

# EiB NAREs Engagement: Strategy and Progress

**NAREs Breakout Session**  
**EiB Annual Meeting 10-12 Nov 2020**

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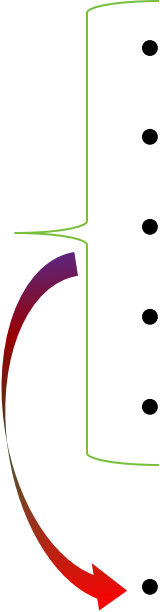
EiB NAREs Coordinator



# NAREs & EiB

- Mod 1: Product Design, Program management
- Mod 2: Optimizing Breeding Schemes
- Mod 3: Genotyping tools and services
- Mod 4: Phenotyping tools and services
- Mod 5: Bioinformatics, biometrics, data management

# NAREs & EiB

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- Mod 1: Product Design, Program management
  - Mod 2: Optimizing Breeding Schemes
  - Mod 3: Genotyping tools and services
  - Mod 4: Phenotyping tools and services
  - Mod 5: Bioinformatics, biometrics, data management
  - NAREs Linkage: Support NAREs programs directly and provide linkage to EiB modules as required.

# EiB NAREs Linkage Team



**Biswanath Das**  
EiB Global NAREs  
Coordinator  
• Nairobi



**Sanjay Katiyar**  
Breeding Optimization  
specialist - Asia  
• Hyderabad



**Lennin Musundire**  
Breeding Optimization  
Specialist - Africa  
• Nairobi



**Ted Carey**  
West Africa and RTB  
Breeding Consultant  
• Ghana



**Manilal Williams**  
Genotyping Demand  
Planning and MAS  
strategy consultant  
• Canada

**Regional  
Consultants**

# EiB NAREs Engagement

NAREs  
Breeding  
Modernization  
Per Se

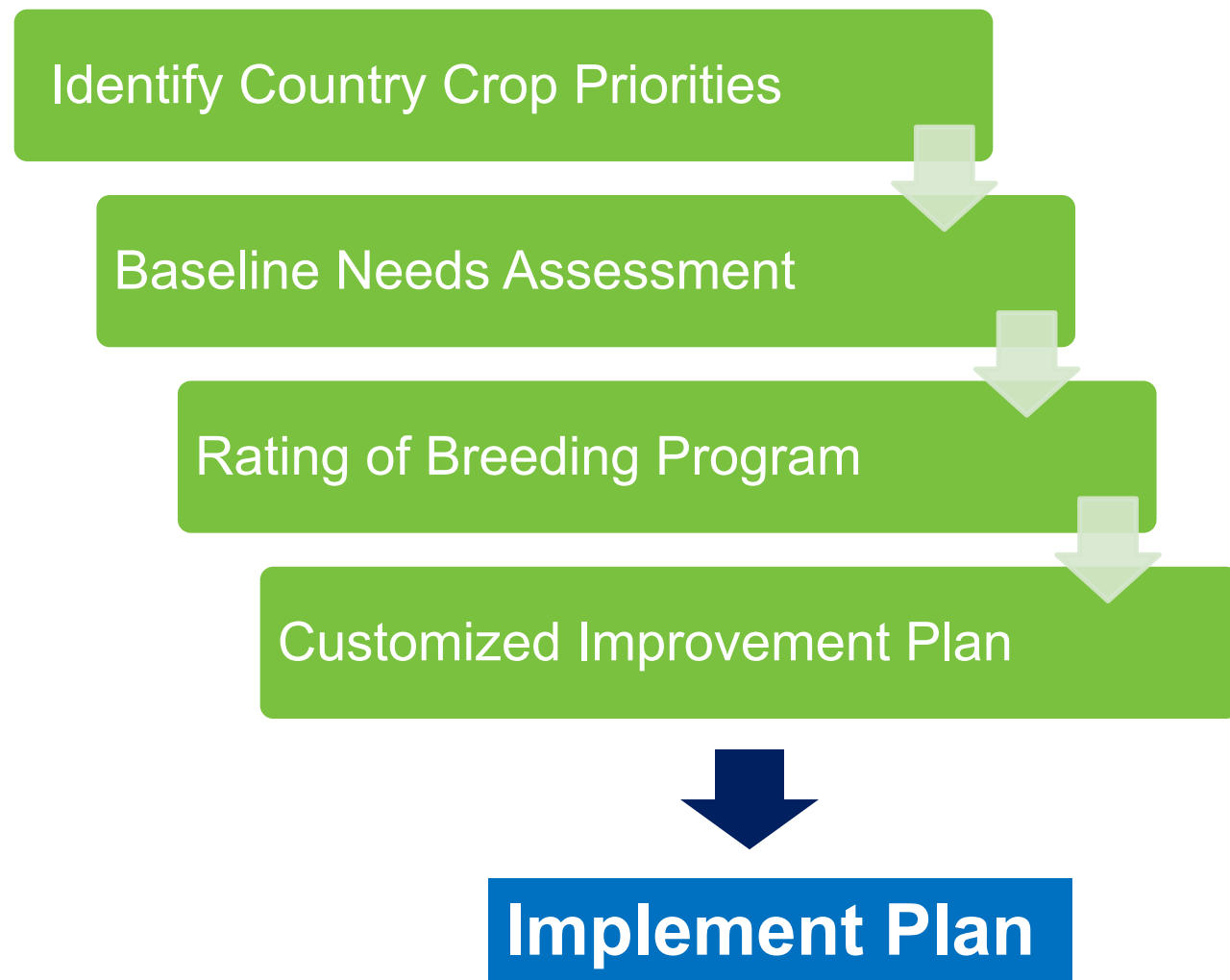
**Vision:** NARs breeding programs adopt modern practices and run continuous, market led breeding pipelines to regularly deliver competitive varieties.

