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A Socio-Economic Valuation of Urban Green Spaces in Nairobi, Kenya

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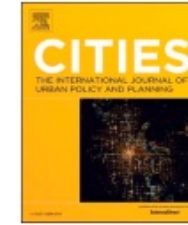




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Cities

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Urban green spaces in rapidly urbanizing cities: A socio-economic valuation of Nairobi City, Kenya

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ABSTRACT

Urban green spaces are integral elements of urban landscapes, conferring a multitude of advantages that enrich urban living. Nevertheless, the rapid urbanization of cities often ignores green spaces. To ensure that physical planning creates effective and accessible green spaces, this study explores the use, perception, and socio-economic dynamics of urban green spaces in Nairobi. Through a combination of quantitative and qualitative methods, including surveys, interviews, and GIS analysis, the study reveals insights into how urban green spaces contribute to environmental sustainability, physical and mental well-being, and social cohesion. Additionally, the findings of the economic assessment of the use of urban green spaces underscores the cost efficiencies and willingness of users to invest in their enhancements, thereby emphasizing the economic significance of green spaces. These results underline the importance of equitable access, effective management, and inclusive design in maximizing the benefits of urban green spaces for urban residents. This research further contributes to a broader understanding of urban green space planning and management, providing insights applicable to diverse urban contexts globally.



Introduction

- UGS act as **havens of nature** amidst the urban concrete, providing a peaceful retreat from the fast-paced lifestyle of city living.
- Support both the **ecological environment** and human well-being
- Enhance physical and mental **well-being**
- Foster **social cohesion**

Challenges

- Urban **densification**, **mismanagement**, and socio-economic **disparities**.
- Rapid urbanization, increased **impervious surfaces**, and **encroachment** contribute to the loss



Question?

How do urban green spaces contribute to **sustainability** and **socio-economic well-being** in Nairobi?

Focus:

- **Socio-economic** dynamics of urban green spaces in Nairobi.
- **Economic benefits**, including the WTP for maintenance and improvement of UGS.
- **Equity of access** to UGS, particularly in marginalized communities.



Approach

Mixed methods combining both quantitative and qualitative data.

