



Into the Wild:

Wilderness Education as a Transformative Approach to ESD

Anne-Kathrin Lindau 

Martin Luther University Halle-Wittenberg, 06120 Halle, Germany
anne.lindau@geo.uni-halle.de

Abstract. A variety of approaches to implementing the concept of education for sustainable development (ESD) now exist. These approaches are thematically dedicated to the SDGs and establish transformative forms of teaching and learning. One such approach is wilderness education, which ties in with the widely discussed topic of wilderness in terms of content and addresses issues relating to core problems of global change, the future and human–environment relationships, as well as sustainable development. Alongside national park-specific approaches, wilderness education can be considered a facet of ESD from an institutional educational perspective. The topic of wilderness provides numerous starting points for reflecting on one’s own and society’s ways of life through personal wilderness experiences. Areas such as national parks, near-natural river meadows, developed or undeveloped urban wastelands, old railway stations or factory sites, and urban forests can be used as learning opportunities for wilderness education in the context of ESD, as can a ‘wild corner’ in a garden, city parks, and schoolyards. Spending time in wild or semi-wild areas enables various target groups to step outside their comfort zones by visiting protected areas (e.g. national parks), as well as suburban or urban spaces with corresponding wilderness features. This allows them to analyse these spaces and reflect on their own lives. A key element of wilderness education is the wilderness camp, which provides participants with a central community and a safe space. This article presents wilderness education as a holistic approach to ESD and transformative learning, discussing its potential and challenges.

Keywords: Education for Sustainability; SDGs, Transformative Learning, Wilderness Camp, Wilderness Education.

1 Introduction

The resources available on Earth are limited and are being used more intensively than ever before in today’s anthropogenically influenced age. In order not to further burden the planetary boundaries that have already been exceeded in some areas (Richardson, 2023), it is an urgent task for all of humanity to accelerate social efforts for sustainable development that is ecologically sound, socially just and economically efficient. An essential SDG is Goal 4 – *Quality Education* as well as sub-goal 4.7 – *Education for Sustainable Development (ESD)*, as the education sector in particular plays a central

© The Author(s) 2026

K. Becker et al. (eds.), *Proceedings of the Conference Growing up the Future: Education for Sustainability (GROUFES 2026)*, Atlantis Highlights in Social Sciences, Education and Humanities 54,
https://doi.org/10.2991/978-94-6239-760-6_23

role in the implementation of the sustainability goals. The goal of ESD is that “all learners acquire the knowledge and skills necessary to promote sustainable development, including through ESD and sustainable lifestyles, human rights, gender equality, a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and the contribution of culture to sustainable development” (UNESCO & DUK, 2021).

For the implementation of ESD, there are now a variety of concepts that are thematically dedicated to the SDGs on the one hand and establish transformative teaching and learning forms on the other. Transformative learning is establishing itself as an approach to ESD in order to break new ground in learning and to stimulate rethinking and reflection that supports sustainable development. Transformative learning aims to provide learners with opportunities to rethink their own ways of thinking and acting and to find new, partly unknown paths to a future worth living. This includes in addition to the acquisition of knowledge on sustainability issues, the critical examination of sustainability debates and sustainable development, as well as contradictions and uncertainties (Vare & Scott, 2007).

One of these approaches is the concept of wilderness education, which, on a content level, ties in with the much-discussed topic of wilderness and establishes relationships to the core problems of global change and sustainable development (Lindau, 2024) and should be discussed later in the context of ESD and transformative learning.

2 Wilderness Education

2.1 Objectives

This article is dedicated to the concern of presenting the concept of wilderness education as an approach for ESD and transformative learning. It is still open how content-related and methodological connections between the two educational concepts can be established. In order to close this research question, the following research questions are focused on in the article.

- What content-related references can be identified between wilderness education and ESD?
- How can wilderness education as transformative learning in wilderness camps be realised?

2.2 Methodology

A qualitative approach is chosen for the research field, as wilderness education as an approach to ESD has so far only been investigated in rudimentary form in German-speaking countries. Therefore, the exploratory-qualitative approach seemed suitable, i.e. the approach is based on a praxeological access to the area under investigation. For this purpose, implementations of wilderness education at the example level are inductively used to gain knowledge in order to be able to make general statements and contribute to later theory building based on empirical investigations (Döring, 2023).

