

ORIGIN ISSUE ASSESSMENT PERU - COFFEE



Photo: David Dudenhoefer

Peru is the second-largest producer of organic Arabica coffee after Ethiopia (FiBL, 2020). The country ranks seventh globally in overall coffee production with a total of 363,291 tons produced in 2019 (FAOSTAT, 2019) accounting for 2% of global production (Coffee Barometer, 2020). Key production areas are San Martin, Junin, Cajamarca and Amazonas, accounting for 28%, 23%, 20% and 13% of total production, respectively (CAMARA, 2021). Most coffee producers are smallholder farmers with 95% of coffee farms being smaller than 5 ha (USDA, 2020; JDE, 2018).

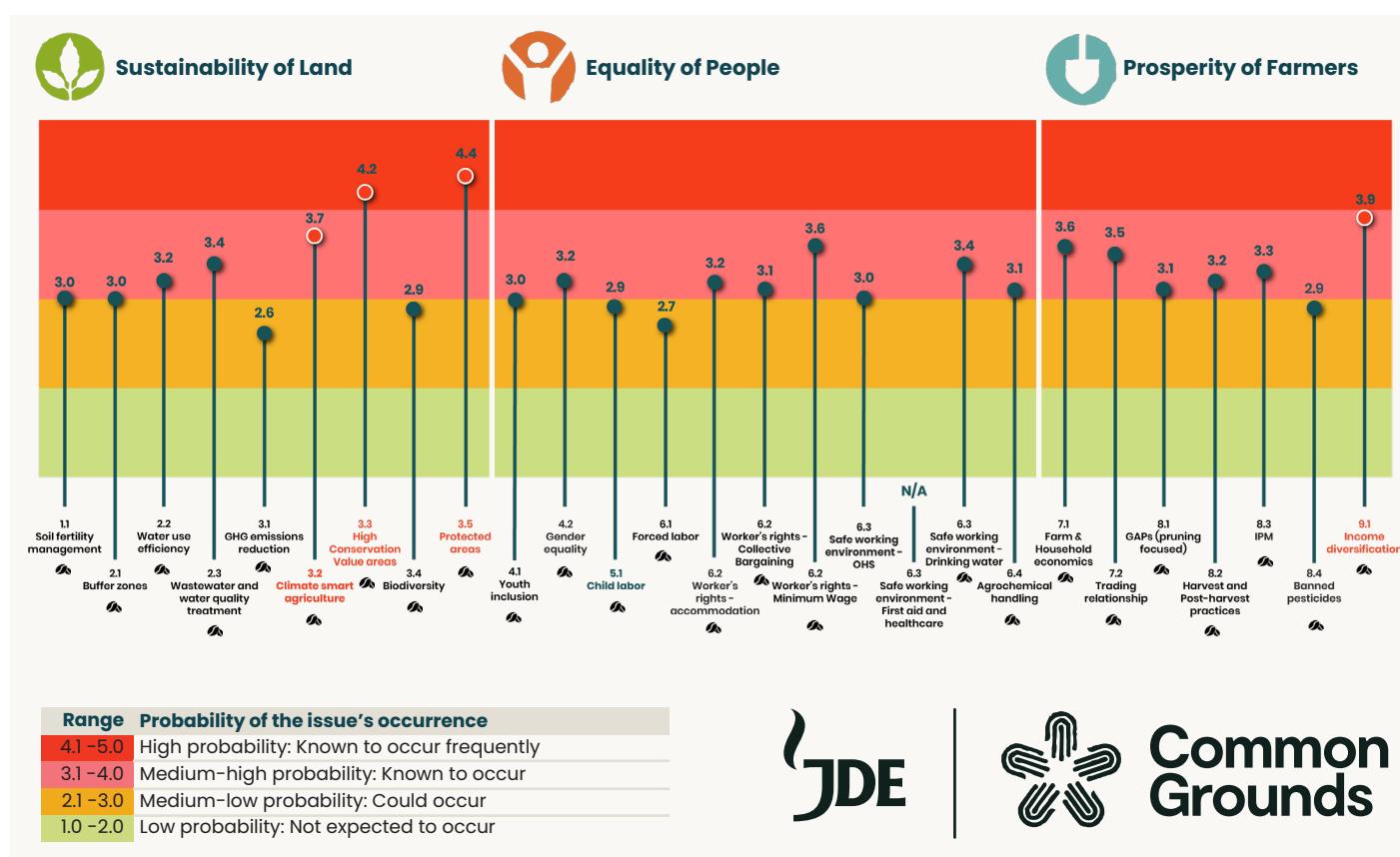
TOP ISSUES

The top issues identified are:

- **Protected Areas (risk score 4.4/5)**
- **Forest and High Conservation Areas (HCAs) (risk score 4.2/5)**
- **Income Diversification (risk score 3.9/5)**
- **Climate Smart Agriculture (risk score 3.7/5)**

In Peru, the upward expansion of coffee-growing areas poses a high risk for deforestation in currently forested and protected areas (**Protected Areas & Forest and High Conservation Areas**). A significant proportion of deforestation in Peru is linked to small scale agricultural expansion through slash and burn practices. Coffee production is one of the main drivers of deforestation. Coffee farmers are unable to earn a living income mainly due to low and volatile coffee prices, as well by climate change impacts (**Income Diversification**). With little support for income diversification, some farmers abandon coffee farming and turn to the cultivation of coca, the raw material used in cocaine. Despite its illegality, farmers can earn a higher and more stable income. Climate change is increasingly being felt among Peruvian coffee growers who face challenges with adapting to changing climatic conditions (**Climate Smart Agriculture**). A lack of subsidies and credits are limiting the implementation of climate smart agriculture practices.

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.



