



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

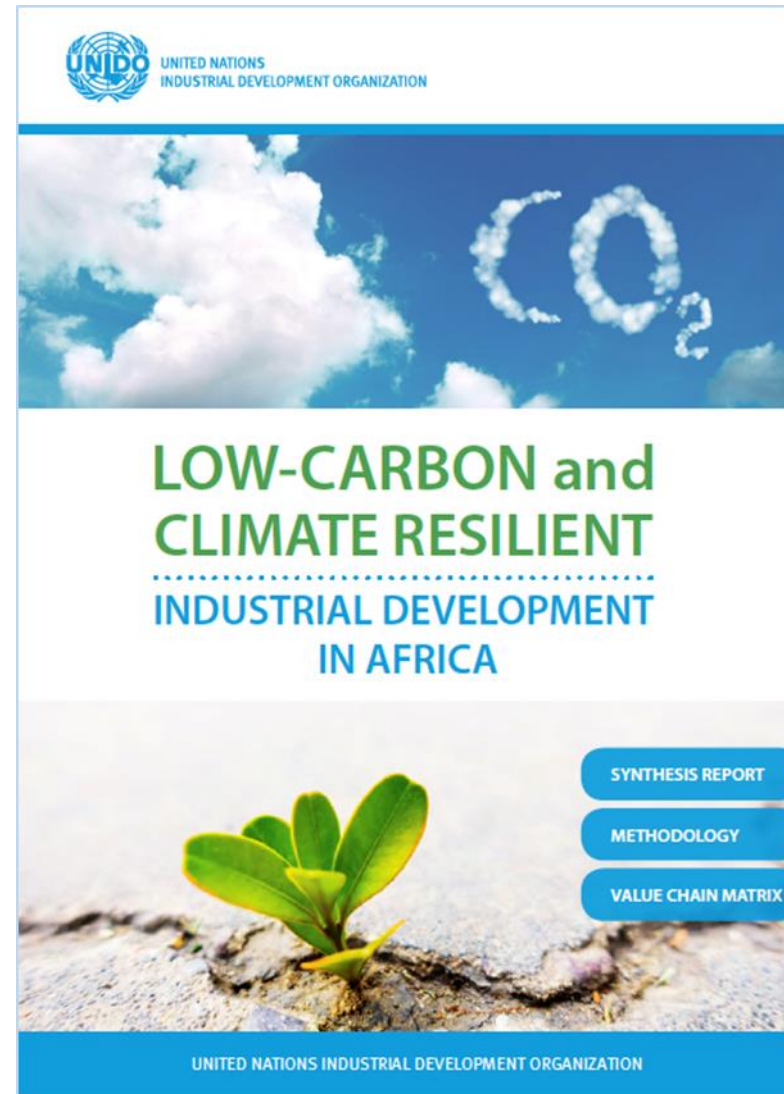


SUSTAINABLE DEVELOPMENT GOAL 9
INDUSTRY, INNOVATION AND INFRASTRUCTURE

Changing with the Climate

UNIDO's experience

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Department of Environment
UNIDO



Adaptation Needs for Industry in Climate Vulnerable Countries

- The poorest and most vulnerable people are being affected the most, especially on their food and water security.
- SMEs are the economic drive in developing countries.



Climate Adaptation for Industry

- To minimize climate-induced risks thereby increasing their resilience and avoiding potential future costs.

Climate Impact on Private Sector

Direct Risk

- Building
- Machine damage
- Storage problems
- Decrease of labor productivity

In-Direct Risk

- Shortages in resources such as water and energy
- Disruptions of supply chains
- Changes in regulations
- Changes in demand



Climate Resilient Industry

- Climate resilient industry builds on **cleaner and energy & resource-efficient production process and technologies** that de-couple economic growth from unsustainable resource consumption and environmental degradation.

