



Urcil Papito Kenfack Essougong

*Abidjan, 20-03-2024*

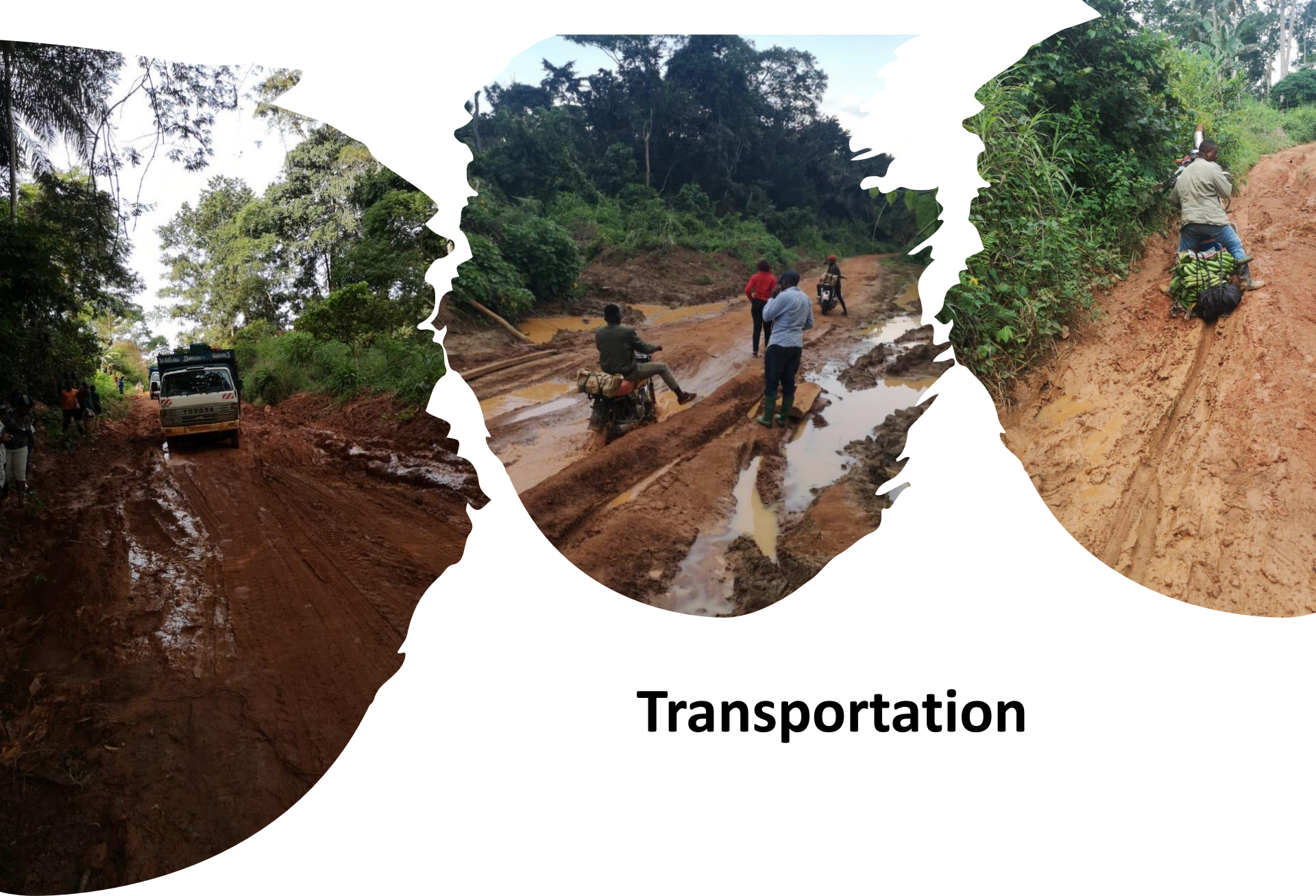
## **Achieving sustainable cocoa intensification in Cameroon: Current constraints and effectiveness of service delivery**



**Fertilizers awaiting collection**



**Water used for pesticides applications**



# Transportation

# Background

## Production Trends and Target

- Production 2022-2023 ~260 000 tons (- 11,2%)
- Yield ~ below 500 Kg/ha
- Target: 600 000 tons by 2025  
1 200 000 tons by 2030