SOIL FERTILITY MANAGEMENT

JDE Sourcing principle 1.1

Score	3.0	
Law	The Peruvian government has approved international conventions on combatting soil degradation and has developed programs for improving soil management practices to reduce desertification and land degradation (MINAM, 2016). Together with the FAO, the government has made commitments to reduce large-scale land degradation through reforestation (FAO, 2016). For the Peruvian coffee sector, public-private investments targeting sustainable land management have been set up which provide the means for sustainable farming training and improving soil fertility management among coffee farmers (Media, 2019).	
Evidence	Soil fertility appears to be naturally low in Peru and is additionally affected by degradation (OECD, 2017). Multiple sources highlight deforestation and agriculture (exhaustion of land use) as the main drivers of erosion and soil degradation (Netherlands Enterprise Agency, 2016; WWF, 2020). On many agricultural lands, the soil is impacted by fertilizer application and pesticides (GGGI, 2016). Evidence highlights the Peruvian Amazon Rainforest which is experiencing rapidly degrading soils, making land unsuitable for coffee cultivation (Lopez, 2020). However, on a national scale soil fertility and quality in coffee growing regions vary due to a wide range of climates and elevations (Media, 2019). For instance, the Cajamarca region exhibits high soil quality due to diverse microclimates (Mercanta, 2020). Several non-conformities regarding soil fertility management in the coffee sector were found during UTZ audits between 2016-2020 (RA, 2020). To combat low soil health in Peru, programs have been set up to train coffee farmers in the Peruvian Amazon to improve their soil (US Gov., 2020).	
Prevailing expert opinion	Medium-low risk: Some farmers manage their soils in an effective way. "Peru is the largest producer of organic coffee so there are a lot of producers with effective farming practices regarding soil health" (Expert survey, 2021).	

BUFFER ZONES

JDE Sourcing principle 2.1

Score	3.0	
Law	Peru's legal framework for protected areas established a Ministry of the Environment and the National Service for Natural Protected Areas (IUCN, 2009). However, the government lacks the capacity to implement environmental policies and experiences difficulties in enforcing conservation through controlling illegal and informal activities (Weisse & Naughton-Treves, 2016; GIZ, 2017).	
Evidence	A large proportion of Peruvian coffee farms cultivate organic coffee due to their financial inability to pay for costly chemical fertilizers and pesticides (USDA, 2020). Hence, water and soil pollution levels are found to be low or non-existent among coffee farms (BASIC, 2018). Non-conformities in UTZ audits between 2016-2020 regarding buffer zones in the coffee sector remain evident (RA, 2020).	
Prevailing expert opinion	Medium-high risk: It is unlikely that farmers maintain a pesticide and fertilizer non-application zone or buffer zone. "From my experience, there has not been enough field training, with the exception of some certified cooperatives and other larger private sector actors who pay for training for producer groups" (Expert survey, 2021).	

WATER USE EFFICIENCY

JDE Sourcing principle 2.2

Score	3.2	
Law	Peru is currently undertaking steps for transforming its water resource management (WWF, 2020). The 2015-2035 National Water Plan aims to upgrade the country's water infrastructure (Media, 2019). A law based on the principles of integrated water management is in place which emphasizes public participation and indigenous block water rights (Mills-Novoa, 2020). While pilot projects on integrated water management have been successfully implemented, management of irrigation infrastructure remains weak with limited investments, poor maintenance, and poor water delivery performance (The World Bank, 2017).	
Evidence	Agriculture accounts for approximately 80% of total water withdrawal (FAO AQUASTAT, 2017). Poor water management and low maintenance of existing irrigation channels have led to lacking water availability (GGGI, 2016; Netherlands Enterprise Agency, 2016). Water scarcity is intensified by the impacts of climate change which further decrease water availability. More irregular precipitation is increasing competition of water resources which compromises the potential for irrigation or the production of washed coffee (Solymosi & Techel, 2019). Evidence from the Cajamarca region finds a severe lack of access to adequate water sources among coffee producers (Ferguson, 2017).	
Prevailing expert opinion	Medium-low risk: Water availability is an issue in the dry season. "Farmers depend on rainfall water to irrigate their crops. Nowadays, farmers are commenting about a change in rainfall pattern, and are suffering from longer dry seasons" (Expert survey, 2021).	

WASTEWATER AND WATER QUALITY TREATMENT AT PROCESSING UNITS *		JDE Sourcing principle 2.3
Score	3.4	
Law	Peru has laws in place on the discharge of wastewater that prohibit the dumping of polluting substances (Media, 2017; OEFA, 2014). The Peru National Water Plan establishes targets for meeting water demand, improving water quality, and sets a wastewater treatment target of 60% in 2021 and 99% in 2035 (OECD, 2017). Recent reforms of water and sanitation services have been taking place which includes the Framework Law for the Management and Provision of Sanitation Services and the creation of the Safe Water Investment Fund (USDOC, 2019).	
Evidence	At a national scale, the WWF Water Quality Index is 62.19/100 indicating that Peru's water quality is frequently impaired, mainly due to the release of untreated effluents from commercial activities including agriculture. Evidence from the San Martin region shows that water resources at coffee farms are not treated responsibly mainly due to the lack of knowledge on water quality treatment, as well as the inaccessibility of collector vehicles to reach the coffee farms (Palamino et al., 2017). Also, in the Cajamarca region, most farms do not have wastewater management systems in place (Ferguson, 2017).	
Prevailing expert opinion	Medium-high risk: Coffee is predominantly wet-processed. "Wastewater treatment is carried out by farmers associated with an organization, as they are subject to certification standards". However, with unassociated farmers "wastewater is not treated, and usually, farmers dig a hole in the ground in which they discharge wastewater and wait until it infiltrates" (Expert survey, 2021).	

*Inappropriate wastewater treatment was listed as a top-priority issue in the previous OIA Peru (2017).

