at the same time highlight the important role of day visitors for local businesses. Topics related to working life are particularly emphasised by individuals at the operational level, both within the tourism sector and in BR management. These actors frequently discuss the trade-offs involved in utilising the low season to generate additional income for covering wages during winter versus allowing time for external staff to visit their families. From a sustainability perspective, year-round-tourism is considered contributing to a more just distribution of income (which is also a typical degrowth topic) throughout the year and in this way bring social and economic benefits to the local economy.

While in the BR Spreewald there is currently no perceived 'overtourism', there, nevertheless, is also evidence of a critical attitude and concern about further growth. Instead of 'quantitative growth', the narrative of 'qualitative growth' is applied. In this context, focussing on new high-income tourism target groups such as LOHAS<sup>3</sup> is seen as a promising strategy, while at the same time the exclusion of low-income families is rejected. The motif that 'qualitative growth' (as potential facet of degrowth) goes along with the risk that less wealthy people are excluded from tourism in the Spreewald is repeated. While a nature conservation representative expresses the desire for a regional cultural change away from consumption and profit maximisation, a BR representative takes a quite sober view: From his point of view, tourism professionals in the region predominantly act according to logic of profit maximisation. It can be assumed that this narrative of the 'inevitable profit fixation' forms the framework for the activities of the BRs with regard to the development of sustainable tourism concepts.

In contrast to the other two BRs, in Schorfheide-Chorin the tourism sector is not yet developed up to existing capacities. Actors aim to shape a sustainable tourism sector that promotes and preserves local ecosystems, while offering opportunities to local inhabitants and small-scale businesses to grow a stable regional economy and to benefit from improved infrastructure and services. As a result of an extensive participatory process in 2018 and 2019 coordinated by the BR administration with tourism actors such as tourism marketing organisations, private businesses, public offices and local inhabitants, the action framework argues that tourism can be developed in Schorfheide-Chorin. This is notably based on the increase in demand for nature-based tourism – with an exception of few hotspots where tourist flows currently exceed capacities. In this manner, sustainable tourism is developed to mitigate the overuse of few destinations, and steer tourism flows so that they benefit the whole areas and multiple local businesses.

## Discussion

Regarding the role of tourism for shaping conflicts in society-environment-interactions, we observed that actors in BRs have varying understandings of how to define ‘sustainable tourism’. Thus, it is important to better clarify the term to identify common goals and work toward them. Degrowth in sustainable tourism could be one way of re-framing sustainable tourism development within planetary boundaries and capacity limits of human and nature in PA destinations. BRs with their model region character can play a pivotal role in testing innovative approaches, contributing to enhance the quality of life for local residents and strengthening the destinations’ resilience in a holistic way. This includes a careful monitoring of ecological impacts of increasing sustainable and nature tourism activities, as for example conducted for impacts of increasing waterborne touristic traffic on bird communities in the Spreewald (Wegner & Wolter, 2024). Although not always framed deliberately as degrowth-inspired strategies by the involved actors, we argue that implementing degrowth-inspired measures such as strongly incentivising public transport or downsizing flows of day visitors through visitor management efforts can effectively contribute to strengthening sustainable tourism approaches.

We found that growth and respectively degrowth in tourism was framed very differently by different actors and in different BRs, depending on their connection both to touristic activities and/or other topics such as nature conservation. For example, the designation of the Wadden Sea as a national park might lead to a broader recognition of the destination as protected area, as this is the most well-known label in Germany (Arnegger et al., 2025). On the other hand, it sometimes leads to resentments regarding the establishment of more labels (e.g. by joining the transition zone of the BR) since nature protection regulations are already perceived as high by some respondents. This opens up at least theoretical options for a more qualitative development of tourism in BRs and leverage points for a diversification of the economy in destinations highly dependent on touristic activity. Yet, the notion of qualitative instead of quantitative tourism development itself does not automatically imply deliberate degrowth approaches. Degrowth-inspired sustainable tourism in BRs needs to address the reconciliation of tourism degrowth with social equity and the issues of

costly and elitist destinations (Fletcher et al., 2019). This is also discussed in the examined BRs, e.g. when framing sustainable tourism as qualitative tourism attracting high income target groups. Thus, degrowth approaches have to be critically assessed regarding their potential of creating different forms of exclusion.