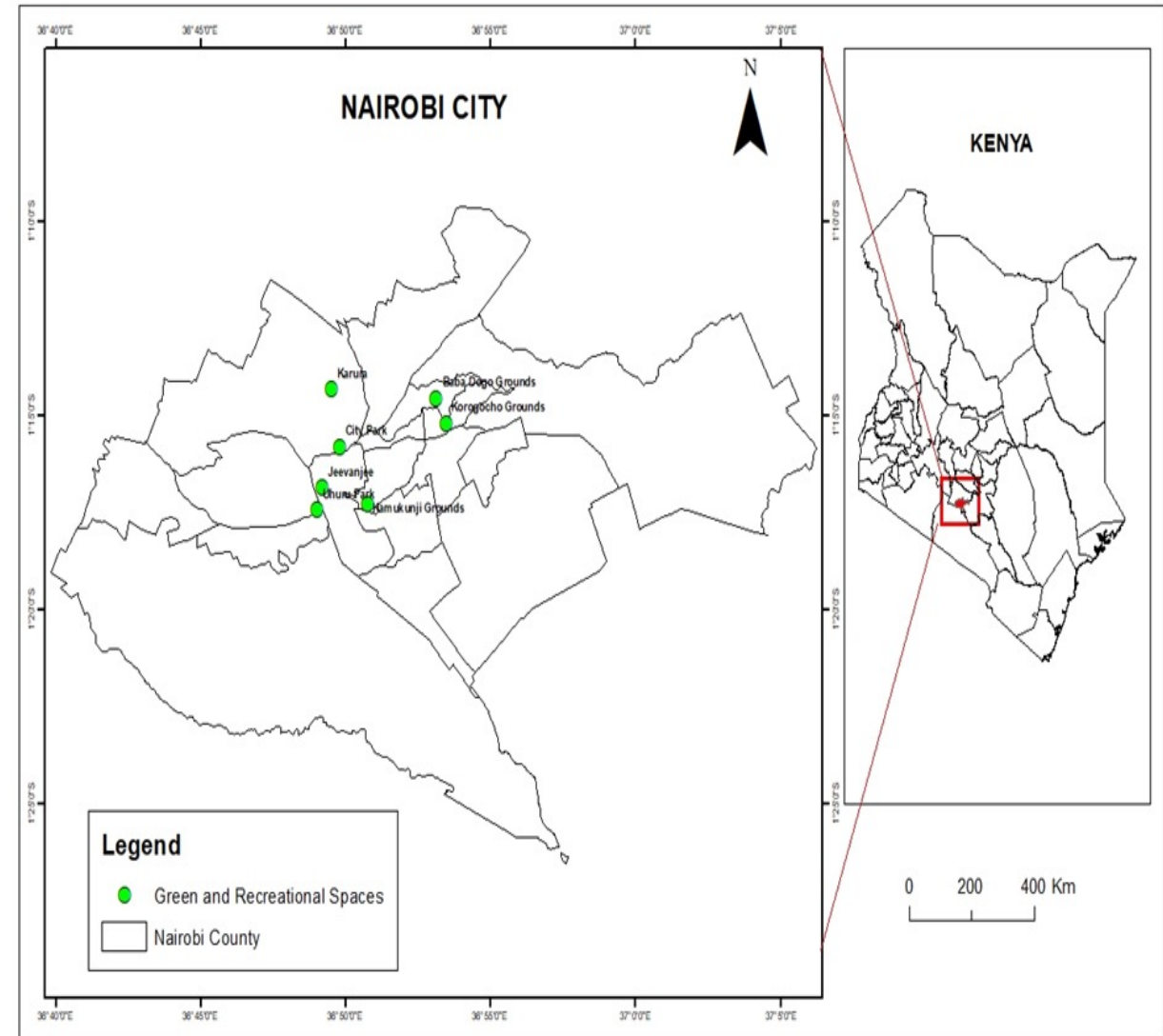
Data Collection Tools

- Surveys: 1465 respondents from diverse socio-economic backgrounds.
- Focus Group Discussions: 14 groups across 7 parks.
- Key Informant Interviews: Experts, park managers, County/NMS officials.