GHG EMISSIONS REDUCTION		JDE Sourcing principle 3.1
Score	2.6	
Law	Peru's Intended Nationally Determined Contribution (INDC) outlines a greenhouse gas emissions reduction of 30% relative to its projected business as usual scenario in 2030 (USAID, 2015). The Peruvian government has highlighted the importance of increasing the share of renewable energy. The National Energy Plan for 2025 establishes a national target of 5% of electricity generation from renewables by 2025 (Umwelt Bundesamt, 2018). A 2008 legislative decree incentivizes investment in renewable energy by issuing special tax write-offs (Grantham Research Institute, 2021). As part of the Nationally Appropriate Mitigation Actions (NAMAs) in the coffee sector, the government seeks to promote sustainable agricultural practices to help reduce GHG emissions (IFPRI, 2019).	
Evidence	Some individual producers have developed solar dryers that shorten drying time and reduce labor (Shapiro-Garza et al, 2019). Also for coffee bean roasting hybrid solar roasting machines have been developed (Media, 2017), however, these initiatives remain in a development stage as most producers still rely on more traditional processes such as the utilization of clay pots in wooden ovens. Research on Peru's coffee sector confirms that the solar energy roasting process has a significantly smaller carbon footprint than local grid electricity production (Franco & Bartl, 2018). The social enterprise Café Comparte is an example initiative which aims to empower coffee farmers in the central Peruvian jungle by providing them with solar-powered technology to roast and sell their roasted beans (Franco, 2019).	
Prevailing expert opinion	Medium-high risk: When looking at the country's coffee-producing regions, it is somewhat unlikely that farmers use energy efficiently and that farmers use renewable energy sources. "The majority of producers are in very remote areas with little ability to have a solid abatement program or can use renewable energy" (Expert survey, 2021).	

CLIMATE SMART AGRICULTURE

JDE Sourcing principle 3.2



Score	3.7
Law	In conjunction with the Paris Agreement, Peru's framework law and National Strategy on Climate Change are the country's binding climate commitments aiming to reduce the adverse effects of climate change and foster low carbon growth (USAID, 2017; UNDP, 2018; GIZ, 2021). The National Plan of Action of Peruvian Coffee (PNA) is an initiative of the Ministry of Agriculture and Irrigation (MINAGRI) and the National Coffee Council (CNC) that seeks to optimize the social, economic, and environmental performance of the coffee sector (Global Coffee Platform, 2018). Collaborations among key players in the coffee sector have resulted in commitments around sustainable coffee production which include the promotion of climate smart coffee production (Global Coffee Platform, 2017).
Evidence	Evidence on adaptation strategies to climate change finds that Peruvian farmers diversify into non-farm activities and concentrate their crop portfolio on more tolerant crops (Ponce, 2020). Nevertheless, Peruvian farmers remain highly sensitive to climate change impacts, particularly coffee farmers (CCAFS, 2018). Extreme temperatures, increased humidity, and pests are impacting the health and quality of the Arabica coffee bean (Media, 2019; Altea, 2019). Moreover, shade-grown Arabica coffee often overlaps with biodiversity hotspots; hence, further expansion of coffee farming to compensate for yield loss puts biodiversity at risk (Valencia, 2020). Although some coffee cooperatives have been promoting new plantings in deforested areas and training farmers (FCPF, 2019), there are few enabling conditions for implementing climate-smart agroforestry systems due to lacking subsidies or credits and lacking disincentives for deforestation (Umwelt Bundesamt, 2018).
Prevailing expert opinion	High risk: Climate change seems to have a negative impact on coffee production and farmers are not able to adapt quickly enough. "In the last years, we are seeing longer dry seasons, drought periods, and an increase of pests, like coffee yellow rust". "Currently producers and their organizations are making particular efforts to move forward, but the speed with which the effects of climate change are being felt is accelerating" (Expert survey, 2021).

FOREST AND HIGH CONSERVATION VALUE AREAS (HCVS)

JDE Sourcing principle 3.3



Score	4.2
Law	The Peruvian government has set the objective to reduce the loss and degradation of forests in Peru and has established a National Forest and Climate Change Strategy (MINAM, 2016). The national government has made significant commitments to address deforestation and has joined the Tropical Forest Alliance to stop tropical deforestation (World Economic Forum, 2019). Public-private partnerships for conservation projects are in place and promote the expansion of protected areas (MINAM, 2016; WWF, 2019). Despite its efforts to halt deforestation, the Peruvian government is being accused of violating its commitments of protecting the Amazon rainforest (Superior court of Lima, 2019; Media, 2019).
Evidence	A significant proportion of deforestation in Peru is linked to small scale agriculture clearing relatively small areas through slash and burn practices (Tedi Peñaherrera et al., 2016; OECD, 2017; NICFI, 2020). The Global Forest Watch on tree cover loss finds that in 2019 Peru lost 231kha of natural forest (Hansen et al., 2019). According to the Peruvian national census, 25% of deforestation in Peru is linked to coffee production due to the abandoning of lands and subsequent expansion of agricultural borders (Coffee Barometer, 2020). A total of 221 hectares are found to be attributed to deforestation for coffee expansion (Forest Trends, 2021). The impacts of climate change further reduce suitable cultivation areas which increase deforestation rates in currently forested and protected areas (Solymosi & Techel, 2019). Few programs have successfully stopped deforestation linked to coffee production. A trial program by Solidaridad aiming to increase climate smart agricultural practices in three different regions in Colombia, Mexico and Peru has avoided 132 ha of deforestation in the San Martin area (Solidaridad, 2017).
Prevailing expert opinion	Medium-high risk: When looking at the country's coffee-producing regions, it remains contested whether farmers have converted High Conservation Value areas to agricultural production or other land uses since January 1st, 2014. On the one hand, experts express that "coffee (with cocoa and oil palm) is one of the drivers of deforestation in the forest of Peru". On the other hand, experts highlight that "there is more and more information about deforestation-free coffee and that an effort is made not to touch the forest" (Expert survey, 2021).

*Deforestation was listed as a top-priority issue in the previous OIA Peru (2017).

