Value Chain Analysis for Development

- A project between Agrinatura and DEVCO (phase I 2016-2020)
- To undertake +30 studies on value chains and their updates in developing countries
- Through a toolkit elaborated by DEVCO (mainly on the basis of existing methods)
- Providing an overall understanding and a detailed assessment of value chain operations and their impact on the main dimensions of sustainable development
- Developing a knowledge and information management and sharing system
- Strengthening capacities in European and partner countries to undertake VCAs
- and fine-tuning the Methodological Brief through lessons learnt

« Knowing what is happening and informing decision-makers through evidence-based analyses and a mostly quantitative approach »
Why VCA4D:

- To have quantitative and evidence-based reliable information
- To create baselines to be followed up and updated in the course of the years
- To have information for project management (formulation, implementation, etc.), policy dialogue and policy implementation in line with EU development objectives
- To ensure that investments are development-friendly as well when involving private sector actors
- To master and manage reputational risks
- To reinforce the partnership between policy makers and research
• Implementation by Agrinatura: a partnership of around 30 European Universities and Research centers involved in agriculture and development

• VCA studies are performed by researchers/scientists

• With the purpose to create a pool of expertise, a community of practices across them, to learn lessons from the studies

• Agrinatura set up a Project Management Unit in Brussels and a Steering Group
To date we have engaged around 70 researchers (the majority associated to an Agrinatura member) that contribute to a community of practise and can be mobilised during the duration of the project.

LCA peer reviews conducted for each study

- 5 VCAs Approved
- 11 VCAs Ongoing
- 5 VCAs Upcoming
Kenya Green Beans
Development of joint partnership projects involving smallholders and agribusinesses to provide the European market with quality products

Zambia Aquaculture
Comparison between different existing and developing models of aquaculture: business models, contract farming, outgrower systems...

Zambia Egg
Understanding the linkages between the egg and the input sectors providing poultry, feed, soya.... As well as the competition between the large business and smaller poultry farmers in the egg market

Tanzania Coffee
Comparison of the value added and employment distribution in conventional and fair trade/organic systems

Swaziland Beef
Improving the productivity in small-scale farming for a more inclusive value chain

Zimbabwe Beef
Enhancement of the competitiveness of small-scale farmers to better link to markets

Specific issues related to value chains in West and Southern African countries, as per EU/countries strategies
What | Why | Who | Where | How ?
--- | --- | --- | --- | ---
Sustainable Development | ECONOMICS | SOCIAL | ENVIRONMENT | FUNCTIONAL ANALYSIS

Provide elements to answer 4 framing questions:

1. What is the contribution of the VC to economic growth?
2. Is this economic growth inclusive?
3. Is the VC socially sustainable?
4. Is the VC environmentally sustainable?

...to give an overall picture of a value chain
A starting point: the Functional Analysis

Overall understanding of how the VC is organized and how it operates

- General description of the value chain system
- Elements of technical diagnosis
- Understanding the governance

What     Why     Who     Where     How ?
<table>
<thead>
<tr>
<th>What</th>
<th>Why</th>
<th>Who</th>
<th>Where</th>
<th>How?</th>
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</thead>
<tbody>
<tr>
<td>General description of the VC system</td>
<td>Elements of technical diagnosis</td>
<td>Understanding the governance</td>
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<tr>
<td>Main and end products</td>
<td>Agricultural production</td>
<td>Marketing networks and distribution channels</td>
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<td>Functions</td>
<td>Services and agro-dealers</td>
<td>Horizontal coordination</td>
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<tr>
<td>Actors</td>
<td>Farm equipment and infrastructures</td>
<td>Vertical coordination</td>
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<td>Flow(s) of products</td>
<td>On farm post-harvest</td>
<td>Regulatory and policy framework</td>
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<tr>
<td>Location of activities</td>
<td>Downstream processing</td>
<td>Governance systems of the VC</td>
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<tr>
<td>Production systems and sub-chains</td>
<td>Marketing and trade</td>
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<tr>
<td>Quantification</td>
<td>Regional infrastructures</td>
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<td>Imports</td>
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<td>Exports</td>
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</tbody>
</table>
1. What is the contribution of the value chain to economic growth?

Estimation of critical indicators

- Economic viability for every type of actors (financial analysis)
- Overall effects in the national economy
- Sustainability and viability within the international economy

Financial and Economic Analysis

« Financial analysis » of actors
Effects within the national economy

- Value of VC production
  - VA Producers
  - VA Processors
  - VA Traders

- Intermediate consumption
  - Direct value added
    - Fertiliser
    - Energy
    - Packaging
    - Transport

- Domestic IC
- Indirect VA
- Indirect imports
- Direct imports
- Total VA
- Total imports

Indirect VA and indirect imports estimated through backward linkages computation

Contribution
- GDP / Economic Growth
- Agricultural GDP
- Public Funds
- Balance of Trade
2. Is this economic growth inclusive?

