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STATE DEPARTMENT FOR INDUSTRY
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KIRDI
KISII COUNTY GOVERNMENT
Prosperity For All

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Optimizing the Mineral Value Chain: Addressing Gaps and Technology Needs in Kisii County

Key messages

- The mineral value chain encompasses various activities that deliver products to consumers through production, processing, and marketing phases.
- The mapping exercise aimed to identify the status, gaps, and technology needs in the minerals extraction value chain to promote innovation and enhance the productivity of SMEs.
- Key value chains identified in the County include Kisii soapstone, construction clay bricks, and shale minerals, with a focus on analyzing the activities and actors involved.
- Findings revealed challenges related to technology, product development, and environmental sustainability, along with opportunities for waste value addition.
- It is recommended that the County government and stakeholders develop an inventory of all minerals in the county and encourage enterprises to adopt modern technologies to improve productivity and competitiveness.

Executive Summary

Kisii County is rich in mineral resources but have not been fully exploited. The Kenya Industrial Research and Development Institute (KIRDI) with support from the Ministry of Investment, Trade, and Industry (MITI) conducted a sectoral value chain mapping survey in Kisii County under the Kenya Industry and Entrepreneurship Project (KIEP), funded by the World Bank Group. This survey aimed at mapping the mineral value chains and assessing the technological needs in Kisii County. This analysis focuses on identifying strengths, weaknesses, and sustainability issues within the local mineral value chains, including soapstone and granite. Despite the county's rich natural resources, challenges such as inadequate technology and exploration infrastructure hinder optimal exploitation. The findings suggest a need for regulations to manage resource use effectively, promoting economic development while ensuring sustainability.

Methodology

Literature review was conducted, and information gathered was corroborated by information from key stakeholders and informants. Field visits were made to the mines and production facilities. Interviews were conducted along with observations on the production processes and sites. The survey was conducted in the month of March 2024.

Findings

- Kisii County's mining is majorly found in the quarries and subsequent transportation to different production sites for curving into products of different features and sizes by artistic sculptors.
- The primary activities in the value chain are dominated by artisans who are organized in mining associations. The engage in both mining and carving of the soapstone products.
- Mining of soap stone is done by miners hired by sculptures producers, distributors and brokers.
- Mining is mostly done by hand-held excavation tools
- Most of the exhausted mining sites are left open posing environmental and safety hazards.

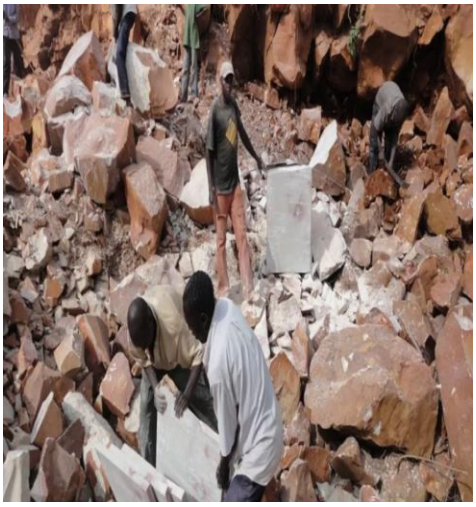
Identified Gaps in Value Chains

The following challenges were identified:

1. **Kisii Soap Stone**

- Limited technologies for mining, design, curving and waste management
- Limited access to finance
- Limited access to market
- Limited knowledge on record keeping and documentation
- Open mines: posing environmental; occupational health and safety (OHS) risks
- Lack of good mining practices in soapstone mining
- Underutilization of soapstone and inadequate research and product

2. **Shale Value Chain**



- Lack of appropriate modern technologies for shale mining and waste management
- Underutilization of the minerals and product diversification
- Limited access to finance
- Limited access to market
- Open mines: posing environmental; occupational health and safety (OHS) risks
- Lack of PPEs for use during Shale mining

3. **Brick Making**

- Limited technologies for mining of clay, molding of bricks and firing
- Limited access to finance
- Limited access to market
- Lack of PPEs for use during clay harvesting, bricks molding and firing

Policy Brief Recommendations

1. **Kisii Soap Stone Value Chain**
   - Invest in appropriate and modern technologies for soap stone mining, product development and waste value addition
   - Provide financial support for MSME's to invest in soap stone value addition

- Create linkages for access to markets for soap stone value added products
- Capacity building and training in business skills
- Reforestation of exhausted mine sites
- Training and promotion of use of personal protective equipment (PPEs) during mining
- Partner with research institutions to undertake research and product development e.g. Universities, R&D and technical institutions

2. **Shale Value Chain**
   - Investment in appropriate technologies for shale mining, value addition, and waste value addition
   - Partner with research institutions to undertake research and product development e.g. Universities, R&D and technical institutions
   - Provide financial support for MSME's to invest in soap stone value addition
   - Create linkages for access to markets for soap stone value added products
   - Reforestation of exhausted mine sites
   - Training and promotion of use of personal protective equipment (PPEs) during mining

3. **Bricks Value Chain**
   - Invest in modern and appropriate technologies for mining of clay, bricks molding and firing
   - Provide financial support for MSME's to invest in soap stone value addition
   - Create linkages for access to markets for soap stone value added products
   - Training and promotion of use of personal protective equipment (PPEs) during mining

4. **Cross-cutting recommendation**

The County Government should create partnerships and linkages to promote productivity and growth of the identified value chains.

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