

VALUE CHAIN ANALYSIS FOR DEVELOPMENT (VCA4D)

Providing Value Chain Analysis for improving operations

WHY? WHAT? HOW?

The European Commission proposal for a New European Consensus on Development highlights inclusive and sustainable growth and jobs as an overarching priority. In this context, sustainable agriculture, together with fisheries and aquaculture, remain a key driver for poverty eradication and sustainable development. The EU is committed to develop agricultural value chains which benefit the poor by taking advantage of the opportunities offered by local and global markets to create decent jobs and value added. It is also committed to the principles of Development Effectiveness on results, transparency and accountability.

The **European External Investment Plan** provides an integrated financial package to finance investments, based on three pillars: investment funds, technical assistance, and the investment climate and policy environment. The **AgriFI initiative** promotes blended finance to increase investment in smallholder agriculture and micro, small and medium enterprises (MSMEs).



Photo: M. Remissa

Value chains: a major channel for agricultural development

VCs are framed around the sequence of production processes from the initial primary agricultural production to its end use: “from farm to fork”.

VCs constitute strategic productive systems relevant for fostering agricultural-based activities through investment and policies engaging farmers and business.

VCA4D responds to the need for quantitative data and evidence-based indicators to inform decision-makers. These elements are often lacking. It provides a detailed assessment of a VC’s operation and its impact on the main economic, social and environmental dimensions of sustainable development.

The VCA4D does not seek to establish a single indicator or a ranking of value chains. It intends to deliver evidence-based analytical content rather than a definite performance appraisal, so as to inform decision-makers and allow them to make their own judgement. It starts with an overall understanding of the VC dynamics (a functional analysis) in order to respond to four framing questions (Figure 1).

Figure 1: Four framing questions

FUNCTIONAL ANALYSIS	What is the contribution of the VC to sustainable economic growth?	ECONOMICS
	Is this economic growth inclusive?	ECONOMICS SOCIAL
	Is the VC socially sustainable?	SOCIAL
	Is the VC environmentally sustainable?	ENVIRONMENT

Functional analysis

Functional analysis gives an overall understanding of how the VC is organised (actors, governance...) and how it operates. It encompasses three main areas:

- **Overall description and mapping of the VC system:** identifying all the actors, indicating geographic distribution of activities and quantifying flows (Figure 2)
- **Main features of technical diagnosis:** typologies of production entities (farmers, MSMEs, etc.) and service providers; benchmarking; synthesis of key known physical and technological constraints and risks
- **Understanding the governance:** structural analysis (e.g. concentration of activities in oligopolies or oligopsonies); general organisation and forms of coordination, information flows, power relations; regulatory and policy framework

Framing question 1: What is the contribution of the VC to sustainable economic growth?

Standard tools of economic analysis are called for to estimate critical indicators for overall domestic growth, production entities performance and national economy. Actual precision depends on data availability, but only robust orders of magnitude are required. Main items expected are:

- **Total Value Added** (in contribution to GDP) to assess the economic importance of the VC within the economy
- **Micro perspective** on financial viability and profitability for the VC actors (in production accounts per type of actor)
- **Macro perspective** at key levels (impact on balance of trade; impact on public funds balance; and competitiveness and sustainability within the international economy through the Domestic Resource Cost ratio)

Framing question 2: Is this economic growth inclusive?

Simple indicators show how growth generated by the VC activities is benefiting the different population groups, businesses and service institutions. This highlights actual impact of VC development on poverty alleviation and its potential as a driver for economic development (Figure 3). Main items expected are the **distribution of value added** (in income of actors) and **job creation** (in number of jobs at the different stages of the VC).

