Can we scale out Climate-Smart Agriculture?

**Business as usual will not work**

- **Increase in temperatures**: by 2.1–2.7°C
- **2 droughts every 5 years**
- **Reduction in maize yield by 10 to 30% by 2030**
- **and 80% by 2050**

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**It is good for the planet and the farmer**

- Increase in soil moisture
- Increase in soil biodiversity
- 50%-80% decrease in soil erosion
- **136% yield increase** (Maize-sunhemp rotation compared to maize monocropping)
- Up to 260% increase in incomes in dry environments

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**but adoption is still low**

Adoption of complete conservation agriculture systems

- **2.5%** - Zimbabwe
- **5.5%** - Malawi
- **8.3%** - Zambia

(Adapted from Kassam et al, 2018, Global spread of conservation agriculture)

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**How to scale Climate-Smart Agriculture (CSA)?**

- **Weigh in the trade-offs**: Needs farm-specific extension strategy
- **Follow a ladder approach**
- **Start with a small plot and expand**
- **Use innovation platforms to increase capacity and connect farmers to reliable markets**

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**Conservation agriculture mechanization** (e.g. direct seeder) addresses labor shortages

**Site-specific extension system**

**Sufficient fertilization** (chemical and organic)

**Resilience with stress-tolerant seeds**

**Integrated pest and weed management**

**Agroforestry and green cover crops**: Increases biomass and soil fertility

**Crop variety choice** (e.g. drought-tolerant maize)

**Legume intercropping**

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**Zimbabwe**

5.5% 8.3%

**Zambia**

2.5% 5.5%

(Adapted from Kassam et al, 2018, Global spread of conservation agriculture)

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**To scale climate-smart practices like conservation agriculture, some farming constraints have to be addressed**