



Balancing Act: Ethical Considerations in Data-Intensive Health Research and Environmental Sustainability in Kenya and Senegal

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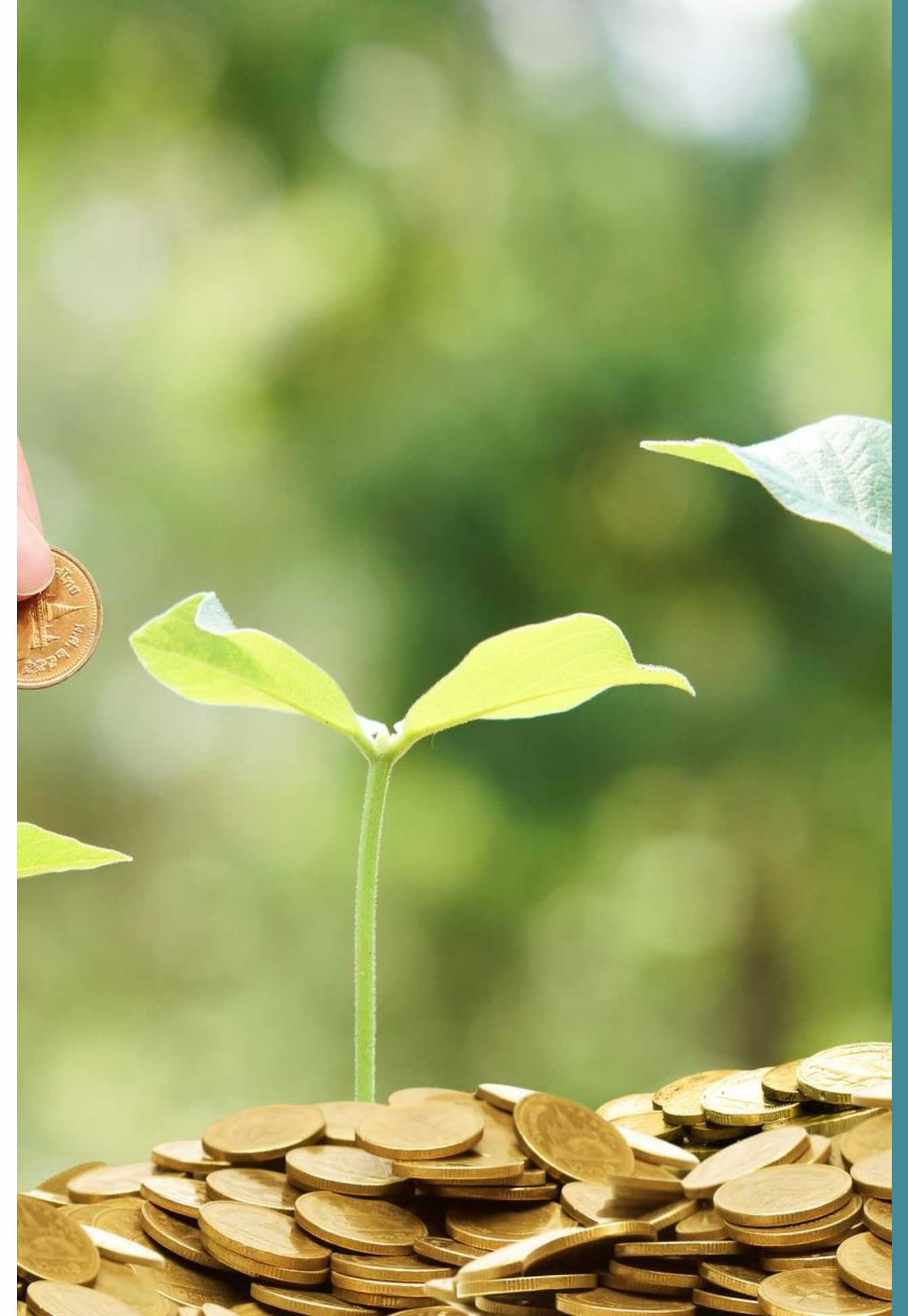
Theme 4: Impact of Health Research on Climate Change
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Presented by: Mercury Shitindo



Introduction

- Ethical considerations associated with the environmental impacts of data-intensive health research in Kenya and Senegal.
- How researchers, institutions, and funders view the integration of environmental sustainability into their practices.