### Conceptualising degrowth-inspired sustainable tourism in BRs (RQ 3)

Based on the findings from and discussion of research questions 1 and 2 and current tourism and degrowth literature, we identified eight approaches as starting points to conceptualise degrowth-inspired sustainable tourism in BRs. They mainly build on the principles of touristic degrowth as proposed by Murray et al. (2023). They also consider narrower sustainability dimensions (economic, socio-cultural and natural capacity) and broader sustainability responsibility enablers (socio-psychological tourism supply capacity, socio-psychological tourism demand capacity and socio-political capacity) of a destination system as conceptualised by Mihalic (2020).

1. *Degrowth-inspired sustainable tourism in BRs aims to safeguard healthy society-environment-relations and positively contribute to human and planetary well-being.* As most tourist destinations are highly dependent on an intact nature, its preservation is key for sustaining it for future generations (Andriotis, 2018). In BRs, healthy society-environment-relations can be enhanced through their main function of logistic support and education for sustainable development, as for example done in the nature discovery centre Blumberger Mühle in the BR Schorfheide-Chorin. Although not yet deliberately framed this way, the innovative approach of collaborative landscape management as coordinative effort to manage synergies between tourism, nature conservation and landscape use as in the BR Spreewald aiming to give something back to the landscape (Zscheischler et al., 2019) could be a point of departure for regenerative tourism approaches (Bellato & Pollock, 2025). A successful example of funding landscape conservation through reinvesting tourism revenues is the concept of the Black Forest Nature Park (Liesen & Coch, 2015).
2. *Degrowth-inspired sustainable tourism in BRs focusses on improving the quality of life for local residents, putting their satisfaction and happiness at the core of political and management decisions.* Research on quality of life in tourism often focuses on the visitor's point of view (Andriotis, 2018; Dolnicar et al., 2012). In the BR municipality of Spiekeroog the quality of life is perceived as high by locals due to short distances, deceleration due to a ban on motorised vehicles and bikes (for visitors) on the island and its pristine nature preserved through a high protection status.
3. *Degrowth-inspired sustainable tourism in BRs aims to contribute to positive socio-economic impacts especially in the field of working life, in particular work-life-balance (e.g. through a reduction of working hours), fair working conditions or decreasing negative aspects of seasonality (Andriotis, 2018).* This could also entail alternative company values, such as the set of criteria for assessing degrowth in businesses as proposed by Khmara and Kronenberg (2018). Both in the BRs Wadden Sea of Lower Saxony and Spreewald some

tourism business owners, e.g. aim to offer year-round contracts instead of dismissing staff during off-season. As findings from BR Wadden Sea suggest, a shift from a mainly customer-oriented mentality towards a stronger focus on the well-being of employees is taking place in BR sustainable tourism enterprises. This contributes positively to sustainable regional development and resilience of the local economy.

