



LOW – CARBON AND CLIMATE RESILIENT INDUSTRIAL DEVELOPMENT IN AFRICA (KENYA)

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INDUSTRY, INNOVATION AND INFRASTRUCTURE



Project Objective

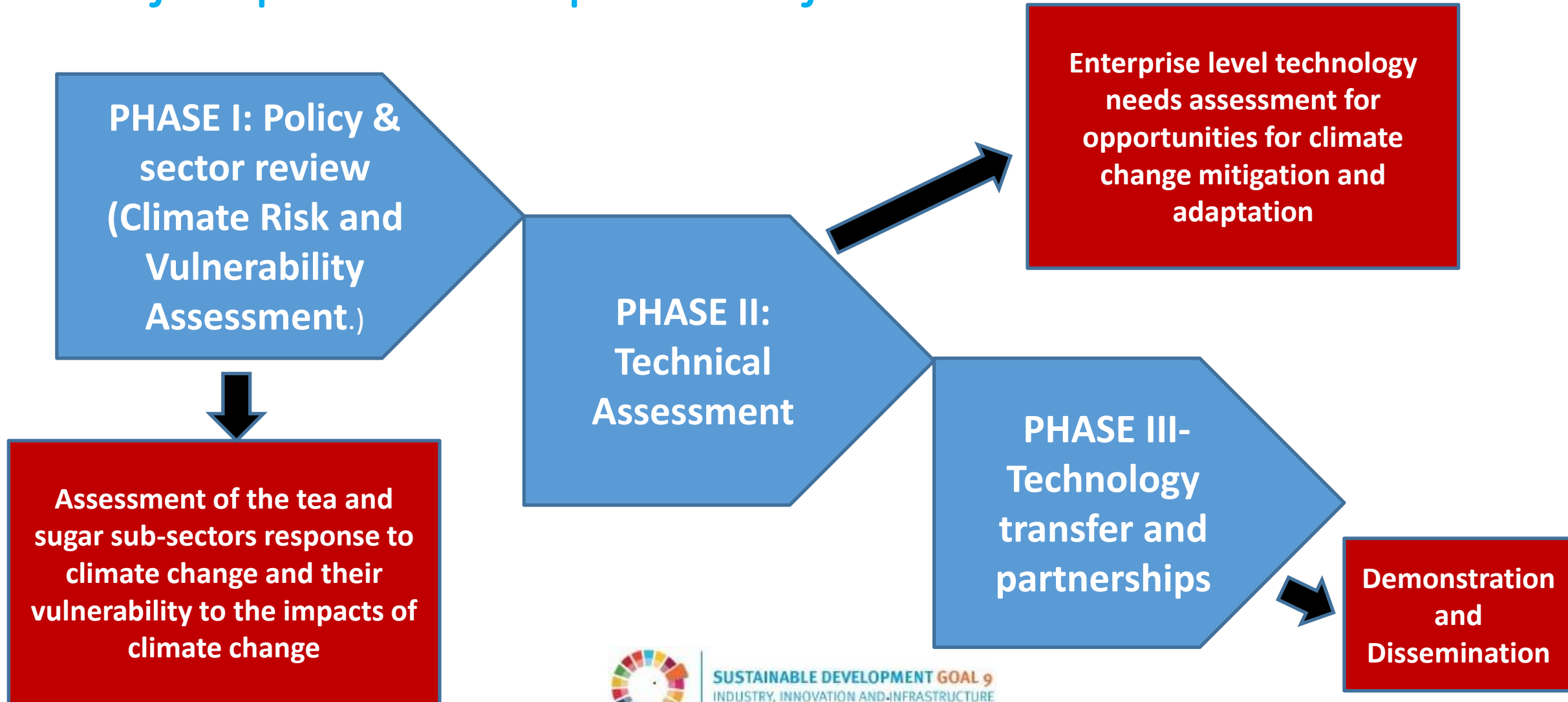
To create awareness and to demonstrate the opportunities and benefits of low carbon growth and climate resilient development in the manufacturing (tea ,sugar and dairy) sectors through application of Green Industry (GI) policy instrument, practices and techniques.



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Project phases and specific objectives .