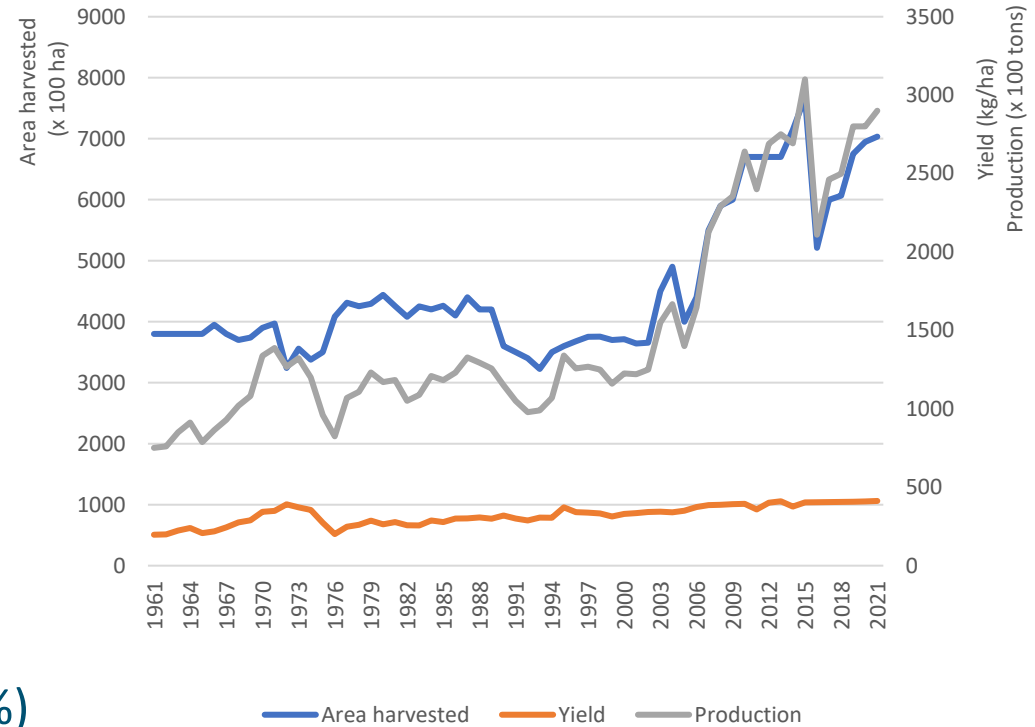


Figure 1: Trends in cocoa yields, total production and cultivated area between 1961 and 2021 in Cameroon

- Main destination market : EU (75%)
- Tension national target and market demand (EU regulations)
- Needs for innovation in practices and innovation support services to achieve sustainable cocoa intensification

# Research Objectives and Questions

**Understanding current barriers to sustainable cocoa intensification in Cameroon and the effectiveness of service delivery?**



**1. What are the factors influencing Best Cocoa Management Practices adoption by farmers?**



**2. How accessible and suitable are innovation support services for sustainable cocoa intensification?**

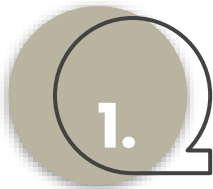


**3. How integrated is the innovation support services delivery landscape?**



# Research Design

Mix of qualitative and quantitative methods

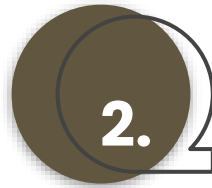


Sampling



## Strategies

- Random
- Proportional
- Purposive
- Snowball

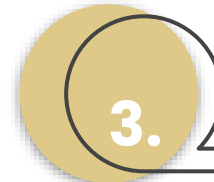


Data Collection



## Techniques

- Key informants' interviews
- Focus Groups
- Workshop
- Surveys
- Desk reviews
- Observations

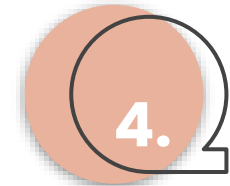


Data Analysis



## Procedure

- Descriptive and Inferential
- Regression analysis (Logistic, Linear and Poisson)
- Social Network Analysis
- Thematic Analysis



Dissemination



## Dissemination

- Conferences / Symposium
- CocoaSoils stakeholder meetings
- Peer-Review journal publications

# BMP adoption and influencing factors

- High level Awareness and knowledge of Best Management Practices (BMP)
- Prioritization of practices