How is the generated growth benefiting the different population groups, businesses and institutions?

- Income distribution
- Employment creation
- Marginalized groups
- Impact of the organisation on income distribution

Financial and Economic Analysis
Social Analysis
A tailor-made « Social Profile »

• Insights on 6 domains by scoring 63 questions

• To point out social opportunities, benefits, constraints, impacts linked to the value chain

• To be used as a basis for a social analysis

3. Is the value chain **socially** sustainable?
• Assessing risks ➔ likelihood and impact
• Make your judgement scoring 63 questions:
  – High
  – Substantial
  – Moderate/Low
  – Low/Not at all
  – n/a « Not applicable » or « Not available »
• Compounded average
  – Questions ➔ Sub-domains ➔ Domains (⇒ Global)
• A process of reflection
  – With adjustments possible at sub-domain level
  – Calling for comments, problem identification, mitigating measures...
<table>
<thead>
<tr>
<th>Dimension</th>
<th>5 SOCIAL CAPITAL</th>
<th>6 LIVING CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WORKING CONDITIONS</td>
<td>5.1 Strength of producer organisations</td>
<td>6.1 Health services</td>
</tr>
<tr>
<td>1.1 Respect of labour rights</td>
<td>5.2 Information and confidence</td>
<td>6.2 Housing</td>
</tr>
<tr>
<td>1.2 Child Labour</td>
<td>5.3 Social involvement</td>
<td>6.3 Education and training</td>
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<tr>
<td>1.3 Job safety</td>
<td></td>
<td>6.4 Mobility ???????</td>
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<tr>
<td>1.4 Attractiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
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<tr>
<td>2 LAND &amp; WATER RIGHTS</td>
<td></td>
<td></td>
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<tr>
<td>2.1 Adherence to VGGT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Transparency, participation and consulta</td>
<td>6.5 Infrastructure and services</td>
<td></td>
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<tr>
<td>2.3 Equity, compensation and justice</td>
<td>6.6 Sanitation and hygiene</td>
<td></td>
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<tr>
<td>Average</td>
<td></td>
<td></td>
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<tr>
<td>3 GENDER EQUALITY</td>
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<tr>
<td>3.1 Economic activities</td>
<td></td>
<td></td>
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<tr>
<td>3.2 Access to resources and services</td>
<td>6.7 Water supply and sanitation</td>
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<td>3.3 Decision making</td>
<td></td>
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<td>3.4 Leadership and empowerment</td>
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<tr>
<td>3.5 Hardship and division of labour</td>
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<tr>
<td>Average</td>
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<tr>
<td>4 FOOD AND NUTRITION SECURITY</td>
<td></td>
<td></td>
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<tr>
<td>4.1 Availability of food</td>
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<tr>
<td>4.2 Accessibility of food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Utilisation and nutritional adequacy</td>
<td>6.8 Education and training</td>
<td></td>
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<tr>
<td>4.4 Stability</td>
<td></td>
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</tr>
</tbody>
</table>
A score grid of 63 questions

1 WORKING CONDITIONS

1.1 Respect of labour rights

1.1.1 To what extent do companies involved in the value chain respect the standards elaborated in the 8 fundamental ILO international labour conventions and in the CESCR and ICCPR?

<table>
<thead>
<tr>
<th>Question</th>
<th>Score level</th>
<th>Count</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>4</td>
<td>Please add justification.</td>
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</table>

1.1.2 Is freedom of association allowed and effective (collective bargaining)?

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<tr>
<th>Question</th>
<th>Score level</th>
<th>Count</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Substantial</td>
<td>3</td>
<td>Please add justification.</td>
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</table>

1.1.3 To what extent do workers benefit from enforceable and fair contracts

<table>
<thead>
<tr>
<th>Question</th>
<th>Score level</th>
<th>Count</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Moderate/Low</td>
<td>2</td>
<td>Please add justification.</td>
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</tbody>
</table>

1.1.4 To what extent are risks of forced labour in any segment of the value chain minimised?

<table>
<thead>
<tr>
<th>Question</th>
<th>Score level</th>
<th>Count</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>1</td>
<td>Please add justification.</td>
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</tbody>
</table>

1.1.5 To what extent are any risks of discrimination in employment for specific categories of the population minimised?

<table>
<thead>
<tr>
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<th>Score level</th>
<th>Count</th>
<th>Comments</th>
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<tbody>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>Please add justification.</td>
</tr>
</tbody>
</table>

Average: Substantial 2,50 2,50 Final: Substantial 2,50 Justification if adjustment of the score level = ...