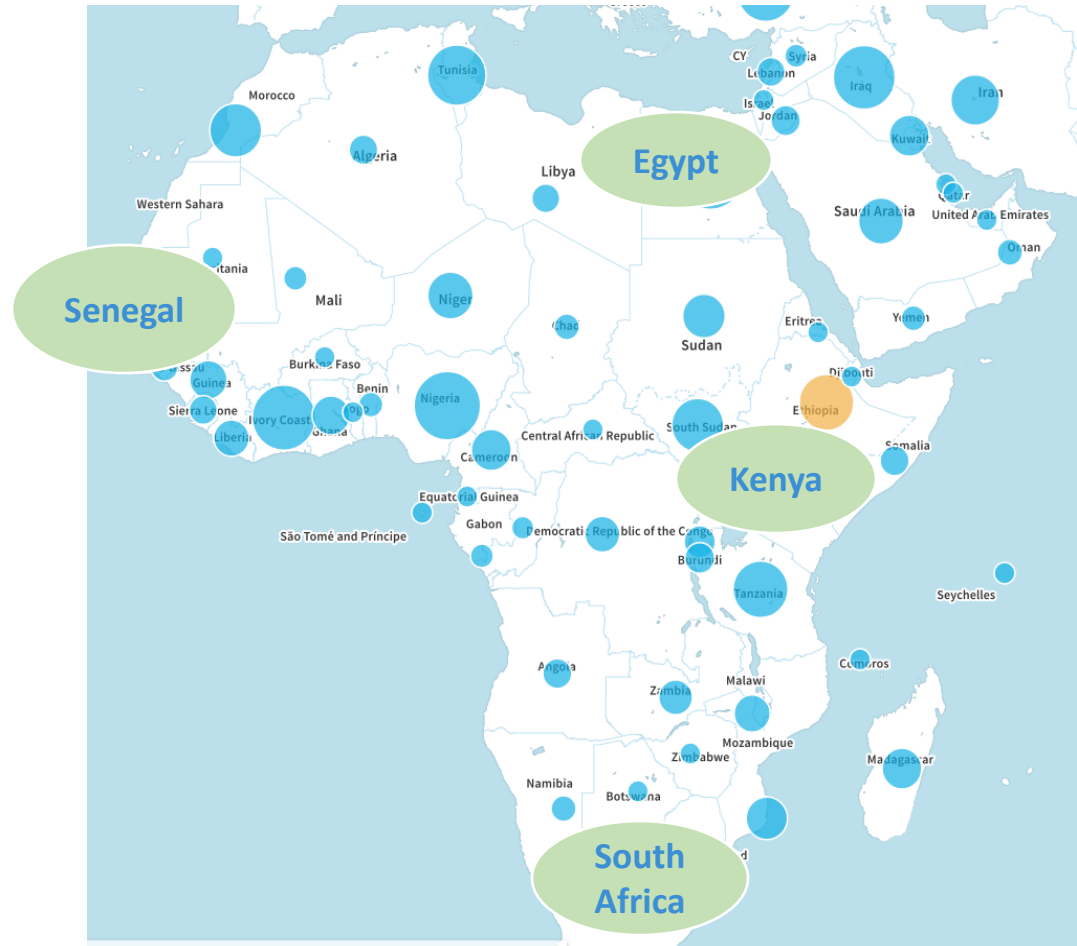
Project Objectives

- To create awareness and demonstrate the opportunities and benefits of low carbon growth and climate resilient development in the manufacturing and related productive sectors in Africa



