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Transforming urban landscape through indigenous tree planting in Bulawayo's CBD, Zimbabwe

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Why Am I Here Today?

Research Background

For decades, our city's urban greening strategies focused on exotic ornamental trees, particularly *Jacaranda, Azadirachta indica (Neem), and Pine*. While these trees provide shade and beauty, they also introduce **serious challenges**, including:

- High water consumption, straining an already stressed water system.

- Health risks—*Jacaranda trees* are linked to **seasonal allergies** affecting thousands.

- Safety concerns—**25% of exotic trees** are weakened by termite infestations, increasing the risk of falling branches.

- Low biodiversity support—Exotic species do not sustain local wildlife as effectively as indigenous ones.

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Research Questions

To guide our study, we focused on three critical questions:

1. *How does the community perceive replacing exotic trees with indigenous species?*

2. *What impact do exotic trees have on urban health and environmental sustainability?*

3. *What potential benefits would arise from integrating indigenous trees into the city of Bulawayo's landscape?*

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Research Aim

To assess perceptions and potential resistance toward the planting of indigenous and exotic trees in the Central Business District (CBD) and develop strategies to ensure successful implementation of Project Guquka under the Green Hut Trust.

Overall Goal

Create a greener, more sustainable urban environment that supports ecological health and community development.
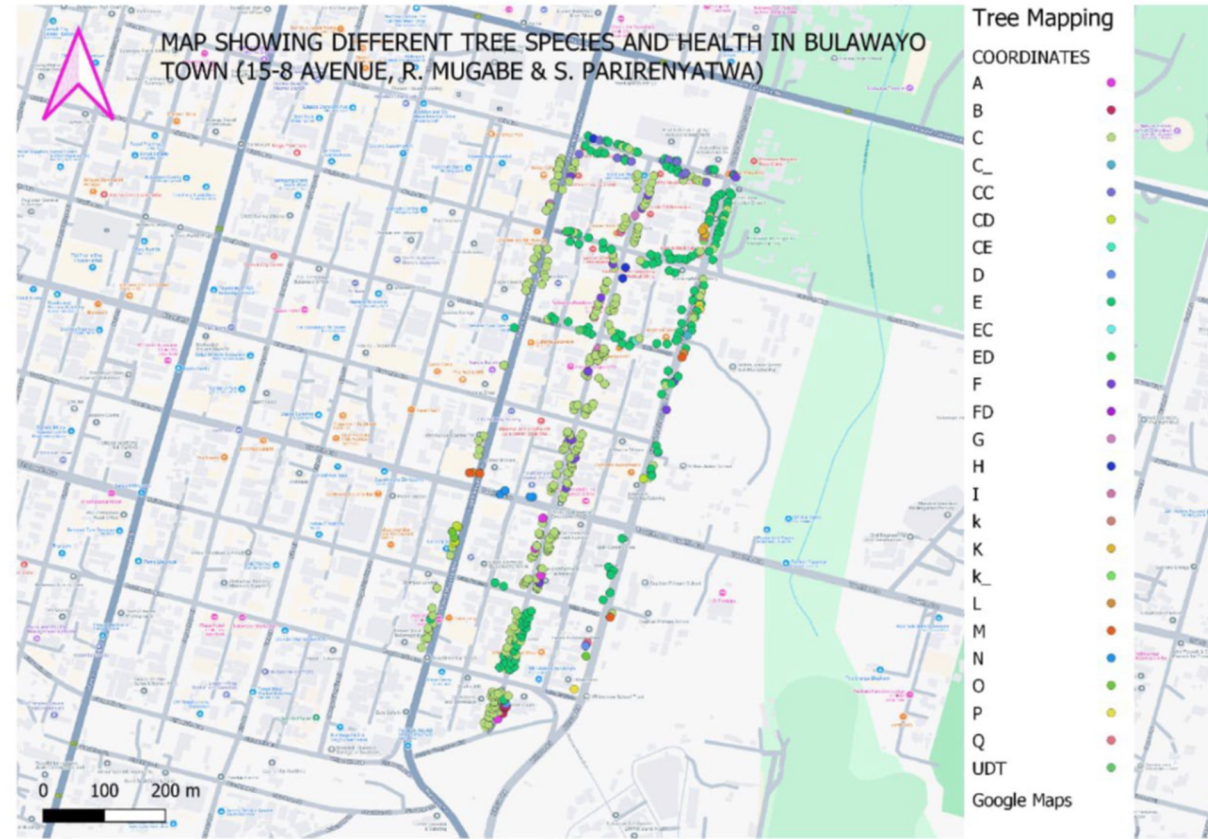
Research Objectives

