

ORIGIN ISSUE ASSESSMENT

UGANDA - COFFEE



Photo: Giuseppe Cipriani

Uganda ranks second in Africa and eighth in global coffee production (UCDA, 2017; CIAT, 2019). The country grows Robusta and Arabica coffee in a ratio of 4:1 (ICO, 2019). Key production regions are Central, Western, South-Western, Northern, and Eastern Uganda (Conservation International, 2020). Accounting for 10% of global coffee farms, an estimated 1.7 million Ugandan households grow coffee with an average plot size of 0.23 ha (ICO, 2019; CIAT, 2019). Coffee is commonly intercropped with bananas and other food crops (CIAT, 2019).

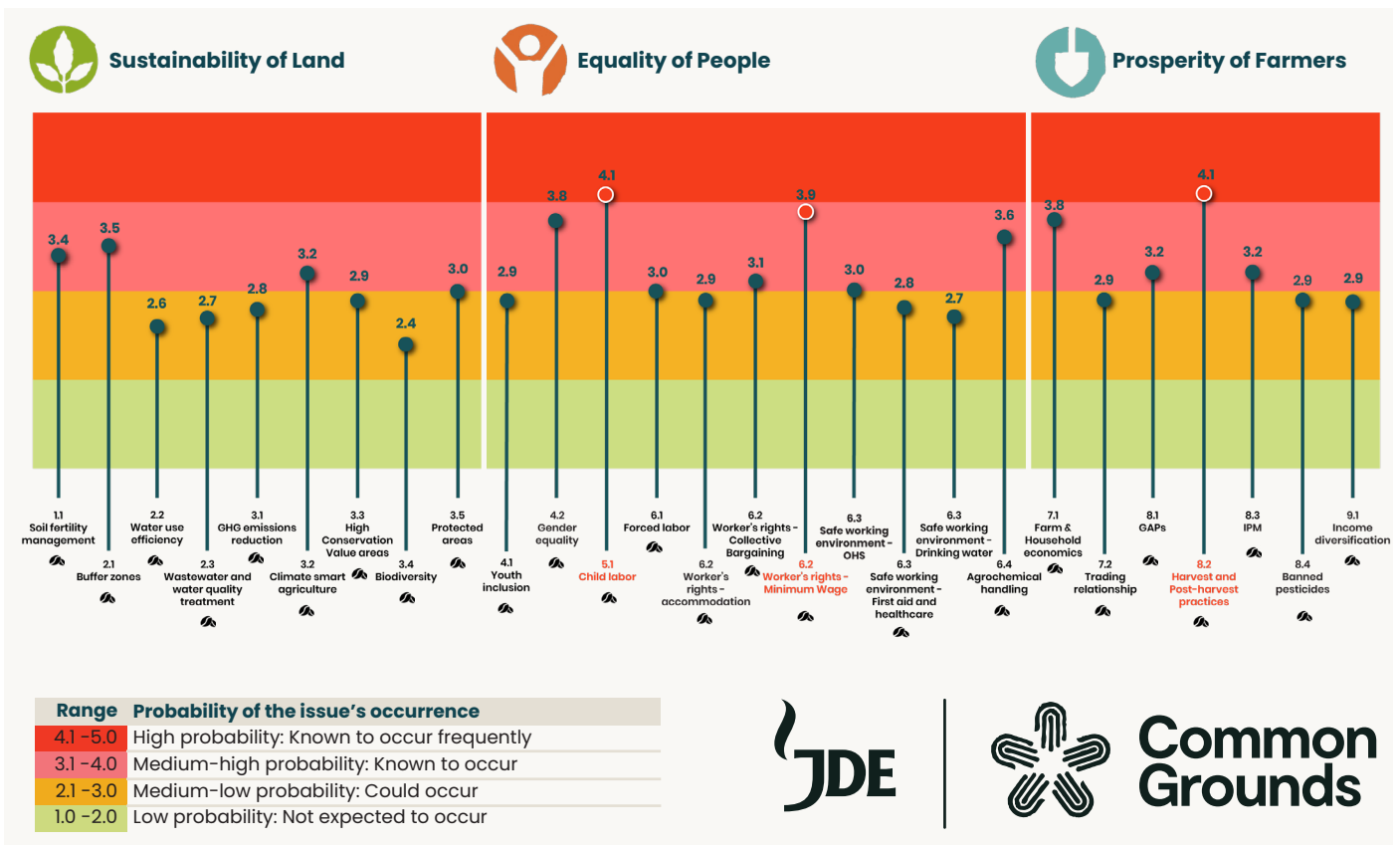
TOP ISSUES

The top issues identified are:

- **Child Labor (risk score 4.1/5)**
- **Harvest and Post-Harvest Practices (risk score 4.1/5)**
- **Minimum Wage (risk score 3.9/5)**

Coffee is among the products produced by child labor (**Child Labor**). In harvest season, a decline in school attendance is observed. Children perform hazardous work in coffee-growing families to support the farm and household activities. Poor harvesting practices on Ugandan coffee farms, such as harvesting unripe cherries, are responsible for lower coffee quality and little on-farm value addition (**Harvest and Post-Harvest Practices**). Financial instability creates pressure to produce coffee as quickly as possible and therefore hinders the implementation of good practices. Uganda does not have a national minimum wage in place (**Minimum Wage**). Due to the significant presence of subsistence farming, workers on coffee farms are casual and receive low pay. Few have written contracts with their employers.


Further details per topic are provided in a separate annex.



ORIGIN ISSUE ASSESSMENT METHOD SUMMARY

This Origin Issue Assessment (OIA) is compiled by the Rainforest Alliance as part of the JDE Common Grounds Initiative. The OIA is a desk-based ‘early warning system’ identifying potential issues related to coffee production in a country for each of the 23 JDE Common Grounds Responsible Sourcing principles. It focuses on the probability of occurrence, and less on the scale and severity of impacts. Three different data sources are used: i) country-specific law and legislation, (ii) recent evidence (media, reports, papers, UTZ audit results*), (iii) expert opinions survey**. The overall score is calculated based on these three types, however evidence is weighted higher (3x), than expert opinion (2x) and the law and legislation score (1x). The weighted scores are added up and divided by 6 to get the overall weighted risk score for each of the 23 issues.

In case insufficient coffee specific information is found, other evidence related to the country’s agriculture sector will be considered.

 This icon indicates the evidence is coffee specific.

The OIA covers the overall coffee sector, making no distinction between, e.g. (i) smallholders and estates, (ii) sun-dried and washed-coffee, (iii) sun- and shade-grown coffee.


The data presented is accurate at the time of publication based on the information collected from the above sources. Neither RA nor JDE will be liable for damage as a result of inaccuracies in the information. For more information about the OIA’s method, sources and expert surveys, please contact us at OIA@ra.org.