4. *Degrowth-inspired sustainable tourism in BRs can address resistance against the 'structural violence' of tourism development, touristification and dispossession* (Büscher & Fletcher, 2017; Fletcher et al., 2023; Murray et al., 2023). A post-capitalist economic and social re-organisation of the tourism industry (Büscher & Fletcher, 2017; Fletcher et al., 2023) could imply protests against, e.g. foreign investors or building of new touristic infrastructure or the founding of cooperatives as collective appropriation and socialisation. Another foundation for 'tourism for sustainability and degrowth' is the 'focus on the needs and interests of the local community' (Higgins-Desbiolles et al., 2019, p. 12) and therefore the prioritisation of the local populations needs. One example for this from BR Wadden Sea is the collective appropriation of living space through the foundation of the housing co-operative Spiekeroog. Tourism might have positive effects for local communities, e.g. in terms of co-benefits of maintaining public infrastructure (health care institutions, swimming halls, cinemas, libraries, ...) both for locals and tourists.
5. *Degrowth-inspired sustainable tourism in BRs aims to strengthen policy objectives related to bio and circular economy and reduce resource use*, e.g. in terms of re-usage and recycling, low-carbon travel, efficient land/space use or a limited use of technology (Higgins-Desbiolles et al., 2019; Latouche, 2009; Murray et al., 2023). One example is the experimentation with hydrogen busses and the creation of new bus routes in the BR Schorfheide-Chorin to reduce car traffic.
6. *Degrowth-inspired sustainable tourism in BRs considers a de-touristification, if they reached level of tourism intensity or touristic infrastructure exceeds the destination's capacity limits or is developing toward exceeding them*. This could imply a down-sizing of tourism (particularly within very touristified) spaces, combined with a process of degrowth-inspired economic diversification and reduction of economic dependency of the tourism sector (Higgins-Desbiolles et al., 2019; Murray et al., 2023), and on the demand side educational processes, e.g. toward ethical consumption in tourism (Weeden & Boluk, 2014). Examples include the bottom-up creation of hiking and biking routes and of a tourist guide system, by a village association in Schorfheide-Chorin, to downsize the massive flows of day trip tourists to a specific destination or enhancing sustainable tourism through visitor-guidance management in the BR Spreewald. Nevertheless, potential negative effects of reducing dependency on tourism income in favour of possibly environmentally more detrimental industries have to be assessed carefully. For example, in the Wadden Sea region, the industrial development of the energy sector could counteract conservation efforts (Christoph et al., 2022). The goal here needs to be the promotion of the most nature compatible use of areas.
7. *Degrowth-inspired sustainable tourism in BRs includes 'rethinking tourism, leisure and recreation' from a degrowth perspective*, e.g. through reducing consumption,

slow tourism, staycation, re-evaluating and shifting values (e.g. in terms of hospitality) or redistribution at the regional scale (Andriotis, 2018; Fletcher et al., 2023; Murray et al., 2023). This also implies ‘(...)a deeper level transformation of livelihoods and lifestyles in line with post-capitalist principles’ (Fletcher et al., 2023, p. 18). which is another leverage point for sustainable BR tourism to contribute to not only imagining but actively modelling alternative tourism pathways. This is illustrated in the Eco-village Brodowin in the BR Schorfheide-Chorin, where close-by nature-oriented tourism or workations are highlighted, notably for visitors from Berlin. Another objective mentioned in all three cases is extending the length of stay as a possibility for deceleration, contributing to the social pillar of sustainable tourism practices through a change of visitor behaviour.

8. *Degrowth-inspired sustainable tourism in BRs enhances a restructuring and re-localisation of production and economy* (Higgins-Desbiolles et al., 2019; Latouche, 2009). This can for example entail the enhancement of domestic or proximity tourism (Ballantine, 2021; Romagosa, 2020), the development of new products or by-local-campaigns (which are present in all three BRs), deceleration and sufficiency. Since it has been shown that the German BRs do not play a role for international travel (Job et al., 2024), this emphasises in particular their role for strengthening sustainable domestic tourism, which is an important pillar for sustainably degrowing tourism. For example, tourism stakeholders in the BR Schorfheide-Chorin have co-created a sustainable tourism development plan dedicated to strengthening regional networks among local small and medium entrepreneurs (Dabard et al., 2024). For the Wadden Sea, the Common Wadden Sea Secretariat (CWSS) has supported the participatory approach of initiating a sustainable tourism strategy for the world heritage destination (CWSS, 2014).

