

The Global Biodiversity Standard

Community-led restoration in the Budongo-Bugoma Wildlife Corridor in Uganda



The Global
Biodiversity
Standard



**BOTANIC
GARDENS**
CONSERVATION
INTERNATIONAL



SOCIETY FOR
ECOLOGICAL
RESTORATION

ECOSIA



TOORO BOTANICAL GARDENS



Jane
Goodall
Institute

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Jane Goodall Institute restoration project, Uganda. (Ecosia)



Dr Grethel Aguilar, Director General, International Union for Conservation of Nature (IUCN)



Dr David Cooper, Former Executive Secretary, United Nations Convention on Biological Diversity (CBD)



Elizabeth Maruma Mrema, Deputy Executive Director of the UN Environment Programme and former Co-Chair of the Taskforce on Nature-related Financial Disclosures (TNFD).

“IUCN welcomes The Global Biodiversity Standard as a tool to assess the impacts of tree planting and other nature-based initiatives on biodiversity and ecosystem integrity, assuring financiers and policymakers, as well as providing assistance to practitioners.”

“The Global Biodiversity Standard is one of several tools that are compatible with the Convention on Biological Diversity’s Global Biodiversity Framework (GBF). The bottom-up approach of this methodology is consistent with the CBD’s central tenet of equitable sharing of benefits.”

“Our solutions to the climate crisis take little account of the natural world and even those that do - like tree planting - are actually failing to increase our climate resilience. The Global Biodiversity Standard will encourage better, more long-term, nature-based solutions to the climate crisis.”



Monitoring Ecosia trees in Uganda. (Luke Dray)

Overview

The Global Biodiversity Standard (TGBS) provides a benchmark for nature-based solutions that drives positive outcomes for biodiversity, ecosystems, and the communities that rely on them. To gain certification, projects must show demonstrable evidence of positive outcomes for biodiversity and ecosystems through a standardised site-based assessment process carried out by regional biodiversity hubs.

The assessment methodology uses four key frameworks:

a) Ecosystem integrity (criteria 1, 4-7): Sites are assessed using a five-star system developed by the Society for Ecological Restoration (SER) across six key attributes (absence of threats, physical conditions, species composition, structural diversity, ecosystem function, external exchanges) that are divided into 21 sub-attributes. Sites are assessed by comparing the baseline (the conditions of the assessment area immediately before the beginning of a project) and current conditions against a native reference ecosystem (i.e., 5-star condition). Sites are scored based on the change in star rating from the baseline to the current condition.

b) Level of protection (criterion 2): Sites are assessed using a five-star system to understand what protection is provided to biodiversity at the site. Sites are assessed based on the presence of legal protection status and the long-term sustainability of management activities, with scores calculated according to the change in protection attributed to the project.

c) Stakeholder engagement and social benefits (criterion 3): Sites are assessed across four attributes, covering stakeholder engagement, benefits distribution, knowledge enrichment, and sustainable economies. Sites are scored based on the presence of key activities.

d) Robust monitoring, evaluation, and adaptive management (criterion 8): The management activities of the site are assessed across five attributes, covering monitoring and evaluation, adaptive management, ongoing management planning, long-term resourcing, and continuous improvement. Sites are scored based on the presence of key activities.

