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ANNUAL
REPORT:
SDG REPORT

15 LIFE
ON LAND



SDG 15: LIFE ON LAND

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UJ SDG REPORT 2023

SDG 15: LIFE ON LAND

15

LIFE ON LAND



Report on the University of Johannesburg's Contribution to Sustainable Development Goal 15

SDG 15: Life on Land

OVERVIEW: EXECUTIVE SUMMARY

This report outlines the University of Johannesburg's (UJ) contributions to the United Nations' Sustainable Development Goal 15 (SDG 15) on Life on Land during the 2023 academic year. UJ has demonstrated a continued commitment to advancing SDG 15 through a variety of initiatives focused on biodiversity conservation, sustainable land use, and ecosystem restoration. Throughout 2023, UJ leveraged its academic, research, and community engagement resources to address critical environmental issues, including deforestation, land degradation, and the conservation of natural habitats.

Key initiatives have included the Gwawkwani Smart Village, a project aimed at improving sustainable farming practices, as well as UJ's active involvement in water management and ecosystem restoration. The university has also strengthened its focus on educational outreach, raising awareness about sustainable land use and the importance of preserving biodiversity among students, staff, and local communities.

This report outlines the various projects and partnerships that UJ has engaged in to support SDG 15, emphasising the

university's leadership in promoting sustainable land practices and ecosystem management. The contributions made by UJ in 2023 are central to the university's broader commitment to environmental sustainability and global conservation efforts.

INTRODUCTION

SDG 15 calls for the protection, restoration, and sustainable use of terrestrial ecosystems, the management of forests, the combating of desertification, the halt of land degradation, and the halt of biodiversity loss. The global decline in biodiversity, the degradation of ecosystems, and the destruction of forests pose significant challenges to the future of the planet. The University of Johannesburg (UJ) has embraced the responsibility to contribute to these global efforts by integrating sustainability into its academic curricula, research activities, and community engagement projects.

In 2023, UJ continued to integrate SDG 15 across various disciplines, including environmental science, engineering, architecture, and social sciences. The university's efforts focused on sustainable land use, eco-friendly technologies, and community development projects that prioritise environmental sustainability. UJ's approach to SDG 15 is interdisciplinary, with research initiatives, collaborative partnerships, and field-based projects aimed at enhancing land conservation and restoring degraded environments.

This report highlights UJ's contributions to SDG 15 through research on biodiversity, sustainable land management, forest restoration, and community-based conservation efforts. By fostering partnerships with government bodies, NGOs, and local communities, UJ is playing an important role in advancing sustainable development in South Africa and beyond.

KEY ACTIVITIES AND INITIATIVES

UJ's contributions to SDG 15 in 2023 have been driven by a combination of research initiatives, community-based conservation projects, and sustainable land management programmes. These initiatives have been designed to address key environmental challenges and promote long-term sustainability through the conservation of terrestrial ecosystems.

1. Biodiversity Research and Conservation

UJ's contributions to biodiversity preservation are extensive, particularly through the work of its Department of Environmental Science and the UJ Biodiversity Research Center. The research centers around ecosystem protection and habitat restoration, focusing on local ecosystems in South Africa and key global regions. In 2023, UJ researchers expanded efforts to conserve threatened species, specifically focusing on endemic flora and fauna within protected areas and urban ecosystems.

A landmark project in 2023 was the university's involvement in the Biodiversity Restoration Project in collaboration with local NGOs and government bodies. This

project focused on the rehabilitation of degraded grasslands in Gauteng and Mpumalanga, areas heavily affected by urbanisation and industrial development. Through native plant restoration, the project aimed to restore ecological balance, enhance soil health, and contribute to carbon sequestration efforts, which are essential components of biodiversity conservation and land regeneration.

Additionally, UJ's researchers partnered with the South African National Biodiversity Institute (SANBI) to assess the impacts of climate change on South African ecosystems, working towards strategies for preserving vulnerable species and promoting sustainable land use practices.

2. Land Restoration Projects and Reforestation Initiatives

In 2023, UJ continued its role in supporting land restoration initiatives, particularly through research and practical applications that focus on soil regeneration, forestation, and land rehabilitation. One of the university's flagship projects was the Reforestation and Regeneration Programme, aimed at restoring degraded lands through afforestation and agroforestry techniques. This project focused on areas affected by soil erosion and loss of vegetation, with the goal of reintroducing native tree species and other flora to restore ecosystem services such as water filtration, carbon storage, and biodiversity support.

The programme involved the planting of over 50,000 trees in 2023, focusing on native species and creating green corridors that link urban areas with natural reserves. This initiative also worked to promote the sustainable use of land, incorporating agricultural practices that improve soil fertility while preventing future land degradation.

3. Sustainable Land Management Practices

In response to the growing challenges of land degradation and unsustainable agricultural practices, UJ has been instrumental in promoting sustainable land management (SLM) through education and applied research. The university's Sustainable Agriculture Programme, launched in 2023, is focused on training farmers and communities in sustainable practices that increase crop productivity while minimising environmental impacts. This initiative has been particularly successful in promoting agroecological practices, which emphasise biodiversity and ecosystem services while reducing dependency on harmful chemicals and unsustainable irrigation methods.

UJ's collaboration with local agricultural bodies and rural communities has helped implement sustainable farming techniques that integrate crop rotation, soil conservation methods, and water management strategies to prevent soil erosion, desertification, and land degradation. By advocating for land tenure reforms and

better land governance, UJ's efforts contribute to fostering resilient communities that can sustainably manage their land resources.

4. Climate Change and Land Degradation Research

UJ's research on land degradation, particularly in the context of climate change, has been a critical area of focus in 2023. The university conducted climate impact studies in vulnerable regions of South Africa, analysing the effects of rising temperatures, drought, and increased flooding on land ecosystems. Through these studies, UJ has provided valuable insights into climate adaptation strategies for land management, especially in relation to water resources, land restoration, and agricultural practices.

The Climate-Smart Land Management project, a collaboration with local governments and international researchers, has been pivotal in promoting sustainable farming systems and natural resource management that help mitigate the impacts of climate change while promoting the restoration of degraded landscapes. UJ's research in this field aims to enhance policy advocacy and create practical solutions for governments and communities facing land degradation and desertification.

5. Community Engagement and Education

UJ's commitment to SDG 15 extends beyond research into community engagement and education. In 2023, the university continued its public education programmes on the importance of sustainable land use and biodiversity conservation. These programmes aimed at raising awareness about the impacts of land degradation and providing practical guidance on sustainable practices for farmers, urban planners, and communities.

The UJ Green Campus Initiative, which involved both staff and students, aimed at reducing land degradation on campus and surrounding areas by promoting recycling, water conservation, and the use of sustainable materials in construction. UJ's efforts to green its own campus have become an exemplary model for other educational institutions and communities seeking to adopt sustainable land management practices.

CONCLUSION

The University of Johannesburg has made significant strides in advancing SDG 15: Life on Land through a variety of initiatives in biodiversity conservation, land restoration, and sustainable land management. By combining research excellence, community engagement, and collaborative partnerships, UJ is helping to combat land degradation, promote biodiversity, and foster sustainable land practices.

Looking forward, UJ is committed to expanding its efforts to restore degraded lands, promote sustainable agriculture, and continue its role as a leader in environmental sustainability. The university will build on its success in 2023 to further contribute to global efforts to protect the world's terrestrial ecosystems and to ensure a sustainable and resilient future for life on land.

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