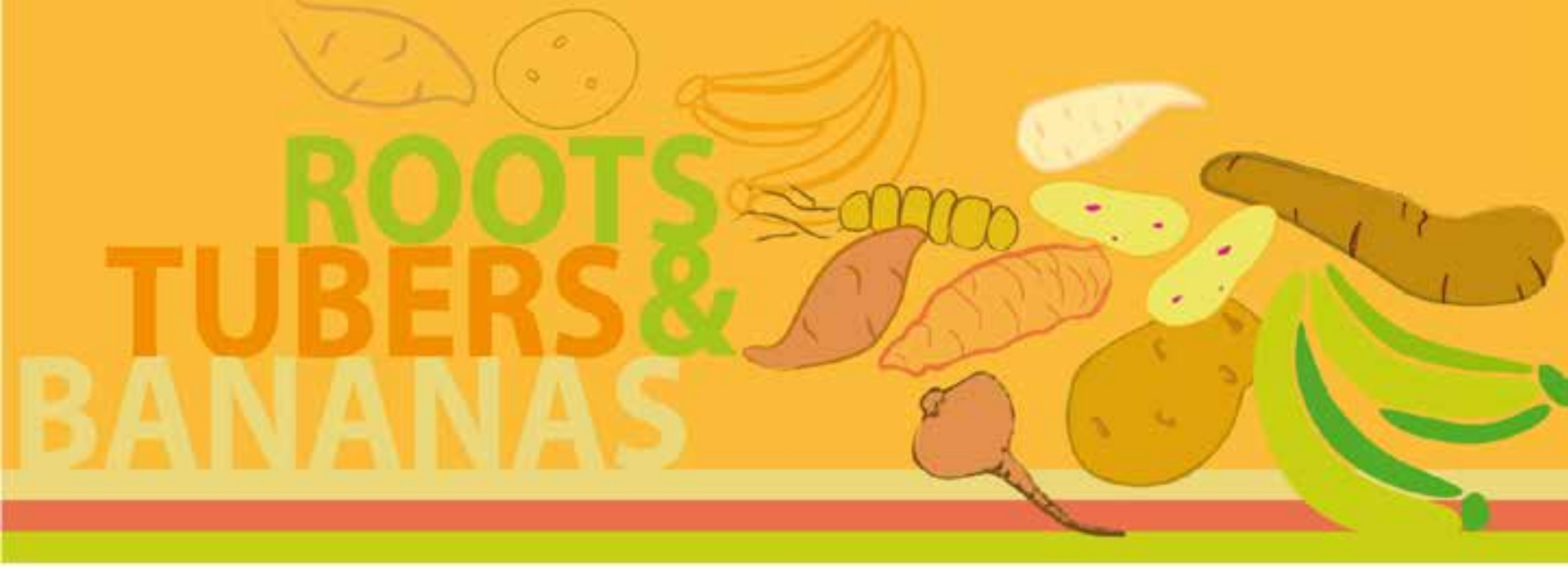


Online Atlas of Roots, Tubers, and Bananas

RTBMaps

Research Program on Roots, Tubers and Bananas

CGIAR

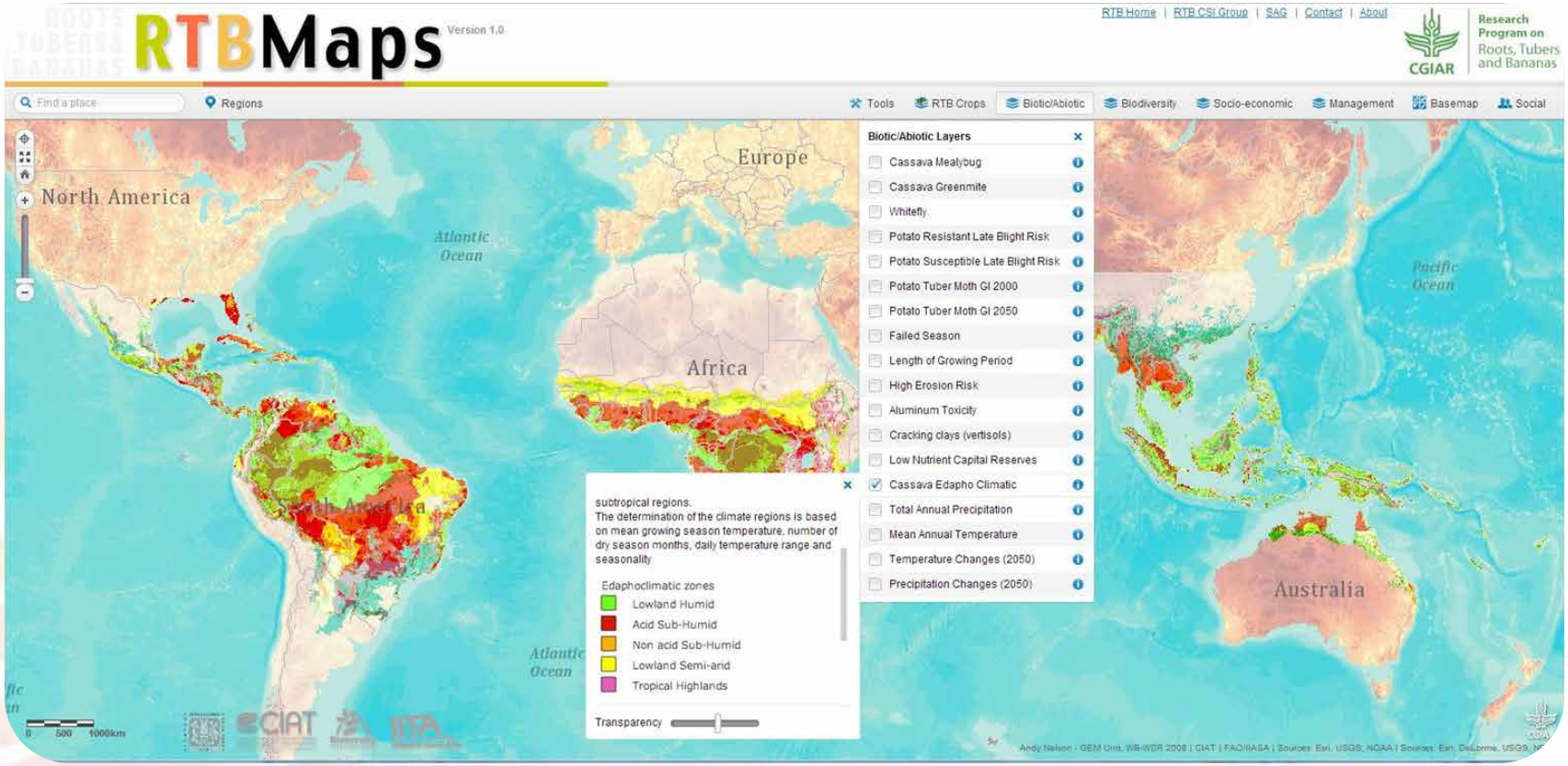
Elizabeth Barona A. – Ernesto Giron E.