## Farmers prioritization of BMP in cocoa based on score and rank (in brackets)

Best Management Practices	Production basin	
	Humid Forest ( <i>n</i> = 60)	Forest savannah transition ( <i>n</i> = 60)
Harvest well-ripe pods	4.60 (1)	4.45 (3)
<b>Fungicide application</b>	<b>4.51 (2)</b>	<b>4.10 (9)</b>
Insecticide application	4.50 (3)	4.25 (7)
<b>Shade management</b>	<b>4.50 (3)</b>	<b>4.17 (8)</b>
Appropriate fermentation	4.45 (5)	4.58 (1)
Appropriate drying	4.30 (6)	4.58 (1)
Pruning	4.28 (7)	4.25 (5)
Use of improved varieties	4.07 (8)	4.37 (4)
Sanitary harvest	4.02 (9)	4.32 (6)
Sorting cocoa beans	3.95 (10)	3.97 (10)
Appropriate storing	3.73 (11)	3.90 (11)
<b>Fertiliser application</b>	<b>3.58 (12)</b>	<b>3.07 (12)</b>
<b>Planting species that fertilise the soil</b>	<b>3.04 (13)</b>	<b>2.70 (13)</b>
<b>Manure/compost application</b>	<b>2.27 (14)</b>	<b>2.86 (14)</b>

# BMP adoption and influencing factors

- Intensity BMP adoption: Number practices adopted, and percentage of fields worked out
- Weak correlation between intensity of BMP adoption ( $68 \pm 15 \%$ ) and average farm yield ( $304 \pm 230 \text{ kg/ha}$ )

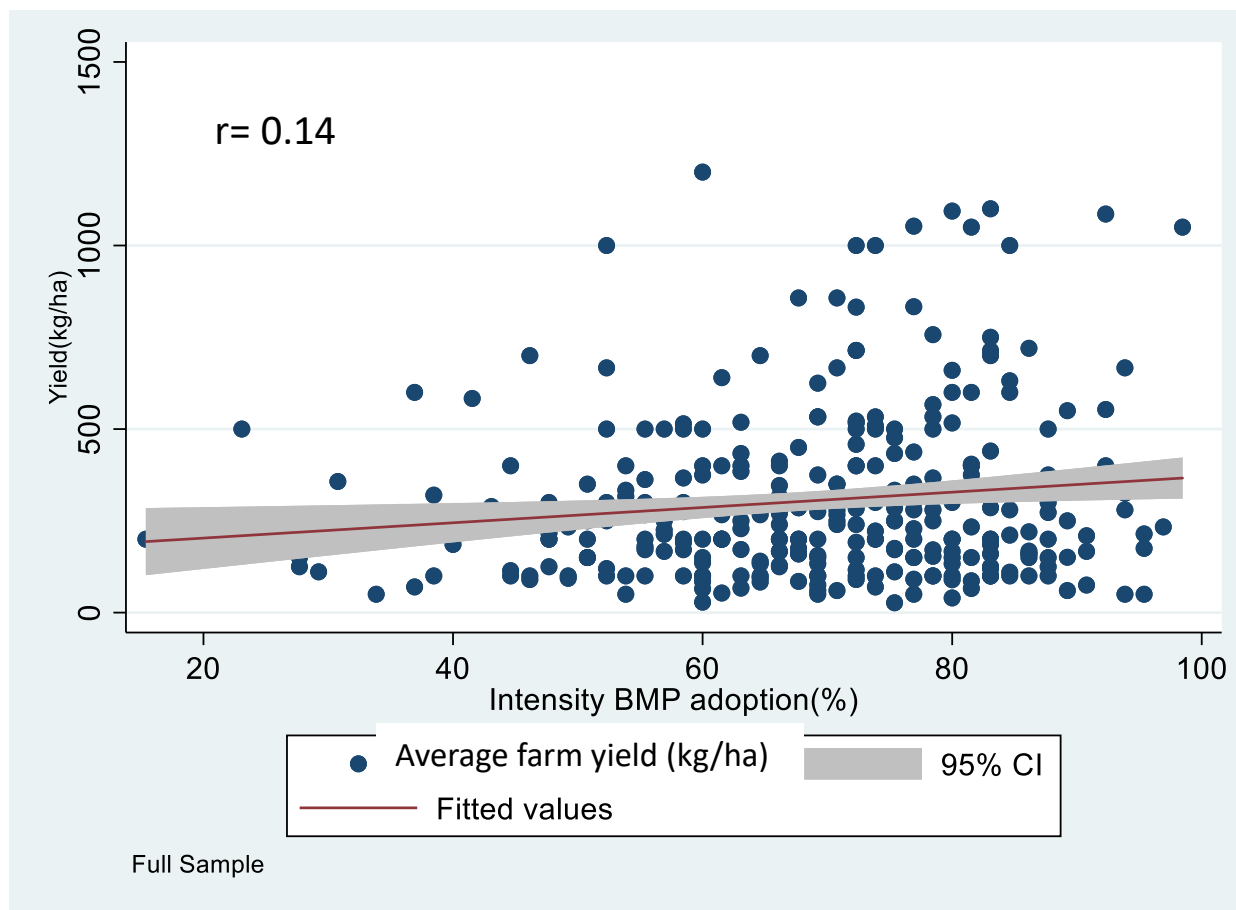


Figure 2: Correlation between Yield and intensity of BMP adoption ( $n=309$ )



