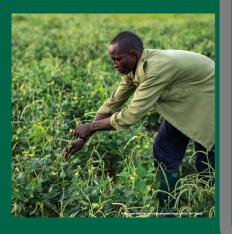


# Resilient & Sustainable (Green) Food Value Chain Development









**Module II** 

Lead Trainer – Felix Ngetich, PhD







# Objectives and outcome



- To raise technical awareness of the greening and sustainable VCs as a strategy for building resilience in food systems at country level
- By the end of the training, you should:
  - i. Understand key concepts in VC greening and sustainability
  - ii. Identify the VC for greening
  - iii. Develop action plans and mainstream green VC development in project implementation



# **Participants Expectations**

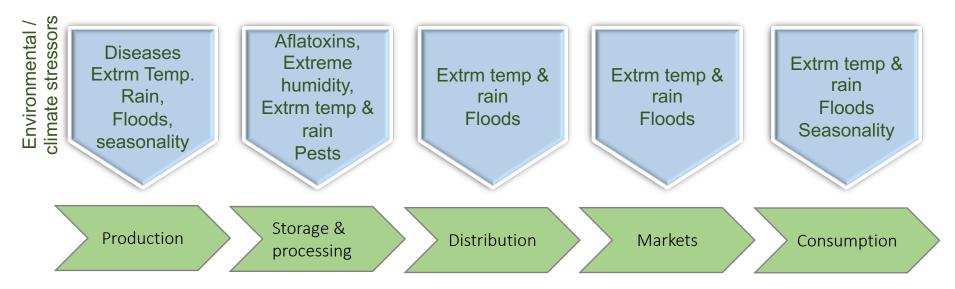




## Why resilience?



 Resilience (of ecosystems): capacity to continue functioning despite stresses or shocks



- Calls for a balance between ecosystem productivity, climatic conditions and the economic activity
- Resource use efficiency
  - to reduce dependence on the biophysical environment
  - Enhance resource productivity

### Why sustainable value chain development approach?

- Environmental sustainability: responsible interaction with the environment
  to avoid depletion or degradation of natural resources and allow for longterm environmental quality
- To promote the transition of the economy to greener and more inclusive industries

Getting the framework conditions right that leave space for private investment and the creativity of entrepreneurs in the search of solutions

# Correcting market failures

- Deliver desirable social and environmental outcomes
- help avoid environmental damage
- influence and steer economic behavior towards the common sustainability agenda

Empower poor people with skills and organizational capacity to benefit from existing economic opportunities

- Improve their access to technology
- Facilitate market participation
- Link smallholder farmers to buyers

Hence, the need for the collaboration between private and public actors in the the coordination of interventions and co-investment



## **Definition of terms**



- Activity greening: making environmentally responsible decisions on a VC activity and turning them into actions
- Greening the economy: making investments in technologies, systems and infrastructures that enhance productive economic activities while optimising natural resource utilisation and minimising environmental impacts
  - ✓ Green economy: a low carbon, resource efficient and socially inclusive
- Value chain (agriculture): range of goods & services necessary for agricultural product to move from farm to final customer



