Case Study: The roll-out of STEP ONE in the coffee value chain of Colombia

Step 1: Value Chain Selection in Colombia

1. Overview

Among the three assessed value chains (Coffee, Banana and Cut Flowers), coffee got the highest score thanks to its market position, the sector organizational structure it offers as well as its high potential for transferability of findings. It appears that OSH is an important matter in the value chain while the latter involves mainly smallholders, making the topic particularly relevant to research. The value chain counts private compliance initiatives, many of which include OSH, with little existing knowledge on their impact. The banana and cut-flower value chains counted important hazards, especially as relate to chemical use, though the availability of actors was called into question in the framework of the current peace process in Colombia and on the basis of past projects led by the ILO.

The results were discussed with the ILO Country Office for Andean Countries. The office agreed with the conclusions of the rapid assessment and confirmed that coffee was a value chain of interest for the country and had functioning collaboration platforms on the basis of which the project could work.

2. Objectives

This report was formulated within the framework of the Joint ILO-EU project to improve knowledge base and safety and health in global value chains to support G20 work on safer workplaces. It serves for the selection of an agricultural value chain in Colombia on which case studies to further research drivers and bottlenecks for OSH improvement will then be developed.

3. Methodology

In Colombia, the three major agricultural exports were assessed: banana, coffee and cut flowers. The present report was elaborated on the basis of a desk review of relevant information and publications. The present report does not pretend to be exhaustive or comprehensive of all information available on the value chains studied, rather it is organized by pre-defined criteria and is meant to support an informed decision.

4. Timeframe

Four weeks of desk review and consultation with the regional specialists in the field and relevant national stakeholders.

5. Rapid Assessment

5.1 Banana

5.1.1 Market position

Table 1. Banana Market Position

| Criteria | Description of information found | Score |
|---|--|-------|
| Importance of the sector for the local economy | Colombia is the world fourth exporter of bananas. The value of those exports is affected by fluctuant exchange rates with the dollar, as banana exports are paid in dollars, not Colombian pesos. Banana exports represented 0.4% of GDP in 2014 (i.e. 961 million USD in 2014) ¹ . It is the third agricultural export of the country. Exports represent about 5% of the local production of banana ² . | |
| Prospects for growth in demand | Global demand has been increasing over the past decades in volume but decreasing in value since the mid-nineties. Latin America is the lead region exporting bananas but its share in world exports is slowly decreasing³. Consumer demand worldwide for fair trade banana is rising. Globally, sales of Fairtrade bananas have shown continual growth since they were launched in 1999 and were multiplied by more than seven between 2002 and 2008⁴. The EU (especially Benelux, UK, Italy and Germany) and the US are the main trade partners of Colombia with over 99% of its banana exports (respectively 75 and 24 %). Colombia is the second biggest exporter of banana to the EU and the fourth exporter to the US. The EU is the biggest importer of banana in the world, banana being the third consumed fruit in the EU, the UK having the highest consumption per capita (almost 17kg/year according to Eurostat). Emerging economies do not seem to impact banana world exports, as most of them are banana producers themselves. | 4 |

¹ <u>http://atlas.media.mit.edu/en/profile/country/col/</u>

² Espinal G. C. F. et al. 2005. *La Cadena Del Plátano En Colombia Una Mirada Global De Su Estructura Y Dinamica 1991-2005*. Ministerio de Agricultura y Desarrollo Rural, Observatorio Agrocadenas Colombia, Documento de Trabajo No. 61. Available at: http://www.asohofrucol.com.co/archivos/cadenas/platano.pdf

³ Overview of Banana Production and Trade, FAO. Available at: <u>http://www.fao.org/docrep/007/y5102e/y5102e04.htm</u>

⁴ Smith, S. 2010. *Fairtrade Bananas: a Global Assessment of Impact*, Institute of Development Studies, University of Sussex, UK. Final Report: April 2010. Available at:

http://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/2010 Fairtrade bananas a global assessment of impact .pdf

| Criteria | Description of information found | |
|--------------------------------------|---|-----|
| | | |
| Competitiveness and profitability | Main competitors are Ecuador, the Philippines, Costa Rica, Guatemala, Dominican Republic and to a lesser extent Cameroon, Cote d'Ivoire and the producing territories that are part of the EU (i.e. Canary, Martinique, Guadeloupe) ⁵ . | |
| | Colombia has a unit value sold to the EU which is higher than the one of Ecuador and other central American countries (i.e. 0.65 euros per kg against 0.59 euros per kg). Still the unit cost is below the ones practiced by ACP countries (i.e. 0.70 euro per kg for Cameroon for instance). | |
| | Studies show that Colombia is the banana producer in which the highest share of total product value is going to the producer ⁶ . Still, it is important to underline that in recent decades supermarkets entered the banana market as a major player, cutting down the market share of big fruit exporters. This entry is creating pressure on the value chain and changing to some extent production modes which were quite vertically integrated initially (major fruit companies integrated vertically the whole chain). As retailers are estimated to capture most of the product value (over a third) ⁷ , profitability down the value chain is under pressure, contract farming has spread over the past decades and investment is low ⁸ . | 3.5 |
| | It seems that a fair proportion of plantations are Global GAP or ISO certified. Some brands like Chiquita source 100% Rainforest Alliance certified bananas. Those certifications seem more difficult to access for small holders as they are not directly linked to a price premium, a number of them turn to Fairtrade certification instead. Colombia is producing 35% of global Fairtrade banana sales. Organics are only a small fraction of Colombia's banana exports, but it is growing, mainly through the certification of medium and large fruit companies' plantations (Grupo Daabon was the only one until 2006 and since then Dole and others started) ⁹ . | |

⁵ Eurostat 2016, available at: <u>http://ec.europa.eu/agriculture/fruit-and-vegetables/product-reports/bananas/statistics/value_en.pdf</u> ⁶ BASIC. 2015. Banana value chains in Europe and the consequences of Unfair Trading Practices.

^o BASIC, 2015. Banana value chains in Europe and the consequences of Unfair Trading Practi ⁷ Ibid.

^{&#}x27; ibid.

⁸ "Los problemas fitosanitarios y los bajos niveles de inversión en el cultivo en labores como la adecuación de fincas, renovación, fertilización y drenaje, son las principales causas de pérdida competitiva en los mercados internacionales, pues han afectado seriamente la productividad de los cultivos y la calidad de la producción para exportación." (Espinal G. C. F. et al. 2005)

⁹ FAO. 2008. Certification In The Value Chain For Fresh Fruits The example of banana industry. FAO Commodity Studies. Available at: <u>http://www.fao.org/3/a-i0529e.pdf</u>

5.1.2 Employment and Working Conditions

Table 2. Banana Employment and Working Conditions

| Criteria | Description of information found | Score |
|---|--|-------|
| Employment (importance in terms of employment, potential for growth) | The banana industry was estimated to employ directly 286,000 workers in 2005 ¹⁰ . Only a part of those jobs is directly related to global value chains: estimates indicated that it gave direct employment to 39 400 people and generated around 118 200 indirect jobs in 2013 ¹¹ . Part of the labour opportunities available in this sector take the form of more or less formalized permanent jobs in plantations, at sorting and packing stages and within export companies. Another part is composed of small holders who are linked to the value chain through contract farming arrangements. Potential for growth in employment is uncertain. On the one hand, the banana industry experienced a crisis in 2013 and a number of jobs were destroyed ¹² . On the other hand, as rural development is an important focus of the new peace agreements and that banana production areas will be directly affected by those provisions, this may create an opportunity for employment growth ¹³ . | 3.75 |
| Vulnerability of employment | The banana exporting industry in Colombia has a long history of labour right conflicts. Still, within the Latin American region, | |
| patterns and relative quality of working | Colombia is reported to be the country where trade union rights in the banana industry are respected the most ¹⁴ . Collective bargaining agreements protect workers in the industry (addressing | |
| conditions | wages, working hours, social protection, etc.), with enforcement being stricter in certified, fully formalized large-scale plantations ¹⁵ . | 3.5 |

¹⁰ Espinal G. C. F. et al. 2005. *La Cadena Del Plátano En Colombia Una Mirada Global De Su Estructura Y Dinamica 1991-2005*. Ministerio de Agricultura y Desarrollo Rural, Observatorio Agrocadenas Colombia, Documento de Trabajo No. 61. Available at: <u>http://www.asohofrucol.com.co/archivos/cadenas/platano.pdf</u>

¹¹ Banco de la Republica de Colombia, Centro de estudios económicos regionales. 2013. in: BASIC.2014. Analysis of German Banana Value Chains and Impacts on Small Farmers and Workers. Final Report, June 2014. Available at:

http://www.bananalink.org.uk/sites/default/files/Germany%20bananenstudie-oxfam-englisch.pdf

¹² http://www.freshplaza.com/article/105047/Plantations-closing-due-to-Colombias-banana-crisis

¹³ Desarrollo rural integral - <u>http://www.acuerdodepaz.gov.co/acuerdos/mejores-oportunidades-para-el-</u>

campo#utm_source=MEC&utm_medium=SEM&utm_campaign=Desarrollo_Rural

 $[\]label{eq:https://www.theguardian.com/sustainable-business/fairtrade-partner-zone/2016/jul/19/banana-workers-are-helping-to-rebuild-a-peaceful-just-society-in-colombia$

 $[\]underline{https://www.fairtrade.at/newsroom/aktuelles/details/banana-workers-for-a-peaceful-society-in-colombia-1283.html and a statement of the sta$

¹⁴ González-Pérez, María-Alejandra & McDonough, Terrence. 2007. "More than Bananas: Social responsibility Networks and labour relations in the banana industry in the Urabá Region of Colombia". In: Schmidt, V. (Ed), *Trade Union strategies towards globalization* (pp. 139-152). ILO, (Geneva).