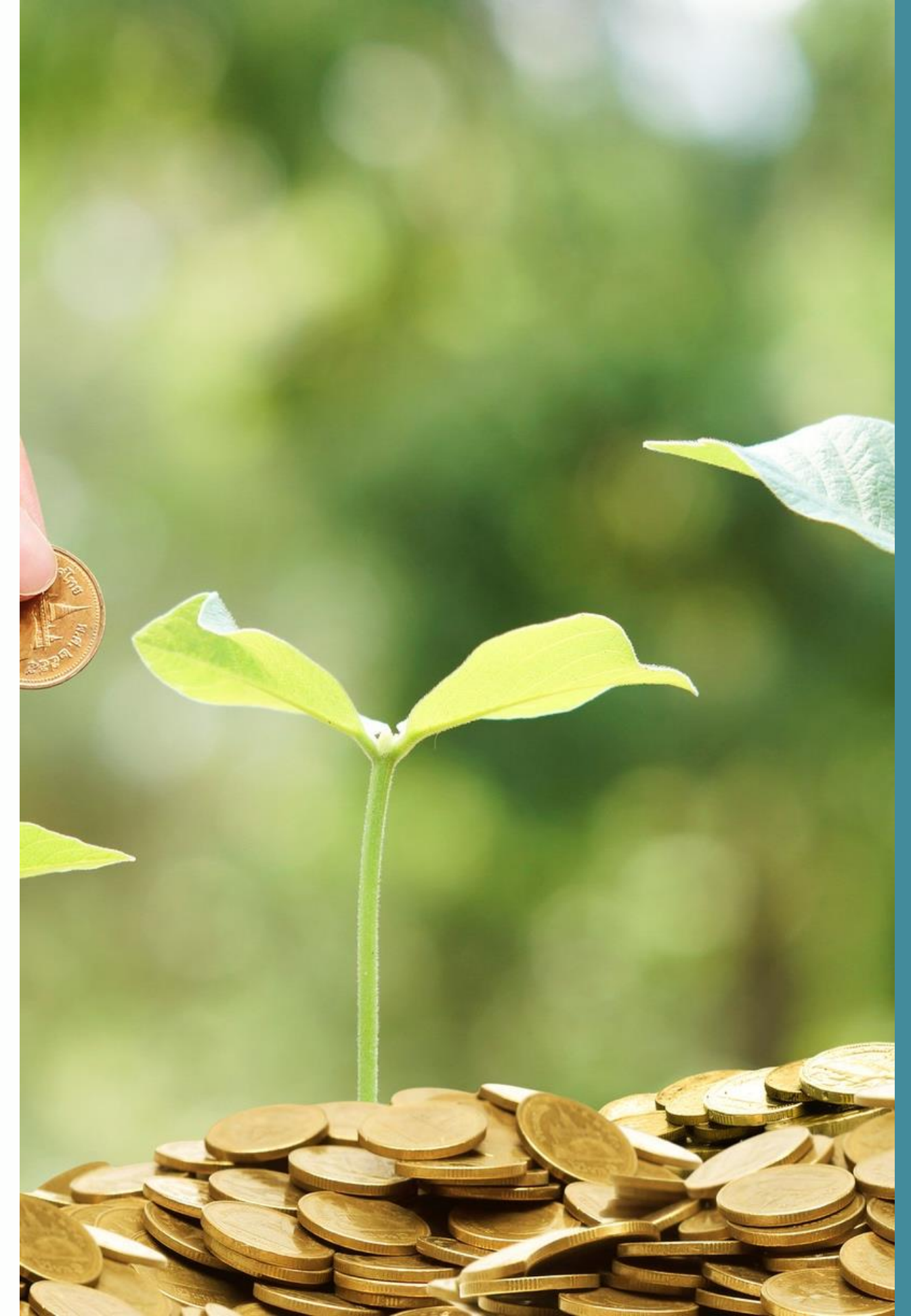
Context

Environmental Impact Concerns

- High energy consumption
- Carbon footprint of digital infrastructure

Growing adoption of data-intensive health research in Africa

- Big data analytics, AI/ML applications, cloud computing
- Essential for addressing pressing health challenges





Research Objectives

- Understand African researchers' perspectives on environmental responsibilities
- Examine tensions between health priorities and environmental concerns
- Explore ethical frameworks for balancing competing needs
- Identify contextually appropriate solutions

Methodology

- Qualitative study design
- In-depth interviews with researchers in Kenya and Senegal
- Focus on data-intensive health researchers



Method: Conducted exploratory interviews with researchers in Kenya and Senegal.



Theoretical Frameworks

Environmental Justice

A Framework examining the unfair distribution of environmental burdens

Application to data-intensive research

- Samuel & Lucassen (2022): Environmental impacts of data-intensive research
- Can perpetuate environmental inequalities
- Unequal distribution of environmental burdens
- Environmental impacts of research affect different communities differently

Caney's Hybrid Model



It combines two principles of responsibility:

1. "Polluter Pays": Those who create environmental harm should bear costs
2. "Ability to Pay": Those with greater resources have greater responsibility

Application to research context:

- High-income countries' historical contributions
- Greater capacity to implement solutions
- Balance between responsibility and capability

Young's Social Connection Model

Responsibility is based on capacity to effect change

Key principles:

1. Not just about direct causation
2. Emphasizes structural connections
3. Forward-looking responsibility

Application to research:

- Global research network connections
- Institutional capabilities
- Shared but differentiated obligations





Key Findings



Competing priorities

"Sick people do not care about the environment"

Health outcomes prioritized over environmental concerns

Limited resources force difficult choices

Responsibility Attribution

- Western nations seen as primary responsibility bearers
 - Tech companies viewed as environmental custodians
- "We are just consumers of these technologies"*



Health Environment Nexus

- Health as prerequisite for environmental care
- Need for balanced approach
- Local context shapes priorities



Ethical Implications



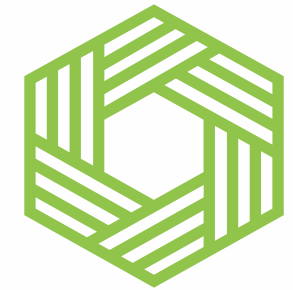
**Misalignment of
Western and African
perspectives**



**Need for
contextually
appropriate
frameworks**



**Balance between
immediate needs
and long-term
sustainability**



**Question of fair
responsibility
distribution**



Recommendations

Develop Context-Sensitive Frameworks

Led by LMIC researchers

Integrate local perspectives



Collective Responsibility Models

- International collaboration
- Shared but differentiated responsibilities



Practical Implementation

- Incentive structures
- Capacity building
- Tech company engagement



Way Forward

- Need for balanced approach respecting local contexts
- Importance of collective responsibility
- Call for continued research and dialogue

Thank you

