LOW CARBON VALUE CHAIN DEVELOPMENT IN VIET NAM

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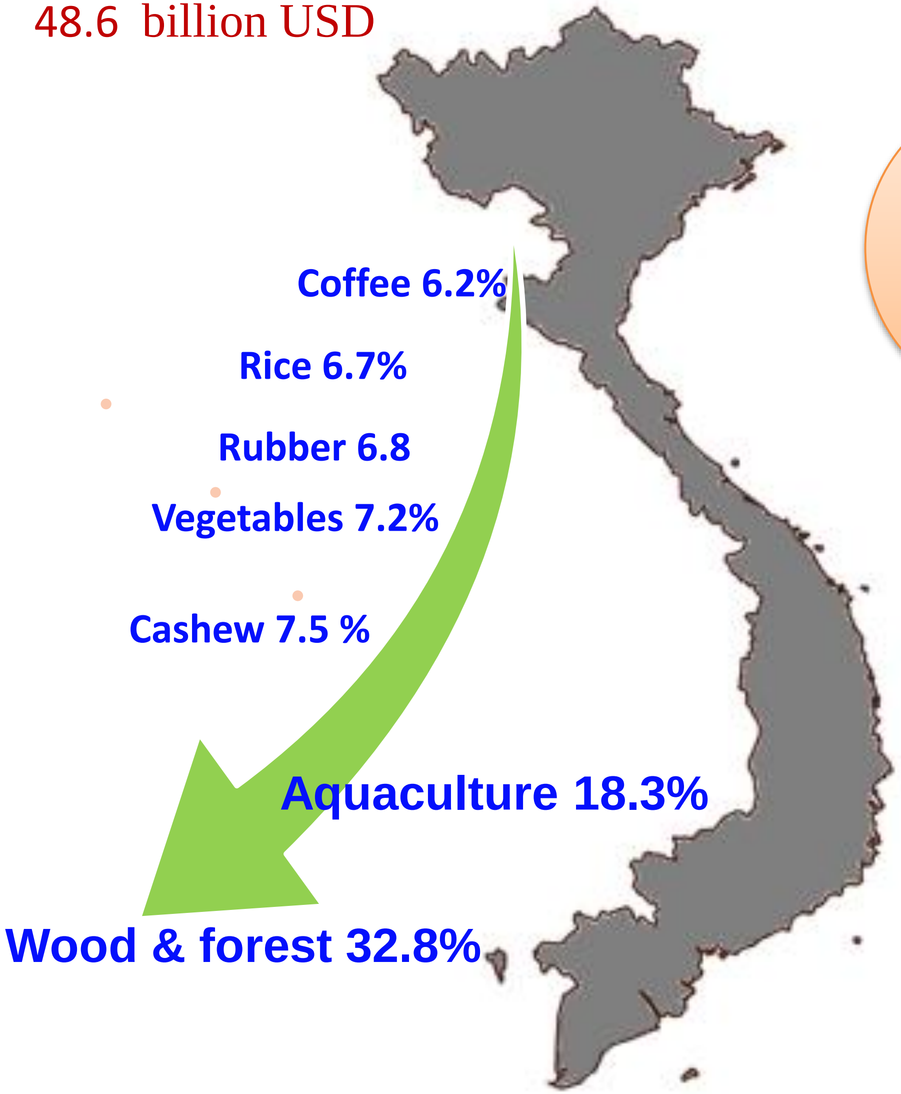
AGRICULTURE SECTOR: CROP PRODUCTION

Total agricultural export value 2021 48.6 billion USD



13.97% of GDP 2021 comes from agri

98.5 M people

68% of farmers are smallholders

62.9% of pop. live in rural areas

28.9% are employed in agriculture

(Source: GSO, 2022)

Unit: Mt CO2e

Emission Sources	Year			
	2014*	2020	2025	2030
Enteric Fermentation (fr. ruminant)	10,2	18,8	21,0	22,2
Manure management	8,9	12,1	13,1	14,1
Rice cultivation	44,3	41,9	41,9	41,5
Agriculture soils	24,0	29,3	30,7	32,2
Prescribed burning of savannas	0	0	0	0
Filed burning of agriculture residues	2,4	2,4	2,5	2,1
Total	**89,8**	**104,5**	**109,2**	**112,1**

Sources: NIR 2014, MONRE, 2018

Development of agricultural value chains based on 3 pillars

Principles:

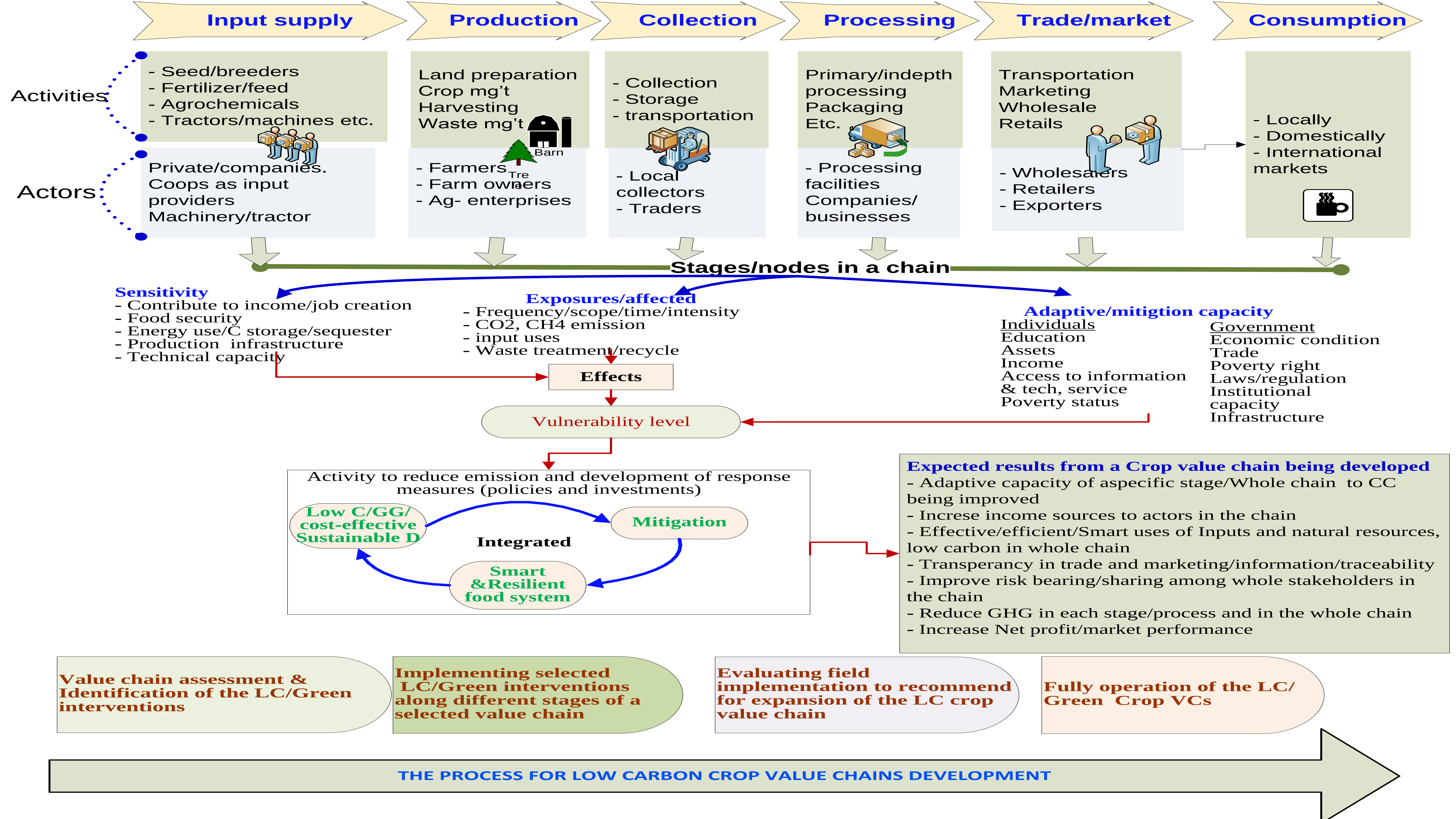
- Selection based on the size of total production value
- Enterprises centered, business-farmer-value chain stakeholders linkages concentrated in reasonable size within a certain ecological region
- Applying high tech to ensure competitive capacity and market demand driven for all stakeholders in the value chains