Figure 3: Value added and income distribution

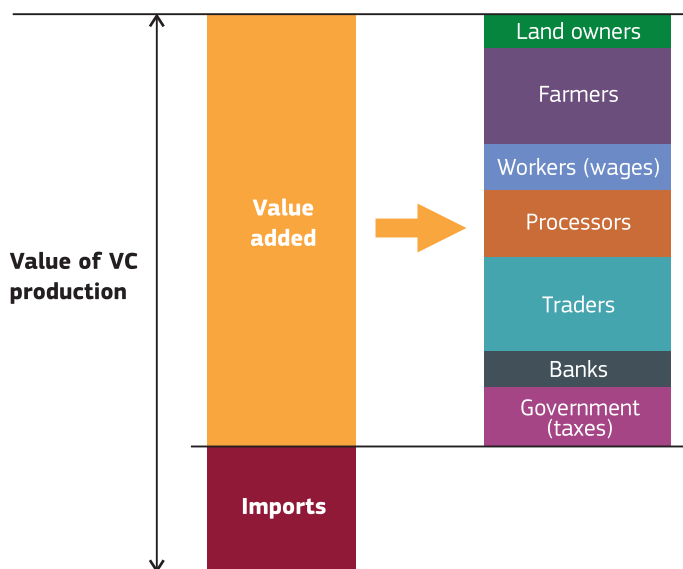
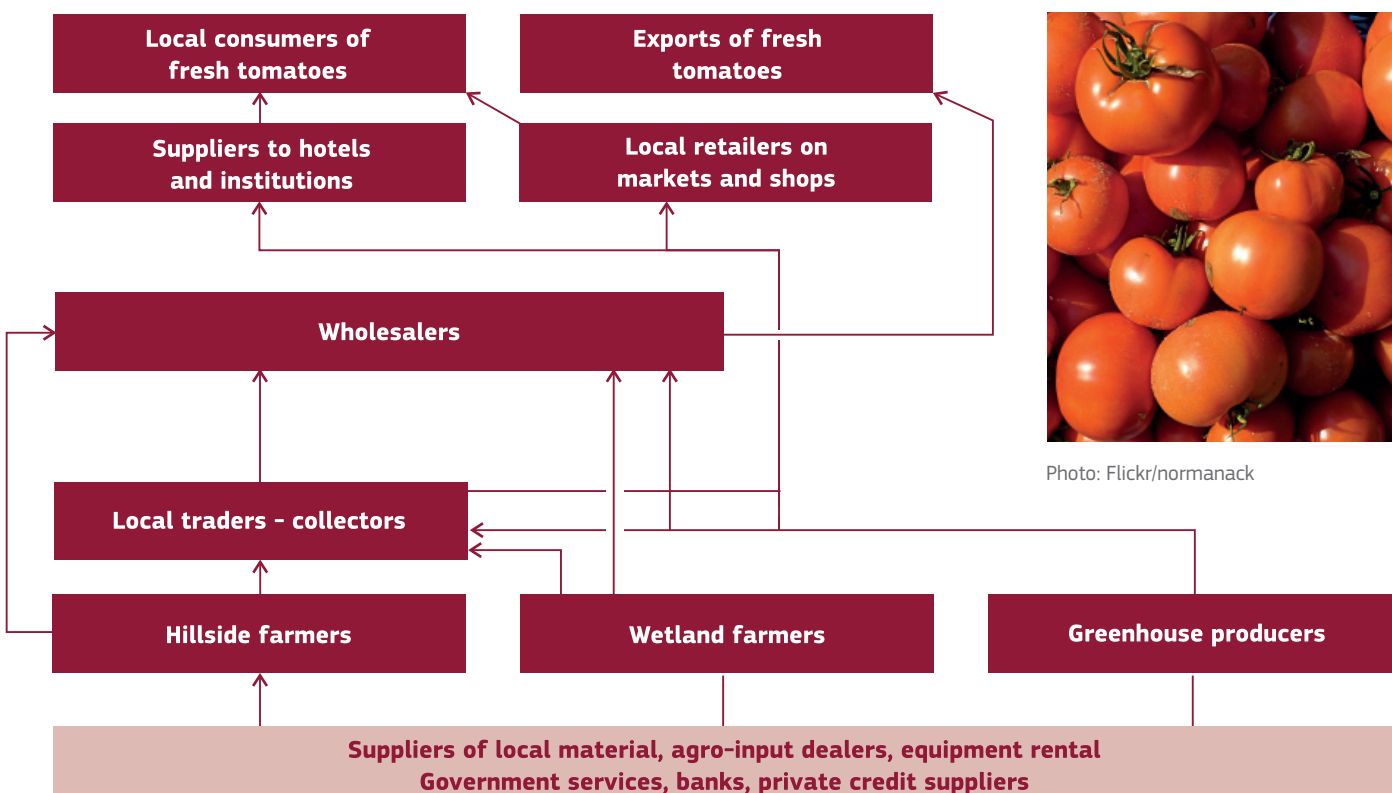