* Through 3rd party audits producer’s compliance is evaluated against the UTZ Certification Standard (owned by the Rainforest Alliance). Audit reports provide insights on certification gaps for the analysis.”


** Rainforest Alliance experts (country representative, thematic and coffee experts) and external expert(s) (e.g. National Coffee Platform representative) are surveyed.





Photo: Kyagalanyi Coffee Ltd.


SOIL FERTILITY MANAGEMENT		JDE Sourcing principle 1.1
Score	3.4	
Law	Uganda has several laws and policies that seek to establish minimum soil quality standards and enhance soil fertility (NEMA, 2001; Rep. of Uganda, 2004). The Uganda Green Growth Development Strategy has set an annual target of engaging 41,000 ha/year in Integrated Soil Fertility Management and land management (National Planning Authority, 2017). The government has identified soil erosion as a common problem in the mountainous parts of the country and has taken measures to support coffee farmers in mitigating this challenge (IHRB, 2016). Some of these measures include advising farmers on mulching practices which help in water retention and soil erosion prevention, and training farmers on making compost manure for improved soil fertility.	
Evidence	Evidence from multiple sources highlights declining soil fertility and the high risk of soil erosion across Ugandan coffee farms (Bauw et al., 2016; Austin, 2017; ICO, 2019; Bamutaze, 2021). With 85% of degraded land affected by soil erosion (CIAT; BFS/USAID, 2017), coffee farms are highly vulnerable to landslides, especially when coffee plants are immature and have yet to establish a canopy (Media, 2020). Poor soil fertility is a consequence of the inadequate application of organic manure and poor mulching practices (IHRB, 2016; Apanovich & Lenssen, 2018; Wang et al., 2015). Only a few households manage the desired shift to sustainable production systems, mainly due to social, economic, and environmental constraints (Sebatta et al., 2019). Integrated soil fertility management in Eastern and Central Uganda has an adoption rate of less than 30% (CIAT; BFS/USAID, 2017). Several non-conformities regarding soil fertility management were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-high risk: In the coffee-producing regions, some farmers do not know how to manage their soils, organic matter is decreasing, soil erosion is commonplace, and nutrients are wasted. “Many farmers have knowledge about soil fertility management, but lack access to or can’t afford good quality fertilizer. Availability of organic matter such as mulch or manure can also be a challenge due to competition for resources with other crops” (Expert survey, 2021).	


BUFFER ZONES		JDE Sourcing principle 2.1
Score	3.5	
Law	The National Environmental Act of 1995 and its revision in 2019 are the country’s legal framework for the sustainable management of the environment (NEMA, 2019). The act established a National Environment Management Authority (NEMA) that represents the supervisory body for all activities relating to the environment including hazardous chemicals and biodiversity offset (NEMA, 2019). Government enforcement on buffer zones around Lake Victoria has shown initial success (Media, 2021). Nevertheless, Uganda still faces a challenge on water and fertilizer policies as there is currently no policy on fertilizer use in agriculture (Leo et al., 2016).	
Evidence	Although Uganda has a very low number of farmers that use fertilizers on their farms, water pollution due to agricultural runoff still exists negatively affecting aquatic biodiversity (Leo et al., 2016; Rep. of Uganda, 2016). Research on Arabica coffee growing regions in Uganda shows that >50% of the surveyed coffee farmers were aware of the negative effects that pesticides are likely to cause on the environment (Kagezi, 2018). Farmers are continuously educated on the use of agrochemicals in combination with water management to increase the adoption of buffer zones (WWF Water Quality Index). They are encouraged to leave a vegetative area around the water source, with a width of 50m for small streams or 100m for large rivers. Non-conformities regarding buffer zones were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is likely that farmers maintain a pesticide and fertilizer non-application zone or buffer zone. On the one hand, “the use of buffer zones is not commonly known or educated to coffee farmers. On the other hand, pesticide and fertilizer application is very low, so the risk of contamination is still minimal” (Expert survey, 2021).	


WATER USE EFFICIENCY		JDE Sourcing principle 2.2
Score	2.6	
Law	The Water Act of 1997 established the legal framework for the use, protection, and management of water resources and supply in Uganda (NEMA, 1997). To unlock the massive irrigation potential of 3,000,000 ha, the government has taken the initiative to expand and support the irrigation sector (Resilience, 2020). The two major policies affecting irrigation development are the National Water Policy (1999) and the Plan for Modernization of Agriculture (2000) (WWF Water Quality Index). The new National Irrigation Policy passed at the end of 2017 is a start towards improved water management and storage. However, Uganda remains far behind its neighbors in this regard due to the country's slow implementation (World Bank, 2018).	
Evidence	Agriculture is mainly rainfed, where only 1% of total farms are irrigated (FAO 2020). For coffee farms, that percentage is even lower. Uganda's water resources remain abundant as total water withdrawal represents 0.4% of total renewable water resources (WWF Water Quality Index). A study by Sarmiento-Soler et al. (2019) on smallholder coffee farms in Eastern Uganda finds that rainfall amount and soil water content are enough to meet the water requirements, and that coffee water consumption per tree is similar across different cultivation systems. Nevertheless, evidence of a lack of piped water at micro-washing stations highlights the need for developing water storage systems as current water for the washing process must be fetched from the nearest water source (IHRB, 2016). Also, higher temperatures and more irregular rainfall caused by climate change could cause water stress despite current water availability (CIAT, 2019).	
Prevailing expert opinion	Low risk: Water availability is an issue in the dry season. "Rainwater harvesting and bottle irrigation are the most common options". "Most processing is dry processing or with the use of eco pulpers" (Expert survey, 2021).	


WASTEWATER AND WATER QUALITY TREATMENT AT PROCESSING UNITS		JDE Sourcing principle 2.3
Score	2.7	
Law	The Water Act Cap (1997) and the National Environment (Standards for Discharge of Effluent into Water or Land) Regulations (2020) state that a person shall not discharge effluents into water or land except in accordance with the act (NEMA, 1997; 2020). The Directorate of Water Resources Management (DWRM) of the Ministry of Water and Environment is responsible for implementing of the Water Act, which includes regulating water abstraction and discharge of wastewater into the environment (Kiggundu, 2017). The National Waste Management Regulations state that the waste handler must control wastewater discharges and comply with minimum treatment requirements (NEMA, 2020). Despite these laws, water management effectiveness remains challenging due to lacking institutional financing and enforcement of the legislation (Katusiime & Schuett, 2020).	
Evidence	The national wastewater treatment performs poorly, i.e., the Yale Environmental Performance Index on wastewater treatment (2020) ranks Uganda 118th out of 129 countries, which finds that only 0,4% of wastewater is treated. Although national wastewater treatment performs poorly, evidence also observes poor pesticide disposal among the Arabica coffee growing regions of Uganda, with >40% of the respondents disposing the wash water and unused/waste pesticide on their farms (Kagezi, 2018). On the contrary, some coffee washing stations are reported to have wastewater treatment systems (World Bank, 2018; Olam, 2020). With many coffee farmers being organic, the practice of discharging untreated wastewater into a ditch not yet poses significant harm to the environment (IHRB, 2016).	
Prevailing expert opinion	Medium-low risk: When looking at the country's coffee-producing regions, it is likely that, at processing units, wastewater is treated and is of good quality before it is discharged into aquatic ecosystems or drainage systems. "Most washing stations in Uganda are operated by exporters and have at least a basic wastewater treatment system". "Smallholder farmers involved in wet processing generally use very low volumes of water for processing and discharge this safely. However, some farmers - particularly if not certified - will wash coffee in rivers or streams" (Expert survey, 2021).	