1
Select appropriate sites to enhance native biodiversity

2
Enhance protection of existing habitats and biodiversity

3
Protect, restore and manage biodiversity in consultation and partnership with local communities and other stakeholders

4
Aim to maximise biodiversity recovery through ecosystem restoration

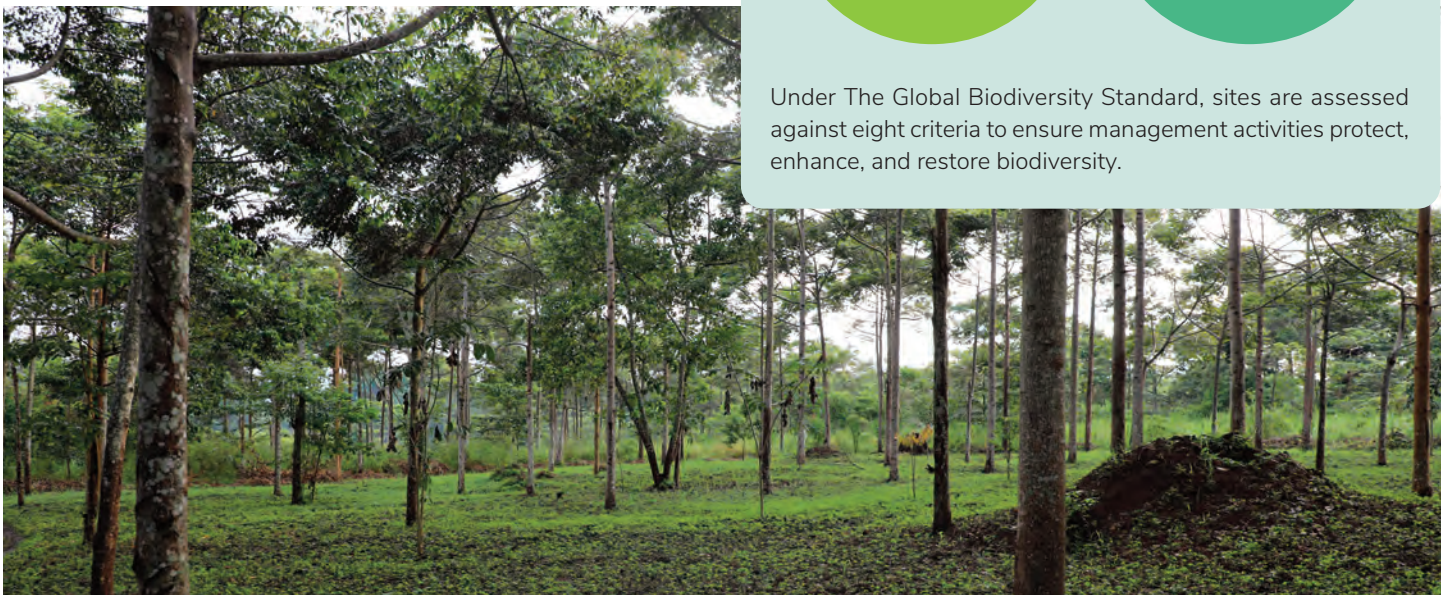
5
Avoid and reduce invasive or potentially invasive species

6
Prioritise the use of native, threatened and rare species

7
Promote biodiversity and adaptive capacity

8
Implement robust monitoring, evaluation and adaptive management of biodiversity

Under The Global Biodiversity Standard, sites are assessed against eight criteria to ensure management activities protect, enhance, and restore biodiversity.