NATIVE VEGETATION AND ON-FARM BIODIVERSITY		JDE Sourcing principle 3.4
Score	2.9	
Law	Peru has ratified the Convention on Biological Diversity and has implemented a National Biodiversity Strategy and Action Plan (OECD, 2017; UNDP, 2017). The Peruvian law on Compensation Mechanisms for Ecosystem Services, passed in 2014, promotes, regulates, and supervises means of compensation for voluntary actions to conserve, recuperate and sustainably use natural ecosystems (Grantham Research Institute, 2021). Despite these commitments, government institutions lack the capacity required to manage and implement the progressive forestry and environmental policy (GIZ, 2017; UNDP, 2017).	
Evidence	With coffee traditionally grown in agroforestry, shade management is common on Peruvian farms. Evidence from the San Martin area finds that 60% of the coffee plantations have multiple shade tree species, 23% have simplified shade, and 13% have no shade (Jezeer et al., 2019). Generally, in Peru shade seems to increase with elevation (Jezeer et al., 2019). Peru's coffee agroforestry systems play a significant role for increasing tree diversity through promoting conservation of useful trees in agricultural landscapes in the Peruvian Amazon (Solis et al., 2020). Nevertheless, agricultural intensification in shade coffee farms has strong impacts on the structure and diversity of the agroforest, negatively affecting native birds and their associated ecosystems (Aerts et al., 2017). Deforestation linked to coffee expansion also resulted in reduced habitat diversity due to increased discharge of sediments into aquatic systems (IWGIA, 2019).	
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. "In comparison to other countries, coffee in Peru is managed quite naturally, in respect with nature, and there is high on-farm biodiversity" (Expert survey, 2021).	

PROTECTED AREAS		JDE Sourcing principle 3.5
Score	4.4	
Law	Through various protection regimes, Peru's national government protected more than 40.000 km ² of forest land between 2014–2018 (NICFI, 2020). The Protected Planet Index identified a terrestrial protected area coverage of 21,64% of which 14,1% are managed effectively. Protected areas in Peru have avoided deforestation and degradation (Schleicher et al., 2017); however, lacking enforcement of the protected areas has resulted in farm-by-farm clearings of rainforests (Conservation International, 2021).	
Evidence	Although the National System of State-Protected Natural Areas has been steadily expanded (OECD, 2017), forest loss appears within protected areas and buffer zones throughout the country (Nicolau et al., 2020; World Bank, 2017; MAAP, 2017). Climate change impacts force coffee farmers to start cultivating in higher altitudes which are currently forested and protected areas (Solymosi & Techel, 2019). Subsequently, deforestation through slash and burn mechanisms for coffee growth often intrudes into primary forests jeopardizing their protected status (World Bank, 2017; Marquardt et al., 2019). Evidence on coca cultivation, a frequent alternative for coffee farmers, highlights that the surface used for illegal coca growing in Protected Areas (PA) grew by 36 % (UNODC, 2017).	
Prevailing expert opinion	High risk: When looking at the country's coffee-producing regions, it is likely that coffee is produced or processed in protected areas or their designated buffer zones. "Farmers in their need to expand their cultivation and increase their production do not respect protected areas" (Expert survey, 2021).	

YOUTH INCLUSION		JDE Sourcing principle 4.1
Score	3.0	
Law	Peru has a National Secretary of Youth (SENAJU) in place for formulating the National Youth strategy and implementing youth policies (OECD, 2021). However, a controversial youth employment law from 2014 (Pulpin law) caused large debates and demonstrations. This law foresaw the exclusion of youth workers from unemployment savings accounts and, therefore, would have deprived them of any social protection following a dismissal (OECD, 2019). Eventually, this law was never passed. Social dialogue to reform youth labor market policies in Peru has been missing during recent negotiations (OECD, 2019). Moreover, the country's Secretary of Youth has been found to lack both autonomy and decision-making power (OECD, 2021).	
Evidence	Peru is confronting the issue of aging coffee farmers with an average age of around 60 (BASIC, 2018; Media, 2021). Due to lacking financial attractiveness, younger generations often seek better employment opportunities in cities (BASIC, 2018). To reengage Peru's youth in the coffee growing business, projects in coffee farming regions have established youth engagement programs increasing the number of young people involved in the coffee industry (Media, 2021). Some coffee cooperatives offer educational programs and agricultural training to young coffee producers and have set up youth committees (Foster, 2021; Café Direct, 2017; ICO, 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. "The opportunities available for young farmers vary from community to community. I have not come across many programs that focus on increasing youth participation in agriculture in Peru" (Expert survey, 2021). However, most experts indicated that youth inclusion is likely.	

GENDER EQUALITY		JDE Sourcing principle 4.2
Score	3.2	
Law	Peru has ratified both the Discrimination (Employment and Occupation) convention and the convention on Equal Remuneration for Work of Equal Value (ILO; Wage Indicator Foundation, 2020). Policies addressing gender equality exist in Peru, but implementation is slow and uneven (USAID, 2020). The government has invested in providing female coffee farmers with opportunities to enter the market economy (CIAT, 2016; IFAD, 2020), nevertheless, persistent gender gaps remain, resulting in lower wages and a lack of benefits for women (USDOS, 2019).	
Evidence	Despite efforts being made, the Peruvian coffee sector is marked by strong inequalities between men and women (BASIC, 2018). Women carry out around 55% of tasks linked to coffee production, however, they do not receive sufficient training and resources available to men, nor are they well represented in positions of influence within the value chain (CQI, 2015; CIAT, 2016). In relation to JDE's CAFÉ project, 40% of people trained in each quarter are women (JDE regional insights, 2021). While women's land rights are fairly well protected in Peru, initiatives supporting Peruvian female coffee farmers have focused on women's income diversification and economic inclusion (Foster, 2021; Media, 2019; FAO, KIT & Twin, 2019). For example, the Cooperativa Agraria Cafetalera Pangoa (CAC Pangoa) is a cooperative in Junin, central Peru, and is fostering women's economic empowerment primarily through micro-credit (FAO, KIT & Twin, 2019). By encouraging the participation of women in events organized by the National Coffee Council the cooperative aims to ensure that women's concerns are heard at the regional and national level.	
Prevailing expert opinion	Medium-high risk: Women sometimes do not have equal rights, responsibilities, and opportunities. "Women in Peru have less access to education than men, have less access to economic opportunities, are therefore more likely to live in conditions of extreme poverty. Women in Peru are much involved in the agricultural sector, but do not have access to land normally, and have limited access to inputs and resources to be able to produce sustainably. Due to COVID, the situation of women has worsened even more. Cases of gender-based violence have increased significantly due to the COVID crisis" (Expert survey, 2021).	