Project Locations

- Egypt
- Kenya
- Senegal
- South Africa





Key Activities

Climate Risks &
Vulnerability
Assessments

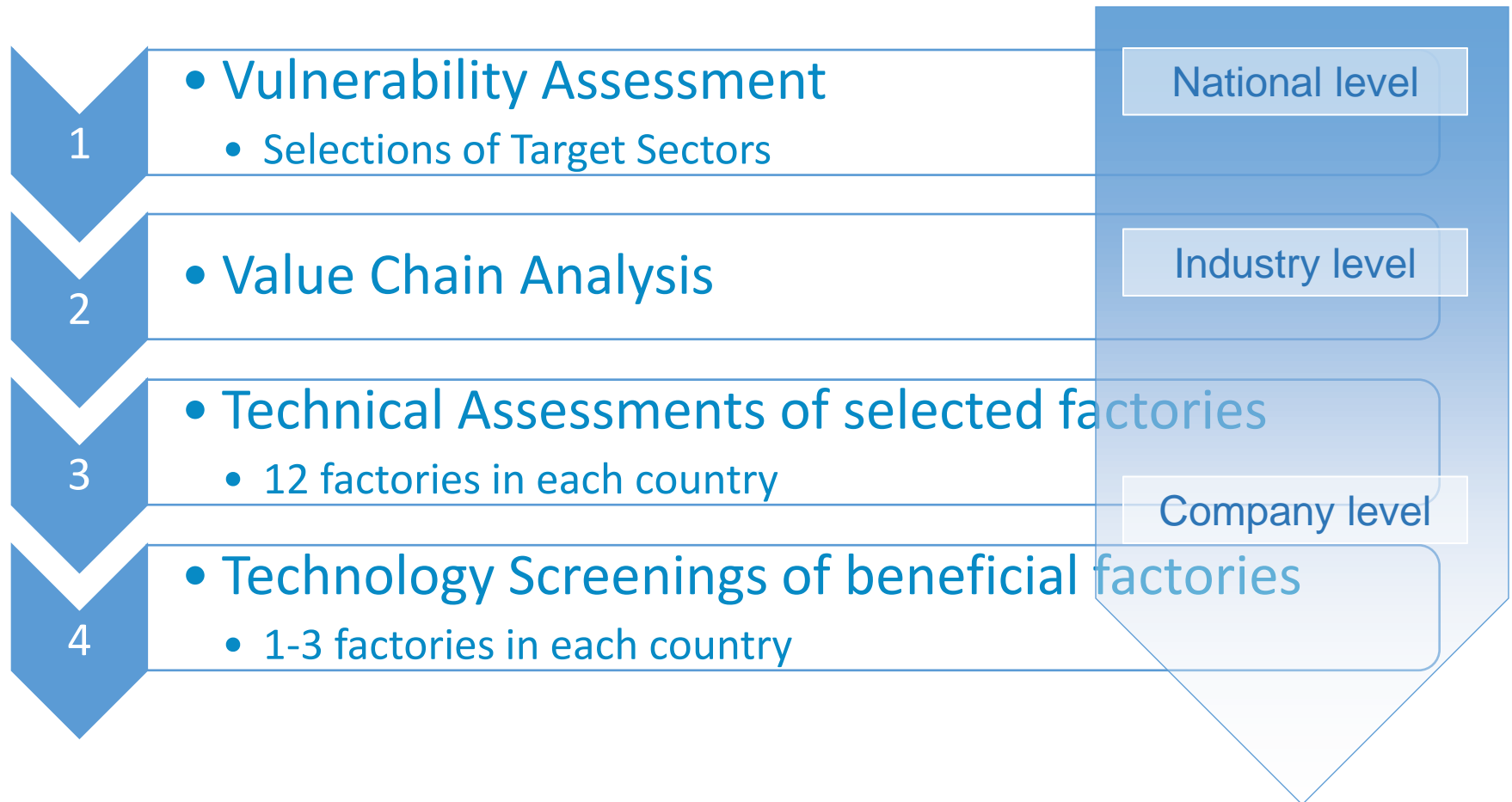
LCCR
Technology
Demonstration
(Adaptation
Measures)

Business
Partnerships

Awareness Raising & Dissemination



Assessment Steps



Climate Vulnerability Assessment

National level

Industry level

Value Chain



- National Adaptation plan
- Nationally Determined Contributions (NDC)

