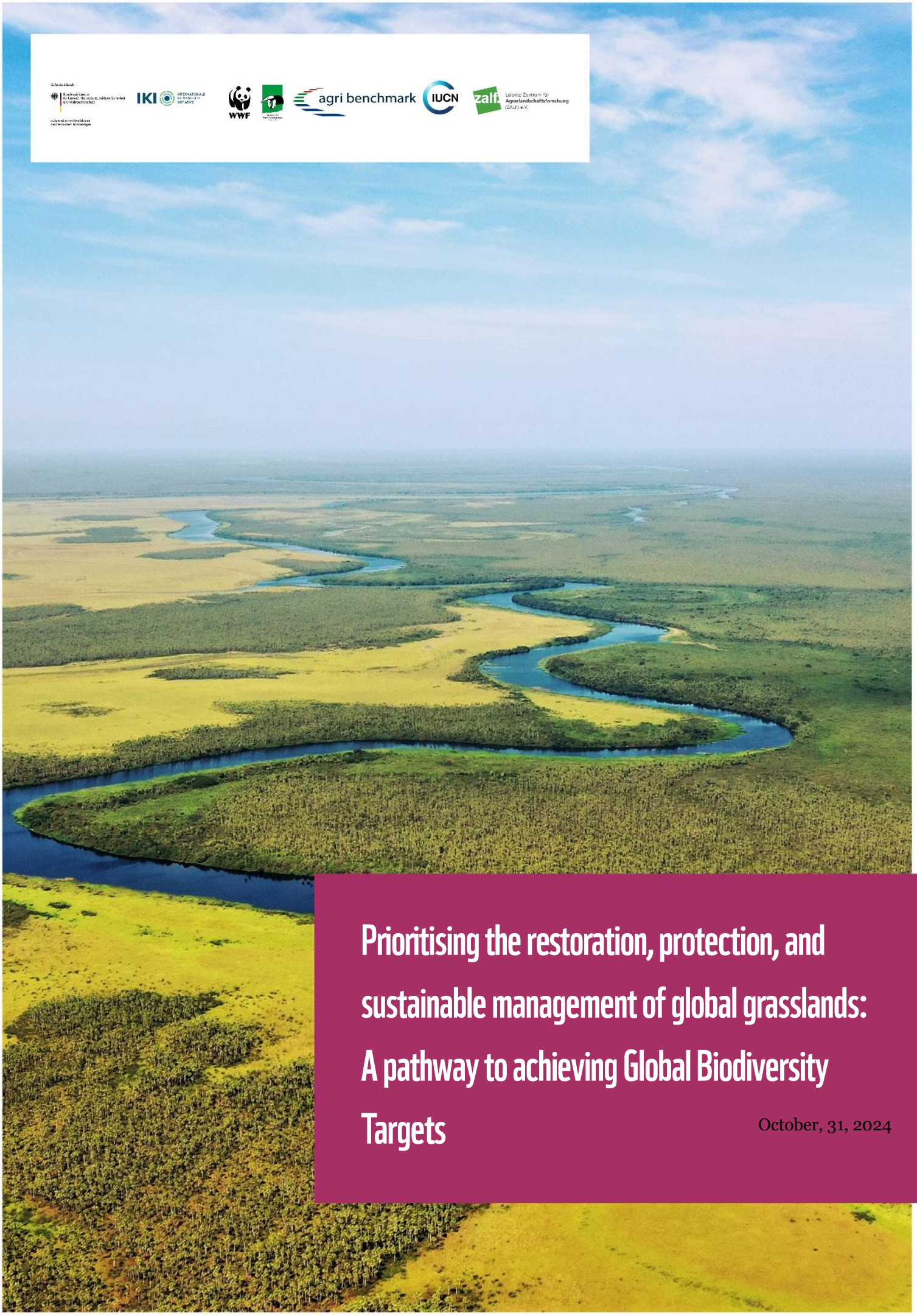

Prioritising the restoration, protection, and sustainable management of global grasslands: A pathway to achieving Global Biodiversity Targets

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NOTE:

This document is a preview to an upcoming report, which will explore this narrative in depth. We welcome your feedback and contributions as we prepare the extended version. Scan the QR code to provide feedback and comments or reach out to us directly via email to Sairandhri Lapalikar sairandhri.lapalikar@iucn.org / Leonie Meier Leonie.Meier@wwf.de.