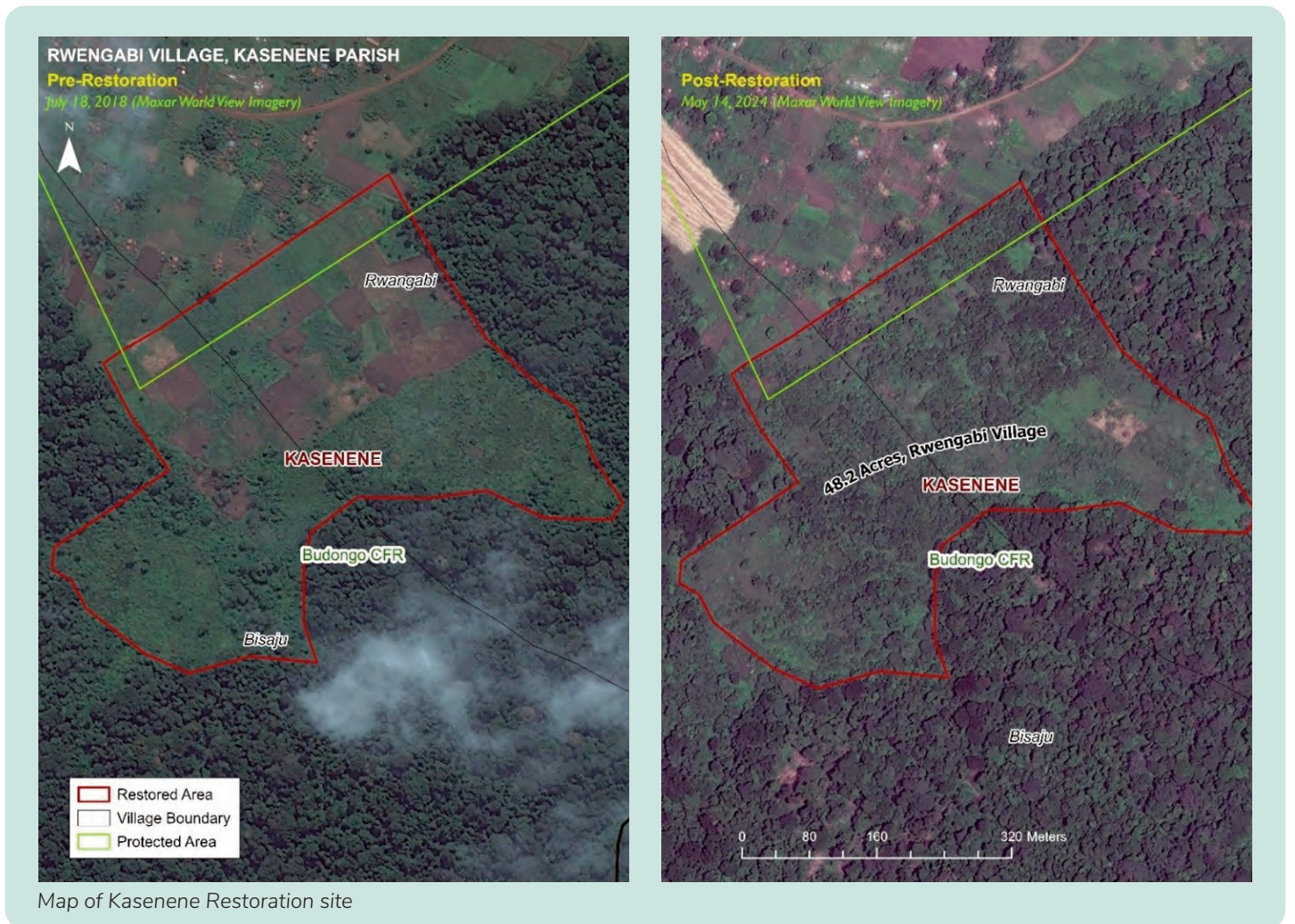
Case Study: The Kasenene Restoration Site, Uganda

For over a decade, the Jane Goodall Institute (JGI) Uganda has been working to conserve private and communal forests in the Budongo-Bugoma Corridor of Western Uganda. These forests face severe threats from deforestation because of agricultural expansion, driven by a growing population and rising demand for crops like sugarcane, as well as demand for firewood. Climate change exacerbates these challenges, with hotter, drier conditions, more frequent wildfires, and unpredictable rainfall threatening both biodiversity and local livelihoods.

This corridor is a critical habitat for chimpanzees and other wildlife and faces significant deforestation threats, agricultural expansion, and climate change. The initiative integrates biodiversity restoration with climate adaptation strategies, focusing on protecting community livelihoods and fostering social and ecological resilience. It adopts a multi-stakeholder approach and promotes collaboration among local communities, conservation organisations, and government bodies to restore and sustainably manage this vital ecosystem.



(Jane Goodall Institute)



Map of Kasenene Restoration site

The primary goal is to enhance social and ecological resilience in Uganda's Albertine Rift, particularly in the Budongo-Bugoma wildlife corridor. Specific objectives include:

- **Integrated Forest and Land Management:** Promoting forest restoration and catchment area management
- **Climate Adaptation and Mitigation:** Building resilience against climate-induced risks such as erratic rainfall, wildfires, and crop productivity loss.
- **Sustainable Livelihoods:** Introducing income-generating activities like apiculture, goat rearing, and banana farming.

In 2017, the Jane Goodall Institute (JGI) Austria partnered with Ecosia to support restoration within the Budongo-Bugoma wildlife corridor. The project is implemented by the Jane Goodall Institute (JGI) Uganda. Ecosia is a Berlin-based search engine that dedicates its ad-revenue to funding environmental initiatives. JGI Uganda promotes conservation, sustainable development, and environmental education while empowering local communities to coexist harmoniously with wildlife and protect natural ecosystems for future generations.

