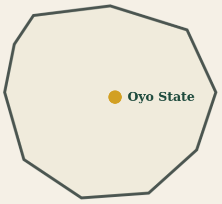
Tropentag 2026

Nigeria



Rainfall shocks, labour migration and the climate adaptation deficit: remittances as a missed opportunity in smallholder maize systems in Southwest Nigeria

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180 maize-farming households · Southwest Nigeria · Field survey 2025

1 Introduction

- Climate stress and out-migration are compounding smallholder vulnerability.
- Migration thins the farm workforce but sends home **remittances** — a potential adaptation resource.
- Question: do remittances fund climate-adaptive investment, or just consumption?

2 Methods

Sample
180 maize farmers, Saki East Local Government Area (LGA), Oyo State

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Sampling
Four-stage multistage random sampling

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Scoring
10-item Rural Sector Investment (RSI) index

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Analysis
Multiple regression, $R^2 = 0.487$

3 The adaptation deficit

- **Farm insurance** uptake — near zero.
- **Irrigation** investment — minimal, despite rain-fed exposure.
- **Post-harvest storage** — largely absent.
- One failed rainy season → food insecurity, with no financial buffer.

4 Results

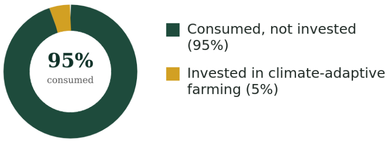
63% of households receive remittances

95% of remittances are consumed, not invested

56% of households lack extension access

78% of households lack credit access

How remittance income is used



5 What drives investment?

- Remittance receipt does **not** predict climate-adaptive investment.

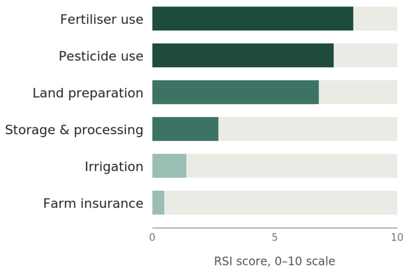
Variable	Effect	Significance
Extension access	Positive — strongest	**p = 0.002**
Monthly farm income	Positive	**p = 0.008**
Married	Positive	**p = 0.015**
Years of education	Positive	**p = 0.016**
Farming experience	Positive	**p = 0.020**
Remittance receipt	No effect	*p = 0.936, not significant*
Access to credit	No effect	*p = 0.220, not significant*

Reading the result

- Extension, income, education and experience drive adaptive investment.
- Remittances fund food and fees now — not resilience for next season.

6 Where farmers do invest

Relative investment score by category



Spending clusters at low-cost inputs, not climate resilience. Source: Field survey, 2025.

7 A climate-adaptive remittance framework

1. **Weather-indexed micro-insurance**
   Bundled with transfers, triggered by local rainfall deficits.
2. **Remittance-linked input credit**
   Regular receipt used as collateral for input loans.
3. **Climate-focused extension**
   Advisory expanded in migrant-sending communities.
4. **Collective infrastructure investment**
   Cooperatives pool remittances for irrigation & storage.

8 Conclusion

Remittances are a latent climate-adaptation resource — institutions, not money, are missing.

- Extension access, not remittances, drives adaptive investment today.
- Closing the gap means turning consumption into productive investment.

Three priorities for policy

- Expand extension into migrant-sending communities first.
- Pilot weather-indexed insurance bundled with remittances.
- Build cooperative credit & storage around remittance history.

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Keywords
Climate change adaptation · Remittances · Smallholder agriculture · Maize systems · Nigeria · Extension services · Weather-indexed insurance

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