GIS Analysis: To map and analyze accessibility patterns of UGS.

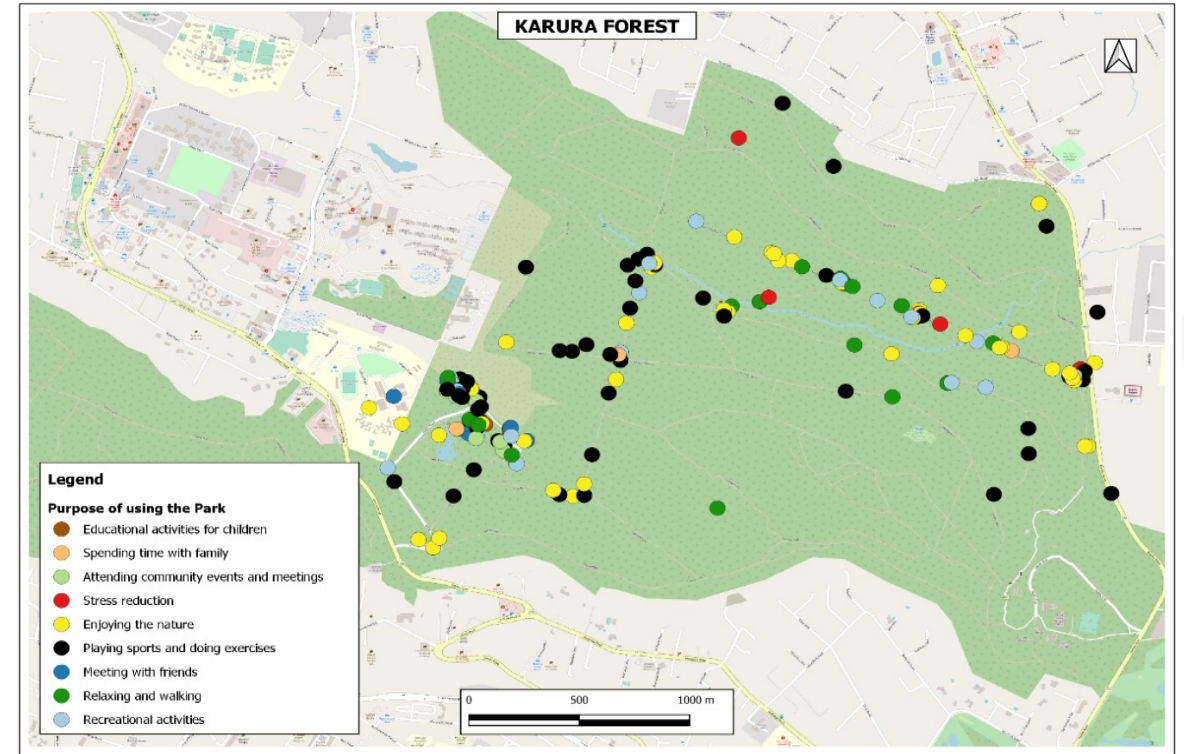
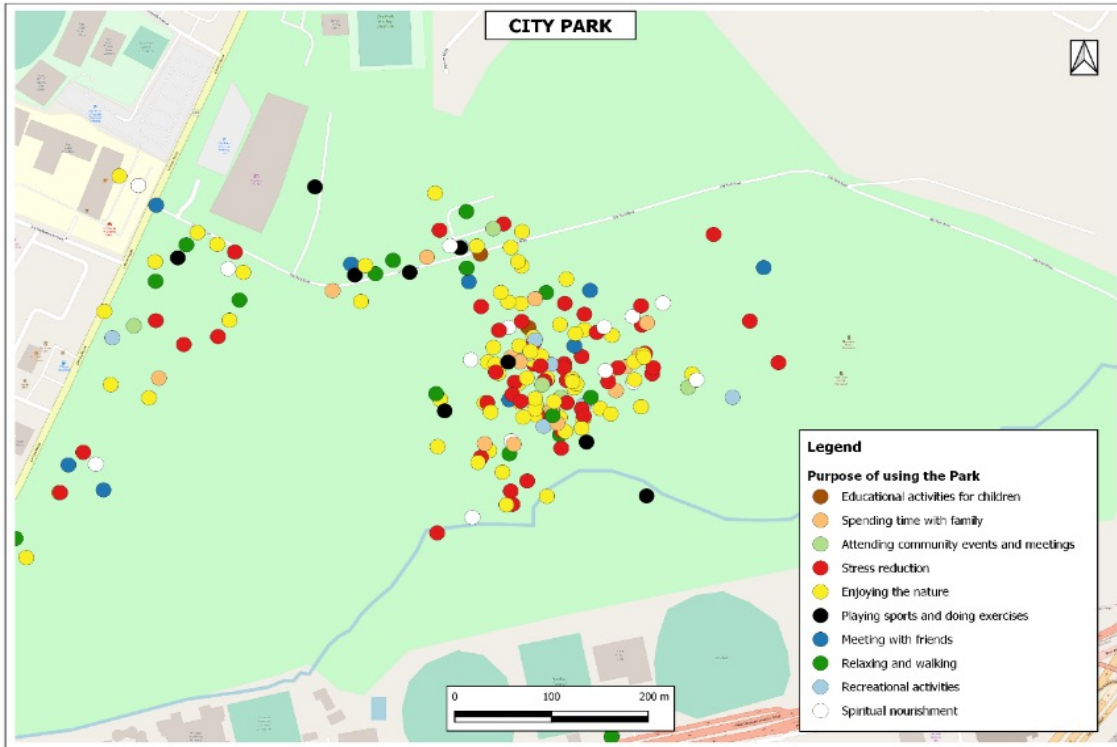
Economic Valuation: WTP using the Contingent Valuation Method (CVM).