Effective  
CGIAR-NARE  
s Breeding  
Networks

**Vision:** CGIAR and NARs teams work collaboratively across a given breeding pipeline with clear roles and responsibilities in order to drive genetic gain on farmers fields.

# 1. Modernizing NAREs Breeding programs Per Se

# 1. NAREs modernization: Stages of Engagement



# NAREs Tier Rating

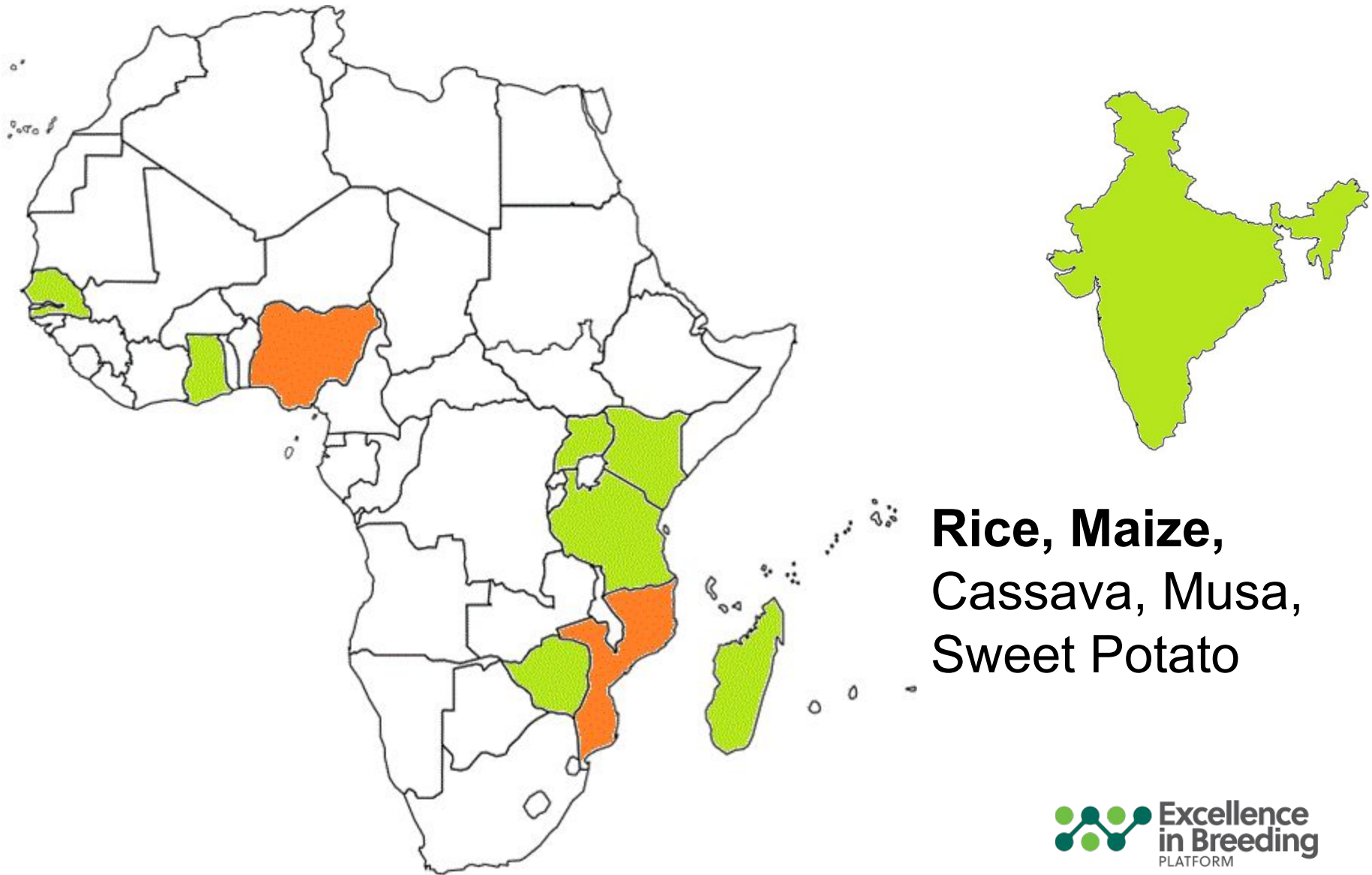
Tier	Tier Type	Breeding program Description
Tier 1	Mature	Well-budgeted pipeline aligned to market size and needs. Regular release of internal germplasm with clear & robust connections to seed systems.
Tier 2	Mid Stage	Continuous pipeline, product profile led pipelines, closed elite pools, regular release of both internal and external germplasm. Pipeline is undersized relative to market size and needs.
Tier 3	Early Stage	Regular testing & release of CGIAR germplasm. Some internal germplasm dev but pipelines non-continuous & underfunded.
Tier 4	Testing	Regular testing and release of CGIAR germplasm. Internal breeding capacity is predominantly trait focused.
Tier 5	Dormant	No internal germplasm dev, irregular testing of CG and partner germplasm. Limited market information.



# Customized Improvement Plans

- Each NAREs are different with separate needs
  - Individual gap analysis for best support
  - Determine the program's ambition and needs and develop plan accordingly (*not all programs need to be Tier 1...*)
  - Hands-On Support to implement change
- Align to CGIAR Support
  - Compliment CGIAR support
  - Catalyst to fast track ongoing support
  - Provide an extra pair of hands

