

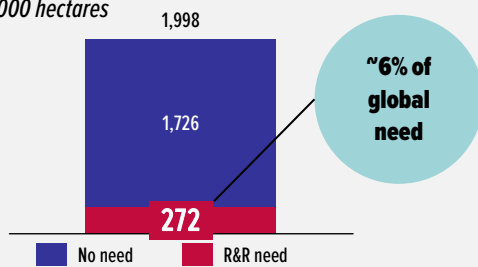
There is not a strong case for renovation in Brazil, but unmechanized SHFs could benefit from rehabilitation

### Quick facts: Brazil is the world's largest coffee producer

Production '000 tons	Production share Global & region	Coffee land '000 hectares	Varieties Arabica-Robusta
<b>2,804</b>	<b>1st in world</b>	<b>1,998</b>	<b>90% A 10% R</b>

### R&R need: ~20% of total land is in need of R&R

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



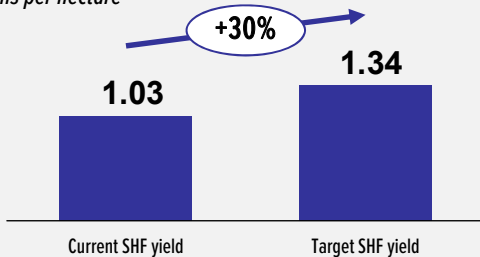
### Drivers of R&R need:



There is not a significant case for renovation since trees are relatively young. Rehabilitation need is driven by suboptimal practices and climate change

### Uplift potential: Low potential uplift given the moderate SHF production

Current SHF yield & potential uplift<sup>1</sup>  
Tons per hectare



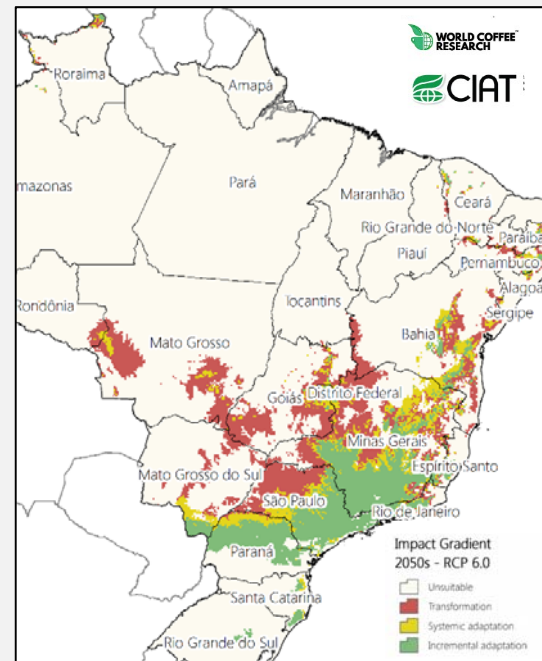
Potential increase in supply

**<5%**

Total national supply could increase ~1-3% if R&R and GAP is implemented on all SHF land in need of R&R2

### Viability: Climate change could significantly impact Brazil

Suitability map



- Brazil could potentially be severely affected by climate change since it has a lot of low-land coffee
- Matto Grosso and Goiás regions are potentially the most exposed
- Coffee in the Southern most part of Brazil looks to be less affected

### Other viability considerations

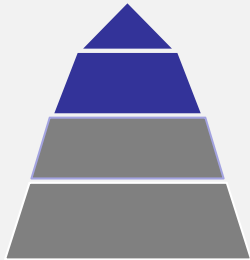
- The 30% potential yield increase applies to unmechanized SHFs. Uplift potential is likely to be lower for other SHFs. Unmechanized farms under 10 ha represent ~30% of total farms, mostly concentrated in the Minas Gerais region
- Production costs have increased over the past years
- Preservation of soils and ecosystems, damaged by the intensive use of fertilizers, is a key consideration for future suitability of coffee

Notes: (1) Average yield is calculated as the total SHF production divided by the total SHF land. The potential yield improvement is estimated by GCP and Technoserve, Economic Viability of Coffee Farming, 2017; (2) Rounded to the nearest 5%, estimate assumes that R&R and GAP increase yields with 30%, and the range reflects a 25-100% R&R success rate Source: FAO Statistics database; ICO statistics; GCP and Technoserve, Economic Viability of Coffee Farming, 2017; USDA, Annual Coffee Report, 2017; ACOB, Producer Training Project, 2017; Sustainable Coffee Program, Brazil: a business case for the production of sustainable coffee, 2014; Ministerio da Agricultura, Pecuaria e Abastecimento, Public policies and the financing of coffee production in Brazil (Presentation for the ICO), 2010; Dalberg Interview



## Brazil's production is dominated by medium and large producers who implement R&R on a rolling basis

### Farmer segmentation: highest number and share of large farms



#### National production is split between SHFs and large and medium farmers

Brazil has the highest number and share of large and medium farmers in the world. Most of the SHFs are organized into cooperatives or have links to markets through traders.

# SHFs  
'000

**270** – 1.5% of global SHFs

SHF land  
'000 hectares

**1,360** (~70% of national land) – average farm size ~5 hectares

SHF production  
'000 tons

**1,400** (~50% of national production)

Assessment of SHF  
orgs.

Brazil has powerful coops though they are not dedicated solely to SHFs: ~10% of SHFs are linked to coops

Links to market

Many SHFs are linked to the market through traders

### Enabling environment for R&R: Strong and well performing sector

#### Political environment



- Coffee share of GDP: 0.35% (2011)
- Coffee sector is a strategic priority for the government. The sector is well organized, including by the well-established Brazilian Coffee Industry Association (ABIC)
- The government has previously subsidized coffee farmers and pushed for a agronomic model based on intensive practices and use of fertilizers

#### Availability of inputs



- Most of the seedlings are locally produced. Research institutions (sometimes in partnership with private companies) develop rust-resistant varieties
- Seedlings are produced at commercial volumes by private nurseries

#### Availability of finance



- Credit for R&R in the coffee sector is easily available through several sources (financial institutions<sup>1</sup>, rural savings<sup>2</sup>, Funcafe<sup>3</sup>)
- Observers worry that, in the aftermath of the 2015 economic crisis, subsidies to SHFs may be cut off

#### Knowledge availability



- Public extension services and private rural extension services are available in Brazil. Some cooperatives provide TA to their members
- Observers complain about the lack of climate adaptation knowledge and the over usage of fertilizers by SHFs

### Examples of R&R programs: Past R&R programs mostly focused on climate change mitigation and rehabilitation

- **HRNS – Coffee and Climate** (2010-2019): HRNS provides TA to SHF to adapt to climate change. The program targets several countries, including Brazil
- **ACOB – Producer Training Program** (2014 – 2017): ACOB trained 2705 coffee SHF on climate-suitable practices, including GAP and rehabilitation practices

Notes: (1) Financial institutions must invest 25% of demand deposits in rural credit. These resources are known as “compulsory resources”. In 2010, compulsory resources represented more than 50% of rural financing. (2) 65% of the value of rural savings deposits must be kept by financial institutions. (3) Coffee Economy Defense Fund: national coffee trust fund dedicated to the financing of the coffee sector. Source: FAO Statistics database; ICO statistics; GCP and Technoserve, Economic Viability of Coffee Farming, 2017; USDA, Annual Coffee Report, 2017; ACOB, Producer Training Project, 2017; Sustainable Coffee Program, Brazil: a business case for the production of sustainable coffee, 2014; Ministerio da Agricultura, Pecuaria e Abastecimento, Public policies and the financing of coffee production in Brazil (Presentation for the ICO), 2010; Dalberg Interview