1. Export values of key national agricultural value chains (~1 bn) ($US billion)

Products	**2019**	**2020**	**2021**
Rice	2.79	*3.07*	*3.27*
Vegetable & fruit	3.74	*3.30*	*3.52*
Coffee	2.75	*2.74*	*2.99*
Black pepper	0.72	*0.66*	*0.94*
Cashews	3.29	*3.20*	*3.66*
Rubber	2.26	*2.38*	*3.31*
Aquaculture	8.63	8.4	8.89
Wooden/furniture	10.52	13.1	15.96
….	….	….	….
Total	41.28	41.20	48.67

2. Provincial level agricultural value chains: from $US 500 million/year

3. One Commune One Product (OCOP): some 10000 products with high quality, comparative advantage, rural job creation value chains


Input supply
Production
Collection
Processing
Trade/market
Consumption
Activities
- Seed/breeders
- Fertilizer/feed
- Agrochemicals
- Tractors/machines etc.
Land preparation
Crop mg't
Harvesting
Waste mg't
Barn
Tre
- Collection
- Storage
- transportation
Primary/indepth processing
Packaging
Etc.
Transportation
Marketing
Wholesale
Retails
- Locally
- Domestically
- International markets
Actors
Private/companies.
Coops as input providers
Machinery/tractor
- Farmers
- Farm owners
- Ag- enterprises
- Local collectors
- Traders
- Processing facilities
Companies/ businesses
- Wholesalers
- Retailers
- Exporters
Stages/nodes in a chain
Sensitivity
- Contribute to income/job creation
- Food security
- Energy use/C storage/sequester
- Production infrastructure
- Technical capacity
Exposures/affected
- Frequency/scope/time/intensity
- CO2, CH4 emission
- input uses
- Waste treatment/recycle
Adaptive/mitigtion capacity
Individuals
Education
Assets
Income
Access to information & tech, service
Poverty status
Government
Economic condition
Trade
Poverty right
Laws/regulation
Institutional capacity
Infrastructure
Effects
Vulnerability level
Activity to reduce emission and development of response measures (policies and investments)
Low C/GG/ cost-effective Sustainable D
Mitigation
Integrated
Smart &Resilient food system
Expected results from a Crop value chain being developed
- Adaptive capacity of aspecific stage/Whole chain to CC being improved
- Increse income sources to actors in the chain
- Effective/efficient/Smart uses of Inputs and natural resources, low carbon in whole chain
- Transperancy in trade and marketing/information/traceability
- Improve risk bearing/sharing among whole stakeholders in the chain
- Reduce GHG in each stage/process and in the whole chain
- Increase Net profit/market performance
Value chain assessment & Identification of the LC/Green interventions
Implementing selected LC/Green interventions along different stages of a selected value chain
Evaluating field implementation to recommend for expansion of the LC crop value chain
Fully operation of the LC/ Green Crop VCs
THE PROCESS FOR LOW CARBON CROP VALUE CHAINS DEVELOPMENT

Strong political commitment and opportunities for sustainable commodity development

Effective governance systems

Integrated land use planning, real-time monitoring and response
(Carbon footprint app.)

Effective platforms

Dialogue inside and across sectors + public-private
(PSAV, SRP)

Standards and traceability

Place of origin ensures deforestation-free commodities
Global GAP, etc.

Enabling Factors for LC crop VCs

Financial mechanisms

Innovative and aligned investments to promote outcomes
Carbon market/bonus or taxes.

Improved models for all land uses

Plantation, natural forest, agriculture land
Agroforestry, EbA, etc.

Monitoring and evaluation system

Compatible with new Planning Law, ensures commitments can be demonstrated and tracked

The issues and challenges

- A limit and a lack of techincal training/technology transfer/availability of technical know-how or accessibility to sources of providing and material/information;
- Tools and capacity in analyzing economic feasibility, developing cost-effective investment plan in up-scaling low carbon crop value chain developed;
- Logistics connection, technical costs and /information/funding/access to land and infrastructure and market information and green/low carbon, deforestation free product markets/premium;
- Economic incentive for development of sustainable/ LC crop value chains;
- Risk bearing/sharing among different stakeholders/value chain actors is also important when promoting new technologies/sustainable solutions;
- Resource mobilization/ a start-up innovation fund/ Start-up innovative incubator for up-scaling;
- There should be a policy mechanism in place to mobilize/incentivize private sector to invest in up/out scaling practices that achieve LC/Green AV/sustainable agriculture