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Introduction

Grasslands and savannahs hold significant economic, ecological, and cultural value, encompassing 54% of our terrestrial landscapes.[1] Despite this, these ecosystems are experiencing the highest rate of conversion and degradation. The fragmentation of grasslands has undermined their essential ecosystem functions, including their ability to store carbon, regulate water, provide food, and support cultural practices. One major challenge is that fewer than 10% of grasslands are safeguarded from threats at a global level.[2] They are also often overlooked in national climate and biodiversity plans: only 10% of nationally determined contributions (NDCs) as part of the Paris Climate Agreement include references to rangelands,[i] compared to 70% of those plans including references to forests.[3]

To achieve the targets outlined in the Global Biodiversity Framework (GBF), which was adopted by the Convention on Biological Diversity's (CBD's) 15th Conference of the Parties (COP15) in 2022, global biodiversity initiatives should prioritise the conservation, restoration, and sustainable management of grasslands to effectively address their rapid degradation and, ensuring the numerous benefits provided by these ecosystems continue for future generations. **This report demonstrates how grasslands must be integrated into actions to achieve Targets 2, 3, and 10, enabled by Targets 19 and 21 of the GBF.**

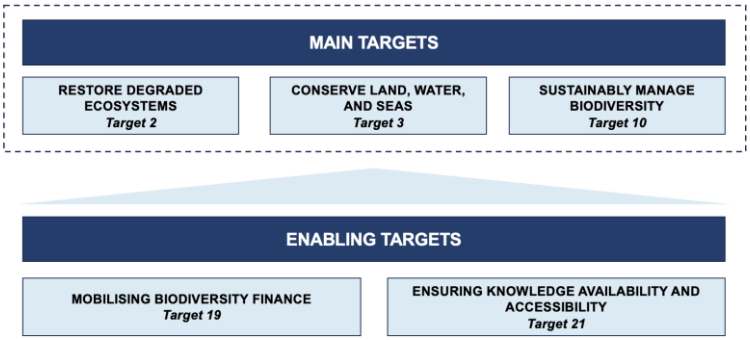

Figure 1: The interlinkages of priority GBF targets for grasslands

Restoring, conserving, and sustainably managing grasslands is essential for achieving these targets, but this involves several common challenges. A lack of consistent standards and definitions complicates the assessment of these ecosystems.[4] Likewise, insufficient specific data on the condition of grasslands and lack of monitoring guidance hinders the development of effective interventions to protect, manage, and restore grasslands among government bodies and other relevant stakeholders.[5] Additionally, limited coherent policy frameworks and mandates at national and sub-national levels that mainstream grasslands and address the local knowledge, land rights, and customary institutions of grassland communities disincentivise grassland action.[6] Overcoming these challenges is crucial for the sustainable management of grassland ecosystems.

[i] Rangelands are lands characterised predominately by grasses, grass-like plants, forbs, or shrubs that can be grazed or have the potential to be grazed. They support the production of grazing livestock and wildlife. Rangelands can encompass natural grasslands, savannas, shrublands, deserts, steppes, tundra, alpine communities, and marshes. Source: Allen, V.G et al. (2011). 'An international terminology for grazing lands and grazing animals. *Grass and Forage Science*, 66: 2–28. Available at: https://www.crops.org/files/membership/divisions/c06/international-grazing-terminology.pdf

Prioritizing global Grasslands and Savannahs in the Global Biodiversity Framework

Operationalising grassland restoration under GBF Target 2

Restoring 30% of degraded ecosystems by 2030 will require increasing the grassland area under restoration and improving the effectiveness of restoration initiatives. Achieving this goal hinges on establishing, implementing, and measuring the performance of grassland restoration interventions. This requires firstly addressing research gaps in grassland restoration, particularly in understanding the dynamics and adaptive requirements of different grassland types, such as drylands and (sub)tropical regions.[7] Funding research and pilot restoration studies can ensure evidence-backed restoration initiatives that achieve the highest returns in investment, in terms of benefits to nature and people, are adopted.[8] For example, restoration strategies should select climate-resilient vegetation, manage species arrival sequences, and maintain consistent management post-restoration.[9] [10]