2.3 Research Design

To explore the contribution of wilderness education to ESD, research was conducted to identify links between wilderness education and the topic of wilderness and the 17 Sustainable Development Goals (SDGs) and their 169 targets (UN, 2015). This approach was chosen because the SDGs address essential educational content related to ESD, thus focusing on an interdisciplinary and holistic approach (UNESCO, 2000). Within the framework of the “Wild Neighborhood” project, funded by the German Federal Environmental Foundation, target group-specific concepts for wilderness education were designed, developed, tested, and evaluated across numerous institutional educational sectors (kindergarten, elementary school, secondary school, vocational training, and universities). The concepts, based on theoretical foundations and curricular requirements, served as the basis for the qualitative content analysis (Lindau et al., 2021). Through consensual validation, points of contact were identified for 62 of 169 sub-goals, which are distributed across 16 of the 17 SDGs, illustrating the contribution wilderness education programs can make to ESD. Only for Sustainable Development Goal 10: Reduced Inequalities could no explicit, direct connections be found, as this goal is primarily associated with political and economic aspects (UN, 2015). In principle, however, addressing SDG 10 in the context of wilderness education is also conceivable in conjunction with other SDGs. The points of contact were made explicit for each sub-goal. Subsequently, using an inductive categorisation approach (Mayring, 2015), six main thematic areas were identified that demonstrate the contribution of wilderness education to ESD. The assigned SDGs were linked to the concept of wilderness education in order to demonstrate the thematic connection between ESD and wilderness education. Regarding the methodological implementation of wilderness education in the context of ESD, the wilderness camp learning setting was tested for the formal education sector. The theory-based practical experiences are being used to establish the wilderness camp as a form of transformative learning by deriving conditions for success.

2.4 Results

Wilderness Education. The concept of wilderness education emerged from several educational movements, e.g. environmental education, adventure education, forest education and nature education, and focuses on the examination of the topic of wilderness (Hottenroth et al., 2017). The term wilderness education originated in the German-speaking area in a concept paper by the Bund für Umwelt und Naturschutz Deutschland e. V. (BUND, 2002), in which a separate national park-specific area of nature and environmental education is defined. As early as the 1960s, numerous wilderness schools were established in the national parks of North America, which to this day focus on the approach of wilderness pedagogy. The aim is to imitate the lifestyles and cultural techniques of indigenous people in order to enable a comprehensive experience of nature (Erxleben, 2008). Coyote teaching (asking questions about wilderness phenomena and reflecting on them) is considered a central method of wilderness pedagogy. Through practical experiences (e.g. B. tracking, making fire, setting up bivouacs) and with the

aim of leaving as few human traces as possible in the wilderness, the personal relationship to nature and to oneself should be strengthened (Young et al., 2014).

The national park-specific concept of wilderness education as a further development of wilderness pedagogy includes the following key points: “nature has an intrinsic value”, “humans do not have to rule everywhere” and “the attitude of ‘letting be’ is protection of nature and needs support” (BUND, 2002, p. 11). As a result, the previous educational concept of the German national parks developed from environmental education to wilderness learning with the aim that learners understand the process protection idea and the acceptance of near-natural areas left to their own devices in order to counteract the alienation from nature (Jessel, 1997; BUND, 2002). In the following years, the topic of wilderness gained increasing importance as part of public and nature conservation policy debates and has now found its way into numerous national strategies (Finck et al., 2015). The German UNESCO Commission considers the topic of wilderness to be worthwhile for educational occasions, as it offers “exciting and networked questions for a [...] [ESD]” (DUK, 2015, p. 15). Wilderness education is described by Nationale Naturlandschaften (2018) as ESD “in national parks [...] [which] pursues the goal of demanding awareness for this different world of a nature independent of humans and of emotionally and rationally grasping and understanding the value of the ‘unused’ for humans, animals and plants. This nature is to be experienced as worthy of protection and with all senses” (n. p.). In the context of ESD, Langenhorst (2016) understands wilderness education as “the action-oriented linking of nature experience and ecological learning based on concrete wilderness phenomena with the focus on reflecting on the relationship between humans and nature” (p. 78) and thus combines the following target perspectives: *Experience harmonious-chaotic nature, Experience nature elementally, Explore ecological interactions, Reflect on lifestyle and meaning of life, Discover biological diversity, Engage with wilderness, Experience freedom in the wilderness.*