## **Brief background**

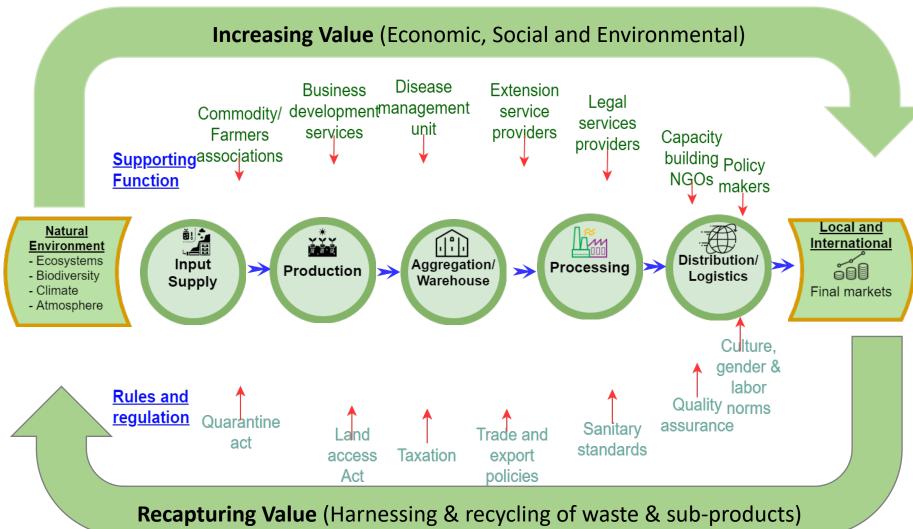


- The *green food value chain concept* is an approach that:
  - ✓ generates and recaptures value at each level or link of the food value chain,
  - ✓ proactively reducing the usage of the natural environment, (natural resources, ecosystem services, and biodiversity),
  - ✓ diminish or mitigate adverse environmental impacts, and/or
  - ✓ even have positive impacts,
  - ✓ and considers disposal and recycling patterns of generated waste
- RSFVD aims to advance a holistic approach to agricultural productivity and agribusiness development in smallholder farming systems as well as the ecosystem health



### Green food value chain concept





The approach generates and recaptures value at each level or link of the food value chain









#### **Economic**

Jobs/Incomes
Tax/Revenues
Food Supply
Net profit/Dividends

Inclusive growth

**Green** growth



Socio-

#### Socio-Cultural

Added value
Distribution
Cultural tradition
Nutrition and health
Worker rights & safety
Animal welfare

# Environmental

progress

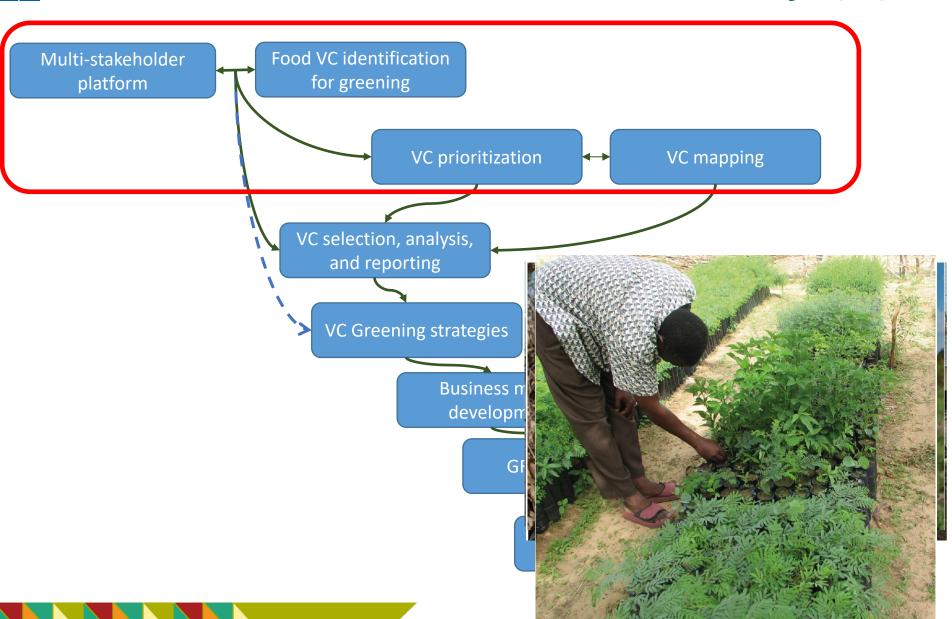
Carbon footprint
Water Conversation
Soil conservation
Biodiversity

Reduce food loss Waste recycling



# VC Greening process







# Food Value chain selection for greening

















# Introduction

- 1. Set a general objective on green value chain development
- 2. Understand the process of compiling the long list of the food value chain





## Setting greening objectives and VC long listing



Set up general objectives for developing a green food VC

### **Objectives setting**

- 1. Brainstorm (by stakeholders/MSP) on the greening objectives and settle on key objective(s)...e.g.
  - 1. To target and develop sustainable markets (market access)
  - To ensure sustainable food security (food secure communities)
  - To build resilience to climate change (resilient value chains to climate shocks and stresses)
  - 4. Enhanced knowledge sharing on sustainable and resilient value chains

commodity/service relevant to the local agricultural VC

- List all potential VCs, product based (local)
- 2. Identify various points along specific VC requiring specific levels of greening