GHG EMISSIONS REDUCTION		JDE Sourcing principle 3.1
Score	2.8	
Law	As one of the first African countries to develop and endorse its Nationally Determined Contributions (NDCs) Partnership Plan, Uganda made key commitments including a 22% reduction of national greenhouse gas emissions by 2030 (World Bank, 2019). Under its NDCs, Uganda aims to have installed 3,400MW of generating capacity from renewable sources, a target it will likely meet (Dutch Ministry of Foreign Affairs, 2018). The National Coffee Policy encourages the use of alternative energy sources to reduce the pressure on wood fuel as the primary energy source (ICO, 2019).	
Evidence	Uganda is amongst the least electrified countries worldwide, with woody biomass being used as wood fuel to provide for over 93% of the country's energy needs (Miito & Banadaa, 2017). Evidence finds that communities in rural areas of the country live without access to electricity (Fairtrade, 2021). The country's coffee sector is characterized by low input use and a high proportion of manual labor making the sector's carbon footprint low by default (CIA, 2019). Several initiatives, however, have advanced the utilization of renewable energy among coffee production activities. For instance, Nucafe's processing plant in central Uganda has installed a 172 kWp solar power plant for its operations which is expected to reduce its carbon footprint (Media, 2020). Furthermore, the social enterprise Kyaffee trains women smallholder coffee farmers to produce renewable energy briquettes from waste coffee husks (SEED, 2019).	
Prevailing expert opinion	Medium-low risk: When looking at the country's coffee producing regions, it is likely that farmers use energy efficiently and that farmers use renewable energy sources. "The most commonly used renewable energy is solar energy, however in many cases, farmers only have solar panels with limited capacity that can't meet their energy needs". "Farmers widely depend on wood-based energy sources in the rural areas" (Expert survey, 2021).	


CLIMATE SMART AGRICULTURE		JDE Sourcing principle 3.2
Score	3.2	
Law	The National Environmental Act (2019) provides a legal framework to environmental issues and established an Environmental Protection Force (NEMA, 2019). As Uganda is part of most international environmental and climate change agreements (e.g., UNFCCC, Kyoto Protocol), the country has made necessary commitments to implement nationwide adaptation and mitigation measures (Rep. of Uganda, 2020). The National Coffee Strategy (NCS) promotes and supports climate change adaptation and environmentally responsible practices (ICO, 2019). For example, the government has distributed 300 million coffee wilt resistance seedlings per year for three years from 2016-2019 (CIAT, 2019). Despite the effort, the survival rates of the seedlings were low.	
Evidence	Uganda is among the world's most vulnerable countries to climate change exhibiting a low adaptive capacity (World Bank, 2018). Research shows that smallholder coffee farmers have been responsive to climate exposure as the impacts are increasingly being felt (Call et al., 2019; Media, 2017; Fossati, 2019). Seeking ways to increase their resilience, coffee farmers have participated in government-supported climate smart agricultural training (Media, 2021; WWF, 2015). Moreover, coffee communities have gained experience in climate adaptation which is demonstrated by the adoption of strategies such as crop diversification and rotation, mulching, pesticide use, planting drought-resistant coffee varieties, and terracing to circumvent soil erosion (WRI, 2019; ITTA, 2019; Mubiru et al., 2018; Mugagga, 2017). Agroforestry systems in which coffee is intercropped with bananas are common and help absorb the severity of the shocks (ITTA, 2019; Solymosi & Techel, 2019). However, limited resources are hindering CSA implementation (CGIAR, 2017). Research finds that farmers struggle to adapt to long-term climate irregularities which result in lower agricultural productivity and reduce opportunities for diversification (Call et al., 2019).	
Prevailing expert opinion	Medium-high risk: Climate change seems to have a negative impact on coffee production and farmers are not able to adapt quickly enough. "Farmers largely do not yet have the skills and technologies to adapt to changes in the weather patterns that are impacting coffee production". Nevertheless, "farmers are adapting at different levels through practices such as intercropping, planting shade trees, and digging trenches" (Expert survey, 2021).	


FOREST AND HIGH CONSERVATION VALUE AREAS (HCVS)		JDE Sourcing principle 3.3
Score	2.9	
Law	To avert degradation, the government has put in place relevant laws and policies to promote the sustainable use of forest resources (Rep. of Uganda, 2020). This includes the National Forestry Policy and Tree Planting Act (NEMA, 2003). In Uganda’s Green Growth Development Strategy, the government had committed to restoring forests to 1990 levels when forest cover was 24% of total land cover (National Planning Authority, 2017). Despite these interventions, the country continues to lose its forests at an alarming rate indicating a lack of policy enforcement (Josephat, 2018).	
Evidence	The rate of forest cover loss in Uganda stands at 2.6% annually, one of the highest in the world (World Bank, 2019). Studies indicate that there will be no forests left in 40 years if current trends continue (Rep of Uganda, 2020). While agricultural activity has been identified as one of the key drivers of deforestation (Solymosi & Techel, 2019), the risk of coffee-related deforestation remains contested. It is highlighted that the role of coffee in the transformation of the Ugandan landscape is hard to quantify (CIAT, 2019). Nevertheless, evidence finds a close link between deforestation and soil erosion within coffee growing communities as expansion into new areas has led to felling large, native trees (Austin, 2017). Conservation International (2016) examines that in comparison to other major global coffee growing areas, future coffee expansion in East Africa carries the lowest risk of future deforestation due to low forest cover in potential expansion landscapes.	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee-producing regions, it is unlikely that farmers have converted High Conservation Value areas to agricultural production or other land uses since January 1st, 2014. “It is happening, although not necessarily driven by coffee expansion, but more by the general expansion of agricultural land due to population growth of around 3% per annum” (Expert survey, 2021).	