The expansion of the wilderness education concept by Reinboth et al. (2021) included wild and rewilding areas outside of large protected areas that can be used for educational purposes and are located in urban and suburban areas. These include, for example, wild corners, rewilding gardens and parks, fallow land, forests and meadows that are smaller in size and characterised by intensive anthropogenic use in the past. A significant potential of wilderness education outside of large protected areas (e.g. national parks) is the great diversity of rewilding areas available. Furthermore, access for target groups such as children and young people to the wilderness education areas is provided by the spatial proximity to their place of residence and school. Despite the concept and area expansion, national parks continue to play an important part in wilderness education.

In the wilderness, various beings can live autonomously and without human intervention. “Wilderness is understood as a constantly changing space that is not (or no longer) designed or used by humans and in which natural processes can take place largely uninfluenced by humans. Rewilding can be seen as wilderness development” (Lindau et al., 2021, p. 21). Wilderness is understood as a construct in several forms, from nature untouched by humans (primary wilderness) to rewilding areas on formerly

anthropogenically used areas of varying extent (e.g. from national parks to wild corners). Wilderness exists as a human mental construct, in that certain characteristics are attributed to a space and it is aesthetically perceived and experienced as such, thus becoming wilderness. The perception of spaces as wilderness is therefore subjective and exists in various variations as a result. In addition to individual perceptions and interpretations of wilderness, there are ideas of wilderness in cultural contexts, so that wilderness is perceived as wilderness in a similar way (Kowarik, 2017).

Wilderness education in the context of ESD. Wilderness education can be understood as a facet of ESD from the educational institutional perspective of kindergarten, school, vocational school and university, in addition to the national park-specific approaches. The topic of wilderness serves as an access point to aspects of sustainable development and offers diverse starting points for questioning one's own and societal lifestyles in everyday life through the individual experience of wilderness. Lindau et al. (2021) were able to identify six main thematic areas based on the SDGs, which are outlined below:

Main thematic area 1 - Counter-world wilderness: Wilderness is understood here as a contrast to civilisation and stands for "the longing for freedom, lack of regulation, deceleration or peace" (Lindau et al., 2021, p. 27). References can be made to SDGs 3 (health and well-being), 5 (gender equality), 9 (industry, innovation and infrastructure) and 16 (peace, justice and strong institutions).

Main thematic area 2 – Justice, responsibility and empathy: Wilderness education is characterised by staying in wild or rewilding nature, which is characterised by a simple and reduced way of life, outside of everyday living standards. Resources such as water and energy (heat and light) are limited and not readily available. Sanitary facilities such as showers, toilets and sinks do not exist. For cooking and for only a fire is available for warmth. Spending time in the wilderness thus offers potential for comparisons between one's own everyday way of life and that of older generations or other regions of the world. At the same time, it offers an opportunity to reflect on the justice of international demands for the protection of wilderness (e.g. tropical rainforests). The utilisation strategies of the past in Germany (e.g. clearing forests in favour of agricultural land and mining) and the necessity of protecting areas with secondary wilderness are valuable impulses for reflection. Another social aspect is the negotiation of activities in the group during the stay in the wilderness – also under gender aspects (e.g. making fire, chopping wood, cooking, setting up and dismantling bivouacs, toilets and communal areas). Links can be made to SDGs 1 (No Poverty), 5 (Gender Equality), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 9 (Industry, Innovation and Infrastructure), 12 (Sustainable Consumption and Production), 15 (Life on Land) and 17 (Partnerships to achieve the Goals).

