



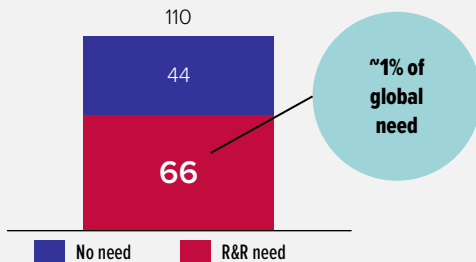
Kenya is a relatively small global producer with significant need for R&R driven by suboptimal practices and high age of trees

Quick facts: Kenya is a significant regional producer

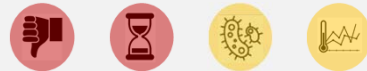
| Production '000 tons | Production share Global & region | Coffee land '000 hectares | Varieties Arabica-Robusta |
|-------------------------|--|------------------------------|------------------------------|
| 52 | 18th in world 5th in Africa | 110 | 100% A 0% R |

R&R need: ~60% of total land is in need of R&R

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



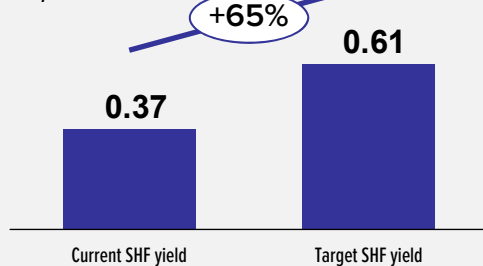
Drivers of R&R need:



Need is primarily driven by old trees (50-70 years in some places) and bad current practices. To a lesser extent, R&R need is driven by disease exposure (Coffee Wilt Disease) and by climate change in the Western part of the country

Uplift potential: High potential for SHF yield increase, though little impact

Current SHF yield & potential uplift¹ Tons per hectare



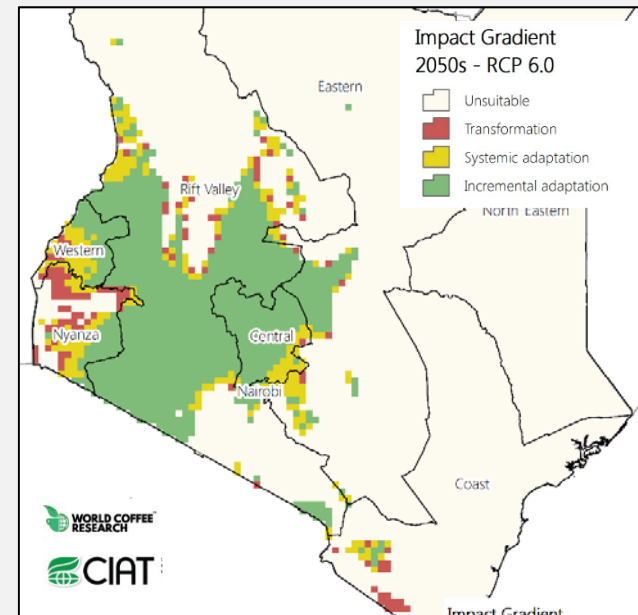
Potential increase in supply

~10-30%

Total national supply could increase ~10-30% if R&R and GAP is implemented on all SHF land in need of R&R²

Viability: Climate change is expected to mainly impact Western Kenya

Suitability map



- The majority of Kenyan coffee growing areas look to be unaffected by climate change
- Areas in the southwest of the country look to be more affected

Other viability considerations

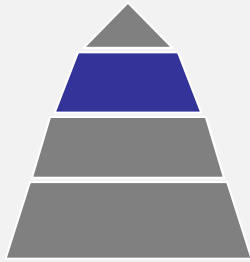
- Farmer share of the export price is around 75%. Local wet mills have the potential to decrease their operational costs, which could result in farm-gate price increases
- Labor costs on average equal USD 260 /ha, corresponding to more than twice the labor costs in Ethiopia and Tanzania. Labor costs have increased over the past years
- Traditional coffee growing areas face competition from housing and enterprise development

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 65%, 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; Kenya Agricultural & Livestock Research Organization; Coffee Development Fund, *Financing Smallholder Coffee Farmers in Kenya*, 2011; Republic of Kenya, *Report of the National Task Force on Coffee Sub-Sector Reforms*, 2016; Dalberg Interview



Kenya's SHF coffee sector is built around cooperatives, but the enabling environment could be improved

Farmer segmentation: Most SHFs are in tight value chains



National production is dominated by SHFs

The majority of SHFs are members of coops, and therefore included in tight value chains

SHFs
'000 **650** (~3.5% of global SHFs¹. SHFs are progressively replacing large plantations)

SHF land
'000 hectares **83** (~75% of national land) – farm size typically ~0.1-0.5 hectares

SHF production
'000 tons **31** (~60% of national production)

Assessment of SHF orgs. Strong coop movement, but high level of mismanagement. ~100% of SHFs are linked to coops

Links to market Coops links the overwhelming majority of SHFs to markets

Enabling environment for R&R: Relatively weak political support to coffee

Political environment



Availability of inputs



Availability of finance



Knowledge availability



- Coffee share of GDP: N/A [Coffee Share of exports: 4.6% (2016)]
- National government and County governments cooperate in a “Task Force for Coffee sub-sector Reforms”, but observers complain about lacking coordination and poor implementation of legislative measures
- The Task Force recommends several measures, including the rule on prompt payment (farmers should be paid at least 40% of the prevailing price on the spot for the cherry they deliver), and a subsidy program for SHFs, offered as a package including fertilizer, planting materials for new varieties, and TA. Implementation of these measures is slow
- The Coffee Research Foundation (CRF) produces four different varieties of verified Arabica coffee, but not at commercial volumes
- Some cooperatives develop their own nurseries, sometimes with the support of private companies, but seeds are not controlled
- Some cooperatives provide credit via the Coffee Development Fund¹ at affordable rates (5% in KES). However, volumes are limited
- Marketing agents and traders provide larger volumes of credit, but interest rates are high (>15% in KES)
- Not all coops are able to provide high-quality TA
- The Ministry of Agriculture and County governments provide extension services, but do not have sufficient extension officers to reach all SHFs

Examples of R&R programs: Past R&R programs have focused on increasing adoption of GAP and building SHF organization capacity

- **TechnoServe - The Coffee Initiative** (2008-2017): Technoserve trained roughly 12,000 Kenyan SHFs on the use of GAP and rehabilitation practices

Notes: (1) Assuming a global SHF population of 20 million. (2) The Coffee Development Fund is a state corporation under the Ministry of Agriculture in Kenya, established in 2006 as a financing vehicle for revitalizing the coffee sector. CoDF provide long-term affordable credits to farmers organized into cooperatives. Source: FAO Statistics database; ICO statistics; GCP and Technoserve, *Economic Viability of Coffee Farming*, 2017; USDA, *Annual Coffee Report*, 2017; Kenya Agricultural & Livestock Research Organization; Coffee Development Fund, *Financing Smallholder Coffee Farmers in Kenya*, 2011; Republic of Kenya, *Report of the National Task Force on Coffee Sub-Sector Reforms*, 2016; Dalberg Interview