



Providing Value Chain Analysis for improving operations

WHAT? WHY? 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 (VCs): 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.

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. The methodology aims at an overall understanding of the VC dynamics (a functional analysis) and at responding to four framing questions (Figure 1).

Figure 1: Four framing questions

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

Functional analysis

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

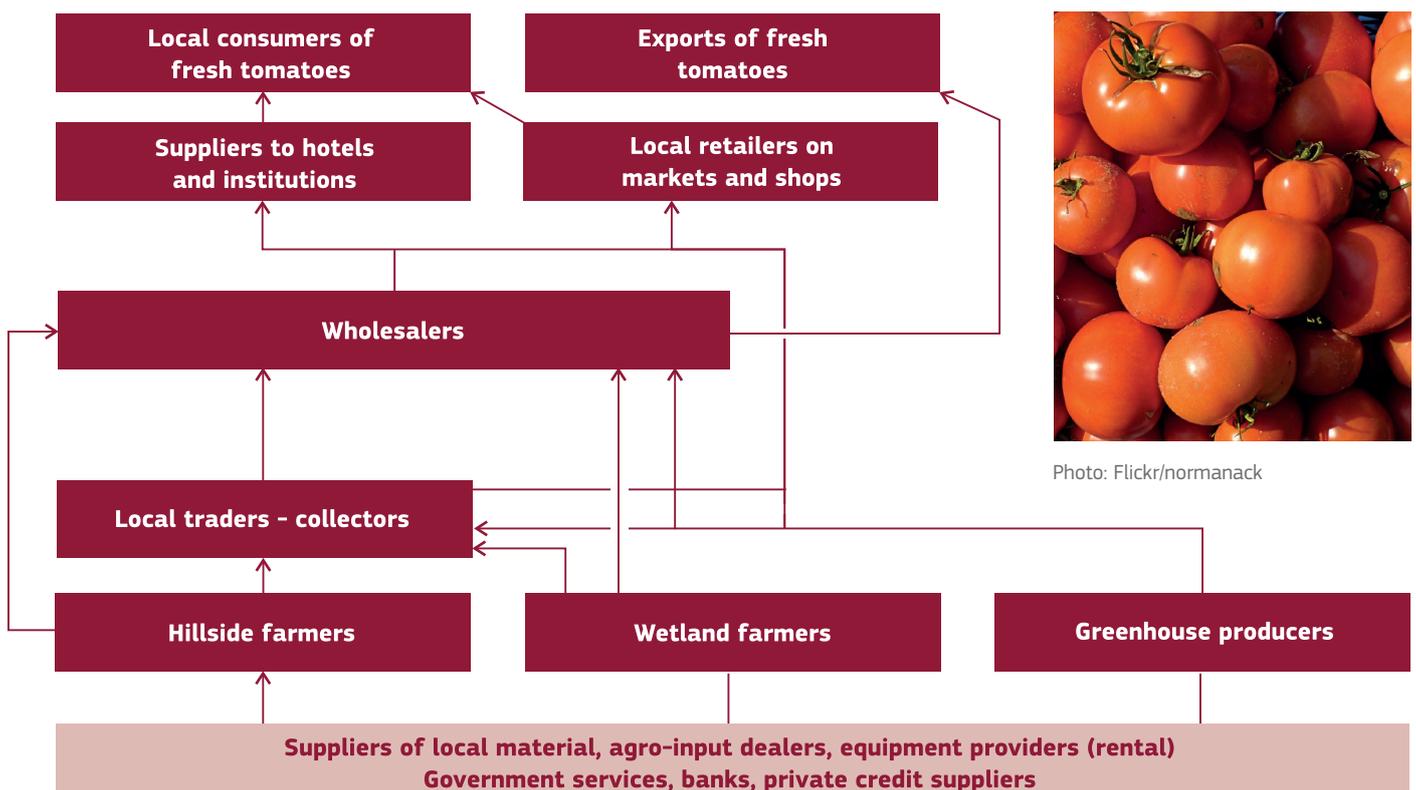
- Overall description and mapping of the VC system:** identifying the actors, indicating geographic distribution of activities and quantifying flows (Figure 2)
- Main technical features:** typologies of production entities (farmers, MSMEs, etc. and service providers; benchmarking; synthesis of key known 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 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 finance; and competitiveness and sustainability within the international economy through the Domestic Resource Cost ratio)