Main theme 3 – Human-Nature Relationship: The discourse on the individual and social human-nature relationship is a traditional debate in the context of nature left to itself and human claims to use space. Formerly intensively used areas, largely through forestry, mining, industry or railway facilities, are taken out of anthropogenic use and left to themselves. Comparisons can also be made between used and unused wild areas, e.g. meadows versus lawns, managed forest versus near-natural forest. A central prob-

lem or a suitable conflict potential enables the question of how many human interventions wild areas need (e.g. hunting versus wildlife protection, wolf protection versus livestock protection, wild areas versus anthropogenic interventions for hazard prevention). The claim for staying in the wild nature is based on leaving as few human traces as possible (Leave no Trace-approach according to McGivney, 2003) and to manage with as few civilisation objects as possible (Minimal-Impact-Approach according to Hampton & Cole, 2003). Links can be made to the SDGs: 3 (Health and Well-Being), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Sustainable Consumption and Production), 14 (Life Below Water) and 15 (Life on Land).

Main theme 4 – Wilderness Ecosystem: Through wilderness education measures participants can experience, discover and learn to understand wild or rewilding nature. In the intensive examination of the aquatic and terrestrial ecosystems, in which natural processes, dynamics and cycles take place without human intervention, selected parameters, e.g. water, air and soil quality as well as species composition, can be analysed using experimental methods. In addition, questions in the field of tension between rewilding nature and ecosystem services, e.g. flood protection, climate protection, biodiversity, recreation and health, are up for debate. Links can be made to the SDGs: 1 (No Poverty), 3 (Health and Well-Being), 6 (Clean Water and Sanitation), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land).

Main theme 5 – Sufficiency: As part of wilderness education being in the wild or rewilding nature under simple conditions without the usual standards (living space, heating, running water, sanitary facilities) can raise awareness of aspects of sufficiency. Numerous opportunities for reflection on one's own and society's lifestyle and consumption style serve this purpose. References can be made to SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-Being), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Sustainable Consumption and Production), 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land).

Main Theme 6 – Appreciation of Wilderness: With the help of wilderness or rewilding nature, social values (e.g. nature-aesthetic experiences, recreation, health, leisure activities and nature experiences, seclusion, peace, health, education and culture), economic values (e.g. storage of genetic diversity, tourism in large protected areas, cost savings due to lack of maintenance measures, retention areas, model for other areas), ecological values (e.g. protection strategy against climate change, preservation of biodiversity, habitat for animals and plants, reference area for intact ecosystems, space for accompanying research) and ethical values (e.g. intrinsic value of nature, conservation value for future generations, protection in the context of international justice and responsibility, occasion for self-reflection, place for spiritual, mystical and religious insights, dilemma situations and conflict potential between land use and nature conservation) are addressed as educational opportunities. References can be made to SDGs 1

(No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-Being), 4 (Quality Education), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Sustainable Consumption and Production), 13 (Climate Action), 14 (Life Below Water), 15 (Life on Land) and 17 (Partnerships to Achieve the Goals).

In addition to the numerous content-related links of the wilderness education to the SDGs, the concept offers potential for transformative learning from a methodological perspective through spending time in wild or rewilding nature. The individual experience is in the foreground and should create opportunities for reflection regarding one's own and social living environment. In this context, so-called dilemma situations or conflicts of objectives, which do not provide quick and easy solutions to the conflicts (e.g., people staying in wilderness areas/national parks versus the untouched and protected wild or rewilding areas, standard of living versus sustainability), provide impetus for educational work (Lindau et al., 2021). Examining one's own life situation within and outside of wilderness education programs, as well as being embedded in local, regional, and global cause-and-effect relationships, aims to raise awareness of sustainability issues and, ideally, more sustainable action. The transfer of impressions, experiences, and insights gained in wild or rewilding nature (e.g., through wilderness camps) to one's own everyday life situation represents an essential pillar of the Halle Model of Wilderness Education (Lindau et al., 2021). The reflection activity on the individual and societal relationship between humans and the environment, as well as the associated transfer to one's own life and society, is intended to encourage the ability to act in the spirit of sustainability. Within wilderness education, the locations, wild or rewilding nature, play a particularly crucial role in the educational offering. This includes large-scale protected areas such as national parks, but also urban and suburban rewilding areas (Reinboth et al., 2021).