Grassland restoration also requires the development of widely accepted and replicable principles and strategies tailored for on-the-ground grassland restoration, along with those adopted under forest and landscape restoration (FLR).[11] Building on this, another key dimension for effective grassland restoration is setting measurable goals. Baseline assessments are essential for countries to set targets and monitor progress. This requires improving the mapping and data related to grassland degradation and creating standardised indicators for monitoring grassland conditions.[12] Just as prioritisation in FLR relies on evaluations, similar grassland assessments can help countries identify degraded areas, understand ecological needs, and effectively track their progress in achieving grassland restoration.[13]

The long-term sustainability of grassland restoration initiatives requires inclusive governance that respects Indigenous People and Local Communities (IPLC) rights. Creating multi-sector mechanisms that include IPLCs in restoration planning and governance ensures that restoration efforts are culturally appropriate, integrate local knowledge, and outcomes are beneficial for all actors.

Tailored restoration approaches must be adopted to safeguard each grasslands' unique value. Catalysing scientific research, building awareness and technical capacity, mobilising inclusive governance structures and capital to finance appropriate interventions that aim to restore the correct species and ecosystems are crucial to achieving Target 2.

Operationalising grassland conservation under GBF Target 3

Effectively conserving viable and well-connected grasslands within ecologically representative protected areas and through other effective conservation measures (OECMs) is crucial to achieving GBF Target 3. Current grassland protection levels are insufficient for maintaining biodiversity and the proper functioning of grassland biomes. Grasslands are also being converted at an alarming rate with estimates suggesting up to 1 million hectares of the Cerrado cleared each year in Brazil, releasing 250 million tons of carbon annually[14]. By increasing grassland protection, countries can improve key indicators related to Target 3, including the coverage of protected areas and OECMs, and the protected area coverage of key biodiversity areas.

Global and national mandates for grassland conservation that uphold the rights of IPLCs can be effective in achieving Target 3. In Mongolia, for example, a national mandate has achieved two-thirds of its aim to place 30% of the country's land, encompassing its significant grasslands, under national-level protection by 2030 as part of the *Mongolian Sustainable Development Vision 2030*.[15] Efforts to identify and protect these unique ecosystems are fragmented and lack a unified approach. Grassland conservation should be elevated in key international biodiversity, climate, and land degradation agreements and plans. On a global level, initiative such as the International Year of Rangelands and Pastoralism present an opportunity for concerted, unified action.

Dedicated area-based conservation with sustainable financing for grasslands is needed to maintain ecosystems and achieve Target 3. Currently, 21 of the world's 70 grassland ecoregions are less than 20% intact, while only 14 ecoregions are at least 60% intact.[16] Among the seven most intact regions, all are located near or within other relatively intact grassland ecoregions, which help create a buffer against areas that have experienced large-scale conversion. [17] For instance, the Maloti-Drakensberg grasslands, the largest and most protected grasslands in southern Africa, benefits from the Maloti-Drakensberg Park World Heritage Site, which mitigates certain threats to its ecosystem. However, the effective management of the site is challenged by substantial budget cuts, leading to reduced operational funding. [18] Long-term funding as outlined in Target 19 is needed to ensure protected areas can implement management plans and safeguard biodiversity values.

Like for restoration, grassland conservation requires baseline assessments, mapping, and monitoring of the ecological condition of grasslands to identify key areas for targeted protection. Conservation should not only focus on expanding protected areas but improving the effectiveness of conserved areas and must similarly acknowledge the rights and practices of IPLCs, actively involving them alongside other relevant stakeholders in conservation efforts. IPLCs have managed these ecosystems through traditional practices for centuries, and their knowledge, institutions, and local customs can support sustainable grassland management practices. [19] For example the Himalayan grasslands support about 150 million people in the upstream regions, and three times as many people living in downstream regions. These communities have implemented innovative and adaptative grassland management practices that address emerging conservation challenges effectively.[20]