1. Understand Stakeholder Perceptions and Preferences

2. Analyse Challenges and Develop Mitigation Strategies

3. Promote Environmental Sustainability

4. Engage Stakeholders and Foster Support
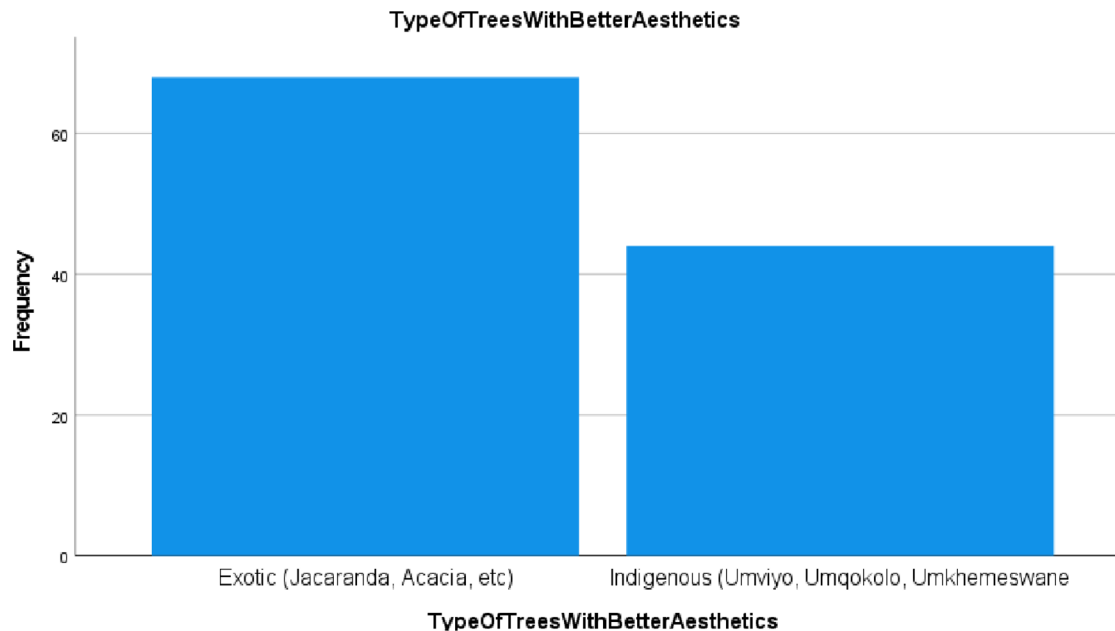
5. Recommend Actionable Strategies

Methodology

To ensure **credible and data-driven insights**, we adopted a **mixed-methods approach**, including:

1. **Community Survey** *(113 respondents from the Central Business District)*
2. **Tree Mapping & Optical Condition Assessment**
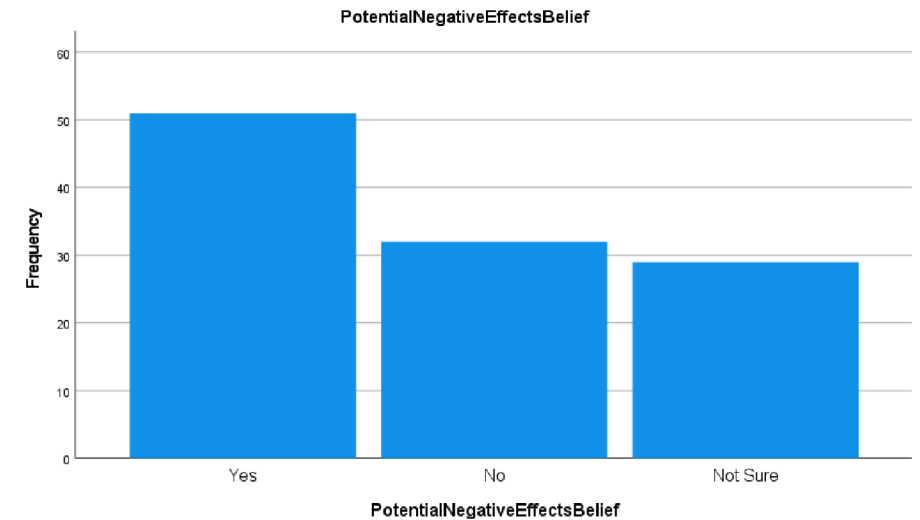3. **Statistical & Thematic Data Analysis**
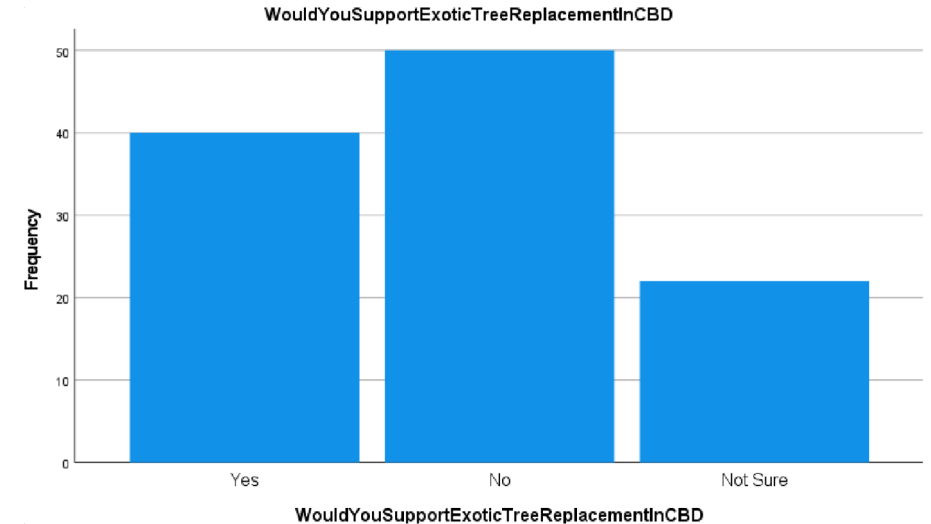
Research Findings

From the survey,
- 60.2% of the participants believe that exotic trees have better aesthetics than indigenous trees,
- 38.9% of the participants believe that indigenous trees have better aesthetics than exotic trees,
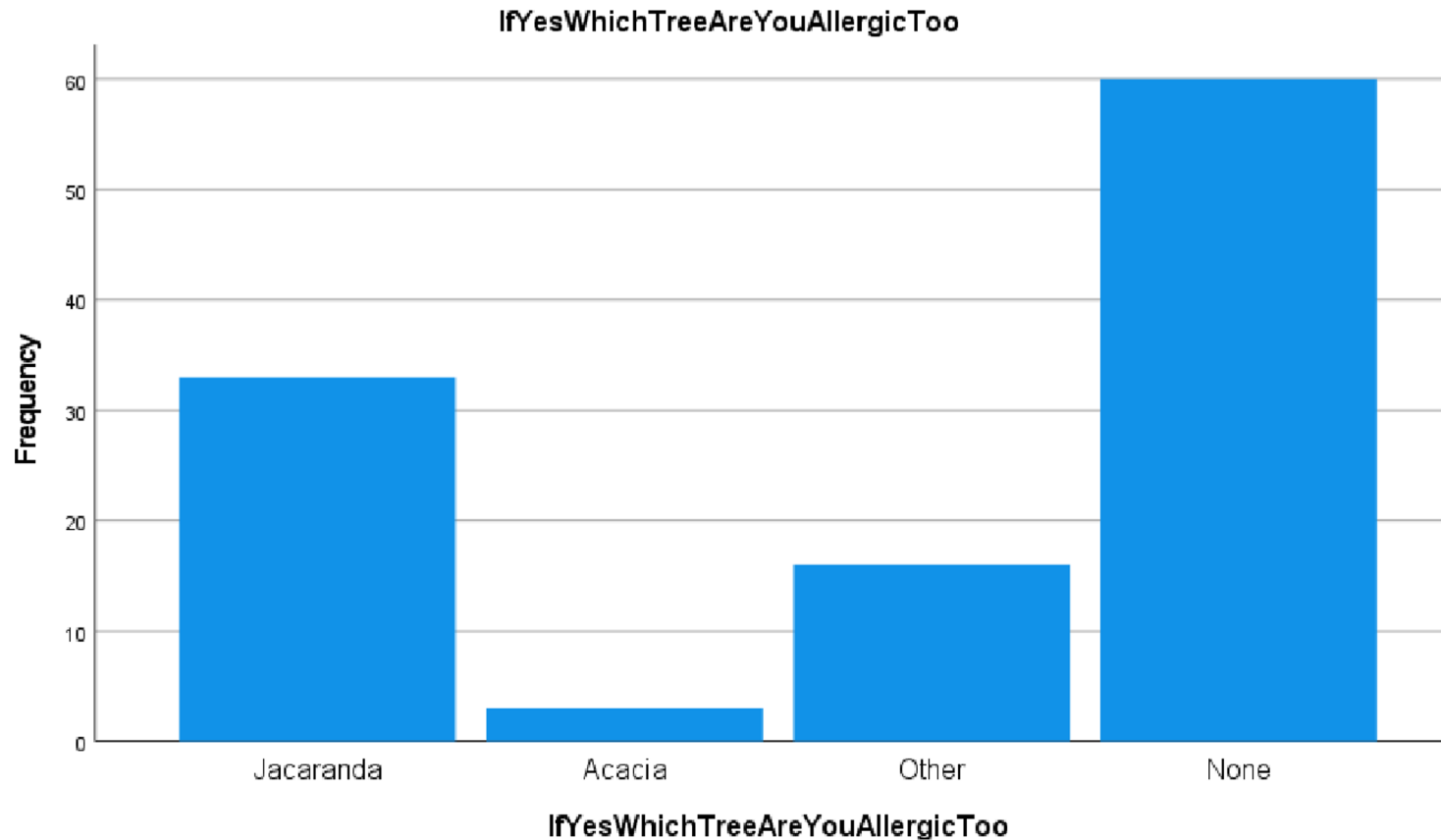- 0.9% of the participants did not highlight their belief.