# BMP adoption and influencing factors



Figure 3: Factors influencing BMP adoption by cocoa farmers

# Accessibility and suitability of innovation support services

A mismatch between service demand and supply

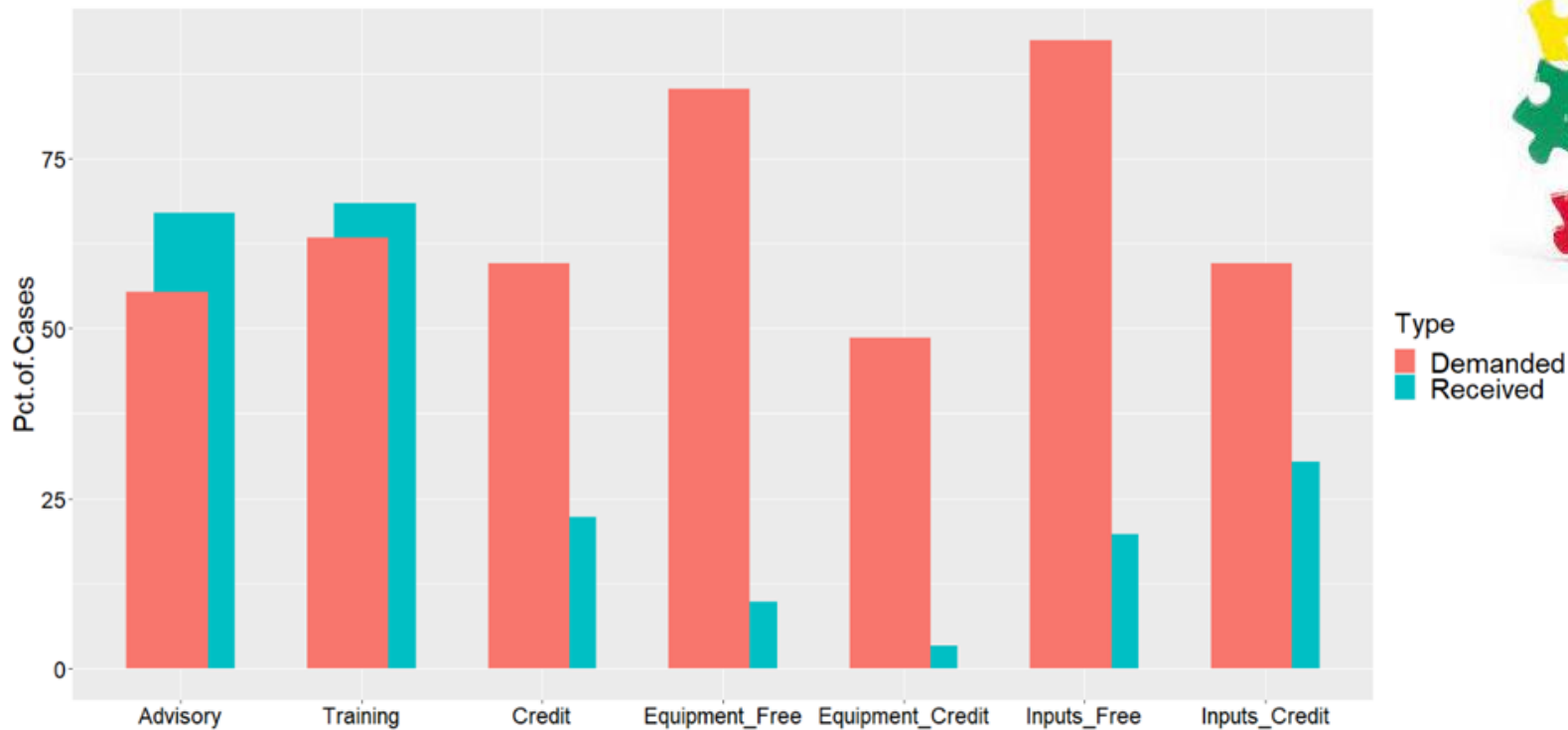


Figure 4: Farmers distribution according to the services received and demanded (n=421)