- Economic Development policies & strategies

Company level

Technical assessments

Technology assessments

Case: Kenya – Tea Industry

• Climate Risks

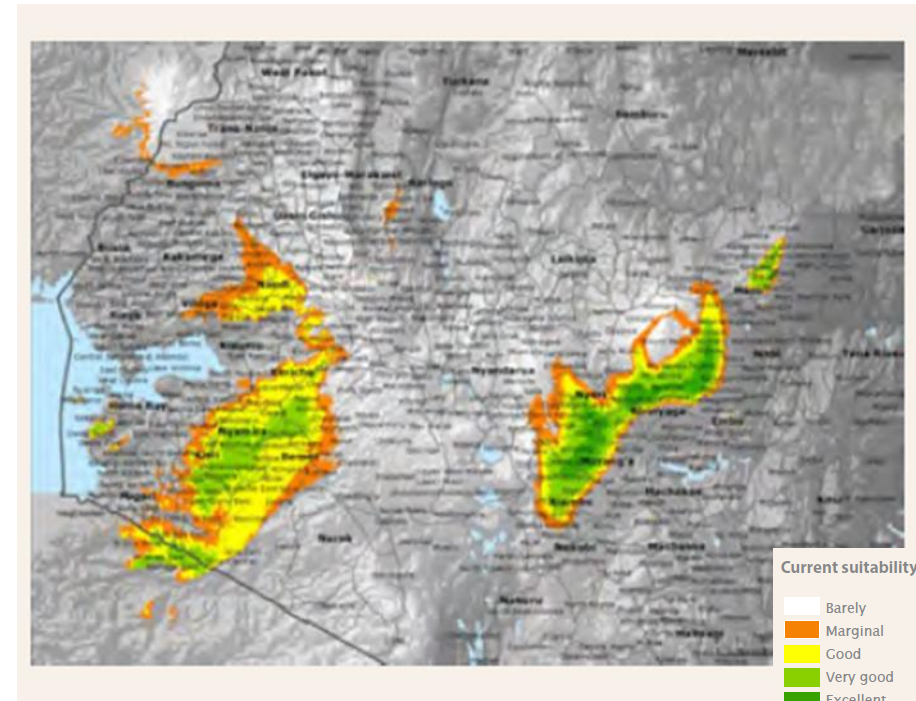
Unpredictable rain patterns

- Longer dry period
- Destructive rainfall

Fluctuating temperature