ESRI – International Conference

July 16th-2014

Online Atlas of Roots, Tubers and Banana Crops

http://rtb.cgiar.org/RTBMaps/



Online Atlas of Roots, Tubers and Banana Crops

RESEARCH PROGRAM ON Roots, Tubers and Bananas

RTBMaps

Research Program on Roots, Tubers and Bananas

GIS TEAM

CIAT:	Glenn Hyman, Bernardo Creamer, Jesus David Hoyos
CIP:	Simon Reinhard, Henry Juarez
BIOVERSITY:	David Brown
IITA:	Tunrayo Alabi
External Consultant:	
Application: Development:	Ernesto Giron
Data Development:	Elizabeth Barona

Roots, Tubers and Banana Crops

It is estimated that around 200 million people depend on root, tuber and banana crops for food and income in developing countries, particularly in the poorest regions of Africa, Asia and the Americas.

(RTB Annual Report-2013)

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Research Program on Roots, Tubers and Bananas

Pest and disease constraints

	Cassava	Potato	Sweet-Potato	Banana	Yam
PEST	Whitefly	Tuber moth	Weevils	Nematodes	Nematodes
	Mealybug		Nematodes	Banana weevil	
	Green mite				
DISEASES	Cassava mosaic	Late Blight	SPVD complex	Fusarium wilt	Anthracnose
	Cassava Brown streak	Leaf roll virus	Alternaria storage rot	Sigatoka leaf spots	Yam mosaic virus
	Bacterial blight	bacterial wilt	leaft spot	streak virus	Tuber rots
	Frog Skin		stem blight	Xanthomonas wilt	
				Ralstonia strains	
				Bunchy top	

- Decrease agricultural yields
- Raise production costs
- Risk livelihood and food security

Pest and disease potential distribution mapping

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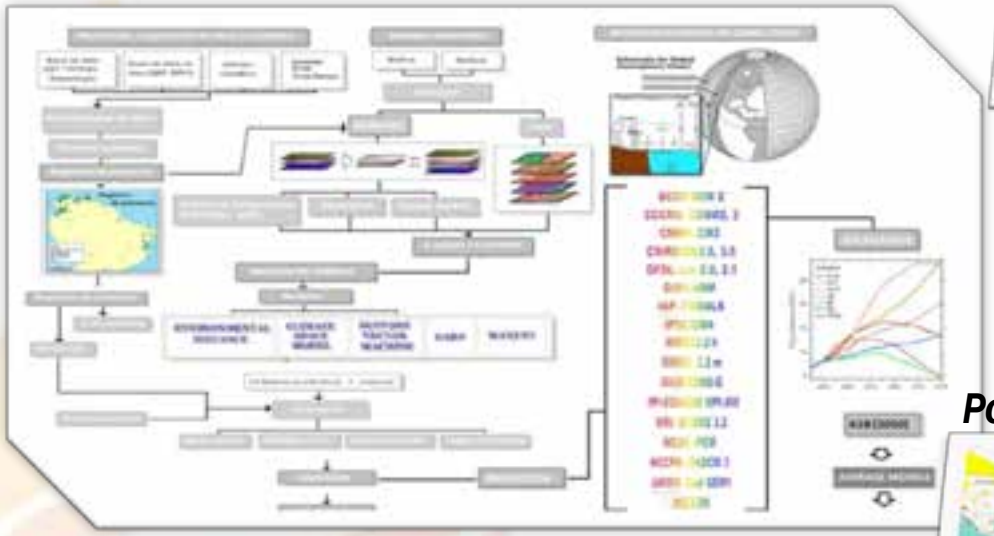
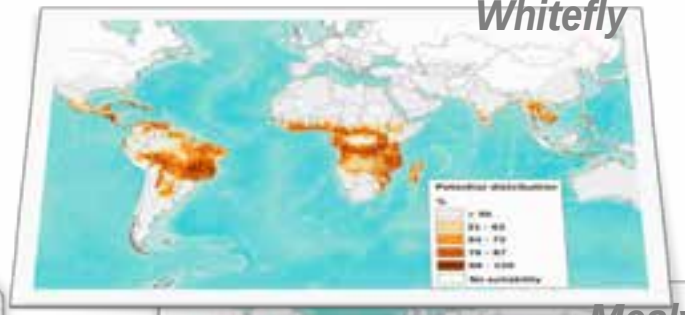
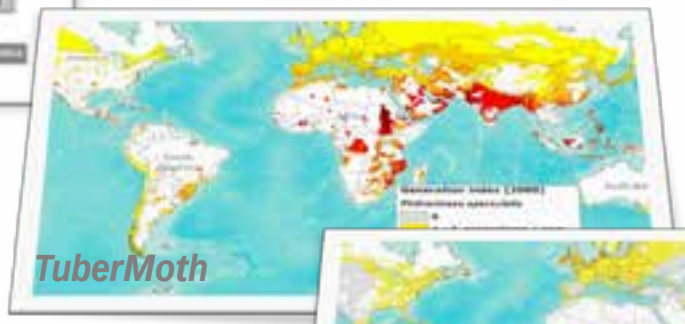
Methods + Climate change scenarios

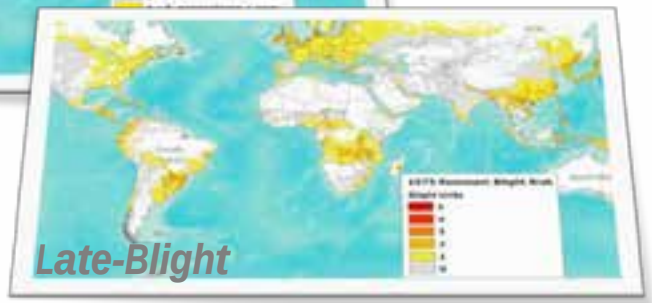


Cassava



Potato





Source: CIAT, CIP-IRRI

CIAT, CIP, IITA and BIOVERSITY

Joint forces to address RTB's crop constraints, and increase the impact for the benefit of smallholder farmers, consumers, and everyone else involved in RTB value chains.