## Unequal chances to access services - Key determinants

Location

Farm Characteristics/Composition

Involvement in certification

Seniority and leadership position in farmers' organizations

# Accessibility and suitability of innovation support services

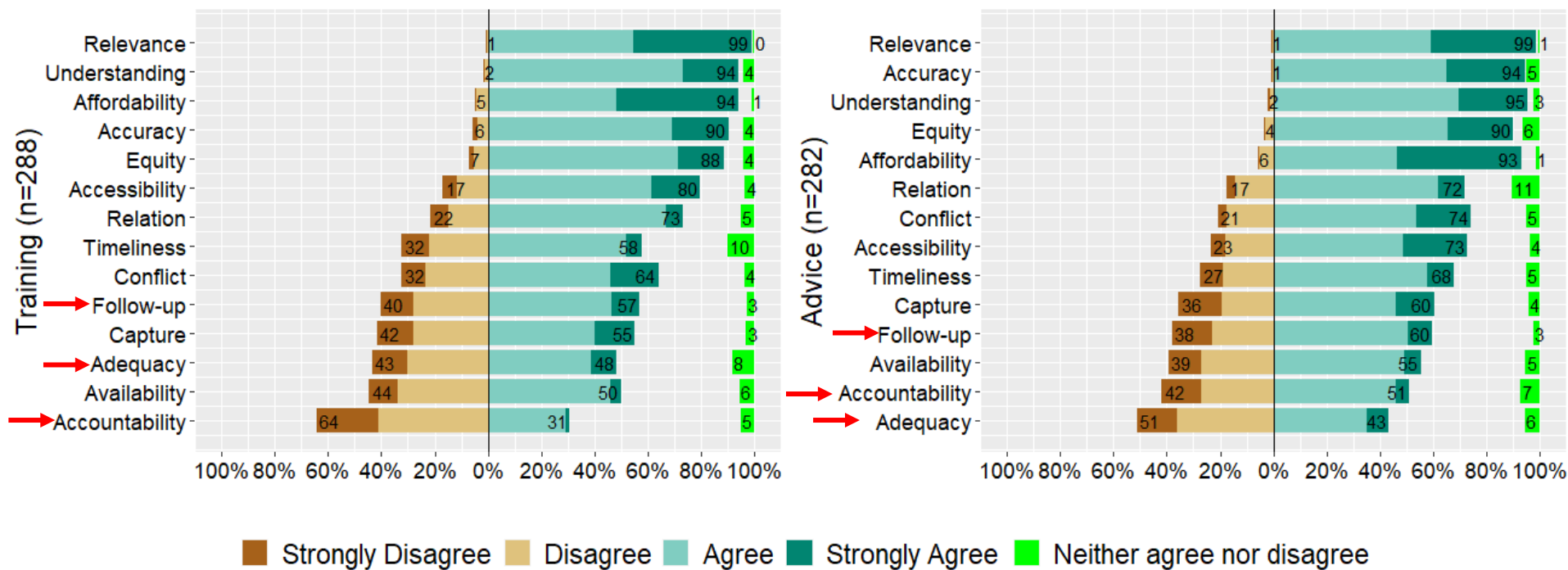


Figure 5a: Distribution of farmers' responses with respect to the extent to which they agree or disagree with the quality of each service attribute