Identifying a list of potential products/activities





Source: <a href="https://peanut-institute.com/">https://peanut-institute.com/</a>



# Example of a list of VCs (livestock or crops) for smallholder farming for green VC development

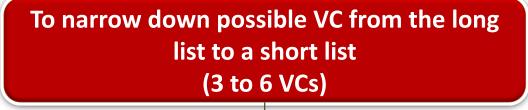


1. Onion	11. Beans
2. Mango	12.Poultry
3. Sorghum	13.Sesame
4. Rose geranium	14.Rice
5. Beef	15.Dairy
6. 1Maize	16.Cowpea
7. Tomato	17.Honey
8. Irish potato	18.Sweet potato
9. Avocado	19. Groundnuts
10.Sheep/goat	20.Cassava



### Screening and shortlisting of promising value chains





### **Option 1**:

When clear evidence/well documented information available

A quick review and validation may be sufficient

Can be done by small selection of MSP members/resource persons

### **Option 2:**

When sufficient data are not readily available

Data collection/Compilation (VC Mapping)

Long list screened against inclusion and exclusion criteria





# Multi-Stakeholder Platform formation (MSP)

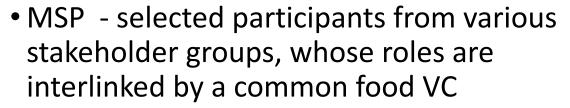
- 1. To set up a functional multi-stakeholder platform (MSP)
  - 2. To conduct stakeholder mapping through practice







- To foster sustainability, there is a need to establish and institutionalise relevant stakeholders' collaboration
  - √ through the multi-stakeholder forum (MSP)



- ✓ which stakeholders will be involved?
- ✓ for what reason?
- ✓ at what time?

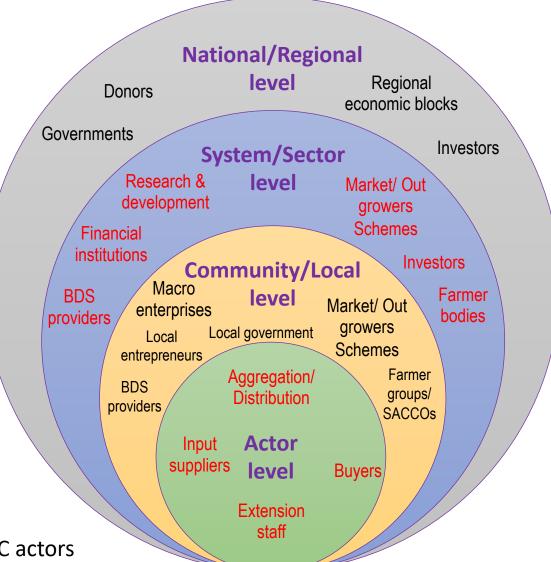






### Levels of stakeholder groups represented at the multistakeholder platform





MSP composition: VC actors operating at any of the levels



## Stakeholder mapping steps



- Identify assorted smallholder farmers' food value chains that have the potential for greening
- 2. Identify potential actors
  - Find out who is involved at various nodes or points in the process, from input acquisition to final product consumption, i.e., the number of the stakeholders involved
- 3. Identifying food VC actors

### Guiding questions

- i. Potential role in the VC?
- ii. Mandate?
- iii. Which stakeholders are usually included or excluded in given food VCs (marginalized)?
- iv. Is the stakeholder relevant? (to determine inclusion or exclusion)
- v. What is their geographical coverage?
- vi. Do the stakeholders support or oppose the greening process?
- vii. Will the stakeholder benefit or be harmed by the greening process?
- viii. What are the stakeholders' concerns and expectations?
- 5. Compile the results in the shared matrix.
- 6. Form an MSP



# UNMSP analysis matrix



Stakeholder/ Value chain actor	Stake/ Mandate	Potential role in the VC development	Marginalised ?	What is their attitude?	Support the greening process?	Oppose greening process	Will the stakeholder benefit from food value chain greening	Will the stakeholder be harmed by the greening process?	Stakeholders 'concerns?
1.									
2.									
3.									
4.									