¹⁵ "The development of the industry during the demobilisation period in the early 1990's offered significant employment opportunities to the exguerilleros and their families. Their strong social identity during the civil war was the building-block for very strong trade union. Today the Sintrainagro trade union includes some 19 000 workers, representing the overwhelming majority of the permanent banana workers in the country." (BASIC, 2014).

| Criteria | Description of information found | Score |
|--|--|-------|
| | It seems there were reports of discrimination against women in the banana industry in Latin America for decades ¹⁶ . Over the last 15 years the proportion of female workers on Latin American banana plantations has fallen by 60%, so that they now make up 10% of the workforce ¹⁷ . Working conditions and vulnerability of employment may be of another nature for small holders, with possibly some non-standard forms of employment and less protection. | |
| Weakness of risk management systems and mitigation mechanisms | Colombia has an extensive legislation on OSH articulated through the <i>Sistema General de Riesgos Laborales</i> which aims at coordinating the different actors involved in the prevention, mitigation and compensation of work accidents and diseases. Legal requirements as regards OSH from the Labour Code exist and apply to agriculture ¹⁸ , though enforcement through inspection seems weaker in agriculture than in other sectors ¹⁹ . Collective Bargaining Agreements were not found online, still they | 3 |
| | may be an additional source of protection ²⁰ . Some value chain specific requirements were found in the various certification schemes of the sector. Almost all schemes have specific indicators, sometimes entire sections, on OSH, focusing mainly on OSH management systems and chemical use and handling ²¹ . A significant part of the banana production is certified, hence the reach of those provisions may be significant as well. | |
| Importance of risk factors | There are several types of risks along the value chain. On-farm work involves potential risks such as chemical exposure, risks related to tools and load handling, as well as common risks relating to contact with pests, contaminated water, etc. The below figure is a first attempt to identify main risk factors at the different stages | 4.5 |

¹⁶ Especially on maternity protection. It is also important to underline that exposure to some of the chemicals used in banana plantation were proven to have impact on pregnancies (miscarriages, birth defects) such as nematicide Nemagon.

¹⁷ http://www.bananalink.org.uk/women-banana-industry

¹⁸ Additionally, the *Plan Nacional de Salud Ocupacional 2013-2021* lays out as a clear priority the extension of the *Sistema General de Riesgos Laborales* and improved OSH to workers in the informal economy and in SMEs.

¹⁹ 477 inspections conducted in agriculture in 2014 (representing a little more than 3% of all inspections). An estimated 38% of formally employed workers in Colombia are part of Safety and Health Committees.

²⁰ <u>http://www.augura.com.co</u>

²¹ 40 schemes identified by ITC Standards Map - <u>http://www.standardsmap.org/identify</u>

| Criteria | Description of information found | Score |
|----------|---|-------|
| | of the value chain ²² and would need to be completed by a proper risk assessment. The overall fragility of the producing regions with the presence of armed conflicts is an additional risk factor for the safety of persons, including workers in the banana industry. | |
| | Disaggregated data at the value chain level was not found regarding accidents and Lost Time Accident, though some evidence may be available at the certification company level for production which is certified (this information was not found in the public domain). | |

5.1.3 Environmental and Social Dimensions

Table 3. Banana Environmental and Social Dimensions

| Criteria | Description of information found | Score |
|--|---|-------|
| Potential to engage poor communities | Production for export is concentrated in the regions of the Urabá Gulf and the North East ²³ in rural areas. Rural poverty headcount at national poverty lines is higher for rural population (40.3%) (and most banana workers are rural migrant workers) than total poverty headcount (27.8%) ²⁴ . It can be inferred that an intervention to improve OSH would have the potential to impact communities that are relatively poor, especially when focusing on contract farming arrangements and displaced populations. | 4.5 |
| Positive impact of climate change | Occurrence of weather related disasters, amplified with climate change, can have a strong impact on plants such as banana, and especially on plantations if they are not part of an integrated agro- forestry system. No evidence of opportunities as relate to climate change was found. | 2.5 |

²² Banana Link. 2012. "Unions here can help workers everywhere secure safe work", Hazards Magazine issue 117, January-March 2012. Available at: http://www.hazards.org/workingworld/bananalink.htm World Banana Forum. Working Group 03 Labour Rights. Diagnosis On the Labour Rights Situation in the International Banana Industry: Paper On Occupational Health And Safety. Presentation to the 2nd World Banana Forum. Feb. 2012, (Ecuador). Available at:

http://www.fao.org/fileadmin/templates/banana/documents/WGs_outputs/WG03_OHS_en.pdf

²³ "Las regiones del Golfo de Urabá y el nororiente del departamento del Magdalena, sobresalen por el grado de especialización que han alcanzado en la producción y exportación de banano y plátano con altos niveles de productividad e integración de los productores y comercializadores, entre otras razones, gracias a las ventajas comparativas de localización y calidad de los suelos con respecto a otras zonas productoras del mundo." (Espinal G. C. F. et al. 2005).

²⁴ World Development Indicators, the World Bank, 2015.

| Criteria | Description of information found | |
|--|---|-----|
| Potential to avoid or limit negative impact on the environment and health of communities | The extensive cultivation of banana in Colombian plantations is an important chemical consumer, with the exception of the organic part. It requires high levels of fertilizers which found few organic alternatives and are important sources of CO2. Additionally, pesticides are also being used ²⁵ . Water, air and soil production happen due to the use of agrochemicals at production stage. Carbon emissions related to operations in the chain are mostly concentrated within fertilizer and transportation. In certified production areas, good practices for the preservation | 3.5 |
| | of the environment are promoted and regularly monitored. | |

5.1.4 Sector Organization and Regulation

Table 4. Banana Sector Organization and Regulation

| Criteria | Description of information found | Score |
|--|--|-------|
| Level of investment in the sector | The desk review did not come across the total volume of investment in the value chain. It seems agricultural subsidy schemes in Colombia benefit particularly the fruit sub-sector (i.e. <i>Incentivo de Capitalización Rural</i>) and subsidies are also allocated where adequate phytosanitary management can be demonstrated (Colombian Agro Institute). Little on private investment was found. Still, changing trade mechanisms may provide incentives for investment²⁶. | 3.5 |
| Level of organization and collaboration | The sector is still relatively well integrated vertically and institutionalized through collective bargaining agreements. Though social dialogue is institutionalized (with major trade unions such as Augura or Sintrainagro and four main exporting companies), there | 4 |

 ²⁵ CIRAD, 2012, available at: <u>http://www.cirad.fr/en/research-operations/tropical-value-chains/banana-and-plantain/context-and-issues</u>
 ²⁶ Geneva Agreement on Trade in Bananas: Since 2009, an agreement was established between the EU Commission, Latin American Most

Source: European Commission DG for Agriculture and Rural Development. 2013.

Favoured Nations (MFN) and the US to cut the MFN import tariff on bananas from 176 euros/tonne to 114/tonne in 2017 or 2019 at the latest. Bilateral agreement: since 2013, the EC and Colombia signed a bilateral agreement for a gradual reduction of the import duty for bananas down to 75 EUR/ton as of january 2020.

| Criteria | Description of information found | Score |
|---|---|-------|
| | is an historic opposition between workers and employers in the sector. Additionally, the intervention of retailers as a growing player in recent decades changed the sector without adapting the institutional framework. Little was found on the organization and collaboration with small holders integrated in the value chain. | |
| Availability and capacities of stakeholders | Stakeholders' capacities are likely to be higher than in other agricultural value chains which are less vertically integrated and formalized. The desk review did not come across projects aiming specifically at addressing working conditions and more specifically OSH in the banana value chain, stakeholders are thus likely to be relatively available, with the limitation that dispersed smallholders may be difficult to reach and mobilize for the part of the chain that works under contract farming arrangements. The peace process may also interfere with stakeholders' availability. | 3.5 |
| Policy relevance / political interest | Since banana is a lead export and makes up for a significant share of rural employment, which is at the heart of the new rural development policy in the context of peace building in Colombia ²⁷ , policy relevance is high. This political interest is both an opportunity and a risk for the project as it creates a constraint on stakeholders' availability and possibly increases the political sensitiveness of interventions in the value chain. The sector expressed a particular interest for addressing OSH in the value chain during the Banana World Forum 2012 ²⁸ . | 4 |

5.1.5 Potential for Transferability

Table 5. Banana Potential for Transferability

²⁷ Desarrollo rural integral, available at: <u>http://www.acuerdodepaz.gov.co/acuerdos/mejores-oportunidades-para-el-campo#utm_source=MEC&utm_medium=SEM&utm_campaign=Desarrollo_Rural</u>