CHILD LABOR		JDE Sourcing principle 5.1
Score	2.9	
Law	Peru has ratified key conventions aiming to eradicate child labor. This includes the Worst Forms of Child Labor Convention and the UN Convention on the rights of a child among others (USDOL, 2019; ILO). Although laws exist to protect children from exploitation in the workplace, child labor remains a serious problem, especially in the informal sector (GMAP; IFC, 2017). The Ministry of Labor created the Child Labor Free Seal which recognizes products and services whose supply chains are free of child labor (USOL, 2019; Media, 2019).	
Evidence	While coffee is not included on the US Department of Labor's List of Goods Produced by Child Labor (USDOL, 2016), the risk of child labour in the broader Peruvian crop sector is still considered to be very high. According to the International Labor Organization, there are 3.3 million child workers in Peru of which one third are under 12 years old (Media, 2018). Children are commonly involved in unpaid work with their families often taking part in agricultural activities (USDOL, 2019; Young Lives, 2018). The Rainforest Alliance Social Risk map attaches a medium risk level for child labor in the coffee supply chain in Peru (RA, 2021).	
Prevailing expert opinion	Medium-low risk. "There is very little information about child labor in the coffee industry in Peru. However, given the smallholder settings, and the fact most work is done by hand through family labor, the chance is there that children are involved in hazardous tasks on the farm. Peru has made enormous strides in providing education during the last 20 years. With COVID, online education was provided but for poor families with little / few internet / mobile devices, hard to access". "Child labor is not a serious problem (yet) but it may become one as a result of the pandemic" (Expert survey, 2021).	

FORCED LABOR		JDE Sourcing principle 6.1
Score	2.7	
Law	The Government of Peru does not fully meet the minimum standards for the elimination of trafficking, but it is making significant efforts to do so (USDOS, 2020). Although the law prohibits forced or compulsory labor, labor exploitation crimes continue to occur also within the agricultural sector (USDOS, 2019; GMAP). The government has a national plan in place to combat forced labor, however, there is not a specific provision in the national budget to support this program (IFC, 2017).	
Evidence	The Global Slavery Index (2018) estimates that there are 80,000 modern slavery victims in Peru which ranks the country as 14th place out of 27 countries in the Americas (with the 1st place having the most victims). Reports and indicators from international institutions show that practices of forced labor continue to exist also in the agricultural sector (Orbie & Van den Putte, 2016). The RA Social Risk Map attaches a medium risk level for forced labor in the country's coffee supply chain (RA, 2021). No non-conformities were found in UTZ audits between 2016-2020 (RA, 2020).	
Prevailing expert opinion	Low risk: It is unlikely that forced labor happens in the country's coffee-producing regions. "Forced labor rarely appears. The family members support the work on the farm, but it is not forced"; nevertheless, "factors that make some workers vulnerable to forced labor in Peru are the use of temporary labor at peak periods, no written contracts, payment by piece rate and different nationality/ethnic background of workers" (Expert survey, 2021).	

WORKERS' RIGHTS AND DUTIES		JDE Sourcing principle 6.2
Highest score	3.6	
ACCOMMODATION		
Score	3.2	
Law	Peruvian law obliges employers to ensure the safety and health of workers in the performance of all aspects of their work. However, the law does not foresee the obligation of employers to provide rest and eating areas (LEGOSH, 2015). If rest and eating areas are provided, the employer is under a duty to monitor and ensure the safety of these facilities.	
Evidence	The highest proportion of the coffee production costs is labor costs which often force employers to pay laborers a daily wage that does not include room and board (Leshed et al., 2018). Coffee farmers in the eastern slopes of the Andes are confronted with high levels of poverty and a lack of access to basic services (Fairtrade, 2021). COVID-19 has had a profound impact on coffee-growing regions because workers often end up in packed living conditions which do not comply with the national COVID restrictions (Media, 2020).	
Prevailing expert opinion	Medium-low risk: While some are provided with accommodation, other workers and their families are responsible for their own accommodation. "The living conditions depend on the economic level of the farmer. Since most farmers are poor, the accommodation given to a worker is mainly a bed and shelter in a room" (Expert survey, 2021).	
COLLECTIVE BARGAINING		
Score	3.1	
Law	The constitution provides the right to peaceful assembly, and authorities generally respect this right (Freedom House, 2021). Peru has ratified international conventions that recognize freedom of association, the right to strike, and collective bargaining (USDOS, 2019). Despite the ratification of core labor standards, concerns have been raised regarding the implementation, particularly in the agricultural sector where unionization is low (Orbie & Van den Putte, 2016). Governance in the coffee sector remains fragmented, with no clear mechanisms for farmers to coordinate (ICAT,2020).	
Evidence	The ITUC Global Rights Index (2020) finds that systematic violations of rights take place in Peru. The Social Hotspot Database also classifies the overall risk of freedom of association for the Peruvian crop sector as high (3/4). Small coffee producers often form associations or cooperatives to obtain better prices, improve production, and cooperate on more effective marketing strategies (USDA, 2020). Although Peru is mostly known as a coffee origin in which cooperatives and associations dominate a large portion of the industry, the reality is that only 30-40% of farmers in the country are members of a cooperative (Caravela, 2020).	
Prevailing expert opinion	Medium-high risk: When looking at the country's coffee-producing regions, it is unlikely 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. "Coffee farms are family-based and informal. This means that labor conditions and benefits are not usually paid or complied with. We can say that the most advanced is with respect to salary, however, health insurance and other conditions are not known, nor are they reviewed" (Expert survey, 2020).	
MINIMUM WAGE		
Score	3.6	
Law	Peru has not ratified the Protection of Wages Convention nor the Minimum Wage Fixing Convention (ILO). Although minimum wages are regulated by the State with the participation of representative organizations of workers and employers, there is no specific legislation on wage-setting (DTUDA, 2020). Peru's law on Acceptable Conditions of Work establishes a national minimum wage, which was less than the official estimate for the poverty income level (USDOS, 2019). The government does not effectively enforce wage laws (USDOS, 2019; DTUDA, 2020).	
Evidence	Low wages in the agricultural sector have led to several protests by farm workers demanding an improvement in wages and working conditions (Media, 2020; Media, 2021). Facing increasing pressure, congress repealed the Chilimper Law in December 2020, a controversial agricultural legislation designed to promote agroindustrial investment at the expense of worker's rights (Peru Support Group, 2020; Media, 2020). The new agrarian law secures a 30% bonus on the minimum wage which would reach an increase of 50 soles per day, far from the 70 soles claimed by workers (Media, 2021). Workers employed in coffee production face a minimum daily salary in the rural areas of 10 dollars, almost 40% less than the living wage (16\$) (BASIC, 2018). Seeking alternative ways of earning higher pay, some coffee producers are abandoning their farms to work on plantations that grow coca illegally where they can earn higher pay (Media, 2019).	
Prevailing expert opinion	Medium-low risk: Most of the workers are paid the minimum wage or more; part of the workers is paid less than the minimum wage. "In Peru, the average payment for coffee workers (plantation) is 40 soles per day and the minimum wage (monthly) in Peru is 930 soles (equivalent to 37 soles per day)". Even though worker's wages reach the minimum wage experts highlight that "the legal minimum wage is very low" when compared internationally (Expert survey, 2021).	