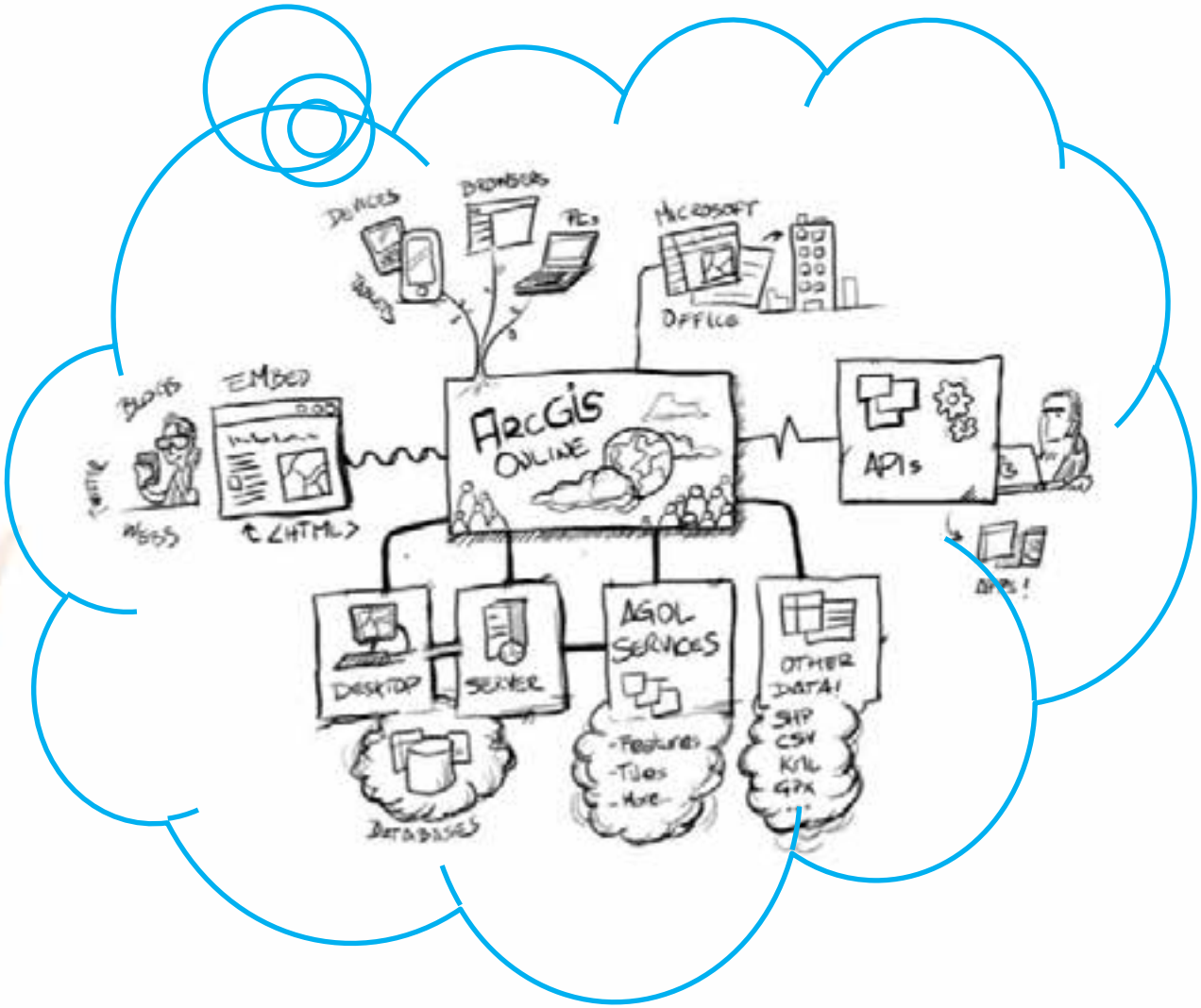
GIS team goal:

Research Program on Roots, Tubers and Bananas

Online digital atlas for understanding the geographic dimension or roots tubers and banana crop improvement

GIS mapping on the cloud

- CGIAR-CSI Platform
- ArcGIS Online
- ArcGIS-JavaScript
- APIs
- Centralized Geospatial data
- Direct path to ArcGIS Online
- Money-cost saving
- Location-based Services



