

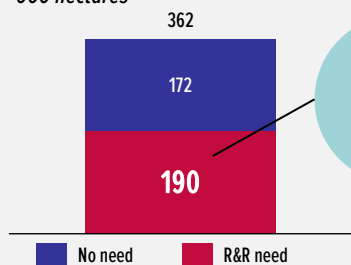
Peru is a major regional producer that has significant uplift potential due to high R&R need in areas affected by La Roya

Quick facts: Peru is the 4th biggest Latin American producer

Production '000 tons, 2014	Production share Global & region	Coffee land¹ '000 hectares, 2014	Varieties Arabica-Robusta
222	9th in world 4th in LA	362	~100% A 0% R

R&R need: ~70% of land is in need of R&R

SHF land in R&R need out of all land
'000 hectares



~4% of global need

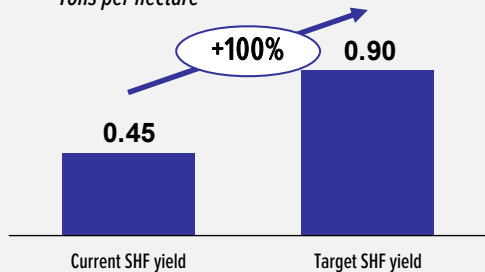
Drivers of R&R need:



Need is primarily driven by old trees and exposure to disease (*La Roya* affected ~50% of coffee growing areas), and to a lesser extent by climate change

Uplift potential: Significant uplift potential given low current SHF yields

Current SHF yield & potential uplift¹
Tons per hectare



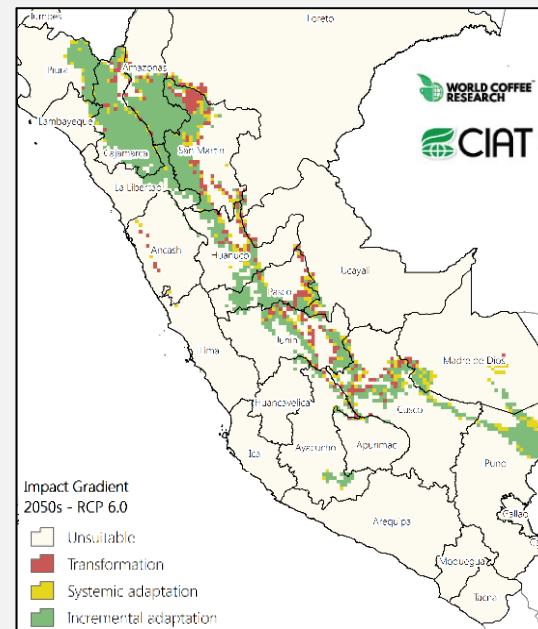
Potential increase in supply

~10-40%

Total national supply could increase ~10-40% if R&R and GAP is implemented on all SHF land in need of R&R

Viability: climate change could affect lowest altitudes areas

Suitability map



- Overall, Peru is forecast to be relatively mildly affected by climate change for coffee production
- Coffee growing area in low altitudes are exposed to climate change risk
- Coffee growing areas in the North East look to be hardest affected

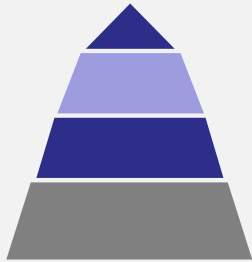
Other viability considerations

- Peru is the world's leading exporter of organic coffee. SHFs, who are mostly unable to pay for fertilizers, are the main producers of organic coffee
- A growing number of SHFs seek out specialized certification schemes to access foreign specialty markets and earn premiums
- The coffee sector generates more than 850,000 jobs in remote and impoverished areas of the country. The government promotes coffee production as an alternative crop to coca leaf cultivation

Notes: (1) The current yield is calculated on the basis of SHF production divided by SHF land area, the potential yield uplift comes from the GCP study on Peru: GCP, Peru: GCP: Economic Viability of Coffee farming, 2017; (2) Rounded to the nearest 5%, estimate assumes that R&R and GAP increase yields with 100%, and the range reflects a 25-100% R&R success rate. Sources: FAO Statistics database; ICO statistics; GCP and Technoserve, Economic Viability of Coffee Farming, 2017; USDA, Annual Coffee Report, 2017; ; Federacion Internacional de Productores Agropecuarios, Las cooperativas de Café en Peru: experiencias y perspectivas, 2009; Ministerio de Agricultura y Riego; Plan Nacional de Renovacion de cafetales, 2014; Dalberg interviews

About 60% of farmers in Peru are SHFs, some of which have benefitted from renovation programs following the *La Roya* outbreak

Farmer segmentation: Production is split



National production is split between SHFs and large and medium farmers

About 59% of farmers are SHFs (30% in tight value chains and a majority in loose value chains). 39% are medium farmers (between 5 and 50 hectares) and 2% hold land larger than 50 hectares

SHFs
'000

132 (~1% of global SHFs¹)

SHF land
'000 hectares

260 (~70% of national land) – farm size typically ~2 hectares

SHF production
'000 tons

110 (~70% of national production)

Assessment of SHF orgs.

Coops obtain better prices, improve post-harvest processing and marketing strategies of SHFs – ~30% of SHFs are linked to coops

Links to market

Non organized farmers are linked to markets by traders

Enabling environment for R&R: Government support, but capacity for R&R is low

Political environment



- Coffee share of GDP: N/A [Coffee share of exports: 2.6% (2011)]
- The government of Peru has recently defined the coffee sector as a national priority.
- 2013: Implementation of a national renovation program with a USD 70 million budget

Availability of inputs



- The national renovation plan supports development of nurseries
- Seeds produced in private seedling nurseries are controlled and certified by the National Institute of Agricultural Innovation (INIA)

Availability of finance



- SHFs in loose value chains have limited access to finance
- Many SHFs complain about credit terms (8 year tenor, 10% interest rate) from AgroBanco, though these are more favorable compared to local financial institutions

Knowledge availability



- Cooperatives have little capacity and experience in providing high quality TA
- The Junta Nacional del Café acts as a service provider, but has limited field presence

Examples of R&R programs: Past R&R programs have focused on renovating areas affected by La Roya

- **Root Capital – Coffee Farmer Resilience Initiative** (since 2013): Root Capital lent USD 2.7 million to farmer organizations in Peru and trained them to deliver loans to their members
- **Government of Peru – Coffee renovation program** (2012-2017): The Peruvian government channeled concessional loans to SHFs to encourage the renovation of 80,000 hectares

Notes: (1) Assuming a global SHF population of 20 million. Sources: FAO Statistics database; ICO statistics; GCP and Technoserve, Economic Viability of Coffee Farming, 2017; USDA, Annual Coffee Report, 2017; ; Federacion Internacional de Productores Agropecuarios, Las cooperativas de Café en Peru: experiencias y perspectivas, 2009; Ministerio de Agricultura y Riego; Plan Nacional de Renovacion de cafetales, 2014; Dalberg interviews