# NAREs Engagement 2020



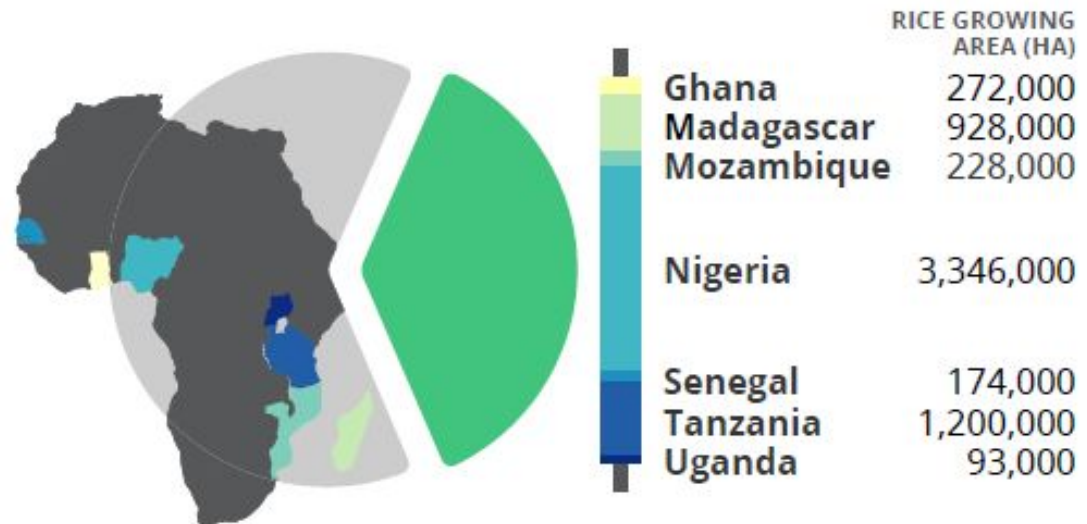
# HiRice



- Short term, catalytic project
- Rapid deployment of modern tools, services and methods.
- Eg product profiles, QA/QC genotyping, Digitization of operations etc

## Impact

Increased performance of NARS rice breeding programs in 7 countries representing 37% of the total rice growing area in Africa.





# Costing

- Operational Costs being Costed for 1<sup>st</sup> time
- Costs used to develop budget
- High Cost centers identified and addressed

Activity	Cost per Row (USD)
Crossing Nursery by Hand	10.57
Sell Pollination Nursery	11.34
Test Crossing	5.88
Off Station Trialing*	2.52



## Recommendations

1. Reduce phenotyping for high heritability traits
2. Mechanize high cost centers
3. Switch to DH or SSD from pedigree

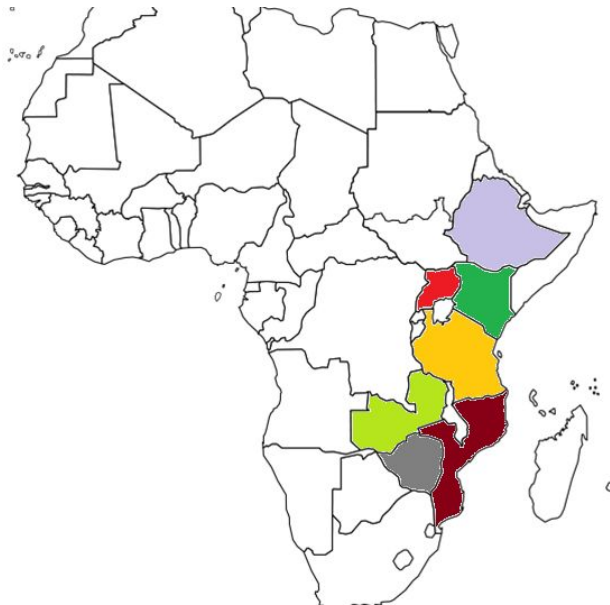
# Training and Scaling

- 6<sup>th</sup> October 2020: Continuous Improvement Webinar
- 19<sup>th</sup> November 2020: Genetic Gains Webinar
- Jan/Feb 2021: Market Segments and Product Profiles
- Scaling
  - Work through regional hubs (CORAF, ILCI, WB)
  - Institutional Coordinators and Specialists