Figure 2: Flow chart of a tomato value chain

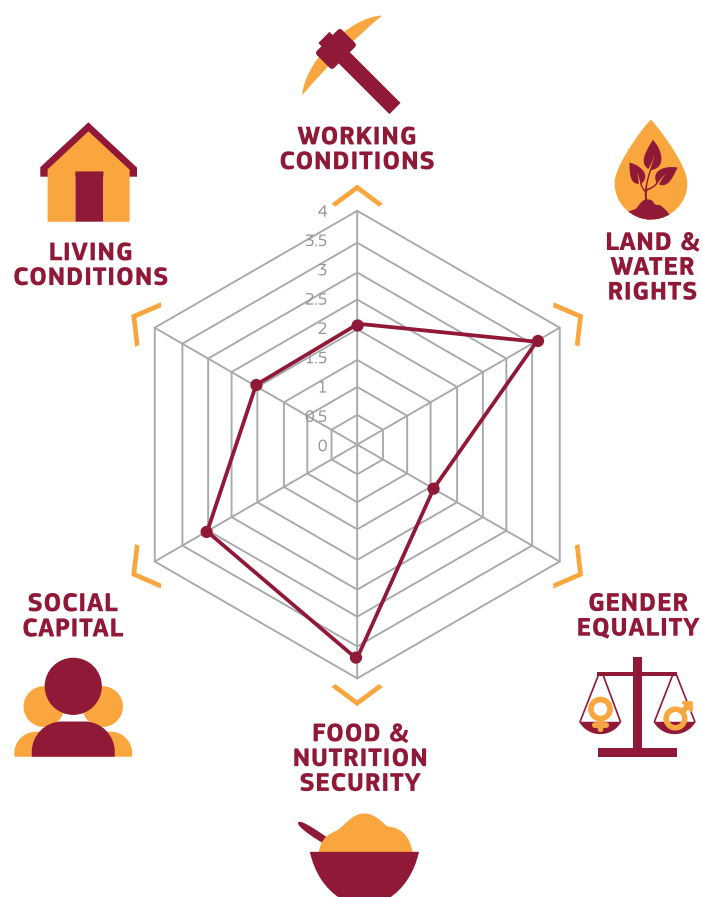


Framing question 3: Is the VC socially sustainable?

A set of questions guides the analyst in understanding the main constraints and outcomes for social sustainability in agriculture and rural territories.



Figure 4: Social Profile radar chart



Emphasis is on identifying areas where negative social effects or risks of social difficulties appear, as well as sensitive knowledge-poor areas which should be investigated in greater depth. VCA4D uses a simple “radar” chart which shows the **scores for six domains** (Figure 4). Over time, the evolution of this diagram helps shed light on changes.

Framing question 4: Is the VC environmentally sustainable?

Environmental performance of the VC operation is assessed using the Life Cycle Assessment (LCA – ISO normed) multi-criteria approach. It measures resources used and substances emitted throughout all the stages of the VC. It reviews their impacts on a set of environmental categories, such as water

and land use, eutrophication, resource depletion, presence of toxic material and release of carbon equivalent (Figure 5).

This then informs on **potential damages, risks or benefits for human health, resource depletion and ecosystem quality**.

