



Gender Equity for a Just Green-Digital Twin Transition: A Multi-level Mapping of South Africa's Value Chains and Sector

Preliminary Findings

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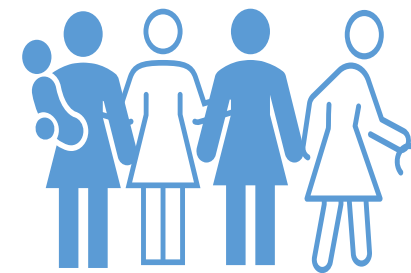
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Part of a multi-country sub-Saharan Africa (SSA) project on **“Responsible AI for Africa’s Just Transition to the Circular Economy (JTCE)”** as part of the **Gender Responsible AI Network (G*RAIN)**.



There is a dearth of information about the conditions necessary to advance the use of data-driven digital technologies to support a **just green-digital twin transition** in South Africa (SA) and the rest of SSA.



However, this transition is not gender-neutral.

Need to focus on **(intersectional) gender inequities** at the nexus of sustainable digital transformation (DX) and the just transition to the circular economy (JTCE), in SSA.

The normative idea of “**twin green-digital new deals**” has raised complex questions regarding existing multidimensional power dynamics :

- Who has the expertise to **frame alternative solutions** to new global sustainable techno-socioeconomic paradigms in a diverse digitally interdependent world?
- What are the **implications** of these alternative solutions for different technological, environmental, social and governance (TESG) contexts, particularly for SSA ecosystems?
- Do these “global” alternatives effectively **integrate local values, consider historical injustices, existing marginalisations**, with proposed governance of technological innovations, for a truly “Just Transition”?

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The first objective of the study is to gain a comprehensive understanding of the gender dynamics within SSA value chains and sectors in the context of a just green digital twin transition (especially concerning frontier technologies such as artificial intelligence (AI)).

The tentative three (3) sectors identified are:

1. Infrastructure development within the digital green transition
2. Gender dimensions within data governance for environmental data
3. Sustainable Agriculture and Agtech

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The second objective of the study is to define the scope of the research, including the specific industries and regions within South Africa that will be the focus of investigation. This is crucial for ensuring that the research is targeted and can provide actionable insights for policy development related to a just green digital twin transition.

Desk research, using a **Transdisciplinary Lens** which emphasizes the need for exploratory analysis and diverse methods, **grounded in sociotechnical theory (STT), policy coherence & systems thinking, intersectional ecofeminist economics, and eco-industrial**

Phase 1

Primary data collection.
Data collected will capture information related to gender, such as gender ratios in the workforce, wage disparities, access to leadership positions, and work conditions.

Phase 2

Engage with stakeholders to gain insights into gender-specific issues and opportunities within value chains and sectors.
Collect qualitative data through interviews and workshops to understand the perspectives and experiences of different stakeholders

Phase 3

Use data collected to create detailed maps of value chains and sectors, identifying key players, processes, and flows of goods and services.
Overlay gender-related data on these maps to highlight areas where gender disparities exist or where women's participation is limited

Phase 4

Develop gender-sensitive policy recommendations based on the research findings.
Recommendations should aim to address gender disparities, promote gender equity, and foster a more inclusive and diverse workforce within key industries

Phase 5

- Guiding Question

How can we foster gender-sensitive governance and policy interventions within the South African context to ensure a just transition towards a green-digital future, considering the complex interplay of digitalization, sustainability, and gender equity in various value chains and sectors?

- **Limited literature and strategies on how to create an enabling policy and regulatory environment for a just green-digital twin transition (JGTT), in SSA.**
- **Systematic integration of diversity equity and inclusion (DEI) in STEM Fields**
- **Support Gender-Responsive Data Collection for the JGTT**
- **Enhance meaningful participation of women in Leadership Roles in the ecosystem, across value chains**
- **Need for policy coherence and systems thinking approach for JGTT**

Thank you!



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