SAFE WORKING ENVIRONMENT		JDE Sourcing principle 6.3
Highest score	3.4	
OCCUPATIONAL HEALTH SAFETY*		
Score	3.0	
Law	Peru has ratified Occupational Safety and Health Conventions and has laws in place which establish the right to a safe working space, welfare of the workers, and paid healthcare in case of work-related accidents or sickness (ILO; Wage Indicator Foundation, 2020; DTUDA, 2020). Through reinforcing the inspection capacities of labor authorities, severe penalties for non-compliance are in place (Media, 2020). Nevertheless, the labor inspection agency has been lacking enforcement (Orbie & Van den Putte, 2016).	
Evidence	Most Peruvian workers are part of the informal economy, workplace provisions are often not present and are frequently hazardous and precarious (DTUDA, 2020). Swed Watch (2020) identifies that agricultural workers often face poor working conditions lacking adequate protection for workers. Research finds that workers in the coffee production industry are exposed to industrial noise (Carabajal et al., 2020). No non-conformities are found in the coffee sector 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 workers enjoy a safe working environment, and that adequate steps are taken to prevent work-related injuries. "The main danger is the lack of personal protective equipment for workers when applying agrochemicals" (Expert survey, 2021). * Unsafe working conditions was listed as a top-priority issue in the previous OIA Peru (2017).	
FIRST AID AND EMERGENCY HEALTHCARE		
Score	N/A	
	At the moment, information collected on first aid and emergency health care does not allow us to draw specific conclusions. Prevailing expert opinion: Medium-low risk: It is likely that workers receive first aid and emergency health care for treatment of work-related injuries. "Workers will receive first aid, but in some places and according to the situation the worker will need to travel for several hours to receive medical attention" (Expert survey, 2021).	
DRINKING WATER		
Score	3.4	
Law	The constitutional right to water has been recognized in Peru (WHO, 2019). A National Water Plan encourages the expansion of the coverage of drinking water and sanitation services in poor areas (OECD, 2017). Peru has a sanitation target to cover 100% of the population with basic sanitary services (WHO, 2019). Regulations to improve, reform, and manage water and sanitation services have been implemented (USDOC, 2019).	
Evidence	Access to safe water and sanitation has improved in Peru in recent years, yet significant shortfalls in both public infrastructure and household facilities remain (Water.org, 2021). Especially in rural agricultural areas, access to an improved source of drinking water is frequently lacking (SHDB). Excessive use of water for commercial crops leaves workers and their families with poor access to clean water and sanitation facilities (Swed Watch, 2020). In coffee-growing communities on the eastern slope of the Andes 72% of the population does not have access to safe drinking water (Fairtrade, 2021). No non-conformities related to safe drinking water access 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 somewhat unlikely that workers have convenient access to safe drinking water. "The water comes from streams or rivers. It is not drinking water". "In some situations, workers share cups and other situations that may favor spreading diseases" (Expert survey, 2021).	

AGROCHEMICAL HANDLING		JDE Sourcing principle 6.4
Score	3.1	
Law	A law on Occupational Health and Safety and a law on Free Protection both promote a culture of risk prevention in the workplace and emphasize the responsibility of the employer to provide free personal protective equipment to workers (USDL, 2016; Wage Indicator Foundation, 2020). According to the US Department of State (2019), the Peruvian government body responsible for investigating violations did not effectively enforce the law. Although Peru has not ratified the Safety and Health in Agriculture Convention (IFC, 2017), the government developed a National Agricultural Pesticides System to control agricultural pesticides and minimize health and safety risks (OECD, 2017).	
Evidence	In the Peruvian agricultural sector, workers were reportedly engaged in the spraying of plantations without adequate equipment (HRB, 2016). A study examining 196 Peruvian smallholder farms found that 22% of respondents experienced pesticide poisoning (Wagner, Cox & Robles, 2016). However, among Peruvian coffee growers the use of chemical inputs is not a common practice due to their inability to pay for costly chemical fertilizers and pesticides (Solymosi & Techel, 2019; Jezeer et al., 2019). Several non-conformities were found in the coffee sector during 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. "Overall agrochemicals use is not very high in Peru, so the risk is moderate, but still, in those farms that use agrochemicals these are normally not used in a safe way (inappropriate mixing, no use of PPE)" (Expert survey, 2021).	