NATIVE VEGETATION AND ON-FARM BIODIVERSITY		JDE Sourcing principle 3.4
Score	2.4	
Law	Uganda has ratified international conventions such as the Convention on Biological Diversity (1992) providing the legislative framework to protect Uganda’s national biodiversity. The National Biodiversity Strategy and Action Plan (2015–2025) is the main instrument for implementing the Convention on Biological Diversity at the country level to enhance biodiversity conservation and management (Rep. of Uganda, 2016). The National Environment Act of 2019 established an Environmental Protection Force (Rep. of Uganda, 2019). Although the budgetary allocations for biodiversity conservation have been increasing significantly, financing gaps remain, most notably in the agricultural sector (CBD).	
Evidence	In Uganda, coffee is commonly grown in agroforestry systems indicating a naturally diverse vegetation structure (ICO, 2019). Negawo & Beyene (2017) find that the diversity of tree species in coffee farms in Uganda is reasonable comparable to that of the forest reserve. However, vegetation structure and biodiversity levels in coffee systems vary with altitude (Rahn et al., 2018; Karungi, 2018). On the one hand, certain varieties of Robusta coffee trees naturally occur in Uganda’s rainforests (Ugandan Coffee Federation, 2021). On the other hand, coffee production occurs in areas with at-risk habitat and biodiversity, such as the Albertine Rift region home to some of the world’s most endangered species (GMAP).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is likely that farmers contribute to the preservation of native vegetation and on-farm biodiversity. “Given the diverse nature of most of Uganda’s small-holder coffee farmers, many are contributing to nature conservation and on-farm biodiversity unconsciously” (Expert survey, 2021).	




PROTECTED AREAS		JDE Sourcing principle 3.5
Score	3.0	
Law	The management of wildlife and protected areas is guided by the Uganda Wildlife Act of 2000 (Nkuringo Buffer Zone Joint Management Board, 2015). The Ugandan Wildlife Authority (UWA) is responsible for enforcing this act by protecting wildlife inside and outside its protected areas. Many new rangers have been trained and recruited by the UWA to fulfill this duty. The effectiveness of the government’s policies and programs has yet to be examined as deforestation trends are still increasing, especially in protected areas (Kihumuro, 2020).	
Evidence	Uganda has 711 Total Protected Areas, which translates into a terrestrial protected area coverage of 16.06%, for which 40.97% have management effectiveness evaluations (Protected Planet Index; World Bank, 2018). Upward expansion for Arabia coffee cultivation poses a threat to forests and protected areas (Solymosi & Techel, 2019). Also, the extraction of wild coffee in protected areas has been noted as a threat and legal issue (GMAP). Moreover, the proximity of coffee farms to national parks such as the Queen Elizabeth Biosphere Reserve and National Park in western Uganda is cited as a threat to biodiversity within the protected area (GMAP). The social enterprise Gorilla Conservation Coffee promotes biodiversity conservation by enabling coffee farmers living around protected areas with gorillas to have a viable livelihood by offering price premiums for their coffee (GCC, 2019). In return, higher incomes for the farmers reduce their need to enter the forest.	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is unlikely that coffee is produced or processed in protected areas or their designated buffer zones. “Protected areas are usually very far away from the coffee-growing communities” (Expert survey, 2021).	


YOUTH INCLUSION		JDE Sourcing principle 4.1
Score	2.9	
Law	The Ugandan government has identified the need for youth inclusion policies and has adopted a National Strategy for Youth Employment in Agriculture in 2017 intending to increase rural access to agricultural finance (FAO, 2020; MAAIF, 2017). Programs targeting business training, access to loans, and entrepreneurship support have been set up (FAO, 2019). However, inadequate funding and delays in the disbursement of funds, and short project cycles were identified as common challenges across different programs (FAO, 2019).	
Evidence	Uganda has one of the world’s youngest populations, with over 78% below the age of 30 (FAO, 2020). Due to constraints in capital skills and assets, young people have limited access to decent jobs in the rural labor market (FAO, 2020). Youth involvement in the coffee sector is frequently limited to casual labor, such as seasonal jobs for coffee harvesting (FAO, 2020). Youth are often an unpaid family labor force that are not entitled to decision-making as household heads are reluctant to share responsibility and benefits of the cash crop (MAAIF, 2017; Solymosi & Techel, 2019; FAO, 2019). Nevertheless, some initiatives promote the involvement of youth in the country’s coffee sector (IHRB, 2016). Programs have focused on encouraging youth involvement at micro washing stations and coffee cooperatives (IHRB, 2016). Furthermore, the Young Farmers’ Federation Uganda and Farm Africa promote coffee farming among youth in the Kanungu District (UNYFA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is likely that the participation of young farmers is promoted. “There are a number of initiatives in Uganda which seek to provide support and training to young farmers, as well as business skills to improve employment (for example, the Young Farmers Federation of Uganda). However, access to land, membership, and decision-making continues to be a challenge” (Expert survey, 2021).	


GENDER EQUALITY		JDE Sourcing principle 4.2
Score	3.8	
Law	Gender equality is manifested in the Ugandan constitution by valuing the dignity of women and prohibiting any form of discrimination (Rep. of Uganda, 2020). The National Gender Policy of 1997 and its revision in 2007 confirm the government’s commitment to take actions that will bring about more equal gender relations (FAO, 2007). The government has started to support gender empowerment programs actively and has sought help fulfilling its commitments from organizations such as UNDP (IHRB, 2016; UNDP, 2021).	
Evidence	Although women are the backbone of Uganda’s coffee industry, it tends to be men who control the profits (Media, 2021). Women contribute up to 70% of labor in coffee production while also engaging in unpaid domestic work (CGIAR, 2018). Evidence finds that revenues from selling coffee are 44% lower for female-headed households in Uganda (ICO, 2018). Particularly at household level women struggle to become empowered highlighting the decision-making power of men in the coffee value chain (Özdemir, 2018). Financial independence among women is seldom as most lack proper education and training, land, inputs, and financial services (CIA, 2019; Farm Africa, 2020). Despite these challenges in achieving gender equality, the proportion of female-headed coffee households is about 40% (ICO, 2019). Government interventions and programs by international organizations have improved some women’s livelihoods by offering trainings, extension services and increasing the uptake of women within coffee cooperatives (CIAT, 2019; ACFODE & Konrad Adenauer Stiftung, 2018; CGIAR, 2018).	
Prevailing expert opinion	Medium-high risk: Women sometimes do not have equal rights, responsibilities, and opportunities. “Women in coffee-growing areas are much involved in the coffee-growing activities, but they are hardly recognized for it. Main challenges include a lack of access to decision-making, training, inputs, and resources like land and credit”. “Most women do not have an equal say in the management of the farm, allocation of resources and use of household income. Most households have limited financial transparency” (Expert survey, 2021).	