Online Atlas of Roots, Tubers and Banana Crops

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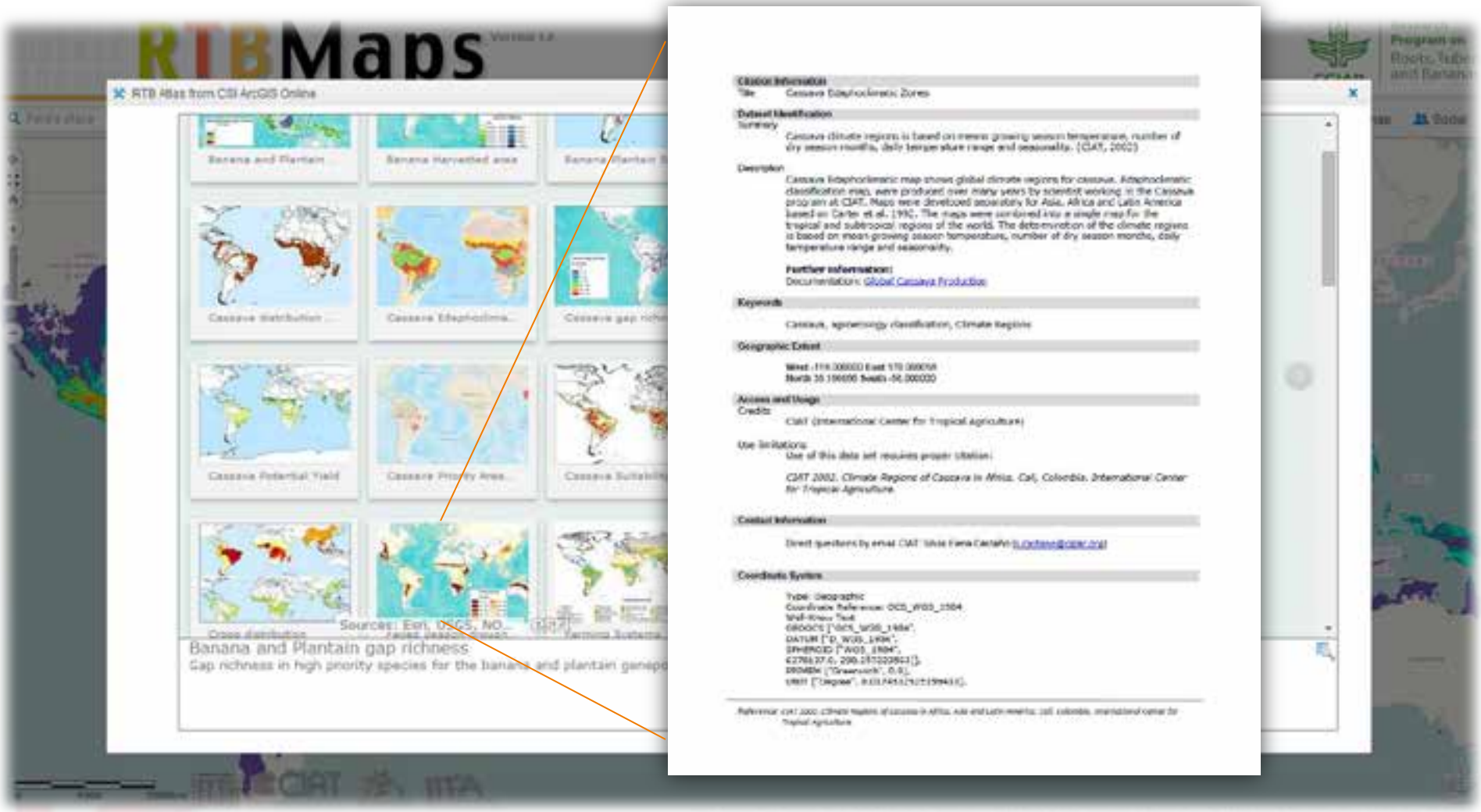

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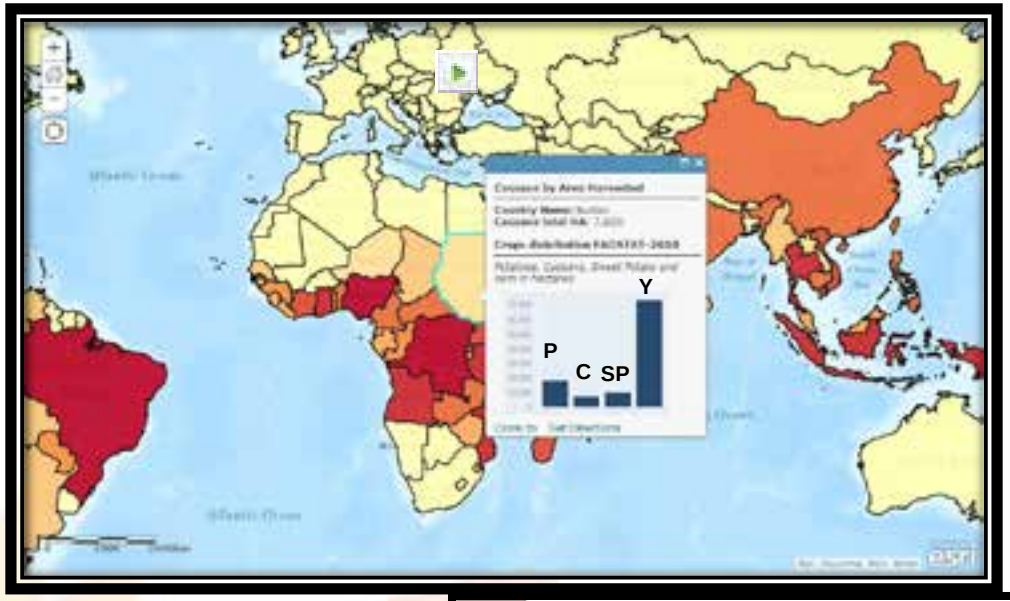
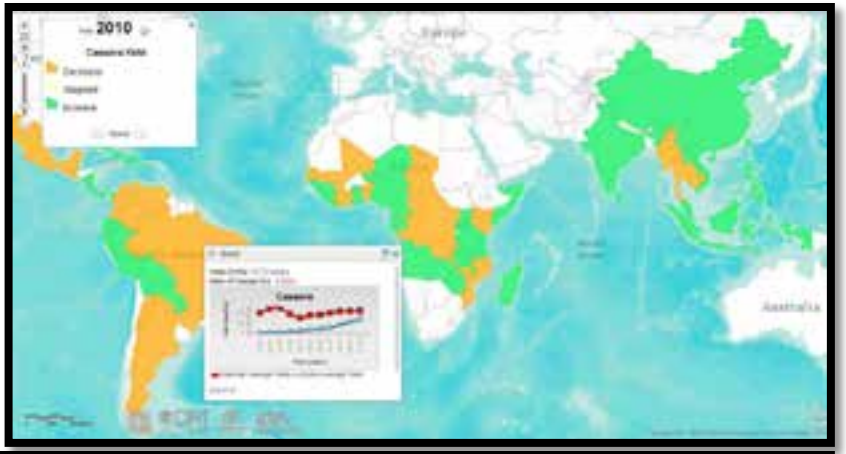
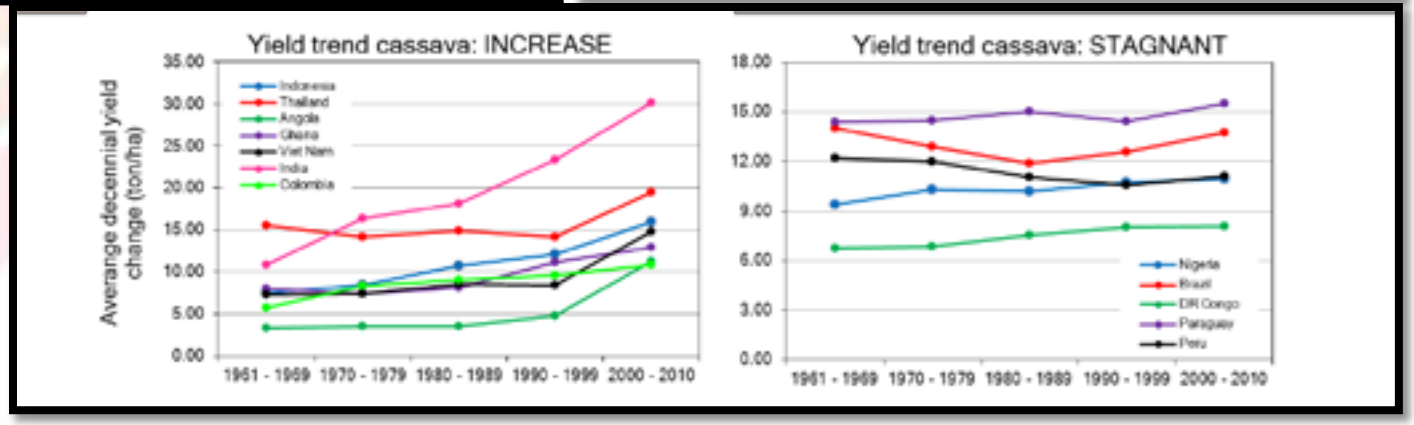