FARM & HOUSEHOLD ECONOMICS		JDE Sourcing principle 7.1
Score	3.6	
Law	Several programs have been established that target improved financial assistance to Peruvian coffee farmers. The Peruvian National Action Plan for Coffee was legally approved in 2012 and aims to improve the levels of competitiveness of the coffee value chain through promoting and facilitating access to timely and innovative financial services amongst other objectives (GCP, 2020). The importance of the sector has been increasingly recognized since the coffee rust crisis in 2012/2013 and has led to the creation of the national renovation plan assistance. DEV-IDA, the Peruvian program to eradicate illicit crops, continues to channel large investments in specific regions into coffee (30% of total) as an alternative to coca (ICAT, 2020).	
Evidence	77% of coffee producers run their farms without technical or business management expertise (UNDP, 2017) which highlights the risk of financially unviable business practices. High production costs, low yields, and low prices have made many Peruvian coffee farmers financially unstable (Fairtrade, 2021; BASIC, 2018). Even though many farmers produce organically, the premium paid does not compensate for low productivity, leaving many growers with debt (USDA, 2018; IFPRI, 2019). Pest outbreaks further exacerbate the financial vulnerabilities particularly those of organic coffee farmers, because fungicides cannot be used to control the pests (USDA, 2018; Root Capital, 2016). Although 85% of the coffee export price is paid to the coffee farmer (Coffee Barometer, 2020), coffee growing families are left with insufficient resources to continue their operations (UNDP, 2017). Furthermore, due to the impacts of COVID-19 restrictions which force farmers to use savings, sell assets, and borrow money to cover their living expenses, farmers are risking severe capital losses that are likely to affect the next agricultural season (Vargas et al., 2021).	
Prevailing expert opinion	Medium-high risk: Most coffee farmers are not sufficiently aware of the farm and household economics. "Most coffee farmers have 5 ha of coffee. 39.4 qq/ha is required to be able to cover costs and most producers only reach an average of 12 qq/ha to 13 qq/ha". "Farmers usually know their costs, but lately are not generating income because of low coffee prices" (Expert survey, 2021).	

TRADING RELATIONSHIP		JDE Sourcing principle 7.2
Score	3.5	
Law	The Plan Nacional de Renovación de Café and the Peruvian National Action Plan for Coffee aim to improve the levels of competitiveness and environmental sustainability of the coffee value chain (ICAT, 2020; GCP, 2020). A National Coffee Board (Junta Nacional del Café) brings together a total of 56 coffee-growing organizations, however, its actions have been limited (SIPA, 2017). With only 25% of farmers being represented on the board, there is an obvious gap in the representation of 75% of unassociated farmers (ICAT, 2020). Peru lacks a centralized entity for coordinating the country's coffee industry, hence, governance is fragmented (Lerner et al., 2021).	
Evidence	Multiple sources highlight the challenge for Peruvian smallholder farmers to obtain enough credit for planting new coffee plants and purchasing fertilizers and pesticides because they often lack land titles (IFPRI, 2019; USDA, 2018; Jezeer et al., 2019; ICAT, 2020). A study by Lerner et al. (2021) investigating prices obtained by local coffee growers and exporters depicts Peru in the category of medium margins to farmers. Some farmers have benefitted from coffee cooperatives which offer more favorable export conditions and obtain better prices (Fairtrade, 2021). However, only 30-40% of farmers in the country are members of a cooperative implying that most farmers are not able to benefit from valuable support, such as training and other technical assistance as well as access to pre-finance (Caravela, 2020).	
Prevailing expert opinion	Medium-high risk: When looking at the country's coffee-producing regions, it is somewhat likely that coffee sourcing companies facilitate farmers to access key production inputs, such as plantlets, fertilizer, and agrochemicals, but it is unlikely that coffee sourcing companies facilitate farmers to access services, such as credit and market information. "Independent farmers do not have access to the services of large service companies; organized groups can sometimes manage partnerships with these providers and even banks". "It is very unlikely for farmers to access market information as this compromises the business case for many local traders" (Expert survey, 2021).	
GOOD AGRICULTURAL PRACTICES		JDE Sourcing principle 8.1
Score	3.1	
Law	A national agricultural policy sets strategic priorities, several of which are linked directly with environmental management in the farming sector (OECD, 2017). In 2011, the Peruvian government inaugurated a new Forest Law that foresees the issuing of so-called Agroforestry Concessions to small-scale farmers informally settled on public land designated to forests (Pokorny et al, 2021). Also, the Peruvian National Action Plan for Coffee highlights the importance of environmental sustainability of the coffee value chain (GCP, 2020).	
Evidence	Traditionally, coffee is grown in agroforestry systems which provide important ecosystem services (Ehrenbergerová et al., 2019). With some 90,000 certified organic hectares, Peruvian coffee farmers use little agrochemical inputs at their farms (USDA, 2020). Some coffee cooperatives encourage their farmers to apply regenerative agricultural practices (Media, 2020). However, on less well-managed farms poor cultivation practices take place which lead to naturally declining soil fertility and forces farmers to clear land from the forest (FCPF, 2019). With limited technical knowledge or experience in sustainable land management, Peruvian smallholder coffee farmers have little capacity for practicing good agricultural practices (Ilieva & Henderson, 2017).	
Prevailing expert opinion	Medium-high risk: Most experts estimate the percentage of farmers in the coffee-producing regions using good agricultural practices to vary between 25 and 50%. "Small producers that are organized (trader, coop, association) receive training and are monitored by the technical assistance department of their organization, however, about 80% remain unorganized" (Expert survey, 2021).	
HARVEST AND POST-HARVEST PRACTICES		JDE Sourcing principle 8.2
Score	3.2	
Law	The Plan Nacional de Renovación de Café is a government program that supports the renovation of coffee plantations through credit (ICAT, 2020). National government agencies and development organizations have heavily promoted solar dryers which can provide benefits such as reducing labor inputs and improving coffee quality (Shapiro-Garza et al., 2019).	
Evidence	The coffee cherry is most commonly picked by hand, sun-dried, and dehulled on-farm (Solymosi & Techel, 2019). Some cooperatives have invested in sophisticated machinery, yet many producers still use basic technology to dehull and dry their coffee cherries as they are located far from central processing facilities (SIPA, 2017). Several non-conformities regarding harvest and post-harvest practices in the coffee sector were found during UTZ audits between 2016-2020 (RA, 2020). Recent media reports highlight harvest delays in the coffee sector because growers are experiencing difficulties in hiring workers due to the COVID-19 restrictions (Media, 2020).	
Prevailing expert opinion	Medium-high risk: Expert estimates 25 to 50% of farmers in the coffee-producing regions to implement good harvest and post-harvest practices. "There is a low (or no) investment in post-harvest infrastructure". "Another problem is that in the harvest, pickers collect unripe cherry beans, which affects the coffee quality. This is because the cost of labor is very high, and farmers do not have enough money to hire pickers for a long time" (Expert survey, 2021).	