²⁸ The main points mentioned were that ILO convention 184 on Health and Safety in Agriculture and 187 were not ratified by Colombia, which were considered necessary for the improvement of labour conditions in the banana sector. Most union leaders of Costa Rica, Nicaragua, Colombia, Guatemala and Panama believed that their country country's government or companies were not making enough progress towards establishing policies on occupational health, however the issue should have more attention, mainly issues such as agrochemicals, aerial spraying, social security and especially diseases that are not yet recognized as occupational.

| Criteria | Description of information found | Score |
|--|---|-------|
| Commodity traded from other developing countries | A number of other developing countries are major banana exporters in Latin America and the Caribbean (Ecuador, the Philippines, Costa Rica, Guatemala, Dominican Republic, etc.) and to a lesser extent in Africa (Cameroon, Cote d'Ivoire, Ghana) where it is an important cash crop. | 4.5 |
| Transferability to other similar chains locally | No evidence was found. Other major commodities traded by Colombia grown in plantations include cut flowers, but they have distinct production processes. Since smallholders usually cultivate various crops, there is a possible spill over effect for smallholders involved in the chain. | 2.5 |
| Potential transferability through lead firms | The sector is quite vertically integrated with a few players both at national and international levels. Sustainability is a growing concern for EU and US markets. Hence, there is a possibility of transferability through lead firms, with the limitation that engaging with retailers may be more difficult than traditional fruit companies in terms of interest for responsible sourcing. | 4.5 |

5.1.6 Final score

Table 6. Banana Final Score Matrix

| | | Banana | |
|---|-------|--------|-------------------|
| Criteria | Score | Weight | Weighted score |
| 1. Market position | | | |
| Importance of the value chain for the local economy | 4 | 0.4 | 1.6 |
| Prospects for growth in demand | 4 | 0.3 | 1.2 |
| Competitiveness and profitability | 3.5 | 0.3 | 1.05 |
| Sub-total I | | | 3.85 |
| 2. Employment and working conditions | | | |
| Importance of the SC in terms of employment and job growth | 3.75 | 0.3 | 1.125 |
| Vulnerability of employment patterns and relative quality of working conditions | 3.5 | 0.2 | 0.7 |
| Weakness of risk management systems and mitigation mechanisms | 3 | 0.2 | 0.6 |

| Importance of risk factors / hazards | 4.5 | 0.3 | 1.35 |
|---|-----|-----|-------|
| Sub-total II | | | 3.775 |
| 3. Environmental and social dimensions | | | |
| Potential to engage with poor communities | 4.5 | 0.4 | 1.8 |
| Positive impact of climate change | 2.5 | 0.2 | 0.5 |
| Potential to avoid negative impact on the environment and health of local communities | 3.5 | 0.4 | 1.4 |
| Sub-total III | | | 3.7 |
| 4. Sector organization and regulation | | | |
| Level of investment in the sector | 3.5 | 0.2 | 0.7 |
| Level of organization and collaboration | 4 | 0.3 | 1.2 |
| Availability and capacities of stakeholders | 3.5 | 0.2 | 0.7 |
| Policy relevance and political interest | 4 | 0.3 | 1.2 |
| Sub-total IV | | | 3.8 |
| 5. Potential for transferability | | | |
| Commodity traded from other developing countries | 4.5 | 0.4 | 1.8 |
| Transferability to other similar chains locally | 2.5 | 0.3 | 0.75 |
| Potential transferability through lead firm | 4.5 | 0.3 | 1.35 |
| Sub-total V | | | 3.9 |

| | | Banana | | |
|--------------------------------|-------------------------------------|--------|--------|----------------|
| | | Score | Weight | Weighted score |
| 1. | Market position | 3.85 | 0.20 | 0.77 |
| 2. | Employment and working conditions | 3.78 | 0.25 | 0.94 |
| 3. | Environmental and social dimensions | 3.70 | 0.15 | 0.56 |
| 4. | Sector organization and regulation | 3.80 | 0.20 | 0.76 |
| 5. | Potential for transferability | 3.90 | 0.10 | 0.39 |
| Total (weighted I+II+III+IV+V) | | | | 3.42 |

5.2 Coffee

5.2.1 Market position Table 7. Coffee Market position

| Criteria | Description of information found | Score |
|---|--|-------|
| Importance of the sector for the local economy | Colombia is the world third exporter of green coffee beans (unroasted, un-decaffeinated), mostly different kinds of Arabica. Exports of coffee declined over the past decades due to industrialization, price volatility and poor weather conditions. Still, exports of sustainable and specialty coffees increased. Coffee exports represented 0.9% of GDP in 2014 (i.e. 2.66 billion USD in 2014) ²⁹ . It is the fourth largest export and the first agricultural export. | 4.5 |
| Prospects for growth in demand | Global demand has been increasing steadily over the past decades (with a growth level corresponding to a mature market), boosted by changing beverage consumption patterns in emerging economies. Global demand will be influenced by i) more consumers in emerging economies and ii) a change in consumption patterns in Japan, the US and the EU directed towards high quality certified specialty coffees. Consumer demand worldwide for sustainable coffees is rising by 20 to 25% yearly³⁰. The US, Canada, Japan, the EU (especially Germany, Belgium) and Switzerland are the main trade partners of Colombia with over 90% of its green coffee beans exported to these destinations. | 4.5 |
| | Colombian coffee makes up for over 7% of the EU coffee imports. Demand boosted by emerging economies such as China and North African countries is of a different nature, including more concern for price than quality and interest in processed products such as soluble coffee. The latter is not truly a market for Colombia which focuses on quality Arabica coffee. | |
| Competitiveness and profitability | As demand is growing for high quality specialty and sustainable coffee, Colombia is seizing this economic opportunity as its competitive advantage was built on quality coffee over the years. | 4 |

 ²⁹ <u>http://atlas.media.mit.edu/en/profile/country/col/</u>
 ³⁰ Invited Paper presented at the Indonesian National Coffee Seminar 'Peran Inovasi Teknologi Kopi Menuju Green Economy Nasional', Organised by Balai Penelitian Tanaman Industri dan Penyegar (BALITRI), Bogor, 28 August, 2013.

| Criteria | Description of information found | Score |
|----------|---|-------|
| | <i>Café de Colombia</i> enjoys a protected GI recognized all over the world which contributed to build a differentiated image for Colombian coffee rather than it being seen as just a commodity and blended with coffees from other origins. | |
| | Colombian coffee growers grow Arabica coffee of superior quality and benefit from decades of research and development (<i>Cenicafé</i>) in the sector. | |
| | Sustainable coffee accounted for 23% of total Colombian production in 2012 ³¹ and almost 40 certification schemes of different nature are present in the Colombian coffee industry ³² . | |
| | Main competitors on the global market are Brazil, Ethiopia, Honduras, Guatemala, Mexico, Peru, Vietnam, Indonesia, Kenya and Uganda. None of those countries experience a level of institutionalization comparable to the coffee sector in Colombia and strategies have been very different from one country to the other, with only a few countries focussed on high quality Arabica coffee. Still, low production costs in Asia and high volumes produced over the past decades have had an impact on global coffee prices. | |
| | Profitability in the Colombian coffee industry is affected by increasing production costs and volatile prices on the world market. Production costs can vary dramatically based on the size and location of the farm and type of coffee the farmer is producing. Main components of production costs for coffee producers are labour, fertilizers and farm infrastructure ³³ . Fertilizers costs rose sharply since 2005 globally. | |
| | World coffee prices have been declining since the 1990s, with the collapse of the International Coffee Agreement, and experienced some fluctuations in recent years ³⁴ . Similarly to production costs, coffee prices vary dramatically depending on the type of coffee traded, with highest prices paid for Colombian Milds (i.e. about 160 US Cents per pound, over double the price offered for Robusta). There are little direct linkages between the price paid by the consumer and the volatility on the global coffee market. The latter is linked to speculation, levels of production worldwide and | |

³¹ Federación Nacional de Cafeteros (FNC).

³² ITC Standards Map.

³³ Pratt, L.; Rivera, L.,; Kilian, B.; Lort-Phillips, L. 2014. Securing the long-term sustainable future of coffee value in Colombia. INCAE Business School and Sustainable Markets Intelligence Center (CIMS), Business Association of Latin American Studies. Proceedings of the 31st Anniversary of The Business Association of Latin American Studies Annual Convention, Apr. 9-12, 2014.