Cost-savings from fitness and leisure activities in UGS.

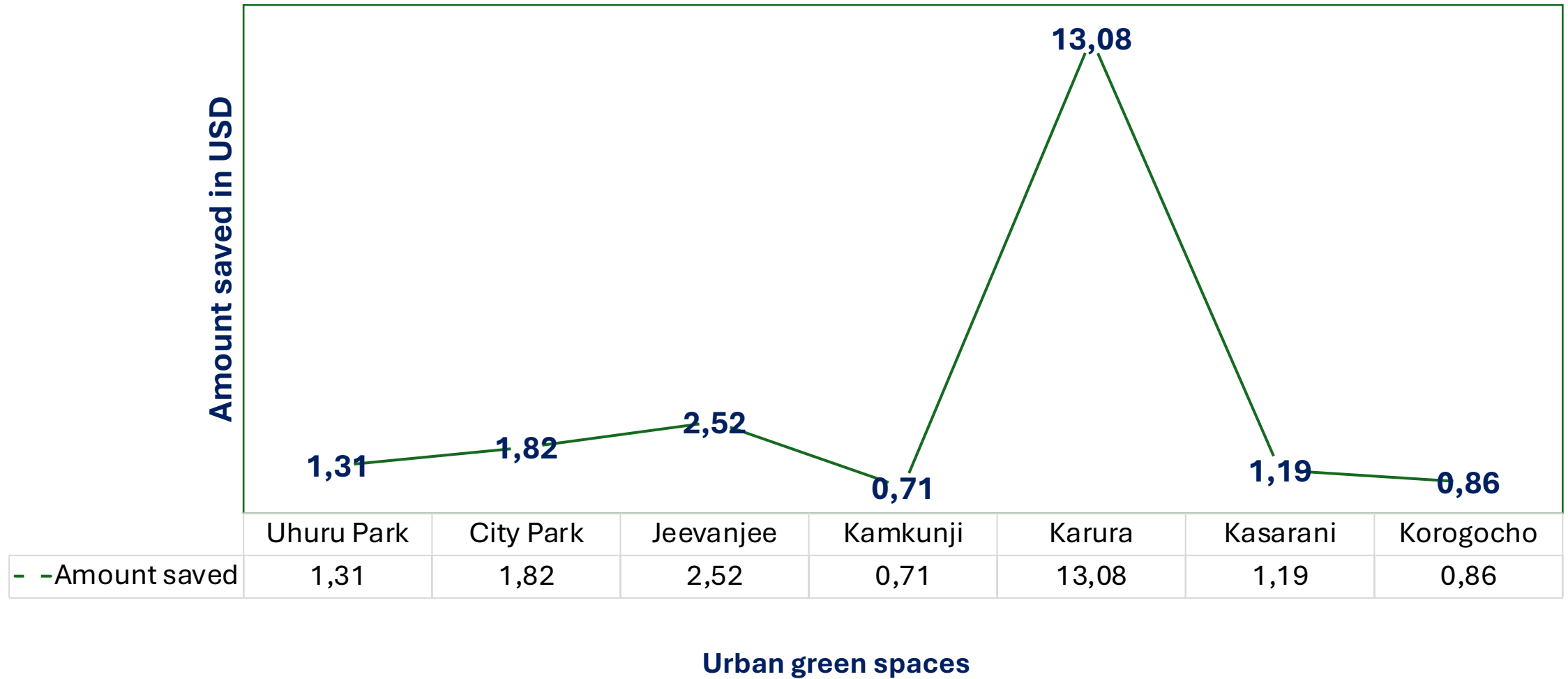


FINDINGS

- Nairobi County has **22 m²** of recreational space on average from a high of **159 m²** at independence.
- This translates to **2.162 acres per thousand** residents compared with the best practice of **6-10 acres per thousand**.
- < 5% of Nairobi County is currently available for recreational spaces.



SAVED COST FOR USING THE URBAN GREEN SPACE





WTP	Coef.	Std. Err	Sig
Security	1.26	.58	0.00*
Infrastructure	3.51	.55	0.02*
Management/maintenance	1.28	.54	0.05*
Level of income	2.12	.33	0.00*
Time taken to and from the UGS	-1.50	.54	0.19
Length of stay at the UGS	0.21	.06	0.05**
Marital status	.04	.01	0.13
Gender	-.78	.62	0.23
Frequency of use	2.61	.63	0.02**
Age	-.413	.14	0.16
Constant	-9.8	2.00	0.00
N			1464
Pseudo R ²			0.76
Log likelihood			-39.02

WTP

POLICY RECOMMENDATION

•Equitable access:

- Prioritize UGS development in underserved areas to reduce socio-economic disparities.

•Climate resilience:

- Incorporate UGS as natural climate solutions in urban planning to address heat islands, flooding, and air pollution.

•Economic integration:

- Utilize public-private partnerships and green taxes to fund UGS creation and maintenance.
- Promote the multifunctional use of UGS for both recreational and economic activities (e.g., small-scale vending).

•Community engagement:

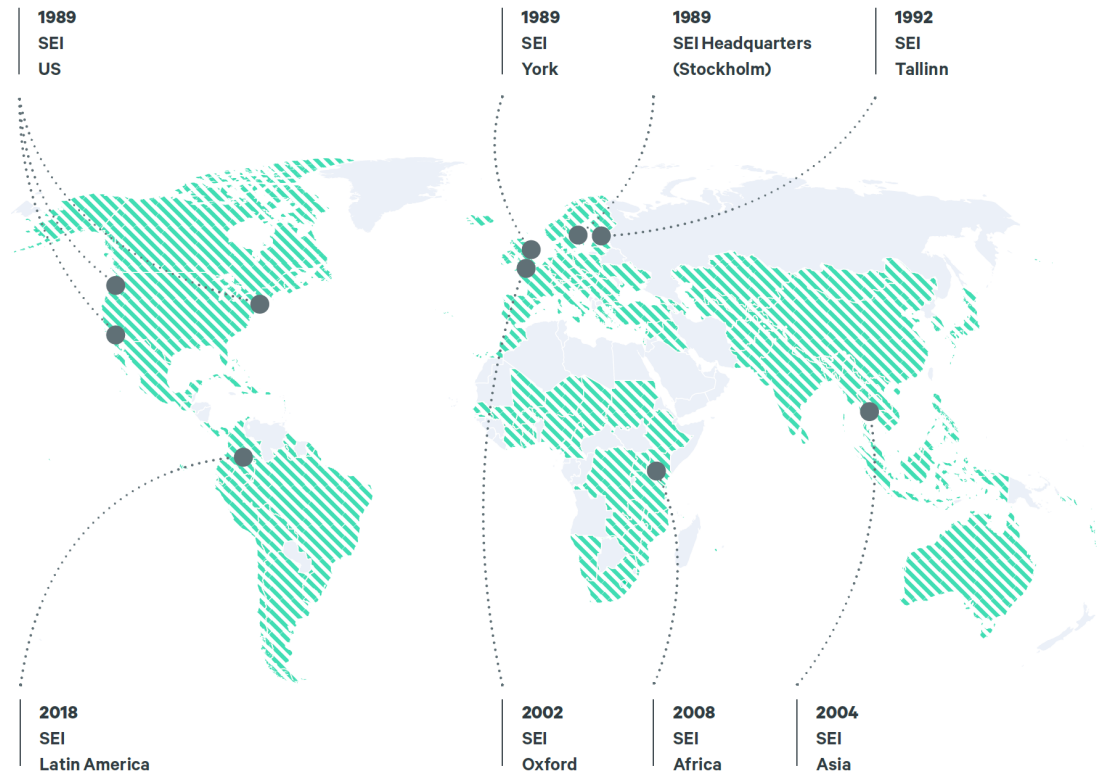
- Engage communities in UGS design and maintenance to ensure sustainability and inclusivity.



SEI strategy 2025–29

Transitions in turbulent times

SEI'S ORIGIN AND MANDATE

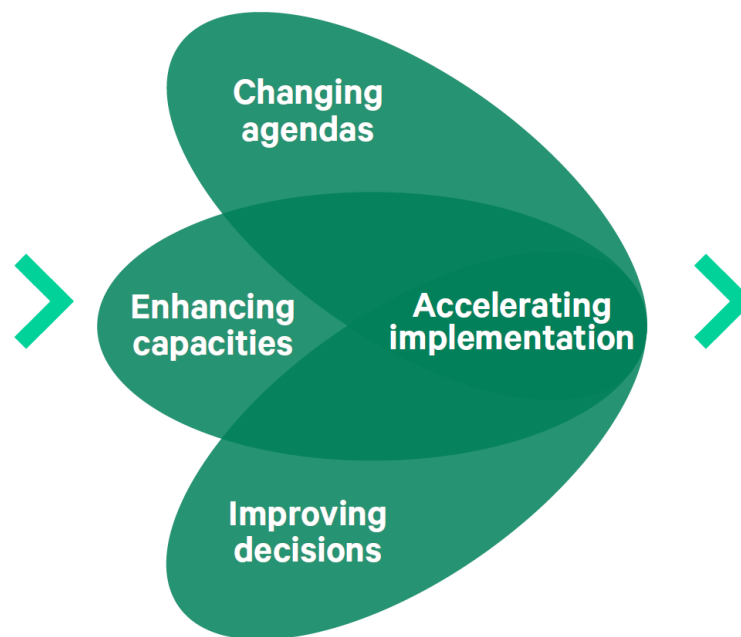


Outputs

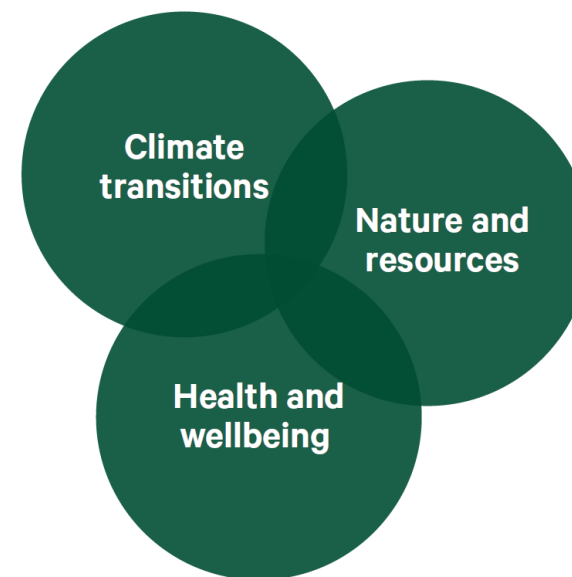
Scientific research
Tools and data
Knowledge co-production
Networks
Training and education
Policy and practitioner engagements
Communications
Media



Outcomes



Impact



Enablers

Scientific excellence

Societal relevance

Trusted partnerships

Financial resilience

Operational excellence

Competence and culture

Communications for impact

One SEI



Thank You.