## **2. Building more effective CGIAR-NAREs Breeding Networks**

# Why Networks?

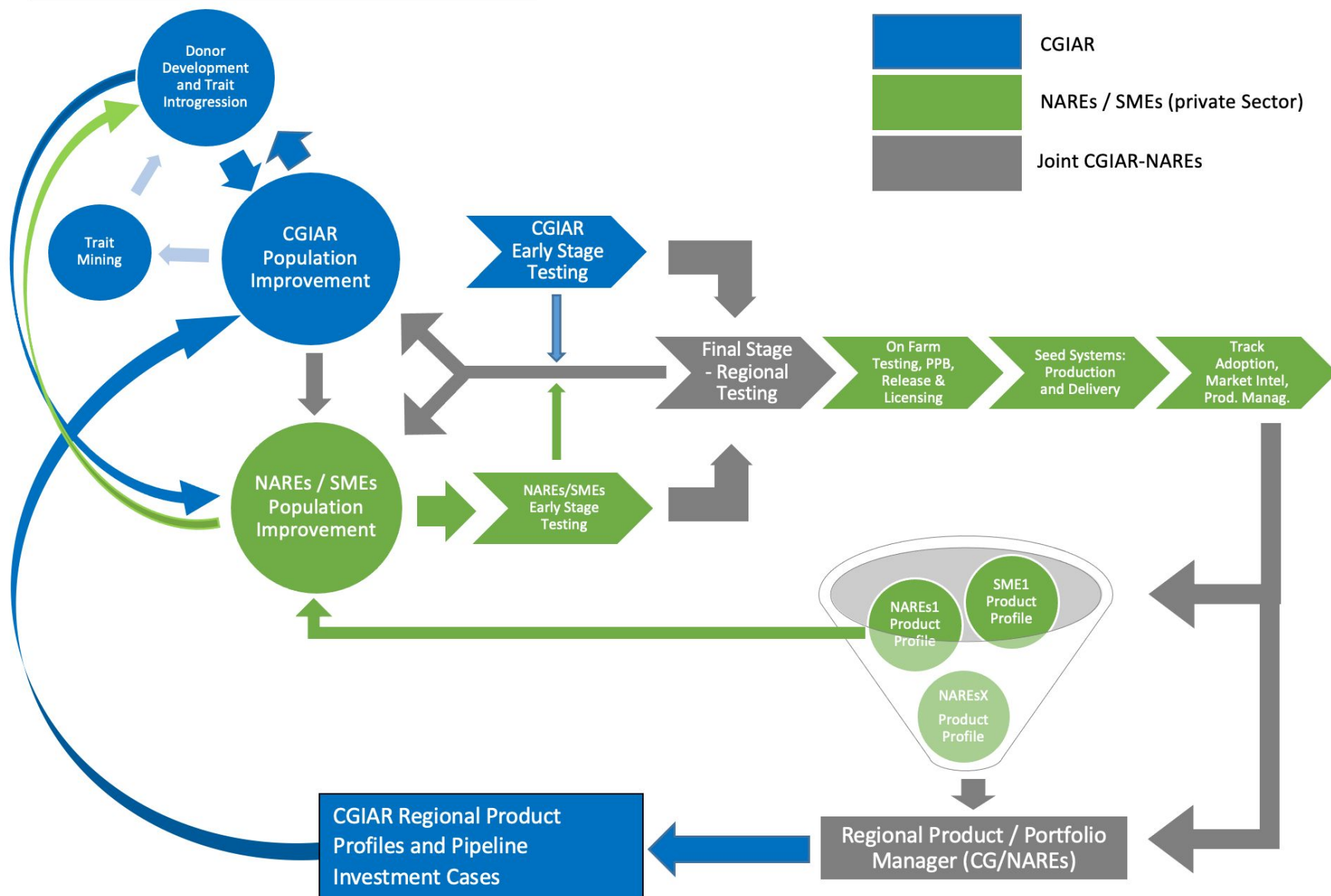
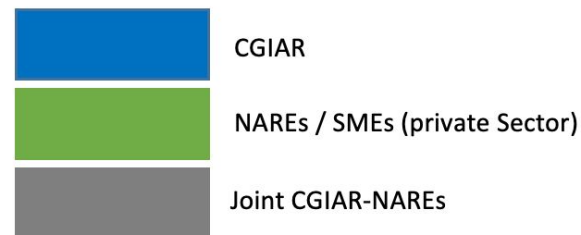
- Breeding takes time (pre-breeding to seed systems)
  - It is impossible for one team to manage the entire process
  - Diverse skills required for various components of pipeline
- Networks provide critical mass / scale