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# Food value chain mapping

Steps in Value Chain Mapping

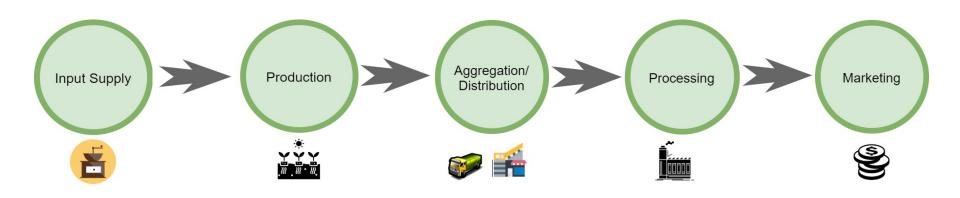




# Step 1. Core activities in the value chain



 Distinguishes a maximum of five to seven core activities that the raw material is transformed through as it changes in value



• NB: Where there is more than one product produced from the initial raw material, each product will follow its own set of value addition activities all the way to final consumption. In such cases, the process map will be more complex and involve parallel sets of processes



# Step 2: Main value chain actors and activities





#### **Actors**

Input suppliers: Seeds, Fertilizers, Herbicides

#### **Actors**

Smallholder farmers Medium scale farmers Large-scale farmers

#### **Actors**

Receipt
warehouse
Hub stores
Cooperatives
Consortia
Market
operators

#### **Actors**

Local millers, Other processors Large-scale millers

#### **Actors**

Local retailers, Wholesalers, Exporters, Market operators

#### **Activities**

Supply of inputs,
Agronomic
advise to
farmers

#### **Activities**

Production (growing) Post-harvest handling