Wilderness Camp as a Transformative Learning Experience. For the practical implementation of wilderness education programmes for children and young people, the focus is on spending time in wild or rewilding nature. The wilderness camp is a central element of wilderness education. This can be a permanently installed camp (or a corresponding pre-construction) that is then used by a group of participants for several days. The wilderness camp's facilities include a communal area with a fire pit, sleeping quarters, and a washing area on gravel surfaces to allow rain and condensation to seep away. Waterproof cotton tarps provide protection over the sleeping quarters and the communal area. The sleeping quarters are equipped with waterproof bivouac tents, sleeping bags, and sleeping mats. Dry toilets can be assembled from prefabricated components (Lindau, 2024). A second version of the wilderness camp is the bivouac site, which is usually located in a rewilded forest area. For this purpose, wilderness camp participants bring tarps, guy ropes, and gas stoves to the bivouac site and usually set up camp for one night (Lindau, 2024). For supplies in both wilderness camp variants, drinking water can be carried to camp or taken from a nearby stream and boiled. Firewood is provided in a bowl for the fire pit to preserve the deadwood of the reclaimed nature and leave it on the land (Berbalk & Halves, 2021). Participants also carry the necessary food to

camp in backpacks. The goal is to live in simple conditions and experience the reclaimed nature, leaving as little trace as possible. Furthermore, the stay in the reclaimed nature is characterized by a lack of infrastructure (e.g., roads and internet reception) (Mohs & Lindau, 2020). During the stay at the wilderness camp, the focus is on self-sufficiency in the camp as well as living and organizing in a group. On the other hand, the construct of wilderness is addressed as transformative learning based on the six identified main areas of action in the context of ESD using various wilderness education methods, which can often be used during excursions lasting several hours in the immediate vicinity of the wilderness camp (Lindau et al., 2021).

The aim is to analyze the intrinsic value of nature in relation to how humans interact with their individuality, society, and nature, and to reflect on the relationship between humans and nature. A key element of wilderness education in the context of ESD is, in addition to the perception of wild and rewilding nature, the connection to the six main thematic areas and the associated SDGs. Furthermore, human-environment relationships in the past, present, and future, as well as the associated uncertainties and uncertainties, are discussed (Lindau, 2024).

3 Discussion & Reflection

In addition to large protected areas (e.g., national parks), wild or feral nature also exists in the immediate living environment and offers potential for discovery within the framework of the wilderness education approach. This includes both near-natural areas and feral urban nature, which are used as learning opportunities for wilderness education in the context of ESD, as experiencing and perceiving wild and feral nature in the immediate vicinity of one's own living area offers itself (Lindau et al., 2021). In terms of content, the wilderness education approach offers diverse approaches to ESD at the content level through explicit references to 16 SDGs, which, due to their complexity and interconnectedness, enable a challenging and interesting learning field (Lindau et al., 2021). Wilderness education thus provides a holistic approach to ESD by addressing and reflecting on learning content related to sustainability, responsibility, justice, and environmental protection. Induction from the SDG references results in six central thematic areas (counterworld wilderness, justice/responsibility/empathy, human-nature relationship, wilderness ecosystem, sufficiency, appreciation of wilderness). These fields provide concrete points of contact with ESD topics such as health, equality, resource conservation, biodiversity, climate, educational equity, and global partnerships (Lindau et al., 2021). Despite the inductive approach, a contribution was made to an empirical basis for further research regarding the establishment and effectiveness of wilderness education in the context of ESD.

The wilderness camp enables multi-day learning processes, self-sufficiency, group organisation, and living in nature under simple conditions and serves as a concrete learning space for translational learning: experiencing, reflecting, and transferring. Transformative learning is triggered by dilemma situations and conflicting goals (e.g., wilderness conservation vs. human use, standard of living vs. sustainability), thus promoting reflective thinking, a shift in perspective, and the willingness to change actions

(Lindau et al., 2021). The goal is to transfer acquired impressions and insights into one's own living environment and into local, regional, and global cause-and-effect relationships. A variety of natural habitats have proven successful for wilderness camps, with proximity to homes and schools in particular increasing access and equal opportunities for all learners (UNESCO & DUK, 2020). The reduced and generally non-ordinary living conditions compared to everyday lifestyles can create a field of experience and experimentation for ESD and transformative learning (Vare & Scott, 2007). Limitations of the study include its exploratory approach and focus on the German-speaking region, as well as on the experiences of the wilderness education approach in the German education system. In this regard, expanding the research approach to European and non-European wilderness education would be worthwhile in the future. The effectiveness of wilderness camps as transformative learning in the context of ESD is also still an open field of investigation and requires further theorisation.

