



BOOK OF ABSTRACTS

- I. SESSION DESCRIPTION
- II. SESSION PROGRAM
- III. ABSTRACTS

I. SESSION DESCRIPTION

ID: G3

Landscape Restoration, Green Spaces, and Ecosystem Services: 3 Case Studies

Hosts:

	Title	Name	Organisation	E-mail
Host:		Alphonse Guzha	International Union for Conservation of Nature	alphonse.guzha@iucn.org

Abstract:

The Embedding Integrated Water Resources Management in Rwanda (EWMR) project is being implemented by the Rwanda Water Resources Board (RWB) with technical assistance provided by the International Union for Conservation of Nature (IUCN) and the Netherlands Development Organisation (SNV) with funding from the Embassy of the Kingdom of the Netherlands (EKN). The EWMR project aims to improve catchment management, contributing to increased resilience of communities & landscapes to the impacts of climate change and other drivers of environmental and water resource degradation. Payments for Ecosystems Services (PES) represents a broad range of tools that can incentivise upstream users and managers of water catchments to adopt practices that promote landscape restoration, reduce degradation, sedimentation and flooding. Besides the most well-known PES mechanism of direct payments to land users for certain sustainable land practices, IUCN is also working to pilot a Community Environmental Conservation Fund (CECF)- a low cost approach to catalyse restoration and improve livelihoods by providing financial grants to farmers, based on a set criteria for conservation actions.

Goals and objectives of the session:

This proposed session aims to highlight ongoing PES approaches in Sebeya catchment (supporting landscape restoration and livelihoods improvements) and activities to value ecosystem services in other catchments in Rwanda.

Planned output / Deliverables:

Contribution to Policy briefs for upscaling PES and increasing awareness on the value of ecosystems.

Related to ESP Working Group/National Network:

Regional Chapters: East & Southern Africa



II. SESSION PROGRAM

Date of session: Friday, 10 June 2022

Time of session: 10:00–11:00

Timetable speakers

Time	First name	Surname	Organization	Title of presentation
10:00–10:15	Alphonce	Guzha	IUCN	Sustainable Interventions to Reverse Degradation in Sebeya Catchment, Rwanda–Implications for Ecosystem Functionality and Service Supply
10:15–10:30	Samuel	Habimana	Rwanda Resilience and Grounding Organization	Green Space and Mental Health in Rwanda: Cross-sectional study take place in Kigali city
10:30–10:45	Christo	Marais	Praxis NR & ASSET Research	The Impact of Transaction Costs on the Viability of Ecosystem Restoration Projects: Some lessons Learnt to be considered during the UN Decade for Ecosystem Restoration

III. ABSTRACTS

Abstracts are ordered based on the session program. The first author is the presenting author unless indicated otherwise.

1. Type of submission: Invited speaker abstract

G. General sessions: G3 – Landscape Restoration, Green Spaces, and Ecosystem Services: 3 Case Studies

Sustainable Interventions to Reverse Degradation in Sebeya Catchment, Rwanda–Implications for Ecosystem Functionality and Service Supply

Presenting author: Alphonce Guzha

Affiliation: IUCN

Contact: alphonce.guzha@iucn.org

Sebeya is one of the catchments of Rwanda, located in the upstream part of the Congo River basin. The catchment integrates valuable natural ecosystem of Gishwati National Park,



3rd ESP Africa Conference

8-10 June 2022 | Musanze, Rwanda

Ecosystem services for the future: Delivering value for Nature, Livelihoods and Economic Investment

HYBRID EVENT

ESP
Ecosystem Services Partnership

agricultural land, livestock grazing pastures and settlement areas. Fragile soils, resettlement, and intensive use of the land together with poor farming practices have contributed to catchment degradation and this is shown by a 62% loss of the forestland within Gishwati National Park. These problems are exacerbated by climate change, limited economic opportunities, poor access to finance, limited alternative sources of livelihoods and limited access to markets. As a result, local communities depend on subsistence farming, which results in increased food insecurity, reduced yields and a reduction of water provisioning services. To address these issues, IUCN and its Implementing Partners, is piloting a project titled “Landscape Restoration and Integrated Water Resources Management in Sebeya and other Catchments. The overall goal of the project is improved water catchment management contributing to increased resilience of communities & landscapes to the impacts of climate change and other drivers. The project is using a participatory community-based approach, in planning (Village Land-Use Action Plans), implementation and monitoring. Participatory planning ensures plans and actions are locally identified, owned and implemented. VLUAP focuses on improved catchment management through soil and water conservation, terracing, agroforestry, improved agriculture practices, restoration, and riverine conservation, among others. Ongoing activities for catchment restoration include afforestation, agroforestry, soil and water conservation measures, livelihoods support measures and innovative finance mechanisms. Landscape restoration in Sebeya is a precursor to biodiversity regeneration and conservation. Embedding restoration objectives in a broader development agenda through improving community livelihoods offers higher chances of achieving restoration targets and improved ecosystem service supply.