#### **Activities**

Storage,
Quality check,
Packaging,
Post-harvest
handling

#### **Activities**

Milling, Quality check, Packaging, Processing

#### **Activities**

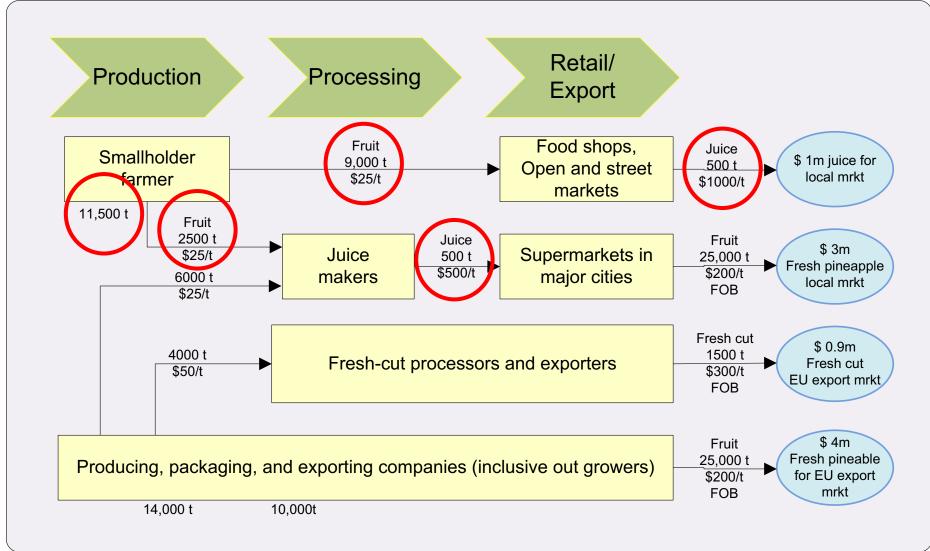
Distribution, Storage

Actors: by name, their numbers, and employment opportunities they offer



# UNStep 3. Flow, volume, and value of products





Distribution of value in pineapple VC, Ghana



# UNStep 4: Geographical flow of the product or service

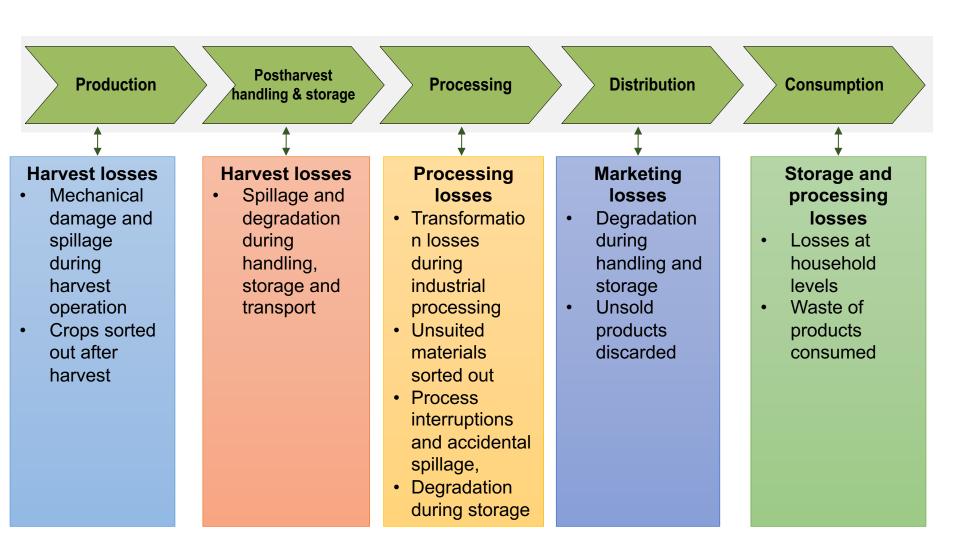


- Identify where each of the VC activity is physically located
  - ✓ where are the
    - Olnput suppliers
    - Producers
    - Aggregators/distributors
    - Processors
    - Markets
- To show locational and regional differences, indicate:
  - ✓ Volumes,
  - ✓ Number of actors



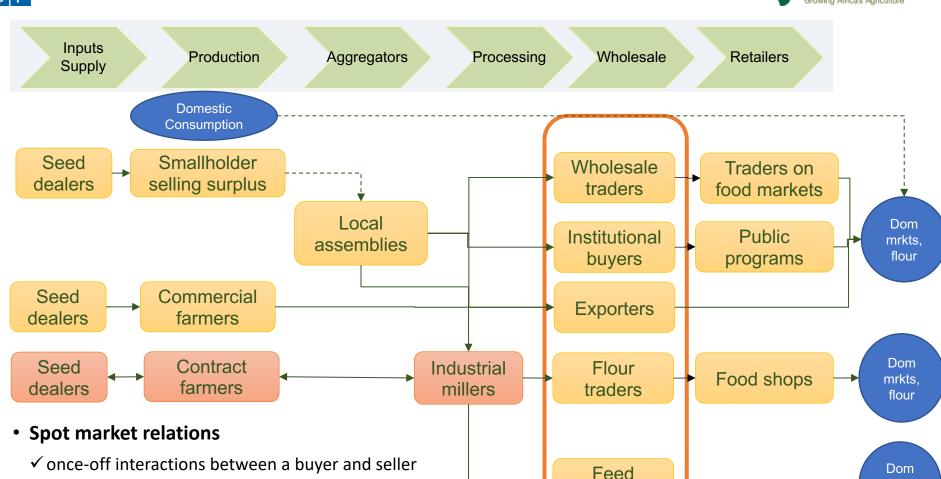
# UNStep 5. Cause of food losses along the value chain





# Step 6: Relationships and linkages between value UN chain actors





• Horizontal integration

Persistent network relations

✓ collaboration between actors conducting the same roles

✓ actors (buyers and sellers) prefer transacting with each other time and time again