Operationalising grassland sustainable management under GBF Target 10

Prioritising the sustainable management of agricultural lands, as outlined in GBF Target 10, is essential to strengthening the resilience, productivity, and long-term efficiency of grassland-resilient production systems. This involves adopting sustainable agricultural practices, such as avoiding overgrazing through biomass-based grazing management and improved supplementary feeding of livestock. [21] It also includes implementing soil management strategies that limit agrochemicals and efficient water management systems that minimise water waste.[22] Additionally, preserving sufficient spaces for native wildlife allows natural habitats to thrive and promotes ecological balance in agricultural grasslands.[23]

Implementing Target 10 requires several key actions. Firstly, an assessment of current grassland agricultural practices should be conducted to identify the barriers limiting more sustainable approaches, with clear guidance consequently developed that proposes actions to mitigate these challenges. Agricultural policies, such as agri-environment schemes, should be established to encourage less intensive farming while recognising the rights of IPLCs. Additionally, subsidies that unintentionally promote the conversion or degradation of grasslands and savannahs for agriculture should be removed or modified. Product certification and labelling schemes that endorse sustainable agricultural management practices can, in turn, incentivise sustainable management. Robust regulations must be implemented to minimise environmental pollution from agriculture, which can adversely impact grassland.[24]

Promoting sustainable livestock grazing and agricultural practices by incorporating traditional knowledge is fundamental to advancing Target 10. Grasslands are home to many Indigenous and local groups whose livelihoods, cultures, and traditions are inextricably linked to these ecosystems. These communities' way of living provides valuable illustrations of sustainable approaches to the management of grassland-reliant production systems. In the Eurasian Steppe, for example, the Mongolian nomadic herding communities play a significant role in protecting grassland diversity and soil integrity, including soil carbon storage.[25] These communities are key to safeguarding grassland biodiversity, and policymakers must, therefore, prioritise a better understanding and integration of local knowledge, customary land management, and institutions to improve sustainable grassland agriculture.

By adopting biodiversity-friendly and low-impact agricultural techniques, farming practices can align with grassland rehabilitation objectives and enhance ecosystem services and benefits.[26] This balanced management approach will provide a strong foundation for meeting the sustainability goals of Target 10.

Enabling targets: Financing and data

> ***Target 19****: Mobilise $200 billion per year for biodiversity from all sources, including $30 billion through international finance.*
> ***Target 21****: Ensure that knowledge is available and accessible to guide biodiversity action.*

In order to achieve Targets 2, 3, and 10, it is important to mobilise resources and ensure relevant data and knowledge is available and accessible for grasslands conservation, restoration, and management (in line with Target 19 and 21 respectively).

GBF Target 19: Mobilise $200 Billion per year for biodiversity

Target 19 calls for the mobilisation of financial resources to support conservation and restoration efforts, ensuring that vital habitats receive the investment needed to sustain their biodiversity and ecosystem services. Funding for grasslands currently remains limited as the value of their ecosystem services often goes overlooked.[27] Moreover, public, private, and other investment mechanisms such as blended finance have traditionally focused on projects that provide direct material goods and, thus, significant revenue streams.[28] For instance, as of January 2023, of the 90 projects that were funded by the Green Climate Fund for terrestrial ecosystems, only 21 projects intervened in tropical and subtropical savannahs and grasslands.[29] Other market-financing mechanisms, such as the Payment for Ecosystem Services (or PES), have traditionally focused on woodlands and farmlands rather than grasslands.[30] This is despite various studies showing the positive impacts of PES on enhancing grassland quality and conservation.[31]

Despite the funding gap for grasslands, an analysis of more than 200 studies found that the cost-benefit ratio of ecological restoration was higher for grasslands than for forests, wetlands, or aquatic/marine systems.[32] These yields highlight the potential for grasslands restoration, conservation, and sustainable management as well as the critical need to mobilise funding, especially through public-private financing mechanisms, to ensure scalable and sustainable grasslands management.

Biodiversity funding as a whole remains too low, though public-private biodiversity finance has seen a significant increase over 2020-21.[33] This growth presents an opportunity to simultaneously increase funding in grasslands restoration, conservation, and sustainable land management efforts, building on the growing number and variety of financing models globally that combine public and

private investment to target grasslands. For instance, the UK government-led Projects for Nature initiative connects businesses with recovery projects, including those focused on grasslands, leveraging corporate donations to drive conservation efforts.[34] Likewise, the Mongolia Sustainable Cashmere Platform (MSCP) promotes multi-stakeholder collaboration for sustainable cashmere production, enhancing the visibility of the valuation of grassland ecosystem services and combating degradation.[35] By demonstrating the financial viability of sustainable cashmere, the MSCP facilitates the mobilisation of blended finance to support both conservation efforts and local livelihoods.