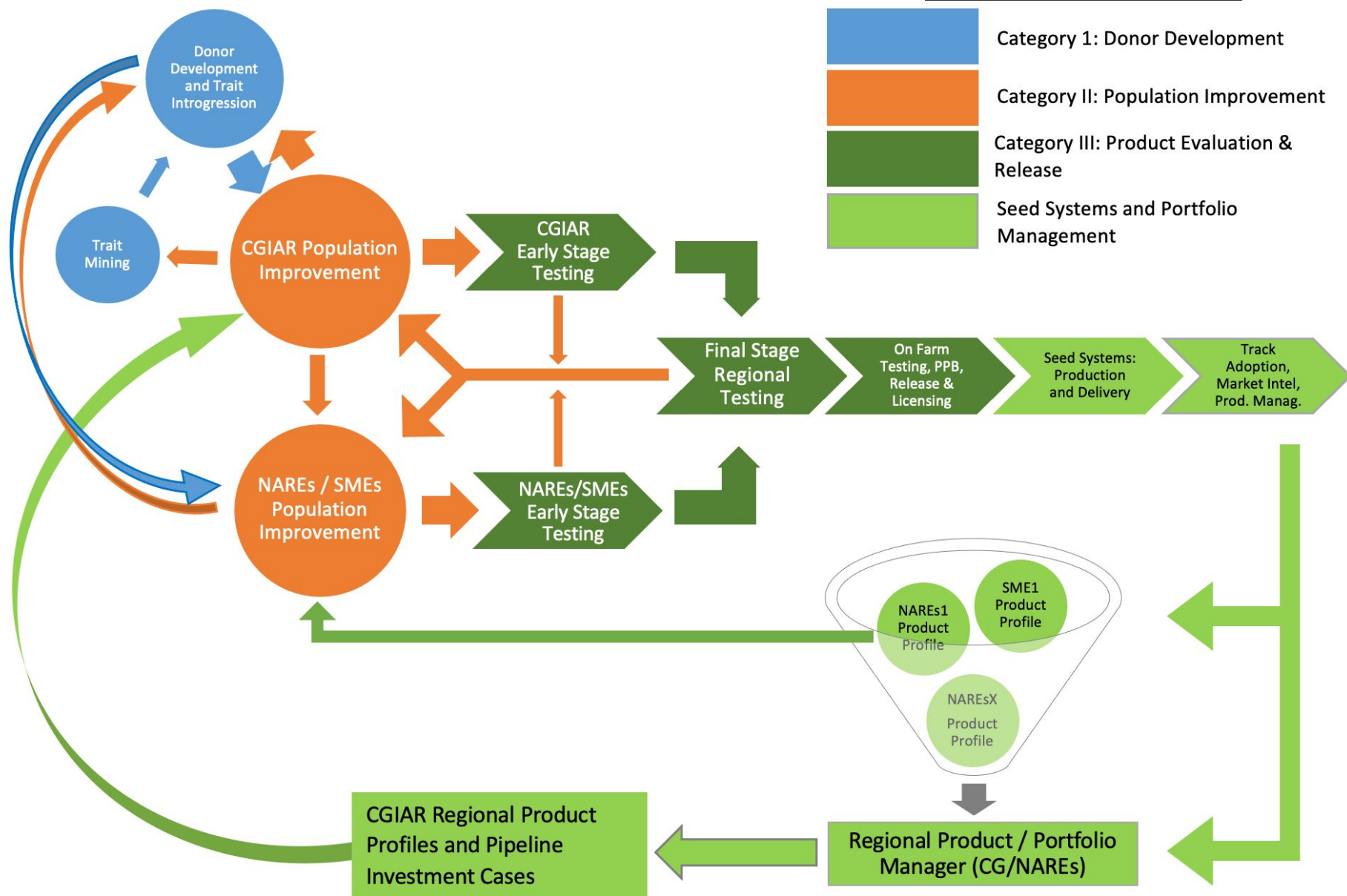
# Effective CGIAR-NAREs/SMEs Breeding Networks: Roles & Responsibilities

## Function Led By:





# Effective CGIAR Co-ordinated Breeding Networks: Roles and Responsibilities



# How can we increase Impact?

- Clear definition of roles, responsibilities & KPIs
  - Weakness at any point risk success of entire pipeline
- Clear handover points and stage gates
- NARs lead downstream components
- NARs lead market surveillance

The researchers found many studies that conclude that smallholders are more likely to adopt new approaches – specifically, planting climate-resilient crops – when they are supported by technical advice, input and ideas, collectively known as extension services.

# Suggestions and Feedback

How can EiB best serve NAREs and help build stronger networks?

**Thank you for  
your interest!**



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