³⁴ http://www.ico.org/documents/cy2014-15/cmr-0515-e.pdf

| Criteria | Description of information found | Score |
|----------|--|-------|
| | weather conditions. This situation affects profitability for coffee | |
| | growers in Colombia and their investment prospects. Still, the | |
| | Federación Nacional de Cafeteros (FNC) made substantial efforts | |
| | over the years to try and guarantee floor prices for its coffee growers. | |
| | Though Colombia is at the heart of its demographic transition and | |
| | youth composes most of the population, the population of coffee | |
| | growers is ageing, which creates a threat to knowledge | |
| | transmission in an industry based on quality and know-how. This | |
| | also suggests that profitability at the bottom of the value chain is low. | |
| | Certification processes have become more of a licence to operate | |
| | than a differentiation factor in the global high-quality Arabica | |
| | coffee market. In this process, Colombia is quite well positioned in comparison to other Latin American and Asian competitors. | |

5.2.2 Employment and Working Conditions

Table 8. Coffee Employment and Working Conditions

| Criteria | Description of information found | Score |
|---|--|-------|
| Employment (importance in terms of employment, potential for growth) | The coffee industry is estimated to employ directly 640,000 workers ³⁵ . Half a million smallholders are growing coffee, most of whom are highly reliant on coffee revenues. Coffee represents over a third of employment in agriculture in Colombia. Potential for growth is uncertain. There is a need to ensure the availability of the next generation of growers. In the past decades the local market developed to progressively stabilize and the transformation industry experienced some growth (roasters, soluble coffee plants). | 4 |
| Vulnerability of employment patterns and relative quality | Considering that over 90% of coffee production comes from smallholders, it can be inferred that non-standard forms of employment are predominant at the production stage, with independent workers, paid and unpaid family workers. | 4 |

³⁵ Roldán-Pérez, A. et al. 2012. Coffee, Cooperation and Competition: A Comparative Study of Colombia and Vietnam. UNCTAD.

| Criteria | Description of information found | Score |
|--|---|-------|
| of working conditions | At the processing (mill) and transformation (roasting, grinding, soluble) stages, little evidence was found on status in employment and quality of working conditions. Considering seasonality and the necessity to process coffee quickly after harvest, long working hours and heavy work load must be involved at the mill stage several times a year (at least 2 harvests depending on the region). Those entities are likely to be formalized. | |
| | Some evidence of child labour in agriculture was found. The occurrence of child labour mentioned does not seem specific to coffee production and affects predominantly poor rural areas. | |
| | Little evidence on freedom of association and discrimination was found throughout the chain. | |
| | Little evidence was found on wages. Anecdotal evidence suggests that coffee workers earn less than the minimum wage, depending on coffee prices and region of cultivation ³⁶ . | |
| | It seems the new entrants in the coffee growing market (i.e. from the Southern region) have less access to the services and programmes provided by FNC (mainly located in the traditional areas of coffee growing) and are relatively poorer, making them most vulnerable ³⁷ . | |
| | With respect to social security, Sarmiento (2013) finds that the coverage in the coffee sector is high in health care and very low in pensions. It seems most coffee workers receive health care support due to belonging to Sisbén (government-subsidized system) rather than the coffee contribution system, indicating high informality. | |
| Weakness of risk management systems and mitigation mechanisms | Colombia has an extensive legislation on OSH articulated through the <i>Sistema General de Riesgos Laborales</i> which aims at coordinating the different actors involved in the prevention, mitigation and compensation of work accidents and diseases. Legal requirements as regards OSH from the Labour Code exist and | 2.5 |

³⁶ International Trade Centre. 2013. Florverde Sustainable Flowers, Echavarría, J. J.; Esguerra, P.; McAllister, D.; Robayo, C. F. 2015. Report written by the commission on coffee competitiveness in Colombia executive summary, (Bogotá). Available at: <u>http://www.urosario.edu.co/Mision-Cafetera/Archivos/Commission-on-coffee-copetitiveness-in-Colombia-%28w/</u> ³⁷ Ibid.

| Criteria | Description of information found | Score |
|-------------------------------|---|-------|
| | apply to agriculture ³⁸ , though enforcement through inspection seems weaker in agriculture than in other sectors ³⁹ . Some value chain specific requirements were found in the various certification schemes of the sector. Almost all schemes have specific indicators, sometimes entire sections, on OSH, focusing mainly on OSH management systems and chemical use and handling ⁴⁰ . A significant part of the coffee production is certified, hence the reach of those provisions may be significant as well. The FNC works with three types of certification schemes at the moment: SAN-Rainforest Alliance, UTZ and Fairtrade (Flocert) ⁴¹ . All have OSH provisions and the two first ones have dedicated chapters. Additionally, the FNC collaborates closely with the relevant government authorities on OSH issues ⁴² . FNC also reports under the GRI LA7 on work injury occurrence for its own employees ⁴³ . Special value chain programmes such as Nespresso AAA also include the adoption of farm management practices that include provisions on OSH ⁴⁴ . | |
| Importance of risk factors | Risk exposure is likely to be gendered, due to gendered employment patterns (while both male and female are involved in land management and coffee harvesting, women seem predominant in processing and packaging while men are predominant on land acquisition, management and trade) ⁴⁵ . At the same time, this traditional repartition of role is evolving and about the third of coffee producing farms are owned by women ⁴⁶ . There are several types of risks along the value chain considering it encompasses several transformation stages. On-farm work involves potential risks such as chemical exposure, risks related to | 4 |

³⁸ Additionally, the *Plan Nacional de Salud Ocupacional 2013-2021* lays out as a clear priority the extension of the *Sistema General de Riesgos Laborales* and improved OSH to workers in the informal economy and in SMEs.

³⁹ 477 inspections conducted in agriculture in 2014 (representing a little more than 3% of all inspections). An estimated 38% of formally employed workers in Colombia are part of Safety and Health Committees.

⁴⁰ 39 schemes identified by ITC Standards Map.

⁴¹ <u>http://www.federaciondecafeteros.org/clientes/es/nuestro_cafe/cafes_especiales/produccion_y_calidad/</u>

⁴² <u>http://www.federaciondecafeteros.org/algrano-fnc-</u>

es/index.php/comments/cafeteros_de_colombia_aprenden_a_prevenir_riesgos_laborales/

⁴³ <u>http://www.federaciondecafeteros.org/static/files/sostenibilidad-2012-esp.pdf</u>

⁴⁴ <u>https://www.nestle-nespresso.com/newsandfeatures/nespresso-aaa-sustainable-quality-tm-program-a-triple-win-collaboration-between-nespresso-and-the-rainforest-alliance</u>

⁴⁵ The North South Institute. 2014. Taller de Género del Sector Cafetero (Informe Resumen). Septiembre 2014. Available at: <u>http://www.nsi-ins.ca/wp-content/uploads/2014/09/Coffee-Sector-Gender-Workshop_-Taller-Genero-Sector-Cafetero_Spanish-Final.pdf</u>

⁴⁶ <u>http://sipse.com/mundo/mujeres-cafe-colombia-duenas-fincas-cafetaleras-174633.html</u>

| Criteria | Description of information found | Score |
|----------|--|-------|
| | tools, machine and load handling, as well as common risks relating to contacts with pests, contaminated water, etc ⁴⁷ . At mill stage, there are possible risks relating to loads, machine handling, heat exposure, exposure to residues and contaminated water. Other stages are less documented. The below figure is a first attempt to identify main risk factors at the different stages of the value chain and would need to be completed by a proper risk assessment. Disaggregated data at the value chain level was not found regarding accidents and Lost Time Accident, though some evidence may be available at the certification company level for certified producers (this information was not found in the public domain). | |

5.2.3 Environmental and Social Dimensions

Table 9. Coffee Environmental and Social Dimensions

| Criteria | Description of information found | Score |
|--|--|-------|
| Potential to engage poor communities | The percentage of people in poverty conditions is higher in non- coffee agricultural areas (37.1%) than in the coffee areas (29.9%), but it is much higher in both areas than in other capital cities and metropolitan areas (14.8%). These percentages are higher in the southern regions (94% in Tolima, Huila, Nariño & Cauca) and marginal regions (91%) that have started to grow coffee more recently ⁴⁸ . Additionally, coffee growers have often had little access to education ⁴⁹ and there are land tenure issues ⁵⁰ that make the situation of their households particularly vulnerable (i.e. little access to finance linked to the absence of collaterals). No evidence reported migrant work at production stage. Little was found at milling stage, though it seems mills are distributed within rural areas that are more accessible and connected than farms, hence with a potentially distinct socio- economic background. Roasting / grinding and soluble coffee | 4.5 |

⁴⁷ ILO. 2004. International Programme on the Elimination of Child Labour Safety and Health Fact Sheet Hazardous Child Labour in Agriculture, Coffee.