CHILD LABOR		JDE Sourcing principle 5.1
Score	4.1	
Law	Uganda has ratified both the Minimum Age Convention (1973) and the Worst Forms of Child Labor Convention (1999) (ILO). There are national laws prohibiting child labor under the age of 14, except for light work that does not interfere with school (GMAP). In 2019, the government initiated a Uganda National Action Plan for the Elimination of Child Labor (ILO, 2019). Despite government efforts to eradicate child labor, child exploitation still occurs, particularly in rural areas (GMAP). Gaps in the legal framework persist, including insufficient laws regulating the minimum age for employment and hazardous work. In addition, existing programs are inadequate to address child labor in the country (USDL, 2019).	
Evidence	Child labor is a serious and common issue in Uganda (GMAP). According to the U.S. Department of Labor’s 2020 List of Goods Made with Forced Labor and Child Labor, coffee is among the products produced with child labor in Uganda (Coffee Barometer, 2020; Anti-slavery International, 2017). Children as young as seven are exploited in coffee farming, often as casual workers on family farms (USDOS, 2020; ILO, 2019; FAO, 2019). Among those children working in coffee, a study finds that 48% have experienced physical injuries (Verite, 2018). Evidence also observes a declining school attendance during the harvesting season (Austin, 2017). The Rainforest Alliance Social Risk Map attaches a high-risk score to child labor in the Ugandan coffee value chain (RA, 2021). To combat child labor, a “Stop Child Labor project” by Volcafe Way (2019) was implemented and has helped 437 children to go back to school.	
Prevailing expert opinion	Medium-high risk: Children are deprived of school at least a few weeks or more per year. Children under 18 years old sometimes perform hazardous work. “Child labor risks are slightly high in the country. Only certified and project supported farmer groups proactively address the risks”. “Children perform hazardous work in coffee-growing families, both as a support to farming activities and household work.” Common hazardous activities identified by experts include children spraying crop protection products and herbicides, participating in work at the coffee mills handling machetes, and carrying heavy weights. (Expert survey, 2021). *Child labor was listed as a top priority issue in the previous OIA Uganda (2017).	


FORCED LABOR		JDE Sourcing principle 6.1
Score	3.0	
Law	Uganda has ratified the Forced Labor Convention and the Abolition of Forced Labor Convention (ILO). Policies related to forced labor include the Uganda National Action Plan for Prevention of Trafficking in Persons and the National Referral Guidelines for Management of Victims of Trafficking (EU Commission, 2020). The Trafficking in Persons report by the U.S. Department of State (2020) highlights that the Ugandan government overall did not demonstrate increasing efforts to combat forced labor. The Coordination Office for Prevention of Trafficking in Persons (COPTIP) is severely underfunded.	
Evidence	Uganda is included in the list of countries that show trafficking for forced labor in global supply chains (ILO, OECD, IOM & UNICEF, 2019). Forced labor is a concern in coffee farming (ILO, 2019). However, coffee is not listed among the U.S. Department of Labor’s List of Goods made with forced labor (USDL, 2020). The Risk Map of the Rainforest Alliance (RA, 2021) attaches a high-risk score for forced labor in coffee.	
Prevailing expert opinion	Medium-low risk: It is unlikely that forced labor happens in the country’s coffee-producing regions. “Most workers are not forced to work and receive payment.”. Though, an expert highlights a “high risk for forced labor due to the fact that many coffee producers use third party labour recruiters to supply workers for peak production periods, and many workers work without formal contracts (Expert survey, 2021).” (Expert survey, 2021).	


WORKERS' RIGHTS AND DUTIES		JDE Sourcing principle 6.2
Highest score	3.9	
ACCOMMODATION		
Score	2.9	
Law	The 1995 Constitution of the Republic of Uganda expresses the right to decent shelter (Rep. of Uganda, 2016). The (2006) Employment Act specifies that for accommodation provision, deductions from worker's remuneration are permitted as long as the employee has agreed to this deduction.	
Evidence	Evidence on coffee-farming households finds low housing quality of most homes (Bartl, 2019). A study on small-holder coffee farmers in the highland area of West Nile and Western Uganda discovered that housing is considered "decent" with meeting 5 out of the 8 criteria of its Uganda housing overview (GLC & SHIFT, 2020). Permanent workers employed on larger coffee plantations such as the Kaweri Coffee Planation are provided with housing (Neumann Gruppe, 2019). No non-conformities were found in UTZ audits between 2016-2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: Workers and their families are responsible for their own accommodation. "Generally, workers on the larger farms come from surrounding villages, and accommodation is not necessary for the owner to provide". "In the few coffee estates, workers may be offered housing of fair quality" (Expert survey, 2021).	
COLLECTIVE BARGAINING		
Score	3.1	
Law	Uganda has ratified the Freedom of Association and Protection of the Right to Organize Convention, the Right to Organize and Collective Bargaining Convention, and the Right of Association (Agriculture) Convention. Ugandan law allows workers to form and join independent unions, bargain collectively, and take industrial action against their employers (Verite, 2018). In practice, however, these government commitments are not adequately enforced as unions have been undermined. The government has failed to prosecute violators of workers' rights to freely associate (Freedom house, 2020; Verite, 2018; Baligasima; 2013).	
Evidence	According to the Uganda Coffee Alliance, there are an estimated 1,600 coffee associations/cooperatives and community-based organizations in Uganda (ICO, 2019). The National Union of Coffee Agribusinesses and Farm Enterprises (NUCAFE) represents an umbrella organization for 200 cooperatives and associations and focuses on strengthening organizational capacity (CIAT, 2019). Nevertheless, the level of organization among farmers varies across districts (FAO, 2020). Due to lacking investments in organizational development, less than one-fifth of coffee farmers are affiliated with producer organizations (Solymosi & Techel (2019). No non-conformities on collective bargaining were found in UTZ audits between 2016-2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country's coffee-producing regions, it is likely that workers are fully aware of their rights and duties and that their employers adhere to those rights and duties, including the right of collective bargaining. "My general impression is that workers at all levels and in all walks of life are quite aware of their rights. Labor offices are active if called upon, and generally chose the side of a mistreated laborer" (Expert survey, 2021).	
MINIMUM WAGE		
Score	3.9	
Law	Uganda has ratified the Protection of Wages Convention and the Equal Remuneration Convention, but not the Minimum Wage Fixing Convention (ILO). The monthly minimum wage in Uganda is UGX 6,000 (equivalent to \$1.7), which has remained unchanged since 1984 (ILO, 2020; Verite, 2018). A government-appointed committee has recommended UGX 130,000 per month as the lowest pay to any worker, an amount far above the current legislation (Media, 2017). The Minimum Wages Bill of 2015 aimed to amend, repeal and reform minimum wage legislation (Rep. of Uganda, 2015). However, President Museveni has declined to sign the bill (Media, 2019; Parliament of Rep. of Uganda, 2019). The political will to implement minimum wage legislation remains weak in Uganda.	
Evidence	In Uganda, minimum wages are set at a level that does not provide an income matching even the extreme poverty line of US \$1.9 per day (ILO, 2020). As a result, Uganda has the world's lowest monthly minimum wage (ILO, 2020). Work on coffee farms is seasonal and often on a part-time basis; therefore, wages for coffee workers are often too low to access basic necessities (FAO, 2020). Evidence on the Bulambuli and Bukomansimbi districts finds that part-time coffee workers on average earn about UGX 20,000 (\$5.5) and 15,000 (\$4.2) a month, respectively, an amount far below the suggested UGX 130,000 (\$37) (FAO, 2020). Wages for casual workers are not based on a standard daily rate but the rate per kilogram of harvested/sorted beans. As a result, there is a high risk for workers earning less than internationally accepted minimum wage rates.	
Prevailing expert opinion	Highly contested risk opinions**: It remains contested whether workers are paid the minimum wage. Experts indicating low-risk scores state that "there is no minimum wage in Uganda, but regions have locally acceptable rates, and these always apply". Experts suggesting high-risk highlight that "most coffee companies manipulate workers in the bid to maximize profits" (Expert survey, 2021). *Minimum Wage was listed as a top priority issue in the previous OIA Uganda (2017). ** The averaged risk score does not sufficiently reflect the wide discrepancy in expert opinion, ranging from low to high risk.	