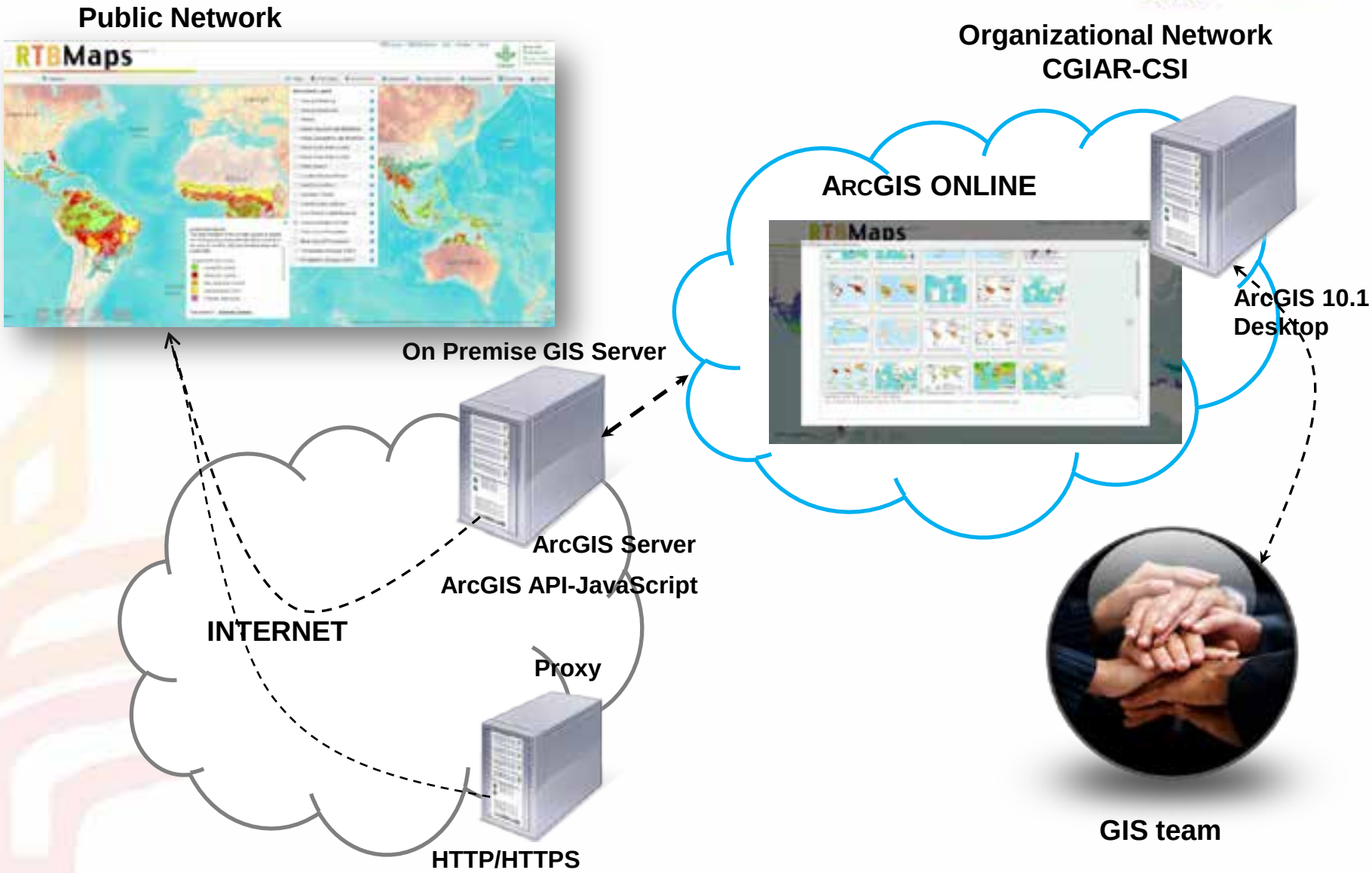
Cassava yield trends by country





Source: FAOSTAT

Web Mapping Application



Web Mapping Application

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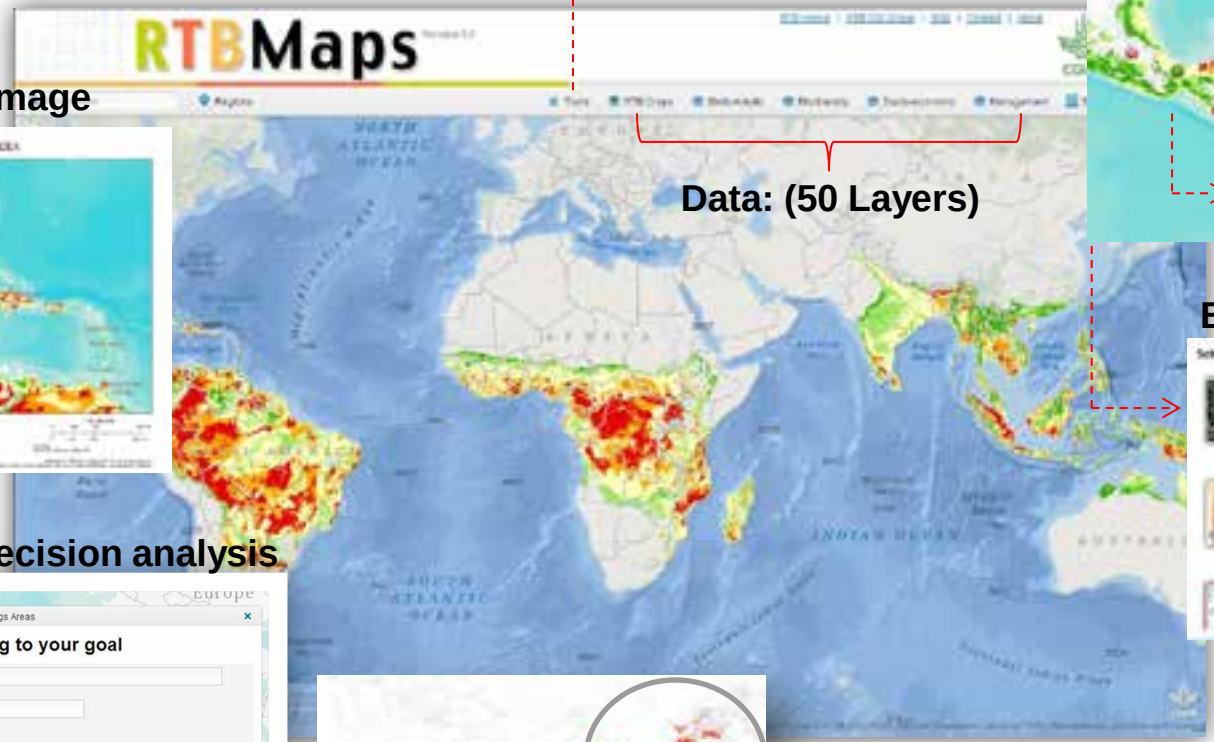
Social Media: YouTube

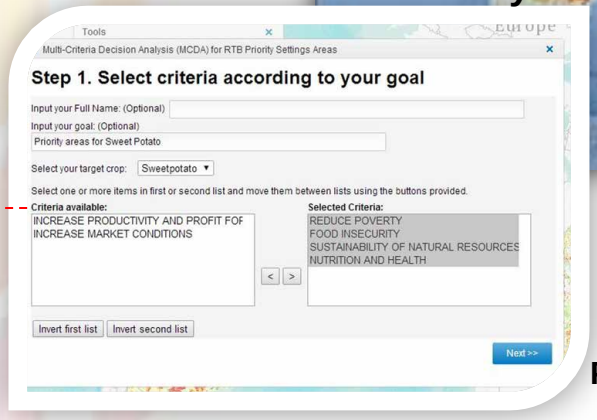
Tools:
1-Print / export image



Data: (50 Layers)

