Data requirements for yield gap analysis

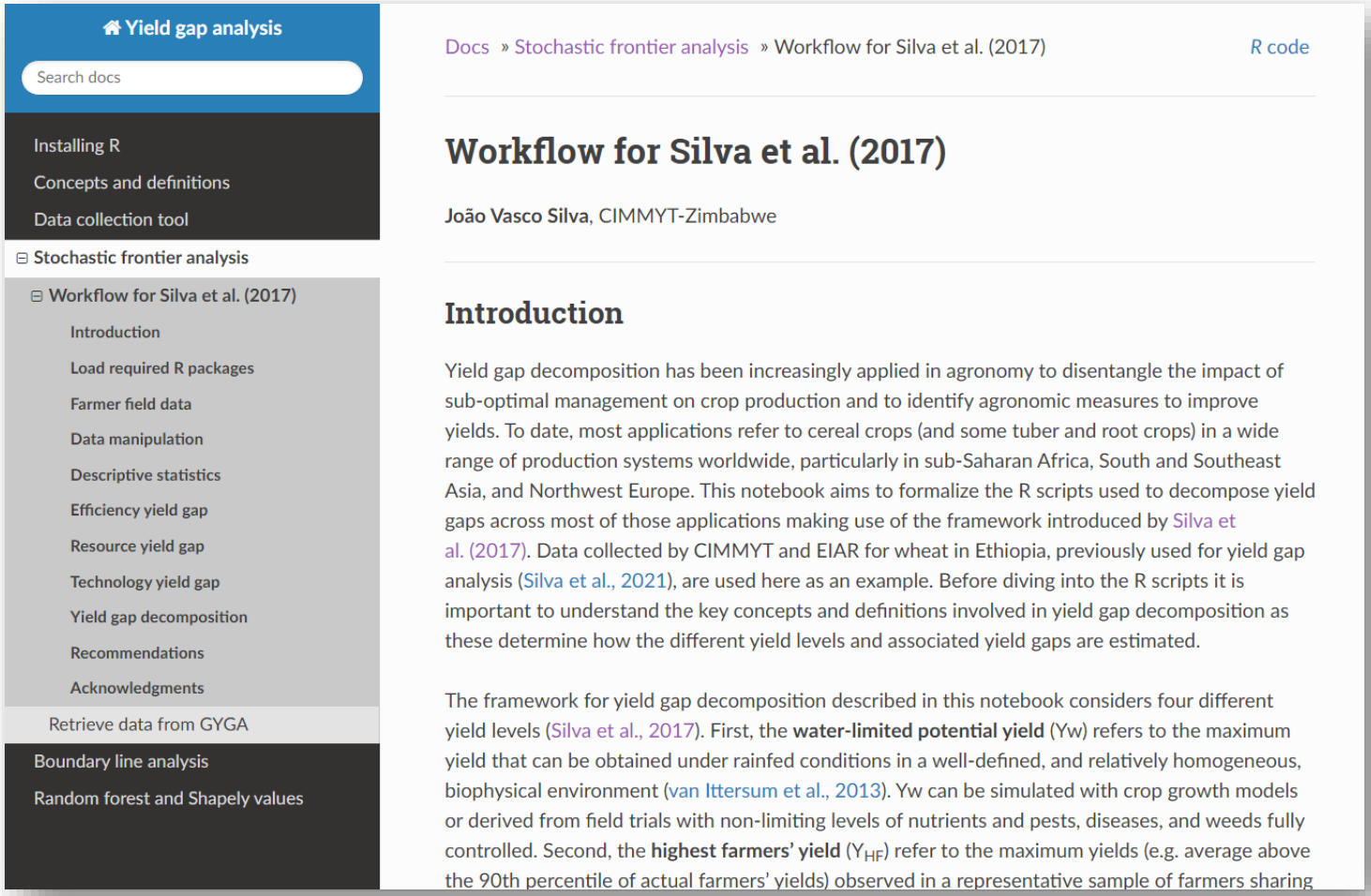
João Vasco Silva (PhD)
j.silva@cgiar.org
Agronomy-at-scale Data Scientist
CIMMYT-Zimbabwe



Addis Ababa, May 23rd 2023

CIMMYT

https://jvasco323.github.io/eia-yg-training



CIMMYT

Minimum data requirements

1) Delineation of relevant **biophysical units** to ensure differences between farm/field performance are only attributed to management practices.