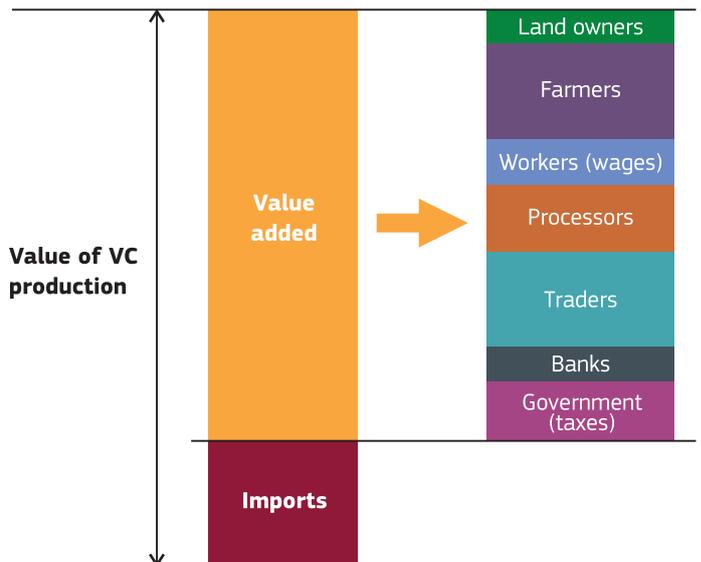
Figure 2: Flow chart of a tomato value chain



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 the 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** (across actors) and **job creation** (in number of jobs at the different stages of the VC).

Figure 3: Total value added and income distribution

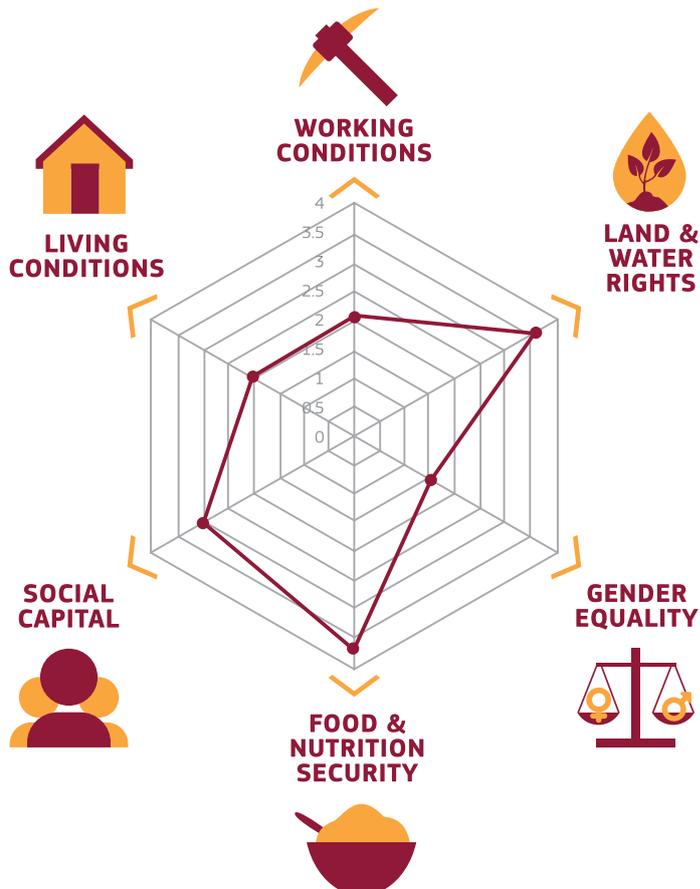


Framing question 3: Is the VC socially sustainable?

A set of questions guides the analyst in understanding the main constraints and potential for social sustainability.