Regarding our proposed conceptualisation, while a ‘de-commodification of tourism, leisure and recreation and re-conceptualisation of entrenched capitalist concepts’ (Murray et al., 2023, p. 5) builds an important dimension of touristic degrowth scholarship (Andriotis, 2018; Kallis, 2018; Murray et al., 2023), it does not fully align with the idea of BRs as model regions for sustainability transitions. The reason: BRs mostly adhere to notions of green growth rather than focussing on strong sustainability. Approaches of de-commodification could for example include new concepts of hospitality, sharing economy, voluntourism or community-based tourism (Cañada, 2021). The importance of local inhabitants’ interests is also emphasised by Mihalic (2020), pointing out that their neglect can have detrimental effects on tourism acceptance and quality of life, especially in the context of destinations facing overtourism. De-commodification approaches are not yet explicitly addressed by actors in either of the BRs, but could serve as an innovative starting point for critically reflecting on existing values.

## Conclusion

This study showed tensions between economic growth and sustainable development by adding the dimension of degrowth approaches to the agenda for sustainable

tourism development in BRs. It contributes to tourism geography literature by bringing a degrowth lens to sustainable management of tourism in ecologically sensitive destinations. We argue that existing conceptualisations of tourism degrowth have mostly been addressed within urban and/or overtourism contexts. Therefore, we propose a refined understanding of degrowth-inspired sustainable tourism by extending degrowth-oriented sustainable tourism research to peripheral, rural and small- and medium-sized destinations.

Including degrowth-inspired thinking into both research and practice of sustainable tourism in BRs offers opportunities for revisiting the notion of sustainable tourism development. This is true for different kinds of destinations (i.e. mature and emerging, in case of BRs often rural/peripheral) which each face distinct challenges. Regarding the three main BR functions, degrowth-inspired sustainable tourism in BRs can actively promote conservation by recognising the risks of neo-liberalisation of PAs through the commodification of nature. This can be helpful when designing nature conservation and rural development policies aiming to promote sustainable tourism. Second, it fosters sustainable development by critically evaluating concepts such as green growth and supports a reduced level of consumption (also through policy objectives, at least in the Global North). Finally, it supports the logistic function of BRs through initiatives like transformative environmental education, which addresses ethical consumption in tourism. This approach must consider the regions' capacity limits, as outlined by Mihalic (2020), to mitigate the negative impacts of tourism. Additionally, it should incorporate the principles of touristic degrowth proposed by Murray et al. (2023) and Higgins-Desbiolles et al. (2019). Furthermore, this model emphasises improving the quality of life for local residents, addressing topics related to working life, and fostering healthy interactions between society and nature. For practitioners, applying a degrowth-lens to conflicts emerging through different positions regarding touristic development can not only provide support through offering a value-based approach for mitigating them, but also contribute to their overall prevention through raising awareness for the priority of healthy society-environment-interactions.

Regarding the methodology of this paper, it provided a snapshot of actor perceptions on changes and challenges of degrowth strategies for sustainable tourism management in BRs. Further research is needed to advance the operationalisation of touristic degrowth in PA tourism (through determining concrete indicators), and concerning implications for different destination types (e.g. based on their stage within the destination life cycle). Additionally, critically examining how to balance social and ecological justice within touristic degrowth approaches, or conceptually linking degrowth and resilience scholarship to increase the resilience of people and nature to current and future crises, represents a relevant agenda for future research.

## Notes

1. Another Biosphere Reserve in Germany designated under state law, but not (yet) recognised by UNESCO, is the South Harz karst landscape.
2. The different designations partly overlap, e.g. part of the BR also belongs to the World Natural Heritage Site.
3. LOHAS is an acronym for consumers oriented towards '*Lifestyles of Health and Sustainability*'.

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## Author contributions

CRedit: **Gesa Witt**: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Validation, Visualization, Writing – original draft; **Jana Zscheischler**: Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Writing – original draft, Writing – review & editing; **Caroline Dabard**: Data curation, Formal analysis, Investigation, Methodology, Validation, Visualization, Writing – original draft; **Carsten Mann**: Funding acquisition, Project administration, Resources, Supervision, Writing – review & editing; **Amelie Bernzen**: Funding acquisition, Project administration, Resources, Supervision, Validation, Writing – review & editing.

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## Data availability statement

The participants of this study did not give written consent for their data to be shared publicly, so due to the sensitive nature of the research supporting data is not available.

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