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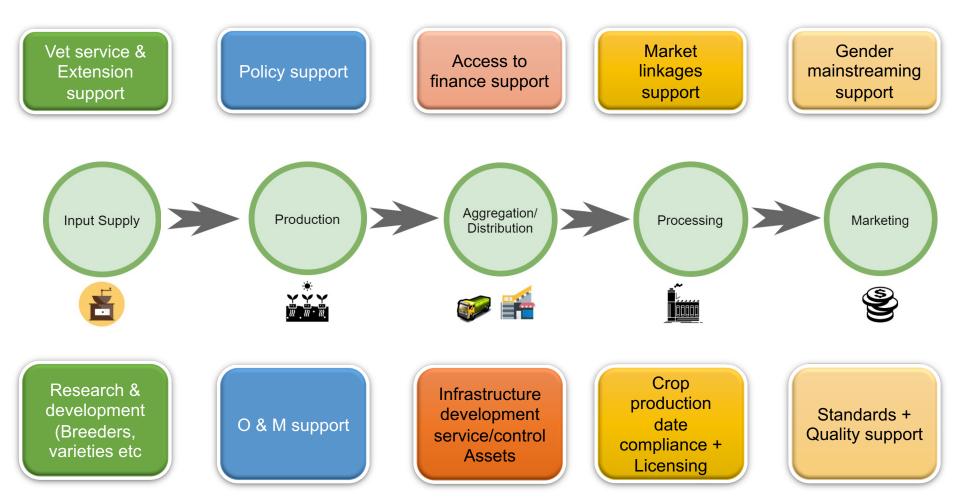
flour

traders



# Step 7. Assessment of Business Development Services (BDS) that feed into the VC





 Mapping secondary services gives an overview of the potential for interventions outside the value chain itself



# **Step 8: Outline VC constraints**





- Reduced quality of rice seeds
- Delayed delivery

### **Production**



- Reduced yields
- Destruction of crops
- Reduced quality of crop
- More time and labor spent for weeding, harvesting and drying

#### **Processing**



- Reduced volumes of rice available for milling
- Poor quality of rice crop
- High moisture content increases breaking at milling
- Delayed deliveries

#### Marketing



- Destruction of transportation routes
- Product losses due to rotting
- Higher transport costs



- Reduced food availability
- Higher food prices

Unfavorable government policy; lack if framework for standardization and traceability







Reduced income





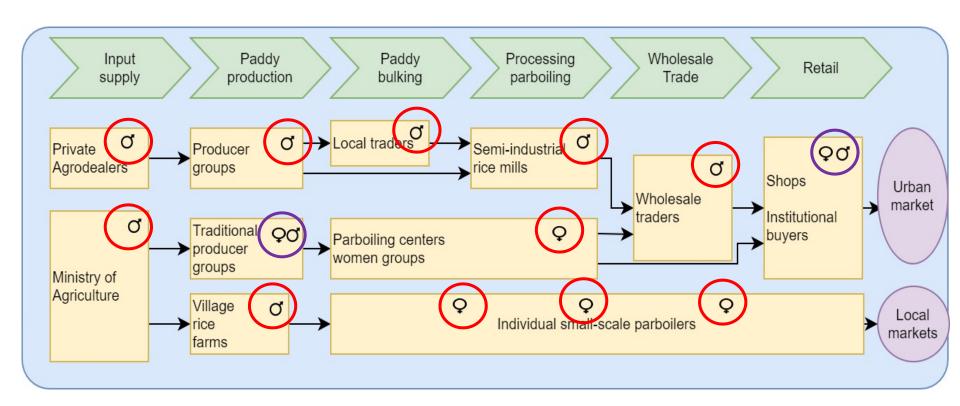


- Should be tailored in line with the greening objective
  - e.g. i) Constraints to greater efficiency, ii) Constraints to upgrading, or iii) Constraints to greater involvement of the smallholder farmers



# UNStep 9. Gender mapping





 Gendered value chain map: men and women in different groups of VC operators in a rice VC in Nigeria



# UN Value chain mapping results



Parameters	Inputs	Production	Aggregation	Processing	Marketing
Activities					
Actors					
Outputs					
Volume					
Value					
Geographical location					
Losses					
Relationship linkages					
Business development					
services (BDS)					
Constraints					
Gender					





# Thank you







# Group work exercise

- Taking you country project into consideration:
  - i. Set a food value chain greening objective (s)
  - ii. Carry out a quick mock
    stakeholder mapping exercise in
    with the aim of forming a food
    value chain greening specific
    Multi stakeholder platform
- Compile the results in the shared MSP analysis matrix







## Stakeholder mapping steps



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# Plenary session