# Accessibility and suitability of innovation support services

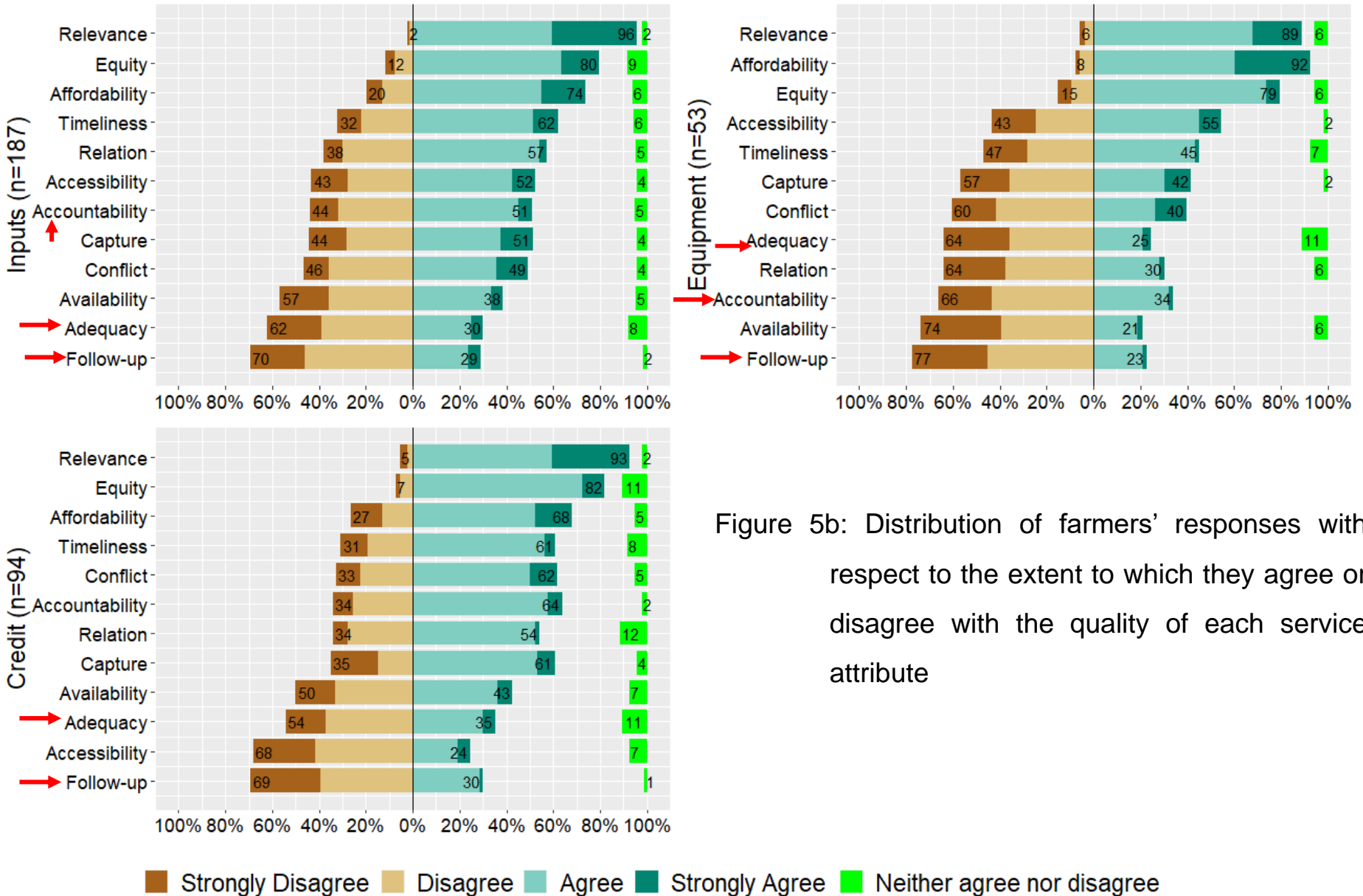


Figure 5b: Distribution of farmers' responses with respect to the extent to which they agree or disagree with the quality of each service attribute