Target 19 is closely tied to multifaceted policy challenges faced within existing grassland conservation efforts, such as a lack of consensus on best practices, weak governance resulting in ineffective policy enforcement, and inadequate data and monitoring. These issues not only hinder the ability to monitor grassland health, but also raise perceived risks for investors, making it difficult to build a compelling business case for financing grassland conservation, especially through blended finance mechanisms. Therefore, addressing these policy challenges and recognising the interlinkages between different targets will be critical in attaining Target 19.

GBF Target 21: Ensure that knowledge is available and accessible to guide biodiversity action

Target 21, which calls for knowledge to be available and accessible to inform biodiversity action, is critical to advancing our understanding and management of grasslands. Both the scientific and economic evaluation literature has highlighted the economic and ecological value of grasslands, which is reassessed as the understanding of grassland ecosystems continues to evolve. However, policy on grassland governance is yet to catch up with the science. Grasslands continue to be disregarded in various national policy frameworks. For instance, grasslands are still classified as wastelands in certain national policy frameworks,[36] signifying the void in understanding and weak grassland governance in public policy. Moreover, as grasslands tend to be subsumed with broader land-use categories such as agricultural land or pasture,[37] it often evades policy discourse and public attention as a separate entity. Most research on grasslands focuses on agricultural systems and there is an absence of journals specifically dedicated to natural grassland research. There is a wealth of practical and traditional experience to grassland conservation, but this is quickly diminishing. Traditional knowledge is especially crucial for grassland management as it provides localised insights into the unique ecological dynamics of specific regions, informed by generations of experience.

Addressing this knowledge gap between science, local knowledge, and policy for grassland conservation is essential to achieve Target 21. Currently, there is a lack of unified standards for approaching grassland degradation,[38] which constrains the global effort in addressing grassland degradation mechanisms and offering restorative prescriptions. Fragmented restoration efforts further complicate the access to successful case studies and datasets.[39] The absence of cohesive policy governance and a unified framework underscores the need for enhanced research to develop standardised science-based approaches that effectively integrate traditional knowledge with informed decision-making. Furthermore, authoritative, frequent assessments and a standardised methodology are essential for defining, classifying, and tracking grassland degradation, as well as understanding grasslands' resilience and sustainability within complex socio-economic and ecological systems. [40] Notably, bridging the science-policy gap requires comprehensive assessments of the socio-ecological impacts of grassland management, in relation to the impacts on local communities. This will help devise policies that are not just scientifically sound, but also environmentally and socially equitable. Ultimately, a strong science-policy nexus is necessary to ensure the active adoption of contemporary scientific research in grassland policy management and to prevent further degradation.

Conclusion

Grasslands represent a critical yet often overlooked biome in restoration, conservation and management efforts aimed at achieving the ambitious targets of the GBF, established under the CBD. Covering an impressive 54% of the world's terrestrial surface, grasslands, savannahs and rangelands must be included in the restoration of 30% of degraded ecosystems (Target 2) and the conservation of 30% of terrestrial and aquatic environments (Target 3) by the year 2030. Likewise, supporting sustainable and traditional agricultural practices in grassland farming is essential for achieving Target 10. Prioritising grasslands in Targets 2, 3, and 10 will ensure the key ecological benefits that grasslands provide are sustained for generations to come.

Achieving these targets requires implementing actions under Targets 19 and 21. Investment and adoption of innovative, long-term financing models, as outlined in Target 19, will enable the effective adoption of Targets 2, 3 and 10 and lasting improvements in grassland conditions. Additionally, advocating for sustainable grassland management to be incorporated into national biodiversity strategies and broader global conservation and restoration initiatives requires applicable and actionable research under Target 21. The call for urgent investment and focused attention in grassland conservation, restoration and sustainable management within the broader biodiversity agenda cannot be overstated. Grassland management is fundamental to reversing biodiversity loss and improving ecosystem functions and services.

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