SAFE WORKING ENVIRONMENT		JDE Sourcing principle 6.3
Highest score	3.0	
OCCUPATIONAL HEALTH SAFETY*		
Score	3.0	
Law	Uganda has not ratified the Occupational Safety and Health Convention, nor the Safety and Health in Agriculture Convention (ILO). Nevertheless, Uganda has established legislations on OHS standards such as the Occupational Safety and Health Act (2006) which describes the duties and responsibilities of employers to protect the safety and health of workers and others (ILO). Though, OSH-related laws are largely outdated (Atusingwize et al., 2018). Significant challenges to adequate occupational safety and health remain as systems to implement the legislations are inadequate (Loha et al., 2018; Atusingwize et al., 2018; GMAP).	
Evidence	Health and safety concerns are found throughout Uganda’s farming sector. Evidence finds a low level of knowledge and awareness of agricultural health and safety risks, disease, and injury prevention among farmers (Lunner-Kolstrup & Ssali, 2016). Inadequate pesticide handling has also been reported in Uganda’s agricultural sector, resulting in health hazards such as pesticide poisoning (Ssemugabo et al., 2017; Fuhrmann et al., 2021). Regarding the coffee sector, no non-conformities on OHS were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is likely that workers enjoy a safe working environment, where adequate steps are taken to prevent work related injuries. “Relatively few dangerous machines & equipment is used”. However, “most farmers don’t have personal protective equipment for their workers”, “as they see this as an additional cost” (Expert survey, 2021). *Unsafe Working Conditions was listed as a top priority issue in the previous OIA Uganda (2017).	
FIRST AID AND EMERGENCY HEALTHCARE		
Score	2.8	
Law	Uganda’s Workers Compensation Act states that employers are responsible for full compensation for injuries, incapacity, or death resulting from accidents or occupational disease (Rep. of Uganda, 2006). Uganda National Social Protection Policy of 2015 presents the Government of Uganda’s (GoU) strategy for social protection and has introduced an affordable national health insurance scheme (Solidar, 2016). Although the government must provide first-aid and welfare facilities for workers according to the Occupational Safety and Health Act (ILO), evidence highlights weaknesses at every level of what should be a critical component in the health care system (Ningwa et al., 2020).	
Evidence	According to the Ugandan government, 75% of the population lives within five kilometers of a health facility (Dowhaniuk, 2021). Coffee farmers are typically uninsured and lack vital social protection programs (GLC & SHIFT, 2020). However, efforts to improve healthcare facility access were found. For instance, Bufumbo Organic Farmers Association built and granted a First Aid Health Center for farmers in the Mount Elgon Region (Caffe River, 2019). No non-conformities regarding first aid and emergency healthcare were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee-producing regions, it is likely that workers receive first aid and emergency health care for treatment of work-related injuries. “Farmers do not have first aid kits at home but will have local first aid treatments available. Emergency health for more serious work-related injuries is available from government health centers” (Expert survey, 2021).	
DRINKING WATER		
Score	2.7	
Law	The Water Cap Act from 1997 establishes the legal framework around the use, protection, and management of water resources and supply in Uganda (NEMA, 1997). The Government of Uganda’s Third National Development Plan (2020/21–2024/25) sets targets for increasing access to water supply from 75% to 85% in rural areas (Huston et al., 2021). The proportion of the rural population using an improved drinking water source has slightly increased from 65% to 69% between 2017 and 2019 (UN, 2020). However, it would require doubling the current annual rate of progress to achieve universal access to basic sanitation services by 2030 (UN, 2020).	
Evidence	Although the proportion of the urban and rural population using an improved drinking water source has increased in Uganda, the access equity gap between districts remains high (UN, 2020). The Water Management and Development project improved the integration of water resources planning, management and development, and access to water and sanitation services (World Bank, 2020). Nevertheless, evidence highlights the threat of water contamination due to heavy metals (particularly Iron) in Uganda’s drinking water (Kasozi et al., 2019). No non-conformities regarding drinking water were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country’s coffee producing regions, it is likely that workers have convenient access to safe drinking water. “Workers generally have access to safe drinking water in the homesteads”. “Where workers are employed on the larger farms, drinking water is generally necessary for the owner to provide in order to attract workers” (Expert survey, 2021).	


AGROCHEMICAL HANDLING		JDE Sourcing principle 6.4
Score	3.6	
Law	Uganda is a signatory of several international Conventions and Agreements related to the management of agricultural chemicals, including the Rotterdam (1998) and Stockholm (2001) convention (NAPE, 2010; UNEP, 2010). The Agricultural Chemicals (Control) Act (2006) sets the legal framework around manufacture, storage, distribution and trade, use, importation and exportation of agricultural chemicals, and for other related matters (Uganda Legal Information Institute). The Agricultural Chemicals Board (ACB) is responsible for the registration and licensing of agricultural chemicals.	
Evidence	Several sources highlight inadequate agrochemical handling in Uganda’s agricultural sector. A study on the Waki-so district found that most pesticides used among smallholder farmers are classified as highly hazardous by the World Health Organization and that less than 2% used personal protective equipment when applying pesticides (Staudacher et al., 2020). For the coffee sector, research shows that pesticide use in the Arabica coffee growing regions is limited, i.e., with 23% of the farmers using pesticides (Kagezi et al., 2019). However, it is also highlighted that coffee farmers who use pesticides exhibit poor disposal methods and some are exposed to pesticide poisoning (Kagezi et al., 2018). Non-conformities regarding agrochemical handling were found in UTZ audits between 2016-2020 (RA, 2020).	
Prevailing expert opinion	Medium-high risk: When looking at the country’s coffee producing regions, it is unlikely that agrochemicals are handled in the right way. “Most farmers don’t know the dangers associated with poor handling of agrochemicals”. “Safe storage and application are a challenge for smallholder farmers. Only certified and projects supported farmer organizations address these issues in a systematic way” (Expert survey, 2021).	