INTEGRATED PEST MANAGEMENT		JDE Sourcing principle 8.3
Score	3.3	
Law	SENASA (Ministry of Agriculture) regulates the application of chemical pesticides for agricultural use under the General Law of Agricultural Health (FAIRS, 2018). The Government of Peru has reinitiated technical assistance to farmers through special programs that included the extension of Integrated Pest Management (IPM) (Colmenarez et al., 2016). The promotion of biocontrol in the main agricultural valleys in Peru has reduced the applications of agrochemicals and resulted in an increase of areas under biocontrol of crops such as coffee and cocoa (Lenteren et al., 2019).	
Evidence	Traditionally, Peruvian coffee producers hardly use any inputs which has made Peru a leading producer and exporter of organic coffee (BASIC, 2018). The main producers of organic coffee are farmers unable to purchase agrochemicals (Solymosi & Techel, 2019). Individual smallholders will often save and trade seed stock of high-quality varieties that are more pest and disease tolerant (Shapiro-Garza et al., 2019). However, to confront the consequences of climate change, a growing number of producers start using more fertilizers and agrochemicals (BASIC, 2018). Although coffee cooperatives, where present, provide technical assistance and facilitation of knowledge on pest and diseases, low literacy rates and a lack of financial capital represent barriers to implementing IPM (Shapiro-Garza et al., 2019).	
Prevailing expert opinion	High risk: Most experts estimate that less than 25% of farmers in the coffee-producing regions apply Integrated Pest Management practices. "Pest and disease management is very poor; the farmer does not know the best practices and does not have the money to buy inputs" (Expert survey, 2021).	

BANNED PESTICIDES		JDE Sourcing principle 8.4
Score	2.9	
Law	Peru is part of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Nonetheless, the registration and national control of pesticides in conformity with Andean Community regulations continue to pose a challenge for the agriculture sector (OECD, 2017). The Ministry of Agriculture and Irrigation (MINAGRI) oversees pesticide registration and has adopted strict rules on extremely dangerous pesticides which are enforced by the National Agrarian Health Service (SENASA) (Media, 2020). However, gaps remain between the country's regulations and enforcement on banned pesticides (Terwindt, Morrison & Schliemann, 2018).	
Evidence	Smallholder's inability to pay for chemical fertilizers and pesticide makes many Peruvian coffee farmers organic by default (USDA, 2020; Jezeer et al., 2019). The promotion of biocontrol in the main agricultural valleys has increased the agricultural area that refrains from using chemical fertilizer or pesticides (Lenteren et al., 2019). Despite the prevalence of certified coffee farming, the recent detection of glyphosate in shipments of organic coffee from Peru has put in question the reputation of Peru as an origin for organic coffee (ICAT, 2020). UTZ audits between 2016-2020 have found several non-conformities with banned pesticides in the coffee sector (RA, 2020).	
Prevailing expert opinion	Medium-low risk: When looking at the country's coffee-producing regions, it is unlikely that banned pesticides are used. "It is highly difficult to find banned agrochemicals. There are local inspectors from national regulatory entities that supervise that agrochemical traders and providers only commercially allowed products" (Expert survey, 2021)	

INCOME DIVERSIFICATION		JDE Sourcing principle 9.1
Score	3.9	
Law	The government has given increasing importance to the coffee sector since the coffee rust crisis and has established a national renovation plan and provided financial assistance (ICAT, 2020). Farmers seeking financial security often turn to cultivating coca, the key ingredient in cocaine. Recent efforts by the Peruvian government to investigate coca-growing regions have resulted in violence, rather than assistance in finding realistic economic alternatives (Specialty Coffee Association, 2021). An USAID program helps these farmers to plant coffee and other crops and connects them to producers' organizations (USAID, 2021).	
Evidence	The decline in coffee yield due to low international coffee prices and the outbreak of the coffee leaf rust has led farmers in Peru to turn to alternative sources of income (Ehrenbergerová et al., 2019; ICO, 2020). While some producers reduce their dependence on coffee by adding new crops also for personal consumption (Vargas et al., 2021), others respond by diversifying more into non-farm activities (Ponce, 2020; Foster, 2021). Evidence from multiple sources points to the farmer's inability to earn a living income from coffee which forces them to abandon their fields and plant coca instead (Technoserve, 2020; ICO, 2020; Media, 2019; Media, 2021). Coca, the main ingredient for cocaine, offers many benefits including higher and more stable financial returns (Specialty Coffee Association, 2021). The COVID-19 pandemic has exacerbated this crisis as Peruvians have been shifting away from coffee (Media, 2020).	
Prevailing expert opinion	High risk: Expert estimates that the average percentage of the farmer's net income generated from coffee production varies between 45 and 90%. "In previous years coffee was a profitable crop because of the high prices on the stock exchange, and farmers did not grow other crops, but now that prices are low and fluctuating, the farmer has identified the need to diversify but has yet to define what other crop to grow, how much to invest and how long it will take to recover". Moreover, "there is a lack of technical assistance to promote other crops" (Expert survey, 2021).	