This partnership aims to plant trees within the Budongo-Bugoma Corridor via community-led restoration, addressing the underlying causes of deforestation while focusing on livelihood diversification. Local communities play a central role in implementing these initiatives, which aim to build resilience against environmental and socio-economic challenges. The project receives co-financing from the Austrian Development Agency.



Saplings in a local community nursery. (Luke Dray)

So far, the Ecosia-JGI partnership has planted over 2.4 million trees along the corridor. Of this total, 36,690 were planted between 2021 and 2023 in collaboration with the Nyakase Environmental Conservation and Development Association (NECODA), a collaborative forest management group (CFM) that unites the adjacent Budongo forest communities of Nyantonzi and Kasenene.

The Kasenene Restoration Site Overview

The Kasenene restoration site (19.5 hectares), located in Kasenene village, is part of the Budongo Central Forest Reserve of the Budongo systems range. Before the project's inception in 2017, the area had been heavily degraded, with most native trees illegally harvested by communities adjacent to the forest. The most harvested species included *Khaya* species, *Melicia excelsa*, *Entandrophragma* species, *Mitragyna stipulosa* for timber, *Cynometra alexandrii* and *Combretum molle* for charcoal, and *Cordia mellinii* for making boats and canoes. Other species were harvested for building logs and fuelwood, contributing to the decline of forest cover of the site. This was worsened by the agricultural expansion apportioning the degraded land into blocks for individual community members to establish agricultural croplands. The largest part of the degraded Kasenene restoration site was converted into *Saccharum officinarum* (Sugarcane) gardens, with other small crop gardens of *Phaseolus* spp. (Beans), *Arachis hypogaea* (Groundnuts), and *Zea mays* (Maize). The agricultural expansion was pronounced along the forest's boundary.

The degradation of the Kasenene part of the Budongo Central Forest Reserve had significant negative consequences for both biodiversity and local communities. The loss of native vegetation cover led to habitat destruction, affecting the forest's rich wildlife, particularly primate species like the *Pan troglodytes* (chimpanzees), which depend on a dense forest canopy for food and shelter, and the decline in forest generalist bird species, impacting the biodiversity of the area.

Assessing impact using The Global Biodiversity Standard

To evaluate restoration progress, The Global Biodiversity Standard (TGBS) methodology was implemented at the Kasenene restoration site in September-October 2024. The assessment was conducted across a 19.5-hectare restoration site. Assessors from Tooro Botanical Gardens, Uganda implemented the assessment following the methodology outlined in the TGBS manual¹, with an independent review provided by the TGBS Secretariat, hosted at Botanic Gardens Conservation International.

Key assessment methods for this site included:

- **Rapid Biodiversity Assessments (RBAs):** Field surveys focused on indicator species such as woody plants, birds, and dung beetles to evaluate biodiversity recovery. These were conducted to measure species richness, abundance, and ecological functions.
- **Remote sensing survey:** Using satellite-based imagery, changes in ecosystem condition were assessed from the baseline to the current condition. The survey focused on changes in vegetation structure, gross primary productivity, forest connectivity, and indices of species diversity.
- **Socio-Economic Surveys:** Focus groups with local communities revealed the project's impact on community livelihoods and knowledge transfer.



Assessor conducting a vegetation survey at the Kasenene Restoration site. (Tooro Botanical Gardens)

- **Documentation review:** Management plans, monitoring and evaluation reports, and legal protection documents were reviewed to assess the level of protection and the robustness of management practices.



Assessors taking diameter measurements for a *Maesopsis eminii* tree during the assessment. (Tooro Botanical Gardens)