FARM & HOUSEHOLD ECONOMICS		JDE Sourcing principle 7.1
Score	3.8	
Law	The Ugandan government has identified coffee as a priority crop and has established a 15-year Coffee Roadmap program. The Uganda Coffee Development Authority (UCDA) is responsible for implementing this program and aspires to increase Uganda’s coffee production to 20 million bags by 2030 and triple incomes of 1.2 million smallholder coffee farmers (USDS, 2020). The UCDA (2019) reports that nearly 80% of UCDA’s budget is spent supporting productivity in production. In addition, as part of its national coffee strategy, the UCDA has distributed coffee seedlings free of charge (IHRB, 2016).	
Evidence	Most Ugandan coffee farmers do not use productivity-enhancing inputs, which is closely linked to the lack of access to agricultural finance (FAO, 2020; UNCP, 2018). As a result, farmers generally have low yields with an average of 0.6 tons/ha (Solymosi & Techel, 2019; Media, 2021). Often coffee farmers are not adequately mobilized into viable economic units due to low input use, a lack of improved technologies, insufficient business advisory and extension services, and unsustainable agronomic practices (UIA, 2016). Moreover, fluctuating international coffee prices have affected farmers financially and have left some in debt (GLC & SHIFT, 2020). To combat the issues regarding financial management on coffee farms, NUCAFE has established a National Coffee Entrepreneurship and Career Service Centre that provides entrepreneurial skills development training (UNCDF, 2018). In addition, organizations such as the GIZ (2015), Solidaridad (2018), and TechnoServe (2020) have taken initiatives to support farmers with their financial management in cooperation with local institutions.	
Prevailing expert opinion	Medium-high risk: Most coffee farmers are not sufficiently aware of the farm and household economics. “Very few farmers keep records. Total coffee harvest, income and input costs are guesstimates”; “only a few of the coffee exporting companies are training farmers on record keeping and having a business diagnosis (cost benefit analysis) for the coffee fields”. Moreover, “numeracy skills among farmers are limited” (Expert survey, 2021).	


TRADING RELATIONSHIP		JDE Sourcing principle 7.2
Score	2.9	
Law	Uganda has a National Fertilizer Policy that aims to provide affordable and accessible fertilizers to farmers to achieve increased and sustainable agricultural productivity and improve farm incomes (MAAIF, 2016). The government has invested and continues to invest in coffee production through providing planting material and agro-inputs (ICO, 2019). In addition, efforts by the Uganda Coffee Development Authority facilitate extension services, link farmers to buyers and provide marketing support (Media, 2020; UCDA, 2019). However, insufficient funding for the implementation of the extension services remains an issue (GCP, 2016).	
Evidence	Since the liberalization of the coffee sector in the late 1980s, multinational companies have invested in the production and primary processing of coffee in Uganda, which includes the provision of extension services to coffee farmers such as financial services, quality inputs, and training (IDH, 2019; CIAT, 2019; World Bank, 2018). Support from development banks offers credits to coffee businessmen and women at low interest rates (ICO, 2019). Despite the evidence highlighting beneficial trading relationships, smallholder coffee farmers often lack access to essential equipment like fertilizer, irrigation, and high-quality seeds, services like bank loans, agricultural training, and market data (Media, 2017). Coffee pre-sold to agents and brokers is commonly sold well below market value (Solymosi & Techel, 2019). The inability to reach agricultural inputs at trading centers is further exacerbated through COVID-19 restrictions on movement and transportation (HRNS, 2020). Evidence finds that 61% of coffee households reported lost income from coffee farming income due to COVID-19 (TechnoServe, 2020).	
Prevailing expert opinion	Medium-high risk: When looking at the country’s coffee-producing regions, it is likely that coffee sourcing companies facilitate farmers to access key production inputs, such as plantlets, fertilizer and agrochemicals, but unlikely that coffee-sourcing companies facilitate farmers to access services, such as credit and market information. “Most companies don’t provide services related to access to finance or market information”. However, “companies working with certified and project farmers have stronger links with their registered farmers and are able to offer additional services, e.g. bonuses, trainings, farm implements, etc.” (Expert survey, 2021).	

GOOD AGRICULTURAL PRACTICES		JDE Sourcing principle 8.1
Score	3.2	
Law	The National Coffee Bill of 2018 aims to promote coffee research, good farming practices, domestic consumption, and value addition (CIAT, 2019; Media, 2020). The Directorate of Development Services is responsible for providing extension services to farmers on Good Agricultural Practices and Agribusiness and technical assistance at the post-harvest level (UCDA, 2019). The directorate conducted training sessions on GAP and distributed rehabilitation tool kits, including bow and pruning saws (UCDA, 2019). Also, the Ugandan Coffee Development Authority has implemented demonstration plots exhibiting GAPs (MAAIF, 2020).	
Evidence	In Uganda, smallholder farmers intercrop their coffee trees with traditional food crops, usually utilizing the shade of banana and other trees (UGF, 2021; FAO, 2020). Programs have been set up to provide rental equipment to individual smallholder farmers and communities, including pruning equipment, drying trays and crop protection equipment (IDH, 2019; World Bank, 2018). Despite the overall low use of agrochemical inputs on Ugandan coffee farms (ICO, 2019), only about 20% of the coffee produced is certified according to sustainability standards (Solymosi & Techel, 2019). The UCDA observes that the number of farmers adopting best practices has increased (UCDA, 2019). Nevertheless, evidence highlights that farmers lose about 50% of the maximum attainable coffee output due to inefficiencies (Sebatta et al., 2018). Several non-conformities regarding GAPs were found in UTZ audits between 2016-2020 (RA, 2020).	
Prevailing expert opinion	Medium-high risk: Expert estimates of the percentage of farmers in the coffee-producing regions using Good Agricultural Practices vary between <25 and >75%. “This varies across the regions”; but generally, “most farmers use a few GAPs, few farmers use more than a few, leave alone all. In coffee extension, it is the predominant focus to get more farmers to apply more GAPs” (Expert survey, 2021).	