BaseMaps

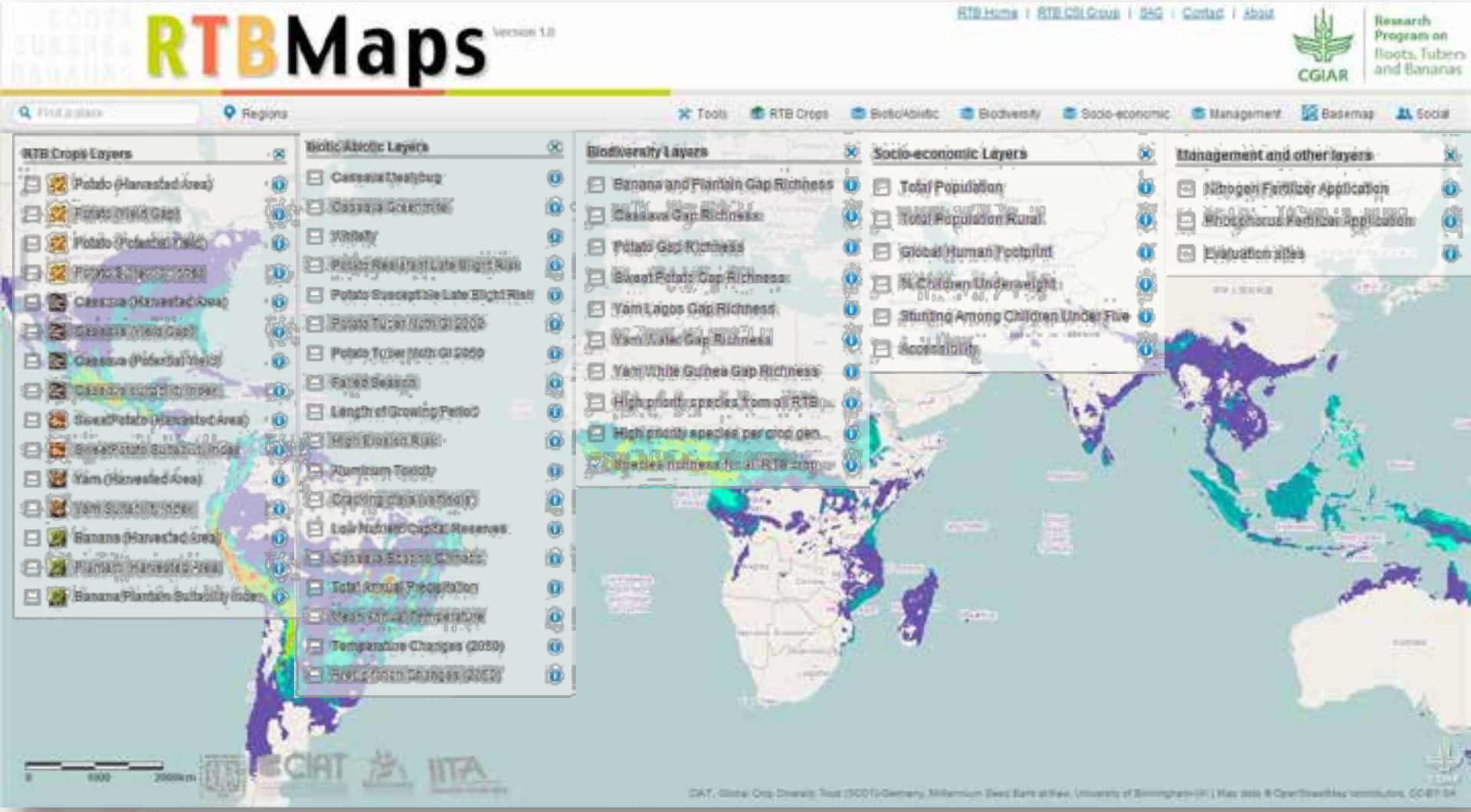
2- Multi-criteria Decision analysis



Priority areas for intervention

Online Atlas of Roots, Tubers and Banana Crops

http://rtb.cgiar.org/RTBMaps/