4 Conclusion

The concept of wilderness education builds on the theme of wilderness and illuminates core problems of global change, the relationship between humans and the environment, and the need for sustainable development. Methodologically, wilderness education offers potential for transformative learning through exposure to nature. The wilderness camp, in particular, plays a central role in this. Through practical experiences and the exploration of dilemmas and conflicting goals, reflective thinking, a shift in perspective, and a willingness to change actions can be fostered. The goal is to transfer the impressions and insights gained to one's own life situation and social contexts, thus encouraging more sustainable behaviour at the individual, communal, and institutional levels. Wilderness education represents a holistic approach that enables profound learning experiences through experiencing and reflecting on wild and degraded natural spaces and can thus make a valuable contribution to education for sustainable development and the promotion of transformative learning.

References

1. Berbalk, S., & Halves, J. (2021). Ist Wildnisbildung außerhalb von Großschutzgebieten möglich? – Überlegungen aus der Perspektive des Nationalpark-Besucherzentrums Torf-Haus. In A.-K. Lindau, F. Mohs, F., A. Reinboth, & M. Lindner (Hrsg.), *Wilde Nachbarschaft – Wildnisbildung im Kontext einer Bildung für nachhaltige Entwicklung* (pp. 117-138). Oekom.
2. Bibelriether, H. (1998). Faszination Wildnis – wissenschaftlich nicht erfassbare Realität. *Nationalpark*, 3, 4-9.
3. BUND. (2002). Wildnisbildung – ein Beitrag zur Bildungsarbeit in Nationalparks. <http://www.gfn-harz.de/sites/wildnisbildung.pdf>
4. Döring, N. (2023). *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften* (6. Auflage). Springer. doi: <https://doi.org/10.1007/978-3-662-64762-2>