HARVEST AND POST-HARVEST PRACTICES		JDE Sourcing principle 8.2
Score	4.1	
Law	The 2018 National Coffee Bill serves as the legislative framework for the UCDA to regulate, promote and oversee the coffee sector and regulate all on-farm and off-farm activities in the coffee value chain (Media, 2020). The Directorate of Development Services conducted 964 training sessions on GAPs and post-harvest handling (UCDA, 2019). With EU funding, the UCDA has made grants available to improve post-harvest handling practices in the cocoa and coffee sector (UCDA, 2017).	
Evidence	Most Robusta is sun-dried, although there have been modest attempts to reintroduce wet processing (UCF, 2021). Most Arabica is processed with the use of hand pulpers. Multiple sources observe poor harvesting practices on coffee farms (Arslan, 2019; Media, 2018; World Bank, 2018). Siedem & Padamsey (2019) identify that financial shocks create pressure to produce coffee as quickly as possible, including harvesting coffee cherries before they are ripe. As a result, there is little to no value addition at the farm level, and coffee farmers continue to sell unprocessed coffee, resulting in lower earnings (UIA, 2016). In addition, the production and handling issues during harvest and post-harvest stages are found to be responsible for low coffee quality (Media, 2018; Wanok, 2019). The deteriorating quality has resulted in a falling competitiveness of Uganda's coffee on the world market which has led to the UCDA closing more than 200 coffee processing plants in the greater Masaka sub-region (MAAIF, 2017; Media, 2017).	
Prevailing expert opinion	Medium-high risk: Expert estimates of the percentage of farmers in the coffee-producing regions implementing good harvest and post-harvest practices vary between <25 and >75%. "Harvesting red cherries and drying on tarpaulins is a common practice". "The biggest issue is strip harvesting, with too many unripe beans in the mix". Also, "managing moisture content is an issue due to availability of moisture meters at farm level". However, there are "strong differences between value chains" (Expert survey, 2021).	

INTEGRATED PEST MANAGEMENT		JDE Sourcing principle 8.3
Score	3.2	
Law	The President of Uganda tasked the coffee sector with distributing 300 million seedlings per year between 2016-2019 (CIAT, 2019). The UCDA coordinated the production of these seedlings with resistance to Coffee Wilt Disease; however, survival rates of the seedlings were low (UCDA, 2019; CIAT, 2019). The policy and legal framework for pest management are satisfactory, particularly with new pest prevention (Kansiime et al., 2016). However, poor regulation enforcement has led to a large informal market for cheap, poor-quality agrochemical products, including counterfeits which compromise the adaption of IPM (Andersson & Isgren, 2021).	
Evidence	Pests and diseases remain the main threats to Uganda's coffee production (ICO, 2019). Past outbreaks of the Coffee Wilt Disease and Coffee Leaf Rust severely affected farmers as input use is low, with only 3.5% of coffee households using inorganic fertilizers and 9% applying pesticides (CIAT, 2019). Coping strategies such as timely weeding and chemical spraying were exhibited among Arabica growing zones (Luzinda et al., 2015). A post coffee stem borer IPM training survey of 126 farmers reveals that farmers' attitudes toward pesticides are a major constraint to IPM use (Ochago, 2018). IPM practices are less appealing because of the cost and high labor requirements, and therefore a limitation, especially to women and the elderly. Nevertheless, programs such as the USAID funded Integrated Pest Management Collaborative Research Program encourage IPM in Uganda.	
Prevailing expert opinion	Medium-high risk: Expert estimates of the percentage of farmers in the coffee producing regions applying Integrated Pest Management vary between <25 and 75%. "Some efforts are being made to use IPM methods in some pest and diseases, but this has not spread to many farmers"; also, a "lack of training, especially in Elgon Region" was highlighted (Expert survey, 2021).	

BANNED PESTICIDES		JDE Sourcing principle 8.4
Score	2.9	
Law	Uganda is a signatory to several international conventions and agreements related to pesticides' responsible use, including the 2008 Rotterdam Convention. The Agricultural Chemicals Control Act provides a legal framework for regulating the use and trade of agricultural chemicals (Uganda Legal Information Institute). However, systems to enforce legislations on responsible pesticide use are poor which has resulted in a large informal market for cheap, poor-quality products, including counterfeits (Loha et al., 2018; Andersson & Isgren, 2021).	
Evidence	Uganda is highlighted as a hotspot for fake agrochemical production and where counterfeit pesticide levels may be over 40% (EU Parliament, 2021). In agricultural shipments from Uganda to the EU, strains of pesticides banned by the EU were found (Media, 2019). Although there is a risk for banned pesticides occurring in agricultural products from Uganda, it is less so for coffee production due to low input use. An estimated 66,000 hectares are certified as organic coffee land, amounting to about 17% of the total organic coffee area in the country (Dutch Ministry of Foreign Affairs, 2020). Despite the low overall percentage of Ugandan coffee farmers applying pesticides (23%), research finds that most of the pesticides recorded (64%) among Arabica growing households belonged to class II chemicals which are defined as moderately hazardous (Kagezi et al., 2019). The same study identified that glyphosate was the most commonly used herbicide by 15.4% of coffee farmers. Several non-conformities were found in UTZ audits between 2016–2020 (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country's coffee producing regions, it is likely that banned pesticides are used (Expert survey, 2021). "We come across very few banned chemicals. There are a few available on the market, but not widely used. Also, because most coffee farmers will use (very) limited amounts of agrochemicals". "Some few farmers un-knowingly use banned agrochemicals on their fields. Exporting companies are trying their level best to educate them" (Expert survey, 2021).	

INCOME DIVERSIFICATION		JDE Sourcing principle 9.1
Score	2.9	
Law	The Farm Income Enhancement and Forest Conservation Program is the government's development strategy that promotes agricultural infrastructure and income enhancement (ADB, 2015). Furthermore, the Agriculture Cluster Development project aims to raise on-farm productivity and marketable volumes of cash crops (Wetaya, 2020). Furthermore, the National Coffee Policy targets to diversify markets, promote sustainable production systems, value addition, and to increase domestic consumption (USDOS, 2020).	
Evidence	For ~70% of coffee households, farming is the main source of income (CIAT, 2019). It is estimated that very few coffee households have a per capita income above the international poverty line; however, they still exhibit a 10% higher income than non-coffee rural households in Uganda (CIAT, 2019). Intercropping coffee with other crops is common and increasing across Ugandan farms (FAO, 2020; ITTA, 2019; Touton, 2021). Smallholder coffee farmers exhibit high levels of crop diversification, mainly for providing shade for the coffee plant, increasing household food, and allowing for income diversification (ITTA, 2019; CIAT, 2019). In addition to crop diversification, coffee farmers in Eastern Uganda rely on off-farm work to generate income, including casual labor, petty trading/handicrafts, and small business farms (WRI, 2019; GLC & SHIFT, 2020). In Western Uganda, evidence finds vanilla cultivation to provide for higher incomes in addition to other food crops (cassava, fruit trees, and livestock) (GLC & SHIFT, 2020). Some efforts for increasing diversification have failed to properly equip farmers with the resources to successfully manage and sell the crops (ITTA, 2019).	
Prevailing expert opinion	Medium-high risk: Expert estimates of the average percentage of the farmer's net income generated from coffee production vary between 50 and 80%. "The percentage of farmer's net income generated from coffee varies strongly between farmers and regions. For farmers that have < 0.25 acre of coffee it may be as low as 5-10%. In the central Robusta areas and Mt. Elgon, it may be 75% or more" (Expert survey, 2021).	