⁴⁸ The *Encuesta Nacional Cafetera* provided a socio-economic panorama of coffee growers but seems outdated (https://datoscede.uniandes.edu.co/microdatos-detalle.php/152/)

⁴⁹ Only 9% of all coffee farmers in Colombia attended secondary school. (Lozano 2009)

⁵⁰ "While only a tiny percentage of ownership claims are in dispute, and virtually every farmer exerts full legal control over his land, only 36% of coffee growers have formal titles for their land (Presidencia de la República, 2012), As a consequence, farmers have difficulty securing loans, since their land cannot be readily used as collateral (see section overleaf on access to credit)". (Lawrence Pratt et al. 2014).

| Criteria | Description of information found | Score |
|--|---|-------|
| | processing companies seem to evolve in a different socio- economic environment (cities). | |
| | Considering the large number of small holders and the volatile price of coffee affecting their income, it can be inferred that an intervention to improve OSH would have the potential to impact communities that are relatively poor. | |
| Positive impact of climate | Changes in temperature, precipitation and sun exposure due to climate change can affect the chemical composition of coffee | |
| change | seeds according to recent studies (Bertrand, 2012). This is likely to affect negatively high-quality coffee growers. This is already | |
| | anticipated by the FNC which, in collaboration with UNDP, is | 2.5 |
| | leading a programme on green commodities (biodiversity-friendly coffee), though the outcomes of this new trend and its potential as | |
| | a risk mitigation strategy are still to be evaluated ⁵¹ . | |
| | | |
| Potential to avoid or limit | Little was found on the impact of the coffee industry on the environment and health of communities in Colombia specifically. | |
| negative impact on the environment | Water, air and soil production can happen due to the use of chemicals at production stage. | |
| and health of communities | Water contamination happens at different production stages (wet processing, decaffeination, etc.) and it seems investments at mill stage are made to improve water waste management ⁵² . | |
| | An important amount of waste is created at production stage if wet processing is used (with the seed being extracted from the fresh fruit), it can be used as compost, though no evidence was found on whether it is the practice in Colombia. | 4 |
| | Carbon emissions related to operations in the chain are mostly concentrated within fertilizer and transportation. | |
| | In certified coffee production areas, good practices for the preservation of the environment are promoted and regularly monitored. | |

 ⁵¹ Biswas-Tortajada A. and Biswas A. K. 2015. Sustainability in Coffee Production, Creating Shared Value Chains in Colombia. Routledge.
 ⁵² <u>https://www.nestle-nespresso.com/sustainability/case-studies/community-milling-in-colombia</u>
 See also: http://www.estle-nespresso.com/sustainability/case-studies/community-milling-in-colombia

See also: <u>http://www.cafedecolombia.com/cci-fnc-</u>

en/index.php/comments/the_fnc_inaugurated_the_most_modern_coffee_dry_mill_in_colombia

5.2.4 Sector Organization and Regulation

Table 10. Coffee Sector Organization and Regulation

| Criteria | Description of information found | Score |
|---------------------------|--|-------|
| Level of investment in | The desk review did not come across the total volume of investment in the value chain. | |
| the sector | The unique institutional framework of coffee growing and commercialization in Colombia allowed to create mechanisms to ensure a better distribution of resources between the actors of the chain. The FNC established a National Coffee Fund in the early 1940s. This fund supports the Purchase Guarantee Policy, which offers farmers a transparent minimum price for their product based on a formula that accounts for the current international market price and the exchange rate, among other factors. The Fund is financed through a 0.06% export tax on green coffee exports ⁵³ . 16% of the coffee contribution must be destined to investments in the regions. Outside of this scheme, the FNC provides a number of services to the value chain though. In recent years the Fund accumulated a deficit as revenues no longer fund its institutional costs. | 3.5 |
| | Additionally, the government has provided some support in the framework of rural development policies ⁵⁴ . Private investments are being made in innovation and to secure high-quality coffee value chains ⁵⁵ . | |
| | As for a number of food products, food safety regulations in destination countries often discourage investments in functional upgrading in developing countries as importers prefer keeping control over transformation processes (i.e. soluble, decaffeinated, ground coffee). This potential disincentive for investment is reinforced by the fact that coffee became less important than other traded products and services for the national economy over | |

⁵³ http://knowledge.wharton.upenn.edu/article/coffee-in-colombia-waking-up-to-an-opportunity/

⁵⁴ Lora, Meléndez y Tommasi (2013) indicate that "The Ministries of Agriculture & Rural Development and of Finance have intervened sporadically in the industry out of the FNC's institutional framework, when acting governments decided to link the coffee growers to support programs covering the agriculture sector in general or when they decide to deliver extraordinary support to coffee growers. Examples of these interventions are: Agro Ingreso Seguro (AIS), whereby support was given to coffee growers from 2006 to 2008, and the Program: Apoyo al Ingreso del Caficultor (AIC-PIC), by virtue of which a subsidy of \$165,000 pesos per carga of 125 kg was given, provided that the domestic price and subsidy did not exceed the sum of \$700,000 per carga. The FNC has been decisive in materializing the delivery of the support to coffee growers, but institutions external to FNC had imposed the rules of the game."

⁵⁵ Mc Falls R. 2016. Good Procurement Practices and SMEs in Value Chains: Nespresso AAA Sustainable Quality Program, Impact of Procurement Practices in an SME in Colombia. ILO, SME Unit.

| Criteria | Description of information found | Score |
|---|--|-------|
| | the years. Lastly it seems smallholders have limited investment capacities ⁵⁶ . | |
| Level of organization and collaboration | The sector has a unique and strong institutional framework organized around the FNC ⁵⁷ . Extensive information is available on the participatory governance structure of the FNC ⁵⁸ and its broad range of services to coffee growers. The value chain is highly institutionalized. In relation to the FNC, some satellite institutions and companies provide key services to the value chain and are collaborating with international buyers: <i>Café de Colombia</i> (labelling, GI), <i>Cenicafé</i> (research), <i>Expocafé SA</i> (exporter), <i>Fundación Manuel Mejía</i> (training), etc ⁵⁹ . | 4.5 |
| Availability and capacities of stakeholders | Stakeholders' capacities are likely to be higher than in other less institutionalized agricultural value chains. In Colombia a number of institutions are providing research and development as well as training services to the coffee value chain. For instance, <i>Cenicafé⁶⁰</i> is a research institution specialized on Colombian coffee and the <i>Centros de Estudios Regionales Cafeteros y Empresariales</i> offer a number of services at several links of the chains ⁶¹ . The desk review did not come across projects aiming specifically at addressing working conditions and more specifically OSH in the coffee value chain, stakeholders are thus likely to be relatively available, with the limitation that dispersed smallholders may be difficult to reach and mobilize. | 4 |

⁵⁶ "Coffee farmers in Colombia are constrained by the inability to scale up, invest or negotiate. This is compounded by considerable uncertainty in future prices and markets meaning small-scale coffee farmers in Colombia are missing out on important opportunities. Among the most critical are investments in post-harvest infrastructure (processing, drying, etc). This is essential for maximizing the number of high quality coffee beans, and is usually the most profitable investment an organized large group of small farmers can make, albeit with substantial risks, given the size of the investment." (Lawrence Prat et al. 2014).

⁵⁷ "All functions tend to be concentrated in a single institution in Colombia, the FNC, with great sectorial and national power. It is not only a trade association, but also designs national coffee policies with the government inside the *Comité Nacional de Cafeteros* (national coffee committee). It regulates exports and it completes exports (close to 35% of the national total) at the same time. Finally, it participates in the most diverse support activities: gathering/storing, transporting, certifying and international trade." (Echevarría, 2015).

⁵⁸ International Trade Centre. 2013. *Florverde Sustainable Flowers*, Echavarría, J. J.; Esguerra, P.; McAllister, D.; Robayo, C. F. 2015. Report written by the commission on coffee competitiveness in Colombia executive summary, (Bogotá), p.31.

⁵⁹ http://www.cafedecolombia.com/familia

⁶⁰ http://www.cenicafe.org/

⁶¹ <u>http://www.crece.org.co/crece/#oferta-de-servicios</u>

| Criteria | Description of information found | Score |
|---|--|---------|
| Policy relevance / political interest | Since coffee makes a third of rural employment which is at the heart of the new rural development policy in the context of peace building in Colombia ⁶² , policy relevance is high. At the same time the coffee sector is experiencing challenges (on the side of financing especially, with a lot of questioning on the impact and sustainability of sector subsidies such as the <i>Programa</i> <i>de Protección del Ingreso Cafetero</i> - PIC) and opportunities (on the high-quality coffee market) that are likely to require more productivity and quality, to which improved OSH can contribute. Specifically on OSH, the FNC has the improvement of the health of coffee growers as a priority in its strategic plan. This political interest accompanied by a need for reform is both an opportunity and a risk for the project as it creates a constraint on | score 4 |
| | stakeholder's availability and possibly increases the political sensitiveness of interventions in the value chain. | |

5.2.5 Potential for Transferability

Table 11. Coffee Potential for Transferability

| Criteria | Description of information found | Score |
|--|--|-------|
| Commodity traded from other developing countries | Colombia is among the leaders in production and exportation of coffee. A number of other developing countries are important players as well in Asia (especially Vietnam, Indonesia), Africa and Latin America. Arabica coffee is a key cash crop for a number of low income countries in Africa (especially Kenya, Ethiopia) and central America. | 5 |
| Transferability to other similar chains locally | Other major export commodities traded by Colombia are not grown in the same areas coffee is grown and have distinct production processes, limiting spill over effects. Still, those could take place with other crop not for export cultivated by coffee growers. | 2 |

⁶² Desarrollo rural integral - <u>http://www.acuerdodepaz.gov.co/acuerdos/mejores-oportunidades-para-el-</u> campo#utm_source=MEC&utm_medium=SEM&utm_campaign=Desarrollo_Rural

| Criteria | Description of information found | Score |
|---|---|-------|
| Potential transferability through lead firms | It is a concern of the coffee industry, especially in Western countries, to improve the sustainability and traceability of its coffee, as product quality and image have become key competitive advantages on those markets. Buyers seem to have important traction on this segment of the market, which is the main market for Colombian coffee. Colombian milds are produced by Kenya, Tanzania, Guatemala, Mexico and India. These commodity chain networks are most likely linked since roasters often need to offset value shortages in their primary origin to another. A number of brands seem to have programmes that strongly involve their value chain in Colombia and other countries (i.e. Nespresso ⁶³ , Starbucks). | 4 |