- Colder condition

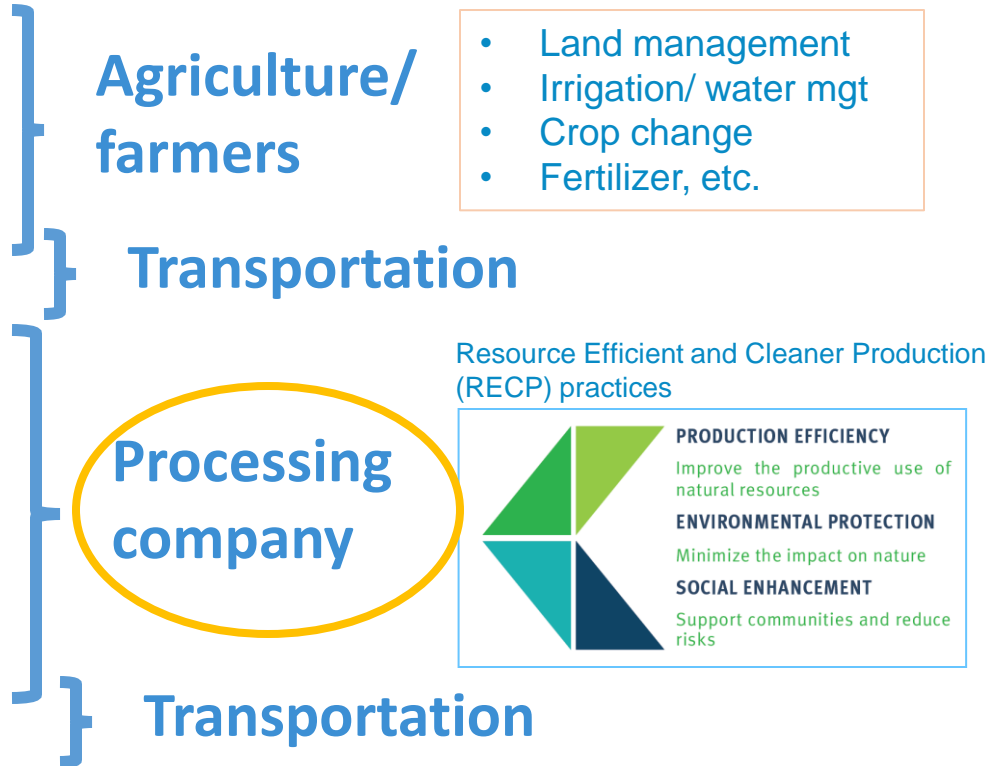
Hail and frost



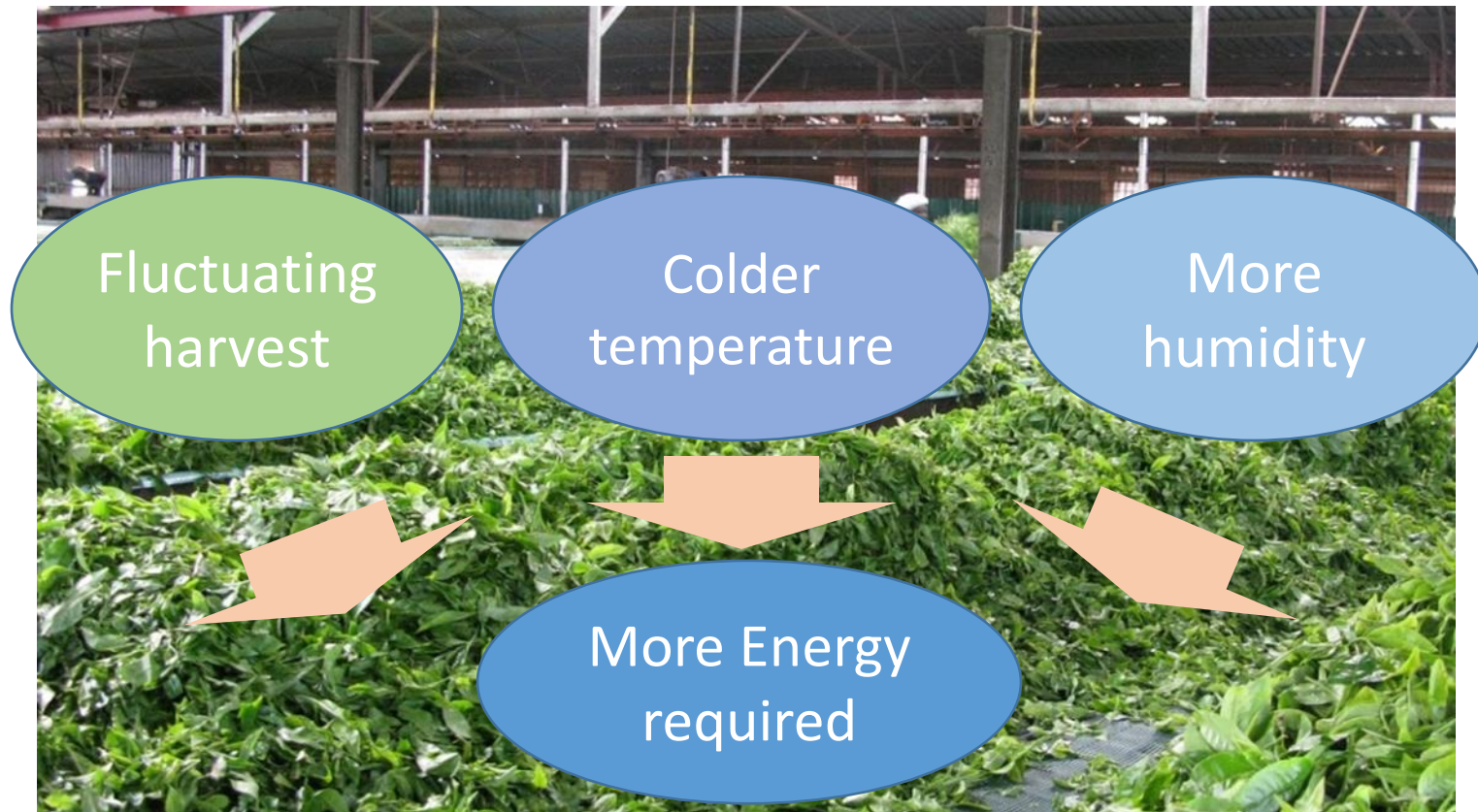
Source: Eitzinger, Läderach, Quiroga, Pantoja, & Gordon, 2011. Future climate scenarios for Kenya's tea growing areas. Retrieved from: <http://ipcc-wg2.gov/nj-lite_download2.php?id=8518>