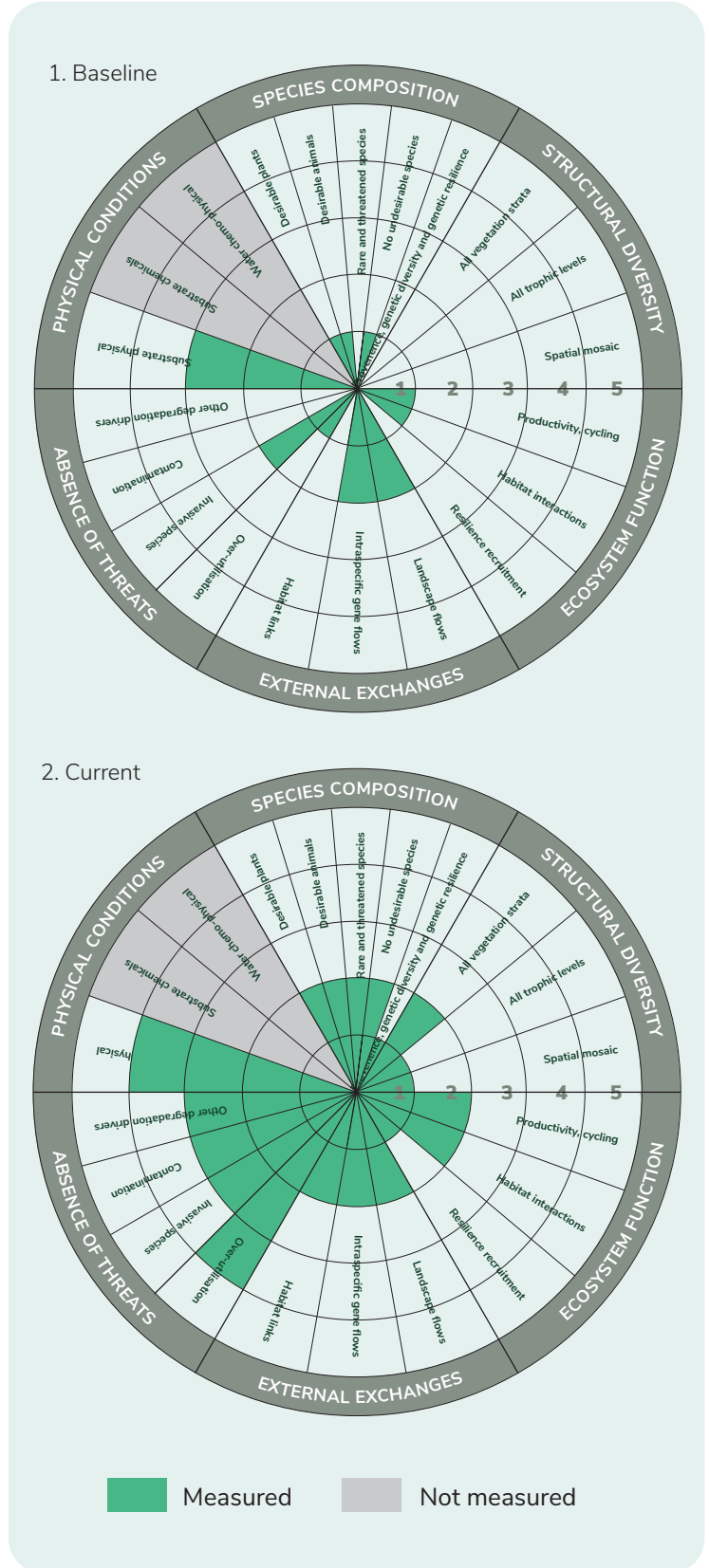
¹Bartholomew and Mosyftiani et al. (2024). The Global Biodiversity Standard: Manual for assessment and best practices. BGCI, Richmond, UK & SER, Washington, D.C. USA

Key Findings

The restoration site started in a highly degraded condition. The baseline starting condition was degraded agricultural land that was highly polluted with synthetic fertilisers and pesticides. The site was also highly threatened by fires and was dominated by non-native invasive species rather than native biodiversity. All vegetation strata were missing, with extremely low landscape connectivity. Through restoration efforts, degradation has been halted, and the ecosystem has started to recover.