5.2.6 Final score

Table 12. Coffee Final Score Matrix

| | | Coffee | |
|---|-------|--------|-------------------|
| Criteria | Score | Weight | Weighted score |
| 1. Market position | | | |
| Importance of the value chain for the local economy | 4.5 | 0.4 | 1.8 |
| Prospects for growth in demand | 4.5 | 0.3 | 1.35 |
| Competitiveness and profitability | 4 | 0.3 | 1.2 |
| Sub-total I | | | 4.35 |
| 2. Employment and working conditions | | | |
| Importance of the SC in terms of employment and job growth | 4 | 0.3 | 1.2 |
| Vulnerability of employment patterns and relative quality of working conditions | 4 | 0.2 | 0.8 |
| Weakness of risk management systems and mitigation mechanisms | 2.5 | 0.2 | 0.5 |
| Importance of risk factors / hazards | 4 | 0.3 | 1.2 |
| Sub-total II | | | 3.7 |
| 3. Environmental and social dimensions | | | |
| Potential to engage with poor communities | 4.5 | 0.4 | 1.8 |
| Positive impact of climate change | 2.5 | 0.2 | 0.5 |

⁶³ Mc Falls, R. 2016. Good Procurement Practices and SMEs in Value Chains: Nespresso AAA Sustainable Quality Program, Impact of Procurement Practices in an SME in Colombia. ILO, SME Unit.

| Potential to avoid negative impact on the environment and health of local communities | 4 | 0.4 | 1.6 |
|---|-----|-----|------|
| Sub-total III | | | 3.9 |
| 4. Sector organization and regulation | | | |
| Level of investment in the sector | 3.5 | 0.2 | 0.7 |
| Level of organization and collaboration | 4.5 | 0.3 | 1.35 |
| Availability and capacities of stakeholders | 4 | 0.2 | 0.8 |
| Policy relevance and political interest | 4 | 0.3 | 1.2 |
| Sub-total IV | | | 4.05 |
| 5. Potential for transferability | | | |
| Commodity traded from other developing countries | 5 | 0.4 | 2 |
| Transferability to other similar chains locally | 2 | 0.3 | 0.6 |
| Potential transferability through lead firm | 4 | 0.3 | 1.2 |
| Sub-total V | | | 3.8 |

| | | Coffee | | |
|--------------------------------|-------------------------------------|--------|--------|----------------|
| | | Score | Weight | Weighted score |
| 1. | Market position | 4.35 | 0.20 | 0.87 |
| 2. | Employment and working conditions | 3.70 | 0.25 | 0.93 |
| 3. | Environmental and social dimensions | 3.90 | 0.15 | 0.59 |
| 4. | Sector organization and regulation | 4.05 | 0.20 | 0.81 |
| 5. | Potential for transferability | 3.80 | 0.10 | 0.38 |
| Total (weighted I+II+III+IV+V) | | | | 3.57 |

5.3 Cut flowers

5.3.1 Market Position

Table 13. Cut Flowers Market Position

| Criteria | Description of information found | Score |
|---|--|-------|
| Importance of the sector for the local economy | Colombia is the world second exporter of cut flowers. Over the past three decades, exports of cut flowers increased, with most of the increase going to developing countries. Cut flower exports | 4 |

| Criteria | Description of information found | Score |
|--------------------------------------|--|-------|
| | represented over 0.4% of GDP in 2014 (i.e. 1.36 billion USD) ⁶⁴ . It is the second agricultural export of the country. | |
| Prospects for growth in demand | Global demand has been increasing steadily over the past decades boosted by new technologies (improvement in packing technology, transport services, e-commerce) and emerging markets such as Russia. Global demand is forecasted to continue its growth, especially the segment of sustainably sourced flowers. The US is the main trade partner, with 75% of Colombian cut | |
| | flower exports, followed by the EU, Russia and Japan. | 4.5 |
| | In value, roses were the primary export flower (\$365 million), then carnations (\$156 million) and chrysanthemums (\$147 million) in 2014. Roses are the most demanded flowers and Colombia is the preferred sourcing destination of US buyers. | |
| Competitiveness and profitability | Colombia benefits from a climate that allows to grow flowers all year round and geographical proximity and infrastructure to access the US market ⁶⁵ . | |
| | The sector is well organized in Colombia where investments were made since the 1980s to install the value chain, initially as a diversification strategy for small businesses, which turned into a concentrated sector with medium sized companies and investments from Dole. Those are closely connected to importers and retailers in the US, which is a key competitive advantage in comparison with new entrants ⁶⁶ . | 3.5 |
| | Since 2005, Colombian flowers are released from custom duties to enter the EU and benefit from the ATPDEA ⁶⁷ programme of the US. | |
| | Main competitors include Ecuador (for the US market), Kenya and Ethiopia (for the EU market) with new entrants such as Costa Rica, Zimbabwe, Uganda, and Tanzania. Profitability is decreasing as prices are decreasing, with a global value higher than the demand (Sepulveda, 2008). | |

⁶⁴ <u>http://atlas.media.mit.edu/en/profile/country/col/</u>

⁶⁵ World Trade. 2009. Say it with Flowers, Say it with Logistics.

⁶⁶ Madrid, G.; Lovell, T. 2007. "Working with flowers in Colombia: The 'lucky chance'?", in: *Women's Studies International Forum*, 30 pp. 217-227.

⁶⁷ Andean Trade Promotion and Drug Eradication.

| Criteria | Description of information found | Score |
|----------|--|-------|
| | Certification is increasingly spread in the sector, with end markets being particularly sensitive to sustainability. The sector has its own certification process, through <i>Florverde</i> . Additionally, 10 farms were fair trade certified in 2010 and Rainforest Alliance counts also ten certified farms. In this respect Colombia is quite well positioned to compete on the international market. | |

5.3.2 Employment and Working Conditions

Table 14. Cut Flowers Employment and Working Conditions

| Criteria | Description of information found | Score |
|--|---|-------|
| Employment (importance in terms of employment, potential for growth) | Floral production generated 111,000 direct jobs (greenhouse jobs) and 94,000 indirect jobs (packaging and transportation) in 2013 ⁶⁸ . This is one of the most labour-intensive industries (i.e. sixteen workers per hectare on average) and a successful one in Colombia where concentrated economic actors have built a production base. Still, as profitability tends to go down, perspectives for growth in employment are uncertain. Indeed, the sector moves towards greater productivity and between 2006 and 2010, 20,000 jobs were lost in the value chain (UNTRAFLORES, 2013.). | 3.5 |
| Vulnerability of employment patterns and relative quality of working conditions | The value chain was composed of 225 companies in 2013, with seven large companies accounting for half of the sales. Work in those companies is likely to be quite formalized, and they are organized as large-scale greenhouse plantations. The majority of the workforce is made up of women, though is a lesser proportion than in sub-Saharan Africa for instance ⁶⁹ . Short- term contract seems to be widespread in the industry, with less protection than full-time staff ⁷⁰ . The division of labour is gendered: women tend to work in weeding, plant tying, pruning, cutting, picking, and packing | 3.5 |

⁶⁸ Produce Marketing Association. 2015. *Colombia Floral Market 2015.*

⁶⁹ 65% of workers were women in 2003 according to Oxfam (less than in Kenya or Zimbabwe).

⁷⁰ Wright, C.; Madrid, G. 2007"Contesting ethical trade in Colombia's cut-flower industry: A case of cultural and economic injustice", in *Cultural Sociology* 1(2)

| Criteria | Description of information found | Score |
|--|--|-------|
| | (perceived to be low-skilled and thus typically low paid), while men generally work as supervisors, machine operators and technicians. | |
| | Over the past decades, a number of cases of violation of labour rights in the flower industry emerged. An independent union of flower workers was created, UNTRAFLORES. | |
| | The workflow is highly seasonal, which engenders both a number of short-term contracts but also long hours of work at peak times (Mother's Day, Valentine's day, etc.). A survey conducted in the Bogota valley indicated that 35% of workers in flower farms were subcontracted through temporary employment agencies (Sepulveda, 2008). The average cut-flower wage in the region was over six dollars an hour in 2013, which was more than the minimum wage (UNTRAFLORES, 2013). | |
| Weakness of risk management systems and mitigation mechanisms | Colombia has an extensive legislation on OSH articulated through the <i>Sistema General de Riesgos Laborales</i> which aims at coordinating the different actors involved in the prevention, mitigation and compensation of work accidents and diseases. Legal requirements as regards OSH from the Labour Code exist and apply to agriculture ⁷¹ , though enforcement through inspection seems weaker in agriculture than in other sectors ⁷² . | |
| | Some value chain specific requirements were found in the various certification schemes of the sector. Almost all schemes have specific indicators, sometimes entire sections, on OSH, focusing mainly on OSH management systems and chemical use and handling ⁷³ . <i>Florverde</i> has an important focus on OSH and especially on chemical use and handling. It reports having resulted in a reduction of 28% in the use of chemical in certified companies in 2014 ⁷⁴ . | 3 |
| | In terms of mitigation and compensation, formal companies are supposed to register their workers to social security. Affiliated workers from the cut-flower sector represent 23% of all agricultural affiliates to the Colombian social security system | |

⁷¹ Additionally, the *Plan Nacional de Salud Ocupacional 2013-2021* lays out as a clear priority the extension of the *Sistema General de Riesgos Laborales* and improved OSH to workers in the informal economy and in SMEs.