Online Atlas of Roots, Tubers and Banana Crops

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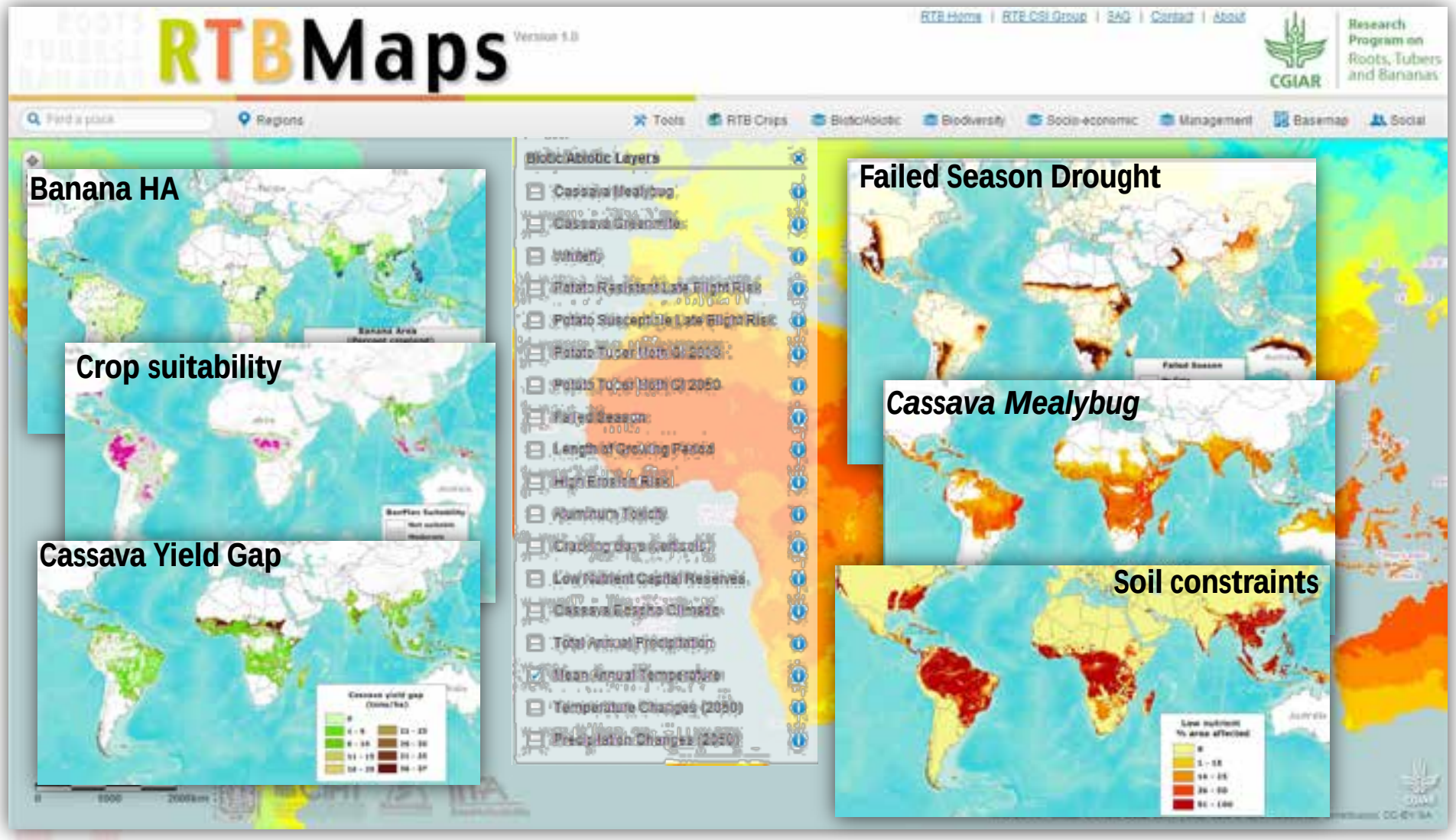
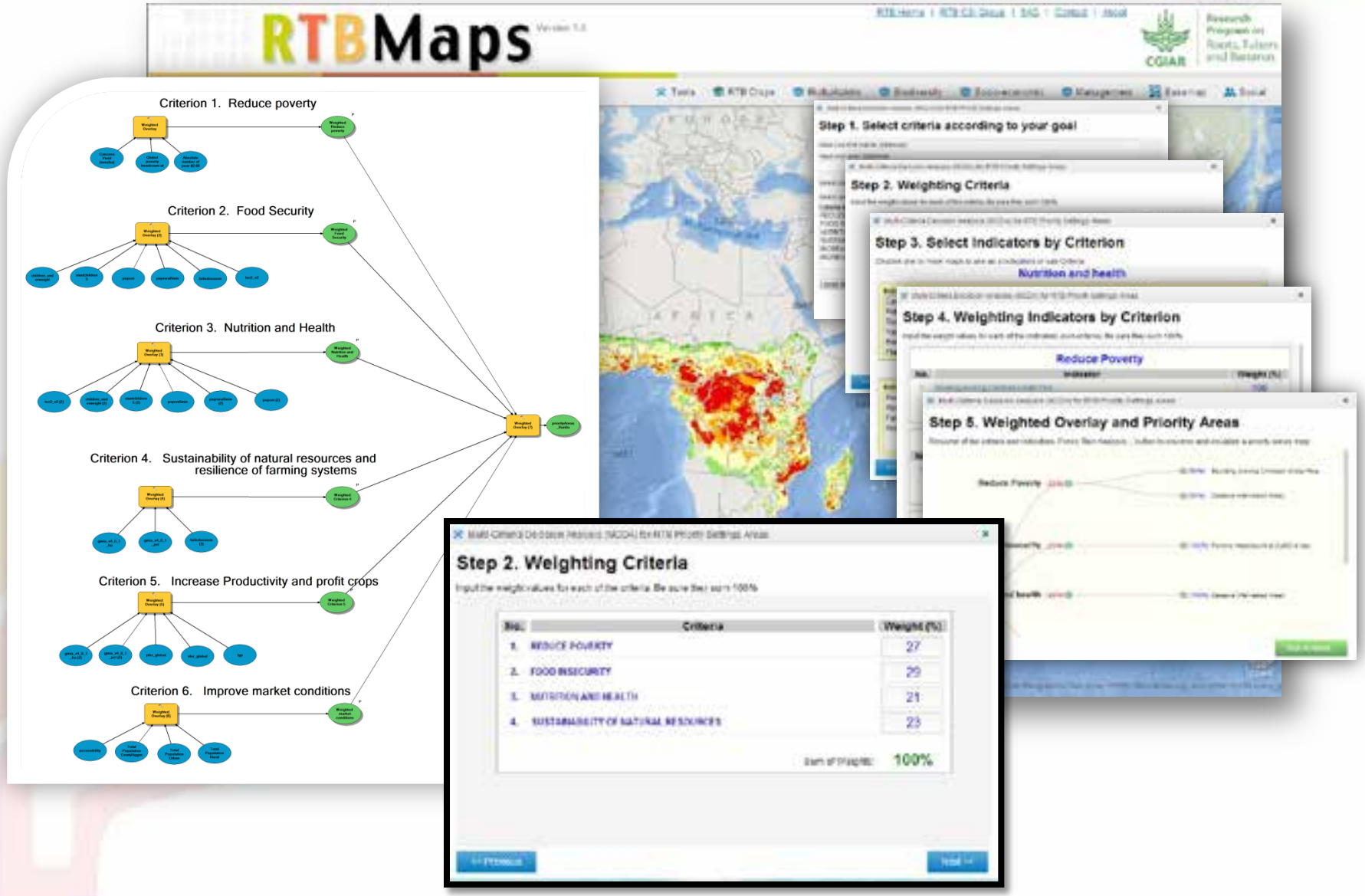