-  **Working Conditions:** labour rights, child labour, job safety, attractiveness
-  **Land and Water Rights:** voluntary guidelines, transparency and consultation, equity and compensation
-  **Gender Equality:** participation in the VC, access to resources, decision-making, empowerment, division of labour
-  **Food and Nutrition Security:** availability, accessibility, utilisation and nutrition, stability
-  **Social Capital:** producer organisations, information and trust, social involvement
-  **Living Conditions:** health services, housing, education

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 resource depletion, ecosystem quality and human health.**

Figure 5: Framework for a Life Cycle Assessment

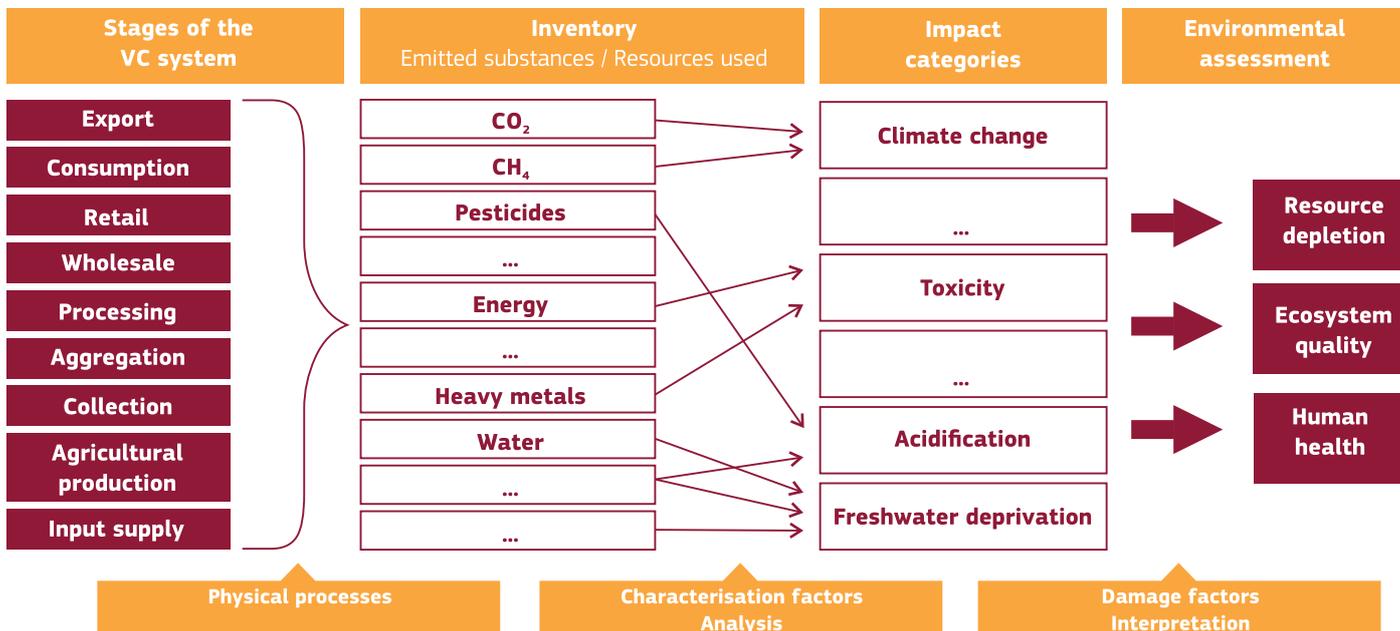


Illustration: Main conclusions of a Rice Value Chain Analysis in a West African country

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 to various VC (different countries or different products in the same country) will allow lessons to be learnt. EU Delegations may also demand VCA4D assistance on a regular basis (yearly, biennially..)



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 around 30 European universities and research organisations (see <http://agrinatura.eu.eu>). **For each VC analysis, an interdisciplinary team of 4 people works in an integrated way and with a collaborative participatory mindset, mixing international and national expertise (economist, social analyst, environmental expert).**



VCA4D includes the use of three software packages for the economic and functional analysis (AgriFood chain Analysis – AFA), the social analysis (Social Profile) and the LCA analysis (SimaPro or equivalent). For more information on VCA4D, please check: <https://europa.eu/capacity4dev/value-chain-analysis-for-development-vca4d->



Photo: AFDI

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