Keywords: Landscape Restoration, Livelihoods, Community Approach, Ecosystem Service supply



2. Type of submission: *Invited speaker abstract*

G. General sessions: G3 – Landscape Restoration, Green Spaces, and Ecosystem Services: 3 Case Studies

Green Space and Mental Health in Rwanda: Cross-sectional study take place in Kigali city

Presenting author: Samuel Habimana

Other author(s): Paul Draus, Salman Qureshi, Juliette Roddy, Emmanuel Biracyaza, Eugene Rutembesa

Affiliation: Rwanda Resilience and Grounding Organization

Contact: samhabimana78@gmail.com

Introduction

Green space and mental health are new topics in Rwanda. Many types of research have done on pricing the impact of psychological approaches to improving mental health after 1994 genocide against Tutsi however there is little attention to green space, open space and garden to mental well-being in Kigali city. Our study scrutinizes the relationship between socio-demographic, green space in terms of physical accessibility, content in green space and mental well being to the population of Kigali city that participate in green space in a period of data collection.

Methods

Using a cross-sexual study design and a probability sampling, we enrolled 420 participants in Kigali city between May and August 2020 in three green spaces including Nyandungu, Fazendha and Golf green spaces in Kigali city.

Results

Regarding accessing green spaces, more than 63.5%(n=268) scored good mental well being while 36.5(n=154) scores less than cut off of mental well being. The logistic regression analysis was found to contribute to the model. The unstandardized Beta weight for households' income, enjoying green spaces, visiting three types of green space were significantly associated with mental well being with $P < 0.005$. The estimated odds ratio favored an increase of mental well being Flowers and plants for Golf green space with [OR=1.680CI=1.012 to 2.787] and living



nearest open space/Run or jog with [OR =1.664, CI=1.039 to 2.663] with P-value <0.005. Genders, education level, occupation, were not found to be significant predictors.

Conclusion

The results show that green spaces have a significant influence on restoration and well being of mental health. Promoting green therapy to reduced stress and mental health fatigue is recommended.

Keywords: Green space, City, nature, mental health.

3. Type of submission: Invited speaker abstract

[G. General sessions: G3 – Landscape Restoration, Green Spaces, and Ecosystem Services: 3 Case Studies](#)

The Impact of Transaction Costs on the Viability of Ecosystem Restoration Projects: Some lessons Learnt to be considered during the UN Decade for Ecosystem Restoration

Presenting author: Christo Marais

Other author(s): Andrew Knipe

Affiliation: Praxis NR & ASSET Research

Contact: marais.christo@gmail.com

The Eastern Cape Thicket Restoration project implemented by Gamtoos Irrigation Board has been operational since September 2003. The first few years were largely experimental, so restorations costs were high while survival rates were low. The project manager however kept a very accurate database of workloads, hectares treated and input costs. Since its inception to date more than R120 million (US\$8,3 million @ R14,50 US\$) has been spent on actual restoration costs, including employment related costs, a profit margin for the community enterprises, personal protective equipment, tools & equipment, project administration costs, training, camping where applicable, and limited fencing costs where applicable. More than 8 500 hectares of land has been treated while more than 3 947 of these were given follow up blanking treatments. This equates to an average direct restoration cost of R14 072 (\$970) per hectare. As mentioned, it does include extensive experimental restoration which does not



represent, the actual cost of restoration at scale. The data has been assessed to exclude outliers to ensure that estimates can be trusted in real life restoration operations. Furthermore, as in all restoration projects there is always restoration failure and mortality. These were considered to find an acceptably accurate estimate of restoration costs. We then considered the potential selected ecosystem services benefits from the restored land in the form of provisioning, cultural & recreational and regulatory services. As the project forms part of the larger Natural Resource Management public employment programmes the effect of transaction costs is assessed by using the cost per person day of employment. The return on investment with and without transaction costs were then calculated to estimate the impact of transaction cost on project viability. We conclude that transaction costs should be minimized by making it easy for market players to do business in the restoration of ecological infrastructure and the subsequent improvement in the delivery of ecosystem services.

Keywords: Ecological restoration, Transaction costs, ecosystem services