Through the assessment process, assessors from Tooro Botanical Gardens collected data to understand ecosystem integrity:

- Flora:** A total of 41 plant species were recorded, with 83% of species native and 17% non-native. Although the population sizes of non-native species remained high (49% of trees), efforts to plant a diversity of native species, including two globally threatened and two nationally threatened species, has helped increase biodiversity at the site.
- Fauna:** A total of 64 bird species were recorded using timed counts and dawn chorus recordings. These species encompassed both generalist species and forest, grassland, woodland, and wetland specialists. Dung beetles were also assessed to indicate below-ground biodiversity, with several specialist species and high functional diversity recorded.
- Non-native species:** While present and included in the planting mix, most non-native species recorded are not considered to be invasive. Ongoing monitoring is needed to ensure they do not outcompete or disrupt the balance of the native flora, whilst a greater focus on native species is needed in the future to enhance biodiversity recovery.
- Structural Diversity:** Tree planting efforts have helped to return some of the vegetation strata, including the understory and sub-canopy. This has also helped improve productivity at the site
- Landscape connectivity:** Positive habitat links with the surrounding environment have been established for some characteristic species. This was evident from the presence of forest specialist birds and beetle species that assessors observed on-site.



Ecological Recovery Wheels for the Kasenene restoration site. (Modified from Gann et al. 2019, Standards Reference Group SERA 2021, Young et al. 2022).

The assessment also revealed key insights about:

- **Level of Protection:** Before restoration efforts, the site was considered a paper park (1 star), whereby biodiversity was continuing to be lost despite legal protection. The introduction of sustainable management practices and protection from overharvesting at the site has helped to enhance protection. Nevertheless, the assessment revealed that greater protection can be provided through the management of fire and invasive species. The site is now considered an area with partial sustainable use of natural resources (3 stars).
- **Socio-Economic Engagement and Social Benefits:** The project included socio-economic surveys to assess the impact of restoration on community livelihoods and natural capital restoration. Assessors found that the Jane Goodall Institute engaged stakeholders to improve livelihoods, enhanced knowledge transfer, and promoted sustainable economies. Community Savings and Credit Cooperative Organizations (SACCOs) facilitated reinvestment in restoration activities but were found to require further financial and technical support for scaling up.
- **Robust Monitoring and Adaptive Management:** The Jane Goodall Institute's TACARE programme was found to co-develop restoration plans with local communities, integrating traditional and innovative practices for effective management. It ensures long-term funding, ongoing monitoring, and adaptive management to safeguard ecosystem resilience. Continuous improvement fosters local engagement, expands restoration, and enhances ecological impact.