⁷² 477 inspections conducted in agriculture in 2014 (representing a little more than 3% of all inspections). An estimated 38% of formally employed workers in Colombia are part of Safety and Health Committees. The Ministry of Labour announced that in 2013, 2,000 inspections were carried out in 5 sectors including the cut-flower industry, and 4,300 sanctions were given to various companies in those 5 sectors for the violation of labour norms, failure to pay contributions of their employees to the social security system (<u>http://www.mintrabajo.gov.co/octubre-2013/2421-seguro-de-desempleo-y-bep-arrancan-en-diciembre-mintrabajo.html</u>).

⁷³ 40 schemes identified by ITC Standards Map.

⁷⁴ <u>http://florverde.org/the-difference/content/our-impact</u>

| Criteria | Description of information found | Score |
|-------------------------------|--|-------|
| | (Aristizabal, J. C. 2012). Still there were reports that workers who contributed were actually not properly registered (OXFAM, 2004). | |
| Importance of risk factors | Risk exposure is gendered, due to gendered employment patterns (see above). | |
| | There are several types of risks along the value chain considering it encompasses several stages. Still, chemical exposure seems to be a particularly important hazard for workers in the sector, and there is evidence that prevention of risks related to chemical exposure, especially pesticides, is poor ⁷⁵ . Cut-flowers need to be pest-free for export and are exempt of regulations on pesticide residues because they are non-edible, hence the high use of pesticide ⁷⁶ . | 4.5 |
| | The below figure is a first attempt to identify main risk factors at the different stages of the value chain and would need to be completed by a proper risk assessment. | |
| | Disaggregated data at the value chain level was not found regarding accidents and Lost Time Accident, though some evidence may be available at the certification company level for the production which is certified (this information was not found in the public domain). | |

5.3.3 Environmental and Social Dimensions

Table 15. Cut Flowers Environmental and Social Dimensions

| Criteria | Description of information found | Score |
|--------------|--|-------|
| Potential to | The majority of the industry is located in the regions of Bogotá, | |
| engage poor | Medellín and Antioquia. Cut-flower businesses are located close to | |
| communities | cities. Bogotá and Antioquia were amongst the 4 departments the | 4 |
| | least affected by poverty (around 28% poverty according to | |
| | national poverty line in 2011). The extreme poverty rate in | |
| | Antioquia was 7% in 2011 and around 2.5% in Bogotá D. C. | |

⁷⁵ Exposure to neurotoxic pesticides and reproductive hazards have been of particular concern in the floriculture industry: in 1990 a report (Restrepo, 1990) on Colombia's cut flower industry found a moderate increase in abortion, prematurity and congenital malformations among children conceived after either parent started working in floriculture.

A study on the use of pesticides in the cut-flower industry shows that in 2005, only 16.7% of the sector's companies respected the recommended delay between the use of highly chemical pesticides (category 1) and the exposure of workers, the study also finds that only 3.6% of the participating companies (all part of Asocoflores) provide a fully protective equipment to their workers. This is partly explained because of the incompatibility of the equipment with the work required. (Tolosa, J., E.; Varona, M. 2005.)

⁷⁶ Workers who transplant, prune, cut and pack flowers without protective equipment may therefore absorb dangerous pesticides through their skin.

| Criteria | Description of information found | Score |
|--|---|-------|
| | However, there are strong urban-rural disparities in this region (as in the rest of the country) and thus the statistics do not reflect the level of poverty in rural areas, where flower plantations are located ⁷⁷ . | |
| | Still, the cut-flower industry is an important source of employment for vulnerable women from rural areas. A research on the perception of women workers in flowers show that despite the poor working conditions, women see working in the flower-cut industry as a way to have a better work-life balance (more fixed hours than in domestic work) and more independence (individual wage) (Madrid, G.; Lovell, T. 2007). | |
| | Those regions also have been affected by armed conflicts, especially around Antioquia (Geneva International Centre for Humanitarian Demining. 2013). | |
| | Considering the large number of women working on low paid jobs in the industry, it can be inferred that an intervention to improve OSH would have the potential to impact communities that are relatively poor. | |
| Positive impact of climate change | A good portion of the agro-ecosystems of the country is vulnerable to increased aridity, soil erosion, desertification, and changes in the hydrological system. In addition, there is a greater risk of crop flooding as well as other natural events that affect agricultural production (windstorms, hailstorms, etc.) (UNDP. 2010). Still, specific impacts on the flower industry are difficult to assess, and it seems the industry has resilience strategies. Growing concerns for sustainability is more a constraint to the industry than an opportunity. | 2.5 |
| Potential to avoid or limit negative impact on the environment and health of communities | The industry is widely criticized for its levels of pollution, mainly linked to heavy use of non-organic fertilizers and pesticides. Flowers are also often shipped by air to the US at peak times, which adds to the sector's carbon footprint. The industry is also a big consumer of water (Bohm et al. 2013). | 3 |

⁷⁷ World Development Indicators, the World Bank.

| Criteria | Description of information found | | | | |
|----------|---|--|--|--|--|
| | It seems that growing environmental concerns impacted the industry which is making efforts in recent years to try and reduce pesticide and water consumption. | | | | |

5.3.4 Sector Organization and Regulation

Table 16. Cut Flowers Sector Organization and Regulation

| Criteria | Description of information found | Score |
|--|--|-------|
| Level of investment in the sector | The desk review did not come across the total volume of investment in the value chain. Data on the total volume of private investments was not found, though over the past decade investments were made in logistics and processes as the sector is highly concentrated. No evidence was found on access to finance on the part of the different businesses in the industry. The government of Colombia also made substantial investments in the sector. The ministry of Agriculture and Rural Development mobilised \$300,000 million pesos in 2011 for investment in the flower industry, with an additional \$40,000 million in subsidies. Additionally, tariffs on the importation of agrochemicals were removed ⁷⁸ . Financial support to Asocolflores was also granted by the Ministry of Agriculture. In 2015, the Ministry invested \$8.660 in non- traditional agricultural exportations, creating 130.000 formal rural jobs ⁷⁹ . | 4 |
| Level of organization and collaboration | From the elements collected by the desk review, the value chain seems organized. The fact that it was capable to develop and promote its own standard (<i>FlorVerde</i>) demonstrates the capacity of coordination and collaboration in the chain. <i>Asocolflores (Asociación Colombiana de Exportadores de Flores</i>) is a group of businesses that represents 70% of Colombian's total cut | 4 |

 ⁷⁸ http://www.cosmoagro.com/site/avanzamos/colombia-subsidios-de-nuevo-para-floricultores/
 ⁷⁹ http://www.minagricultura.gov.co/noticias/Paginas/minagricultura-consolida-expansion-floricultura.aspx

| Criteria | Description of information found | Score |
|---|--|-------|
| | flower exports. Around 220 out of the 600 companies in the flower industry are part of <i>Asocolflores</i> . | |
| | On the workers' side, UNTRAFLORES represents the interest of workers in the industry. Additional activist groups exist such as CACTUS. | |
| Availability and capacities of stakeholders | Stakeholders' capacities are likely to be higher than in other agricultural value chains which receive less support. A number of projects from development agencies focused on the cut-flower value chain in Colombia over the past decade ⁸⁰ . Projects reported some difficulties to access sector actors and availability issues. The desk review came across the ILO SCORE project which aimed specifically at addressing working conditions in the cut flower value chain, including OSH. | 3.5 |
| Policy relevance / political interest | Since cut-flowers make a fair share of rural employment which is at the heart of the new rural development policy in the context of peace building in Colombia ⁸¹ , policy relevance is high. As mentioned, the Government of Colombia promoted the sector through investment projects and subsidies. This political interest is both an opportunity and a risk for the project as it creates a constraint on stakeholders' availability and possibly increases the political sensitiveness of interventions in the value chain. | 4 |

5.3.5 Potential for Transferability

Table 17. Cut Flowers Potential for Transferability

| Criteria | Description of information found | Score |
|-----------------------------------|---|-------|
| Commodity traded from other | Cut-flowers are traded from a few other developing countries in the Americas (Ecuador, Costa Rica) but also in Africa (Kenya, Ethiopia but also Zimbabwe, Uganda, Tanzania more recently), including Low Income Countries. | 5 |

⁸⁰ See ILO SCORE programme (http://www.ilo.ch/empent/Projects/score/lang--en/index.htm), UNDP CERF project