Research Findings

A Divided Public on Tree Replacement

- **44.2% support replacing exotic trees, while 35.4% oppose it, and 19.5% are undecided.**

- **Concerns about tree removal (45.5%)** show that people recognize risks such as urban heat islands, economic disruptions for vendors, and potential habitat loss.

- **Lesson:** Urban reforestation requires **gradual, community-inclusive strategies** that address environmental, economic, and cultural concerns.

WouldYouSupportExoticTreeReplacementInCBD

PotentialNegativeEffectsBelief

Research Findings

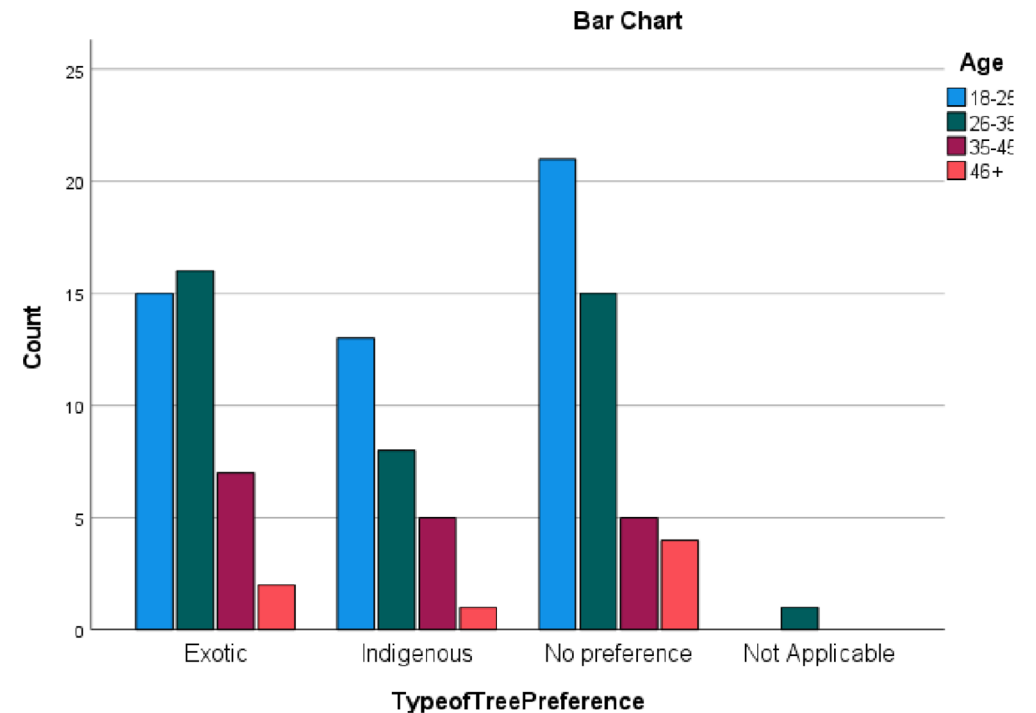

IfYesWhichTreeAreYouAllergicToo

From the survey,
29.2% of the participants highlighted that they are allergic to Jacaranda trees,
2.7% of them are allergic to Acacia trees,
14.2% of them are allergies to other tree species,
53.1% of them are not allergies to any tree while
0.9% of them did not share their sentiments regarding this matter.