5. DUK. (Hrsg.). (2015). *Querbeet. Biologische Vielfalt und Bildung für nachhaltige Entwicklung – Anregungen für die Praxis*. https://www.bne-portal.de/bne/shareddocs/downloads/files/2015_biological_diversity_web_0.pdf?__blob=publicationFile&v=111.2021
6. Erxleben, A. (2008). Einheimisch werden in der Natur – Untersuchung zur Wirkung ursprünglichen, ganzheitlichen Lernens in Wildnisschulen als Beitrag zur Umweltbildung. https://www.wildniswissen.de/images/fab_media/Diplomarbeit_Wildnis.pdf
7. Finck, P., Klein, M., & Riecken, U. (2013). Wildnisgebiete in Deutschland – Fiktion oder ein realistisches Naturschutzkonzept? *Natur und Landschaft*, 88(8), 342-346.
8. Finck, P., Klein, M., & Riecken, U. (2015). Wildnis im Dialog – Wege zu mehr Wildnis in Deutschland. Eine Einführung. In P. Finck, M. Klein, U. Riecken, & C. Paulsch (Hrsg.), *Wildnis im Dialog. Wege zu mehr Wildnis in Deutschland, Dokumentation und ausgewählte Beiträge des gleichnamigen Workshops des Bundesamts für Naturschutz vom 20.–23. Oktober 2014 an der Internationalen Naturschutzakademie Insel Vilm (INA)*. Bundesamt für Naturschutz (BfN), 5-11.
9. Hampton, B., & Cole, D. (2003). NOLS soft paths. How to enjoy the wilderness without harming it. Stackpole Books.
10. Hottenroth, D., van Aken, T., Hausig, F., & Lindau, A.-K. (2017). Wildnisbildung als Strömung einer Bildung für nachhaltige Entwicklung – mehr als ein Bildungskonzept für Großschutzgebiete. In Institut für Geowissenschaften und Geographie (Hrsg.), *Hallesches Jahrbuch für Geowissenschaften*, 40, pp. 61–79.
11. Jessel, B. (1997). Wildnis als Kulturaufgabe? – Nur scheinbar ein Widerspruch! Zur Bedeutung des Wildnisgedankens für die Naturschutzarbeit. *Laufener Seminarbeiträge*, 1, pp. 9-20.
12. KMK, & BMZ. (Hrsg.). (2016). Orientierungsrahmen für den Lernbereich Globale Entwicklung im Rahmen einer Bildung für nachhaltige Entwicklung. Cornelsen.
13. Kowarik, I. (2017). *StadtNatur und Wildnis*. Geographische Rundschau, 5, 10-15.
14. Langenhorst, B. (2016). Wildnisbildung und nachhaltige Entwicklung. Kovač.
15. Lindau, A.-K. (2024). Wildnisbildung. In R. Braches-Chyrek, C. Röhner, J. Moran-Ellis, & H. Sünker (Hrsg.), *Handbuch Kindheit, Ökologie und Nachhaltigkeit* (S. 451-465). Verlag Barbara Budrich.
16. Lindau, A.-K., Mohs, F., & Reinboth, A. (2021). Bildung für nachhaltige Entwicklung und Wildnisbildung. In A.-K. Lindau, F. Mohs, A. Reinboth, & M. Lindner (Hrsg.), *Wilde Nachbarschaft - Wildnisbildung im Kontext einer Bildung für nachhaltige Entwicklung* (pp. 15-43). Oekom.
17. Mayring, P. (2015). Qualitative Inhaltsanalyse. Grundlagen und Techniken. Beltz.
18. McGivney, A. (2003). Leave no trace. A guide to the new wilderness ethic. Mountaineers Books.
19. Mohs, F., & Lindau, A.-K. (2020). Wildnisbildung - ein Exkursionskonzept im Rahmen einer Bildung für nachhaltige Entwicklung. In A. Seckelmann & A. Hof (Hrsg.), *Exkursionen und Exkursionsdidaktik in der Hochschullehre: erprobte und reproduzierbare Lehr- und Lernkonzepte* (pp. 69-91). Springer.
20. Nationale Naturlandschaften. (2018). *Nationalparks in Deutschland. Bildungsauftrag*. <http://www.nationale-naturlandschaften.de/wissensbeitraege/bildungsauftrag/>
21. Reinboth, A., Mohs, F., & Lindau, A.-K. (2021). Potenziale und Grenzen von Wildnis- und Verwilderungsflächen für die Wildnisbildung. In A.-K. Lindau, F. Mohs, A. Reinboth, & M. Lindner. (Hrsg.), *Wilde Nachbarschaft - Wildnisbildung im Kontext einer Bildung für nachhaltige Entwicklung* (pp. 139-166). Oekom.

22. Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S.E., Donges, J. F., Drüke, M., Fetzer, I., Bala, G., von Bloh, W., Feulner, G., Fiedler, S., Gerten, D., Gleeson, T., Hofmann, M., Huiskamp, W., Kumm, M., Mohan, C., Nogués-Bravo, D., Petri, S., Porkka, M., Rahmstorf, S., Schaphoff, S., Thonicke, K., Tobian, A., Virkki, V., Weber, L., & Rockström, J. (2023). *Earth beyond six of nine planetary boundaries*. *Science Advances* 9, 37. DOI: 10.1126/sciadv.adh2458
23. UN. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
24. UNESCO, & DUK. (2021). *Bildung für nachhaltige Entwicklung. Eine Roadmap*. https://www.unesco.de/sites/default/files/2021-10/BNE_2030_Roadmap_DE_web-PDF_nicht-bf.pdf
25. Vare, P. & Scott, W. (2007). Learning for a Change: Exploring the Relationship Between Education and Sustainable Development. *Journal of Education for Sustainable Development* 1(2), 191–198.
26. Young, J, Haas, E., & McGown, E. (2014). *Handbuch für Mentoren. Mit dem Coyote-Guide zu einer tieferen Verbindung zur Natur: Grundlagen der Wildnispädagogik*. Biber-Verlag.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