# Accessibility and suitability of innovation support services

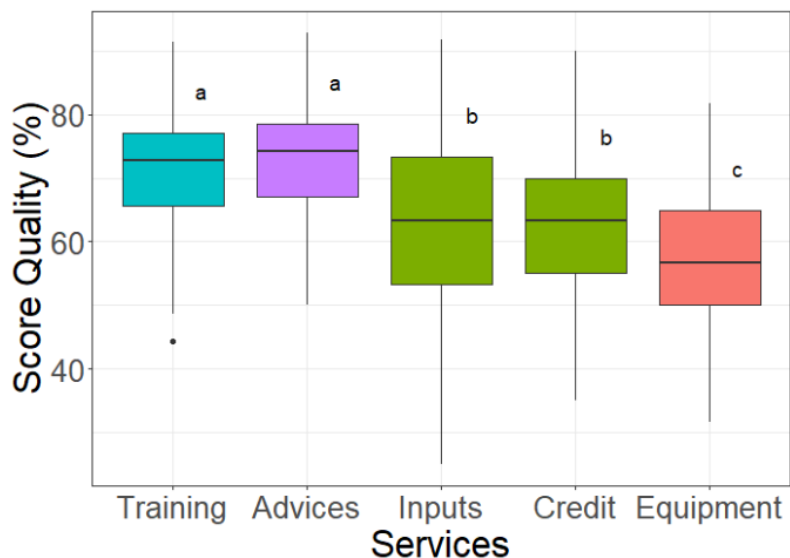


Figure 6: Aggregate score quality per service

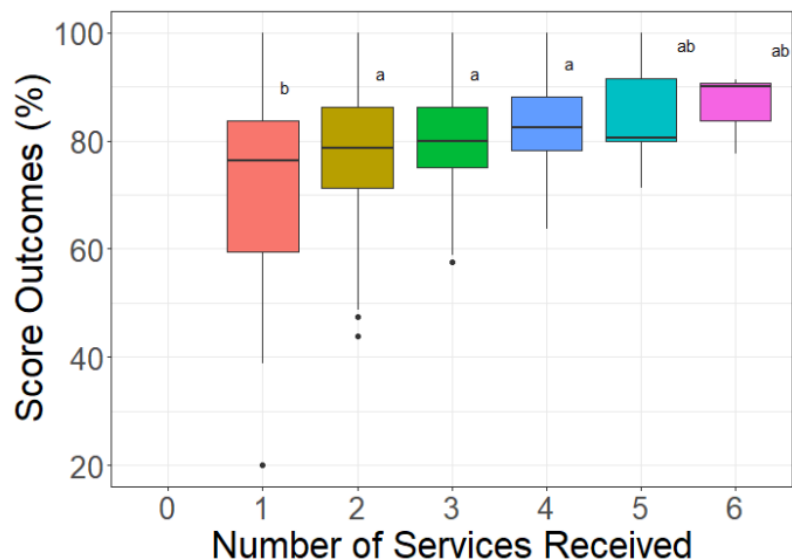


Figure 7: Aggregate score outcomes per the number of services received

- Higher satisfaction with **training, coaching** quality, compared to **equipment, credit, inputs**
- Combining services leads to higher satisfaction with generated outcomes
- Significantly higher Yields when training/coaching complemented with another service

# Integration within the innovation support services delivery landscape



- Pluralistic and highly fragmented landscape

## 180 actors

Private sector (54%)

Public sector (13%)

Farmers Organisations (12%)

NGO and development agencies (15%)

Research and education (6%).

- Existence of multiple stakeholders' platforms for information sharing!
- Little coordination interventions
- IDH, MINADER, ONCC, CICC are potential game changers