Value Chain Assessment

	Hail	Frost	Inadequate rainfall	Cold conditions	Number of 3s
Climate risk					
Frequency	+	-		-	
Land preparation	2	1	3	0	1
Planting	2	2	3	1	1
Plant husbandry	3	2	3	3	3
Plucking	3	3	3	3	4
Transportation	1	1	0	1	0
Withering	1	2	2	3	1
Cut, Tear, & Curl	0	0	1	2	0
Fermentation	2	2	2	3	1
Drying	3	2	0	3	2
Sorting	0	0	0	0	0
Packaging	0	0	0	0	0
Distribution	1	0	0	0	0
Number of 3's	3	1	4	5	12



Tea Factory's Climate Vulnerable Process - Withering



Adaptation technology

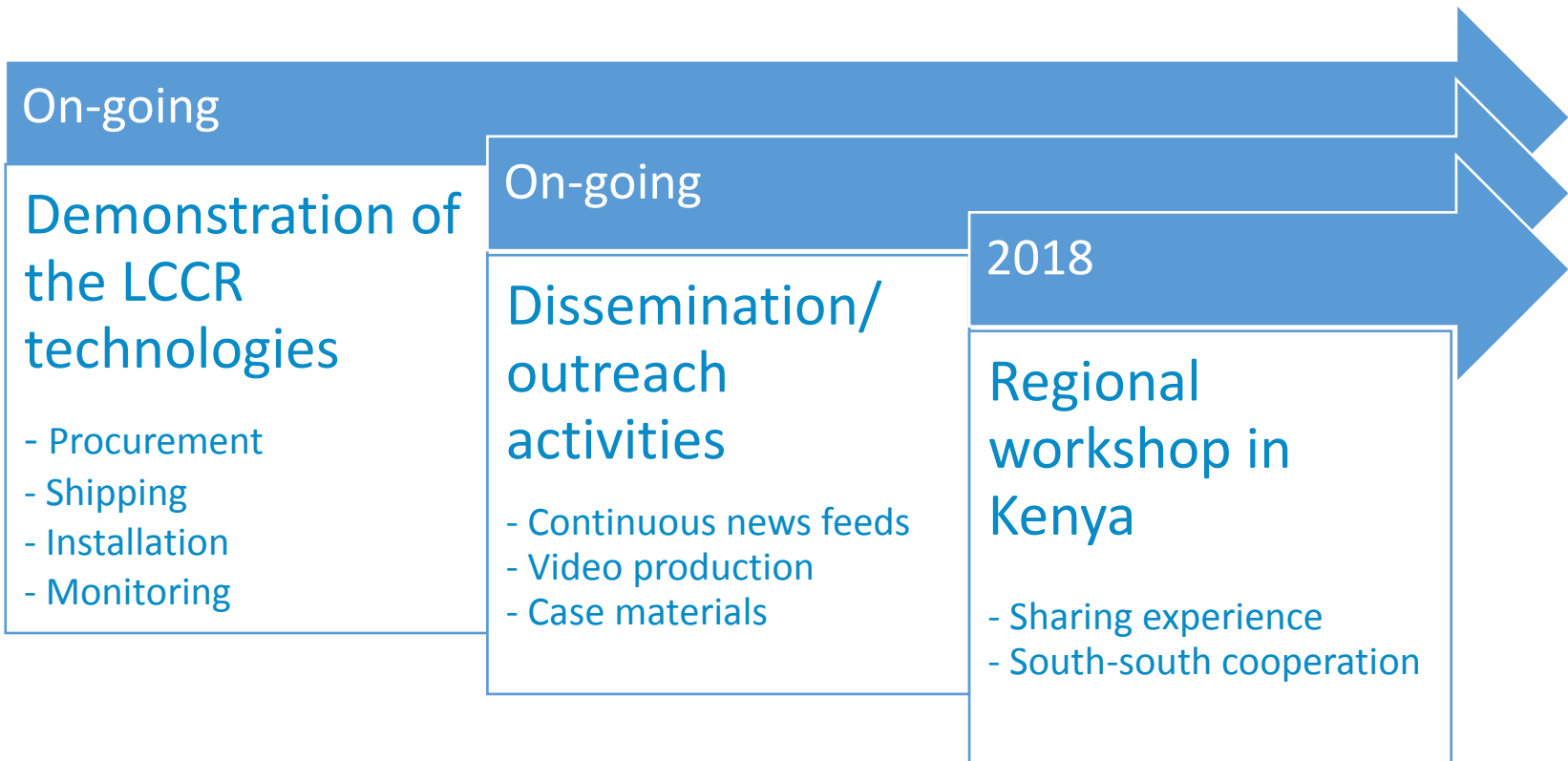
- Efficient Air Blower with the air volume control