1.2 Child Labour

1.2.1 Degree of school attendance in case children are working (in any segment of the value chain)?

<table>
<thead>
<tr>
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<th>Score level</th>
<th>Count</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>Please add justification.</td>
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</table>

1.2.2 Are children protected from exposure to harmful jobs?

<table>
<thead>
<tr>
<th>Question</th>
<th>Score level</th>
<th>Count</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>Please add justification.</td>
</tr>
</tbody>
</table>

Average: n/a n/a n/a Final: n/a n/a Justification if adjustment of the score level = ...

1.3 Job safety

1.3.1 Degree of protection from accidents and health damages (in any segment of the value chain)?

<table>
<thead>
<tr>
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<th>Score level</th>
<th>Count</th>
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<tbody>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>Please add justification.</td>
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</table>

Average: n/a n/a n/a Final: n/a n/a Justification if adjustment of the score level = ...

1.4 Attractiveness

1.4.1 To what extent are remunerations in

<table>
<thead>
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<th>Count</th>
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<tbody>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>Please add justification.</td>
</tr>
<tr>
<td>Domain</td>
<td>Present profile</td>
<td>Trend</td>
<td>Previous profile</td>
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<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td>1 WORKING CONDITIONS</td>
<td>Moderate/Low</td>
<td>↑</td>
<td>Not at all</td>
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<td>↑</td>
<td>Not at all</td>
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<tr>
<td>4 FOOD AND NUTRITION SECURITY</td>
<td>Substantial</td>
<td>↑</td>
<td>Not at all</td>
</tr>
<tr>
<td>5 SOCIAL CAPITAL</td>
<td>Moderate/Low</td>
<td>↑</td>
<td>Not at all</td>
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<tr>
<td>6 LIVING CONDITIONS</td>
<td>Moderate/Low</td>
<td>↑</td>
<td>Not at all</td>
</tr>
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![Radial plot](image)
Environmental Analysis

Stages of the VC system
- Export
- Consumption
- Retail
- Wholesale
- Processing
- Aggregation
- Collection
- Agricultural production
- Input supply

Inventory
- Emitted substances / Resources used
  - CO₂
  - CH₄
  - Pesticides
  - Energy
  - Heavy metals
  - Water

Impact categories
- Climate change
- Toxicity
- Acidification
- Freshwater deprivation

Environmental assessment
- Human health
- Resource depletion
- Ecosystem quality

Physical processes
Characterisation factors Analysis
Damage factors Interpretation

4. Is the value chain **environmentally** sustainable?
CQ1.1. How profitable and sustainable are the VC activities for the entities involved?
CQ1.2. What is the contribution of the VC to the GDP?
CQ1.3. What is the contribution of the VC to the agriculture sector GDP?
CQ1.4. What is the contribution of the VC to the public finances?
CQ1.5. What is the contribution of the VC to the balance of trade?
CQ1.6. Is the VC viable in the international economy?

CQ2.1. How is income distributed across actors of the VC?
CQ2.2. What is the impact of the governance systems on income distribution?
CQ2.3. How is employment distributed across the VC?

CQ3.1. Are working conditions throughout the VC socially acceptable and sustainable?
CQ3.2. Are land and water rights socially acceptable and sustainable?
CQ3.3. Is gender equality throughout the VC acknowledged, accepted and enhanced?
CQ3.4. Are food and nutrition conditions acceptable and secure?
CQ3.5. Is social capital enhanced and equitably distributed throughout the VC?
CQ3.6. To which standards are major social infrastructures and services acceptable and do the VC operations contribute to improving them?

CQ4.1. What is the potential impact of the VC on resources depletion?
CQ4.2. What is the potential impact of VC on ecosystem quality?
CQ4.3. What is the potential impact of the VC on human health?

FQ1. What is the contribution of the VC to economic growth?
FQ2. Is this economic growth inclusive?
FQ3. Is the VC socially sustainable?
FQ4. Is the VC environmentally sustainable?

The 19 core questions shed light on the 3 dimensions of impact.
Supporting the formulation of the appraisal on the 4 framing questions.
Allowing decision-makers to make their own judgement.

Strong methodological choice: no aggregation of the knowledge elements into one global appraisal or one single indicator.
How to have more information on VCA4D please consult:

- On the project: https://europa.eu/capacity4dev/value-chain-analysis-for-development-vca4d-

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