Online Atlas of Roots, Tubers and Banana Crops

http://rtb.cgiar.org/RTBMaps/

Research Program on Roots, Tubers and Bananas

Multi-criteria Decision Analysis (MCDA) - Tool



Multi-criteria Decision Analysis (MCDA) - Tool

Research Program on Roots, Tubers and Bananas

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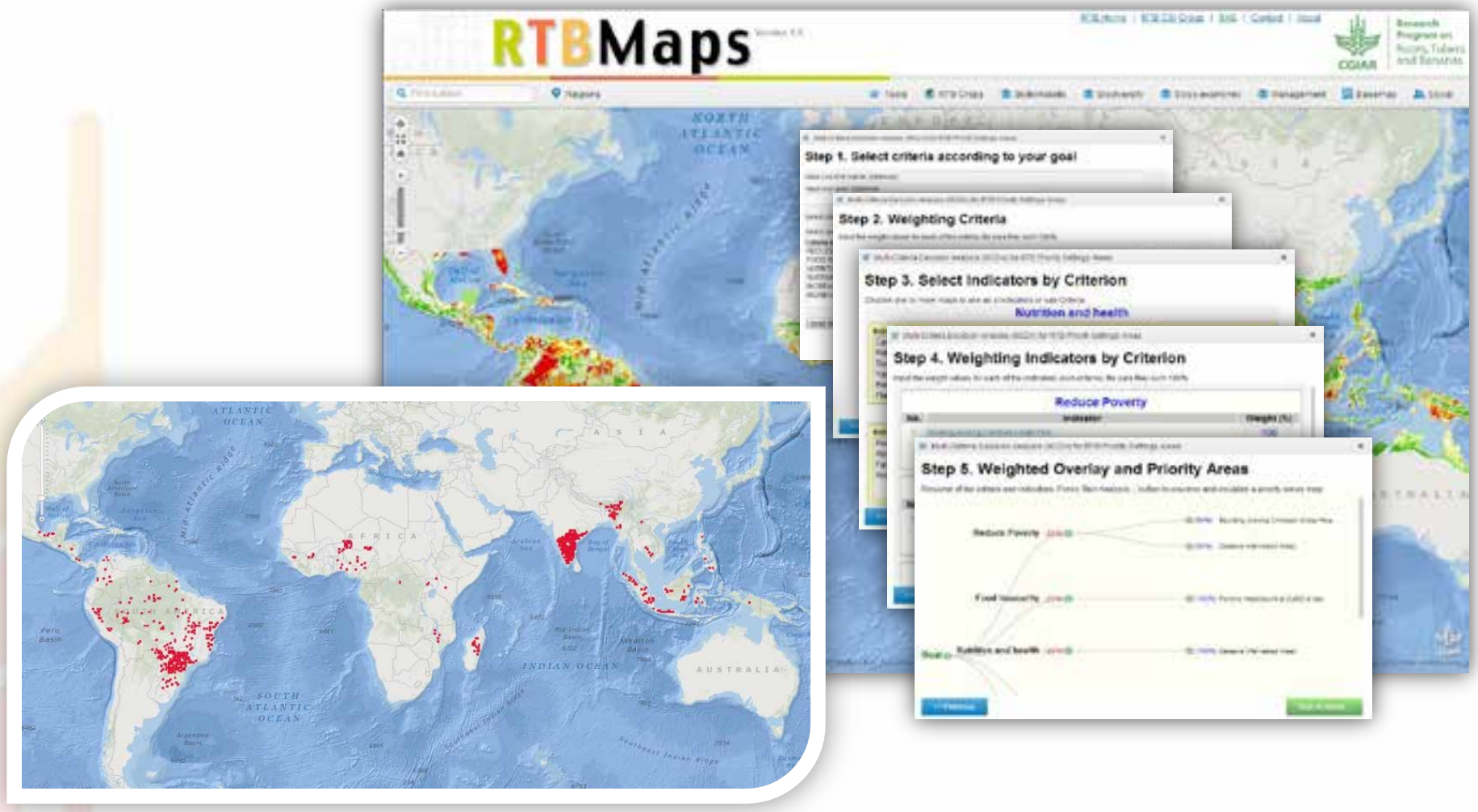
Weighted overlay targeting:



Conclusions:

- RTBMaps provides a platform for the RTB crop research and development community to understand geographic dimension of these crops

- Digital mapping and targeting will help prioritize locations, places and regions where the RTB program can have the biggest impact

- No software, data or GIS expertise is needed, just and internet connection and a browser

- More data and new functionality need to be included on the Atlas to continue support the RTB research and development community in addressing food security issues related to roots, tubers and bananas

Research Program on Roots, Tubers and Bananas

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THANK YOU !

http://rtb.cgiar.org/RTBMaps/