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Research Findings

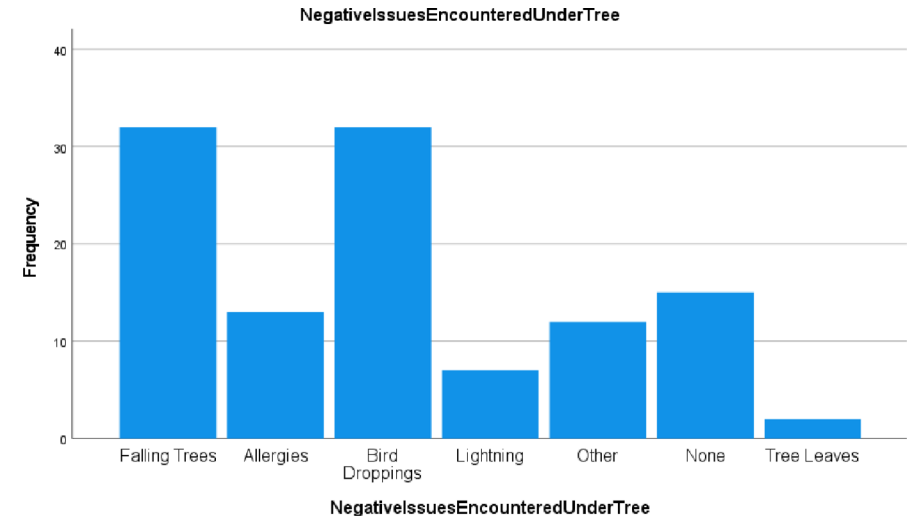**The Role of Age and Education in Environmental Engagement**

- **Younger people (18-25) prefer indigenous trees (48.1%)**, while older groups (36+) show less engagement.

- **Higher education correlates with a decline in exotic tree preference**, indicating increased environmental awareness.

- **Lesson: Younger generations and educated individuals** can be key advocates for sustainable reforestation. Schools, universities, and youth groups should be **mobilized for tree-planting campaigns**.

Research Findings

Economic and Social Factors in Tree Usage

- **Informal workers (vendors) rely on trees for shade,** making tree removal an economic issue.

- **Falling branches (28.3%) and bird droppings (33.3%)** disrupt public spaces, showing that tree maintenance is as important as tree selection.

- **Lesson:** Sustainable urban forestry must **consider economic dependencies on trees** and **implement maintenance programs** to minimize risks.

Activities

- Tree mapping exercise to determine the types of trees and their condition within Bulawayo CBD

- Engaging local authorities on dying trees that need replacement and identification of spaces needing more trees within the CBD

- Tree planting along avenues and in local schools

- Cleanup campaigns in the CBD and local schools

Key Takeaways

✅ **Education is key**—Public perception can shift if people understand the functional benefits of indigenous trees.

✅ **Tree policies must balance aesthetics and sustainability**—Indigenous trees should be promoted for their long-term benefits without completely disregarding public aesthetic preferences.

✅ **Health and safety considerations must be prioritized**—Tree selection should reduce risks like falling branches and allergenic pollen.

✅ **Gender and social impact matter**—Women, children, and informal workers interact with trees differently and must be considered in planning efforts.

✅ **Engagement strategies should target youth and education sectors**—They are more receptive to sustainability initiatives and can drive long-term change.

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Recommendations

- Replace exotic trees with indigenous species, prioritizing fruit-bearing varieties like Azanza garckeana (snot apple), Vangueria infausta (wild medlar), and Dovyalis caffra (Kei-apple) to enhance biodiversity, public health, and environmental sustainability.

- Conduct educational campaigns, involve schools and youth organizations, and inform the public on the ecological, medicinal, and climate resilience benefits of indigenous trees.

- Identify and replace hazardous trees, prioritize low-allergen species, and implement regular maintenance (e.g., pruning) to reduce risks such as falling branches and bird droppings.

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Acknowledgements

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SI·YE·PAMBILI

Green Hut

PROJECT GUQUKA

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Thank You.

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