2) **Farmer field data** to estimate Ya, Y_{TEx} and Y_{HF}, and associated efficiency and resource yield gaps.
   a) Stochastic frontier analysis
   b) Actual yield percentiles
   c) What were the reasons behind the selection of these sites?

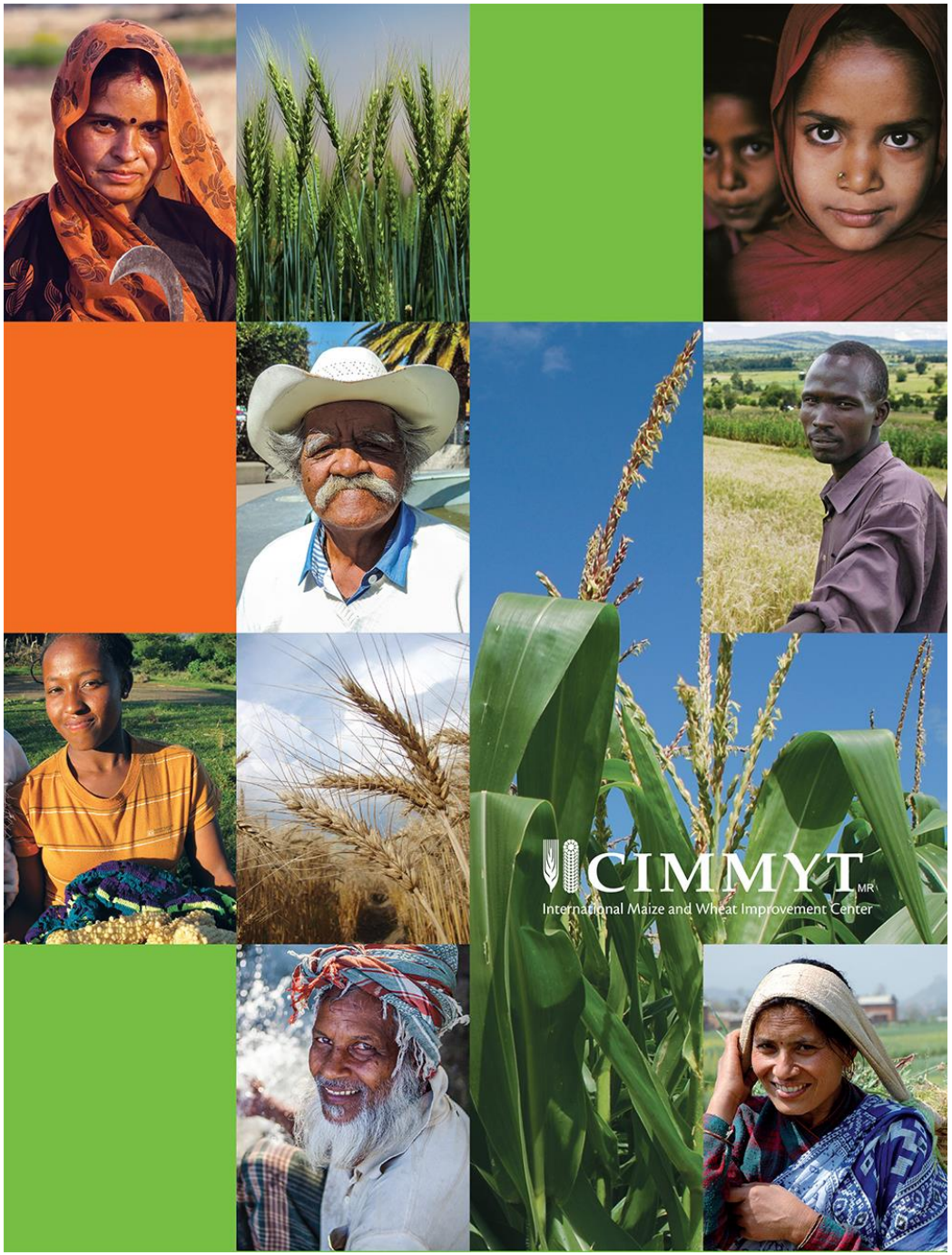
3) **(Simulated) yield ceilings** from crop growth simulation models to estimate technology yield gaps.

Farmer field data

GPS coordinates, water regime, variety, sowing & harvest dates, yield

Crop management (water, nutrient, pest, disease, weed), socio-economics

CIMMYT



Thank you for your interest!