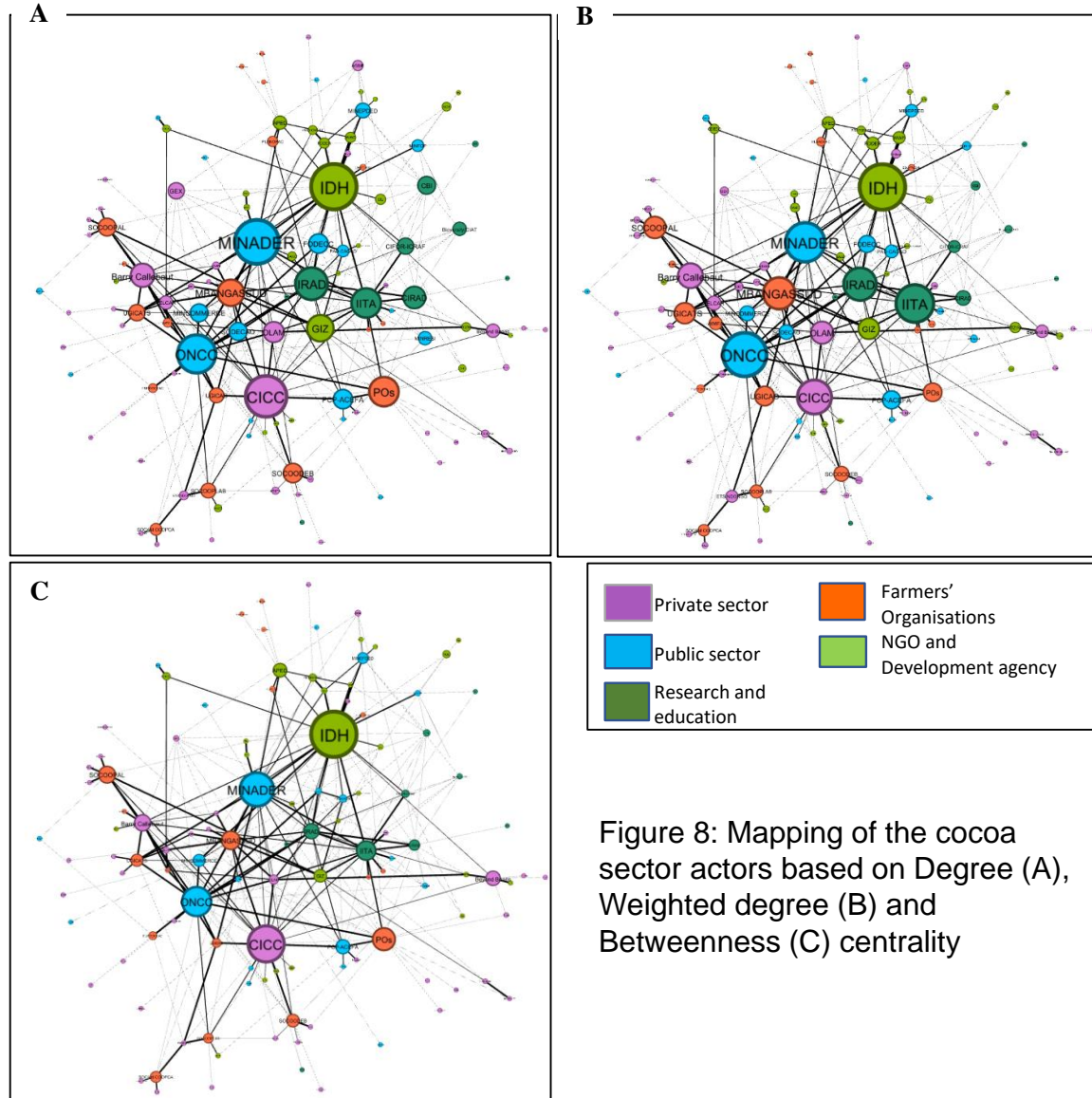
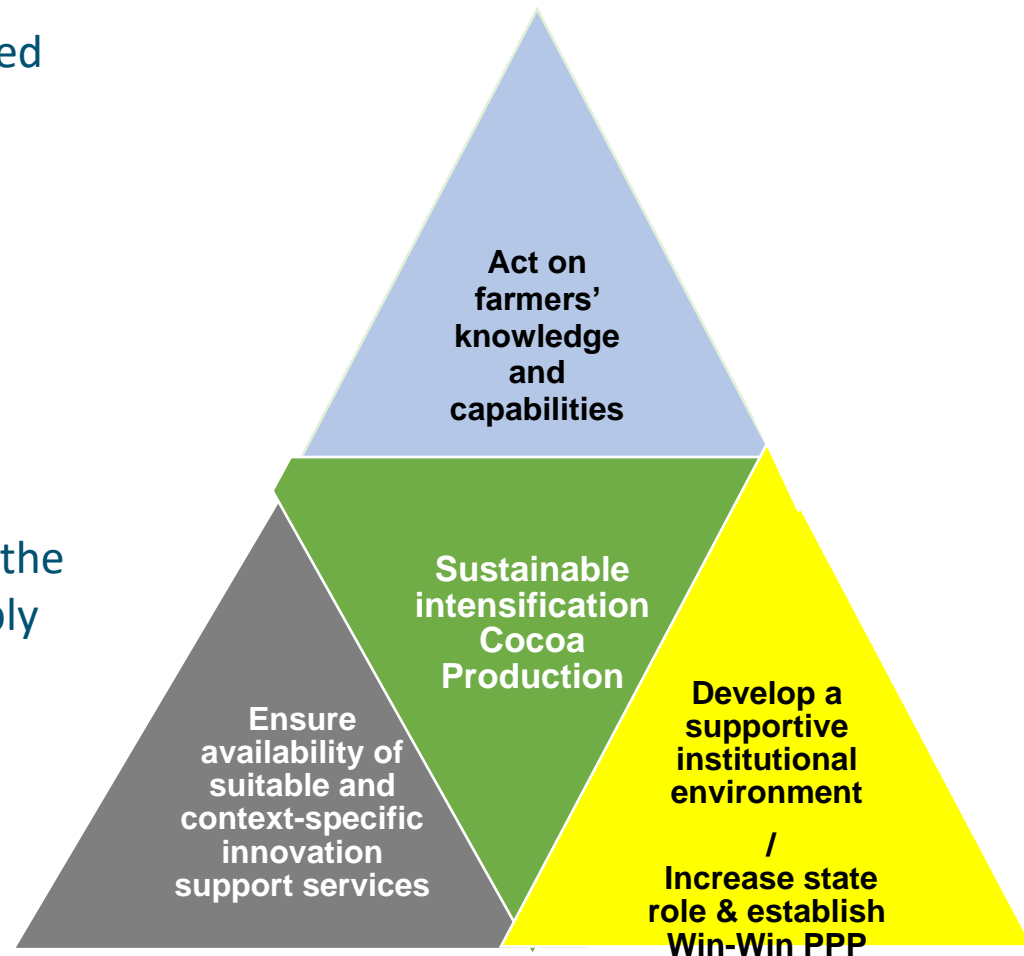


Figure 8: Mapping of the cocoa sector actors based on Degree (A), Weighted degree (B) and Betweenness (C) centrality

# Conclusion

- Farmers are knowledgeable on BMP,
- BMP adoption depends on factors related to farm (ers) characteristics, their environment and how they see and interact with it
- Current services are not sufficiently accessible and suitable to foster SI
- Providing bundles of services increases the chances of matching demand with supply and increases satisfaction
- The efficiency and effectiveness of the service delivery system is currently low due to poor service integration



Pillars to Achieve Sustainable Cocoa Intensification



# Thank You

<b>Project Lead/Donor</b>	 			
<b>National Research Institutes</b>				
<b>Intl Research Centres</b>	 	 	 	<p>Alliance</p>  
<b>Private partners</b>	  	 	  	    





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