Figure 5: Framework for a Life Cycle Assessment

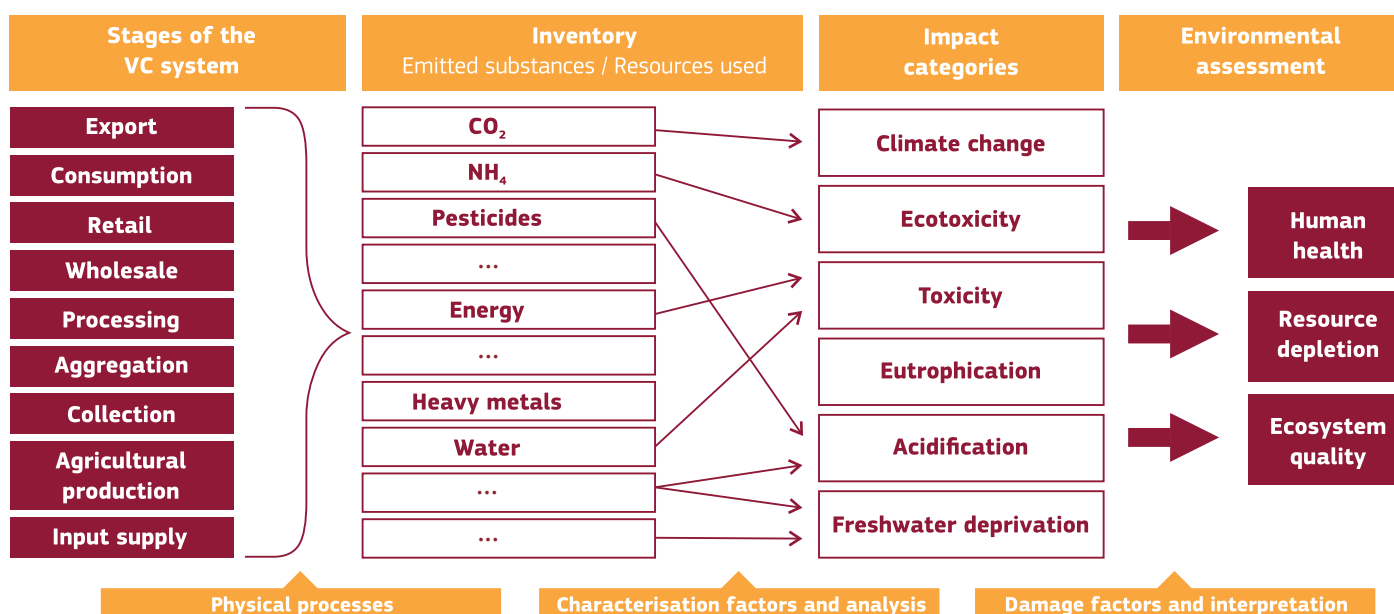


Illustration: Main conclusions of a Rice Value Chain Analysis in a West African country

The *Economic Analysis* indicated that several years of tax exemption on rice importation did not result in a reduction of prices for the consumer, leaving the margins earned by the small number of importers (an oligopsony) high.

The *Social Analysis* indicated the risk of smallholders being removed from their land by companies in areas where cultivation is done with total water control under existing weak land tenure rules.

The *Environmental Analysis* showed that the greatest impact arises during the cropping stage (in the fields) through emissions and the use of inputs. Among the cultivation systems in place, those with total water control and rainfed practices are more adapted to addressing the main environmental challenges of water and climate change.



Photo: Y. Derenne

Implementing VCA4D

EU Delegations and partners make requests for value chain analyses to help them invest in value chains and inform policy dialogue. Applying the same methodology will allow lessons to be learnt. In some cases, providing regular VCA4D support will enable impact to be tracked over time.

To carry out this work, DEVCO has set up a **partnership with AGRINATURA**, the European Alliance on agricultural knowledge for development. AGRINATURA is a grouping of 27 European universities and research organisations (see www.agrinatura-eu.eu). **For each VC analysis, an interdisciplinary team of people works in an integrated way and with a collaborative participatory mindset, mixing international and national expertise (economist, social analyst, environmental expert, technical experts as needed).**

VCA4D includes the use of three software packages for the economic and functional analysis (AgriFood value chains Analysis – AFA), the social analysis (Social Profile) and the LCA analysis (Simapro or equivalent).

VCA4D will build a database of knowledge on agri-based VCs and will draw lessons and guiding principles for relevant interventions and policies.



Photo: AFDI

The contents of this publication do not necessarily represent the official position or opinion of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of information in this publication.

Directorate General International Cooperation and Development – EuropeAid, Rue de la Loi 41, B-1049 Brussels; email: europeaid-info@ec.europa.eu

Published by Directorate General International Cooperation and Development – EuropeAid, Directorate Sustainable Growth and Development. For further information: <http://ec.europa.eu/europeaid/>