⁽http://www.co.undp.org/content/colombia/es/home/operations/projects/crisis_prevention_and_recovery/proyecto-cerf-2014-y-2015.html). ⁸¹ Desarrollo rural integral -

| Criteria | Description of information found | Score |
|---|--|-------|
| developing countries | | |
| Transferability to other similar chains locally | No evidence was found. Other major commodities traded by Colombia are not grown with cut flowers and have distinct production processes. Possible the fresh fruit export industry working in plantations. | 2 |
| Potential transferability through lead firms | The world leaders in terms of cut-flower trade are the companies form the Netherlands where the industry is long established. Some of those major players invested in low-income countries such as Kenya and Ethiopia where they largely control the value chains, and are deeply involved in its functioning. Thus, transferability of findings to those countries through lead firms may be limited as the structure of the industry in Colombia is rather distinct. As for other fresh products, there is a possibility of transferability through lead firms (such as Dole for instance which controls a fifth of the Colombian cut-flower exports), with the limitation that engaging with retailers may be more difficult than traditional fruit companies in terms of interest for responsible sourcing. | 3.5 |

5.3.6 Final score

Table 18. Cut Flowers Final Score Matrix

| | Cut Flowers | | | | |
|--|-------------|--------|-------------------|--|--|
| Criteria | Score | Weight | Weighted score | | |
| 1. Market position | | | | | |
| Importance of the value chain for the local economy | 4 | 0.4 | 1.6 | | |
| Prospects for growth in demand | 4.5 | 0.3 | 1.35 | | |
| Competitiveness and profitability | 3.5 | 0.3 | 1.05 | | |
| Sub-total I | | | 4 | | |
| 2. Employment and working conditions | | | | | |
| Importance of the SC in terms of employment and job growth | 3.5 | 0.3 | 1.05 | | |

| Vulnerability of employment patterns and relative quality of working conditions | 3.5 | 0.2 | 0.7 |
|---|-----|-----|------|
| Weakness of risk management systems and mitigation mechanisms | 3 | 0.2 | 0.6 |
| Importance of risk factors / hazards | 4.5 | 0.3 | 1.35 |
| Sub-total II | | | 3.7 |
| 3. Environmental and social dimensions | | | |
| Potential to engage with poor communities | 4 | 0.4 | 1.6 |
| Positive impact of climate change | 2.5 | 0.2 | 0.5 |
| Potential to avoid negative impact on the environment and health of local communities | 3 | 0.4 | 1.2 |
| Sub-total III | | | 3.3 |
| 4. Sector organization and regulation | | | |
| Level of investment in the sector | 4 | 0.2 | 0.8 |
| Level of organization and collaboration | 4 | 0.3 | 1.2 |
| Availability and capacities of stakeholders | 3.5 | 0.2 | 0.7 |
| Policy relevance and political interest | 4 | 0.3 | 1.2 |
| Sub-total IV | | | 3.9 |
| 5. Potential for transferability | | | |
| Commodity traded from other developing countries | 5 | 0.4 | 2 |
| Transferability to other similar chains locally | 2 | 0.3 | 0.6 |
| Potential transferability through lead firm | 3.5 | 0.3 | 1.05 |
| Sub-total V | | | 3.65 |

| | | Cut flowers | | | |
|----------------------------------|-------------------------------------|-------------|--------|-------------------|--|
| | | Score | Weight | Weighted score | |
| 1. | Market position | 4 | 0.20 | 0.80 | |
| 2. | Employment and working conditions | 3.70 | 0.25 | 0.93 | |
| 3. | Environmental and social dimensions | 3.30 | 0.15 | 0.50 | |
| 4. | Sector organization and regulation | 3.90 | 0.20 | 0.78 | |
| 5. Potential for transferability | | 3.65 | 0.10 | 0.37 | |
| Total (weighted I+II+III+IV+V) | | | | 3.37 | |

6. Value Chain Selection

Table 19. Selection Matrix

| | | Banana | | | Coffee | | | Cut Flowers | S |
|--|-------|--------|-------------------|-------|--------|-------------------|-------|-------------|----------------|
| Criteria | Score | Weight | Weighted score | Score | Weight | Weighted score | Score | Weight | Weighted score |
| 1. Market position | | | | | | | | | |
| Importance of the supply chain for the local economy | 4 | 0.4 | 1.6 | 4.5 | 0.4 | 1.8 | 4 | 0.4 | 1.6 |
| Prospects for growth in demand | 4 | 0.3 | 1.2 | 4.5 | 0.3 | 1.35 | 4.5 | 0.3 | 1.35 |
| Competitiveness and profitability | 3.5 | 0.3 | 1.05 | 4 | 0.3 | 1.2 | 4.5 | 0.3 | 1.35 |
| Sub-total I | | | 3.85 | | | 4.35 | | | 4.3 |
| 2. Employment and working conditions | | | | | | | | | |
| Importance of the SC in terms of employment and job growth | 3.75 | 0.3 | 1.125 | 4 | 0.3 | 1.2 | 3.5 | 0.3 | 1.05 |
| Vulnerability of employment patterns and relative quality of working conditions | 3.5 | 0.2 | 0.7 | 4 | 0.2 | 0.8 | 3.5 | 0.2 | 0.7 |
| Weakness of risk management systems and mitigation mechanisms | 3 | 0.2 | 0.6 | 2.5 | 0.2 | 0.5 | 3 | 0.2 | 0.6 |
| Importance of risk factors / hazards | 4.5 | 0.3 | 1.35 | 4 | 0.3 | 1.2 | 4.5 | 0.3 | 1.35 |
| Sub-total II | | | 3.775 | | | 3.7 | | | 3.7 |
| 3. Environmental and social dimensions | | | | | | | | | |
| Potential to engage with poor communities | 4.5 | 0.4 | 1.8 | 4.5 | 0.4 | 1.8 | 4 | 0.4 | 1.6 |
| Positive impact of climate change | 2.5 | 0.2 | 0.5 | 2.5 | 0.2 | 0.5 | 2.5 | 0.2 | 0.5 |
| Potential to avoid negative impact on the environment and health of local communities | 3.5 | 0.4 | 1.4 | 4 | 0.4 | 1.6 | 3 | 0.4 | 1.2 |
| Sub-total III | | | 3.7 | | | 3.9 | | | 3.3 |
| 4. Sector organization and regulation | | | | | | | | | |
| Level of investment in the sector | 3.5 | 0.2 | 0.7 | 3.5 | 0.2 | 0.7 | 4 | 0.2 | 0.8 |
| Level of organization and collaboration | 4 | 0.3 | 1.2 | 4.5 | 0.3 | 1.35 | 4 | 0.3 | 1.2 |
| Availability and capacities of stakeholders | 3.5 | 0.2 | 0.7 | 4 | 0.2 | 0.8 | 3.5 | 0.2 | 0.7 |
| Policy relevance and political interest | 4 | 0.3 | 1.2 | 4 | 0.3 | 1.2 | 4 | 0.3 | 1.2 |
| Sub-total IV | | | 3.8 | | | 4.05 | | | 3.9 |
| 5. Potential for transferability | | | | | | | | | |
| Commodity traded from other developing countries | 4.5 | 0.4 | 1.8 | 5 | 0.4 | 2 | 5 | 0.4 | 2 |
| Transferability to other similar chains locally | 2.5 | 0.3 | 0.75 | 2 | 0.3 | 0.6 | 2 | 0.3 | 0.6 |
| Potential transferability through lead firm | 4.5 | 0.3 | 1.35 | 4 | 0.3 | 1.2 | 3.5 | 0.3 | 1.05 |
| Sub-total V | | | 3.9 | | | 3.8 | | | 3.65 |

| | | Banana | | | Coffee | | | Cut Flowers | | |
|--------------------------------|-------------------------------------|--------|--------|-------------------|--------|--------|-------------------|-------------|--------|-------------------|
| | | Score | Weight | Weighted score | Score | Weight | Weighted score | Score | Weight | Weighted score |
| 1. | Market position | 3.85 | 0.20 | 0.77 | 4.35 | 0.20 | 0.87 | 4.3 | 0.2 | 0.86 |
| 2. | Employment and working conditions | 3.78 | 0.25 | 0.94 | 3.70 | 0.25 | 0.93 | 3.7 | 0.25 | 0.93 |
| 3. | Environmental and social dimensions | 3.70 | 0.15 | 0.56 | 3.90 | 0.15 | 0.59 | 3.3 | 0.15 | 0.50 |
| 4. | Sector organization and regulation | 3.80 | 0.20 | 0.76 | 4.05 | 0.20 | 0.81 | 3.9 | 0.2 | 0.78 |
| 5. | Potential for transferability | 3.90 | 0.10 | 0.39 | 3.80 | 0.10 | 0.38 | 3.65 | 0.1 | 0.37 |
| Total (weighted I+II+III+IV+V) | | | | 3.42 | | | 3.57 | | | 3.43 |

7. Conclusion

Among the three assessed value chains, coffee got the highest score thanks to its market position, the sector organizational structure it offers as well as its high potential for transferability of findings. It appears that OSH is an important matter in the value chain while the latter involves mainly smallholders, making the topic particularly relevant to research. The value chain counts private compliance initiatives, many of which include OSH, with little existing knowledge on their impact. The banana and cut-flower value chains counted important hazards, especially as relate to chemical use, though the availability of actors was called into question in the framework of the current peace process in Colombia and on the basis of past projects led by the ILO.

The above results were discussed with the ILO Country Office for Andean Countries and the Ministry of Labour as well as the social partners and the National Federation of Coffee Growers. They agreed with the conclusions of the rapid assessment and confirmed that coffee was a value chain of interest for the country and had functioning collaboration platforms on the basis of which the project could work.