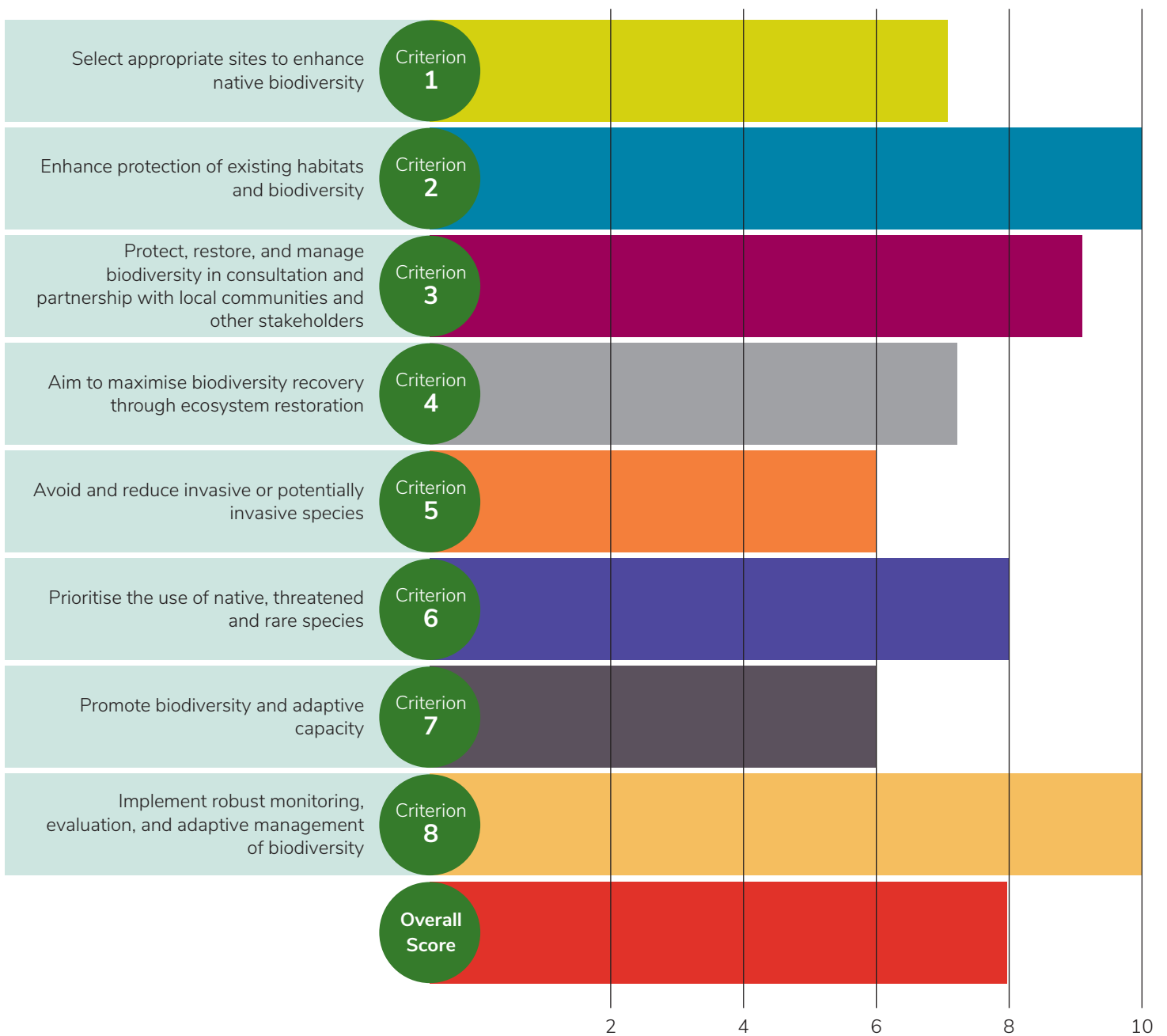
A monitoring visit by Ecosia, the National Forest Authority of Uganda and the Jane Goodall Institute (Ecosia).

The JGI partnership with the NECODA collaborative forest management group have led to significant social, economic, and ecological benefits, including biodiversity enhancement and livelihood improvements. Local community members actively participate in restoration activities, such as tree planting and sustainable land management practices, contributing to the project's success and sustainability. However, challenges such as human-wildlife conflicts and the effective management of invasive plant species persist, requiring ongoing attention to ensure the long-term success of conservation efforts. JGI Uganda is actively supporting these initiatives through targeted programmes and collaborative strategies.



Assessors conducting a social survey with stakeholders at Kasenene Community Church. (Tooro Botanical Gardens)

TGBS Advanced certification



Averaging the scores from the eight criteria, **an overall score of 7.93 out of 10** was awarded to this site. No criteria scored negative points, and a minimum of 6 out of 10 was scored across all 8 criteria. This grants the Kasenene restoration site under the Bugoma-Budongo chimpanzee corridor restoration project **Advanced Certification level**. It is the first site to receive this level of certification under TGBS.

Next steps

Ecosia looks forward to continuing to work with JGI to have this site certified and copy practices to other areas in the region and the country. For Ecosia, the fact that the hard work in the field is assessed by TGBS is important not only to have the work externally verified, but also as an opportunity for the partners on the ground to learn from the experts involved in TGBS.



Jane Goodall (Chase Pickering)

“It brings me great pride to know that our work along the Budongo and Bugoma corridor in Uganda in collaboration with JGI Uganda, JGI Austria and Ecosia, is among the first in the world to receive advanced certification under The Global Biodiversity Standard. This recognition honours our commitment to preserving life’s diversity and restoring vital habitats. Guided by the scientific rigor of the Standard, the leadership of local hub partners in assessment, and the communities on the ground striving to protect their environment.”

The Global Biodiversity Standard reminds us of our responsibility to protect our ecosystems, not just for our own survival, but for the future of every living creature with whom we share this planet. My hope is that many more organisations will adopt the measures laid out by the Standard and ensure we regenerate the planet for future generations.”

Jane Goodall, Ph.D., DBE.

Founder, the Jane Goodall Institute
& UN Messenger of Peace.



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