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
Senegal	Fish processing	Ice Maker	Heat recovery for drying process (value addition)
	Fruits, Cereal	Solar dryers	-
South Africa	Fruit processing	Chiller with heat recovery	Water Management
Egypt	Vegetable	Chiller with heat recovery	
	Fruit processing	Roof coating	PV panel

Next Steps





https://open.unido.org/projects/M2/projects/130028



2017

Home Projects Donors Publications Scorecard About

Africa

Projects

Donors

Country Overview

Ongoing Projects (38)

> GC1 Creating Shared Prosperity (7)

> GC2 Advancing Economic Competitiveness (10)

> GC3 Safeguarding the Environment

170170 - Promotion of Green derived bil...

170170 - Improve the health and enviro...

170300 - Promoting Coordination, Cohe...

104063 - Capacity Strengthening and T...

104065 - Capacity Strengthening and Te...

120386 - Establishment and first Operat...

120594 - Strategy for disposal and dest...

130028 - Low Carbon and Climate Resil...

130238 - Start-up and First Operational ...

140282 - Minamata Initial Assessment i...

140368 - MIA in Francophone Africa 2

140371 - Hg-MIA Cabo Verde & Sao To...

150008 - Minamata Initial Assessment i...

150060 - Promotion of BAT and BEP to ...

160013 - Building resilient rural commu...

170031 - Scaling up renewable energy i...

Low Carbon and Climate Resilient Industrial Development in Africa

Overview

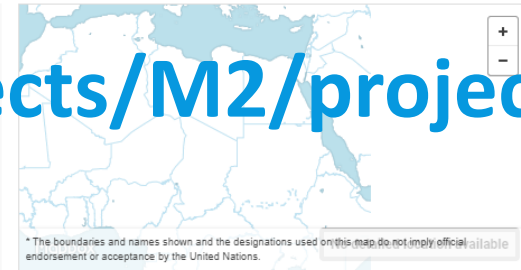
Project ID: 130028
Thematic Priority: GC3 Safeguarding the Environment

Location: Africa

Project Manager: Smail ALHILALI

Donor: Japan

Funds: Operational Budget
Trust Funds
Regular Programme of Technical Cooperati...



*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

The project will focus on four African countries, respectively: Egypt, Kenya, Senegal and South Africa. The project takes advantage of the institutional platforms already created by UNIDO through in particular the National Cleaner Production Centres (NCPs), the ECOWAS Regional Centre for Energy Efficiency and Renewable Energy (www.ecree.org) and African Agribusiness and Agro-Industry Development Initiative (3ADI).

Financials

\$1,828,408 Total budget
\$1,555,510 Total expenditures



View financial information by year

Estimated Timeline



Media

Pictures (2) Advocacy Material (6) Links (2)

0.Vulnerability assessment report (Main).pdf Download

1.Value chain vulnerability-Egypt country report... Download

2.Value chain vulnerability-Kenya country report... Download

3.Value chain vulnerability-Senegal country repo... Download

4.Value chain vulnerability-SouthAfrica country r... Download

UNIDO_leaflet_17_LCCR.pdf Download

https://open.unido.org/projects/M2/projects/130028