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Project implementation support

Advisory committee

1. Ministry of Industry, Trade and Cooperatives (The Ministry of Industrialization and Enterprise Development)
2. National Environment Management Authority (NEMA)
3. UNIDO –Kenya (Ex-officio)
4. The Kenya Private Sector Alliance,(KEPSA)
5. Kenya Climate Innovation Centre (KCIC)
6. Kenya Industrial Research and Development Institute (KIRDI).
7. Kenya tea Development Authority (KTDA)
8. Kenya Sugar Research Foundation (KESREF)
9. Energy Regulatory commission (ERC)





Advisory committee role

- Guided the development of the company selection criteria.
- Provided insightful and technical input on the project implementation
- Ensured that the project is aligned with the national strategy and priorities.
- Enhanced linkages to existing initiatives at national and international levels.
- Monitored the quality of the project implementation progresses.
- Ensured that the project achieved its outcomes.



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Company selection criteria

Having high potential for GHG emission reduction



Of high resources use and pollution intensities



Vulnerability to the impacts of climate change.





Selected and assessed companies

No	Name of Industry	Sector
1	South Nyanza Sugar Company	Sugar
2	West Kenya Sugar Company	
3	Butali Sugar Company	
4	Sukari Industries limited.	
5	Unilever Kimari Tea Factory	Tea
6	Unilever Chagaik Tea Factory	
7	Kiamokama Tea Factory	
8	Mununga Tea Factory	
9	New KCC Kiganjo Milk Processing Factory	Dairy
10	New KCC Nyahururu Milk processing Factory	
11	New KCC Sotik Milk Processing factory	
12	Kabianga Dairy Limited	





Climate risk & Vulnerability Assessment Output

Overall National agricultural sector vulnerability & value chain assessment reports

Tea Sub-sector vulnerability & value chain assessment reports

Sugar Sub-sector vulnerability & value chain assessment reports

Government action agenda:

To assist the implementation and operationalization of the existing policies & linkage to available National and international technical and financing mechanisms



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Climate risk & Vulnerability Assessment findings (Gaps)

- Climate change does not feature with the prominence of attention it deserves in the various national laws , legislations and development strategies.
- High dependence on power from national grid and imported diesel renders level of preparedness of industries to climate risks
- Low technical skills at the managerial level and issues of climate change are not considered as part of mainstream decision making.
- Low awareness at the industry level on issues of climate change mitigation and adaptation mechanisms.
- General slow uptake of climate compatible programmes.
- Lack of resource productivity assessment for benchmarking for planning
- High cost of new efficient technologies and their installation
- Structures of ownership of the industries is mostly sole proprietorship which bears negatively on the management decision making.





Technical assessment

All the 12 companies were assessed.

Focus areas

- Resource (energy, raw materials and water) consumption
- Waste generation and its management
- Evaluation of the technologies in use



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Technical assessment challenges

- Poor resources quantification and data recording at factory level
- Unwillingness to share production data
- Political and local leadership interferences to factory operations
- High level of decision making centralization within the organization management structure





Demonstration projects selection criteria

- Project implementation timeliness,
- Potential for co-financing from the company
- Japanese technology availability
- Project contribution on Social, Economic and Environmental Impacts
- Project post- demonstration operational ability to run and maintain a technology



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Companies selected for demonstration

Tea



KTDA Kiamokama

Sugar



Butali Sugar

Milk



KCC Nyahururu





Technology identified

Country	Sectors of factories	Potential intervention option1	Potential intervention option2
Kenya	Tea	Efficient air blower	Biomass gasifier for steam production
	Sugar	Closed Belt dryer	Bokashi fertilizer
	Milk	Biomass boiler	Cold storage at collection point





Kiamokama tea factory case

- Grant amount \$95,000 (Ksh. 10,000,000)
- Replacement of the existing FOOUR (4) withering air blowing system with more efficient air blower unit with controllable air volume function for withering process.
- **4% of the total required to overhaul the entire withering**





**PHASE I: Policy & Sector review
(Climate Risk and Vulnerability
Assessment.)**

PHASE II: Technical Assessment

**PHASE III-Technology transfer
and partnerships**

**Green Industry Action
agenda in line with the
Government of Kenya's BIG
FOUR AGENDA**



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Green Industry (GI) Agenda Proposal

Based on the outcome of this project, KNCPC is in the process of developing a GI action agenda for the manufacturing sector.

Aim

To promote sustainable patterns of production and consumption i.e. patterns that are ;

- I. Resource and energy efficient,
- II. Low-carbon emissions
- III. Produce products that are responsibly managed throughout their lifecycle.





Thank you



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