

Partnership for Impact in Haiti

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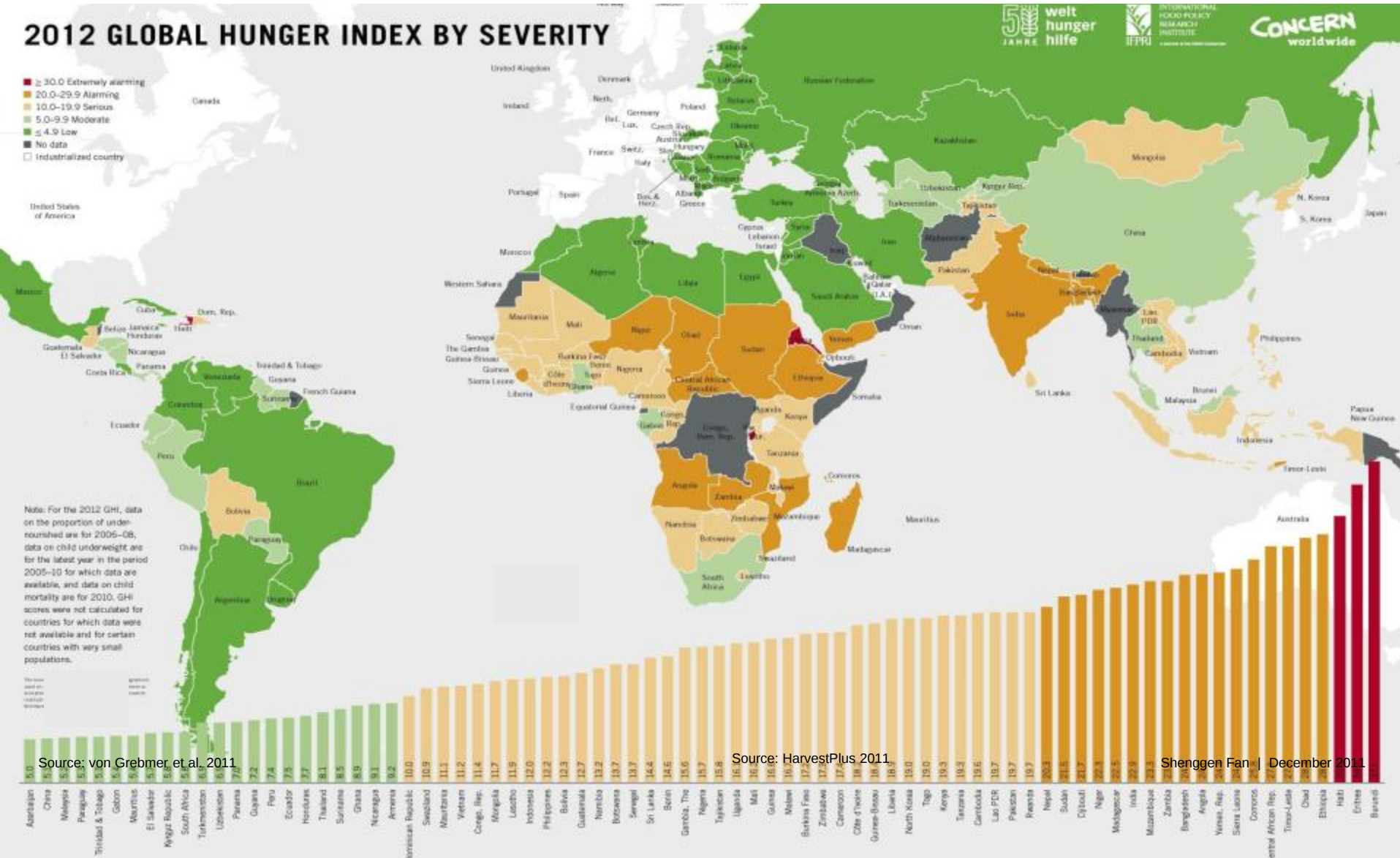
A strategy to improve livelihoods and restore degraded land.



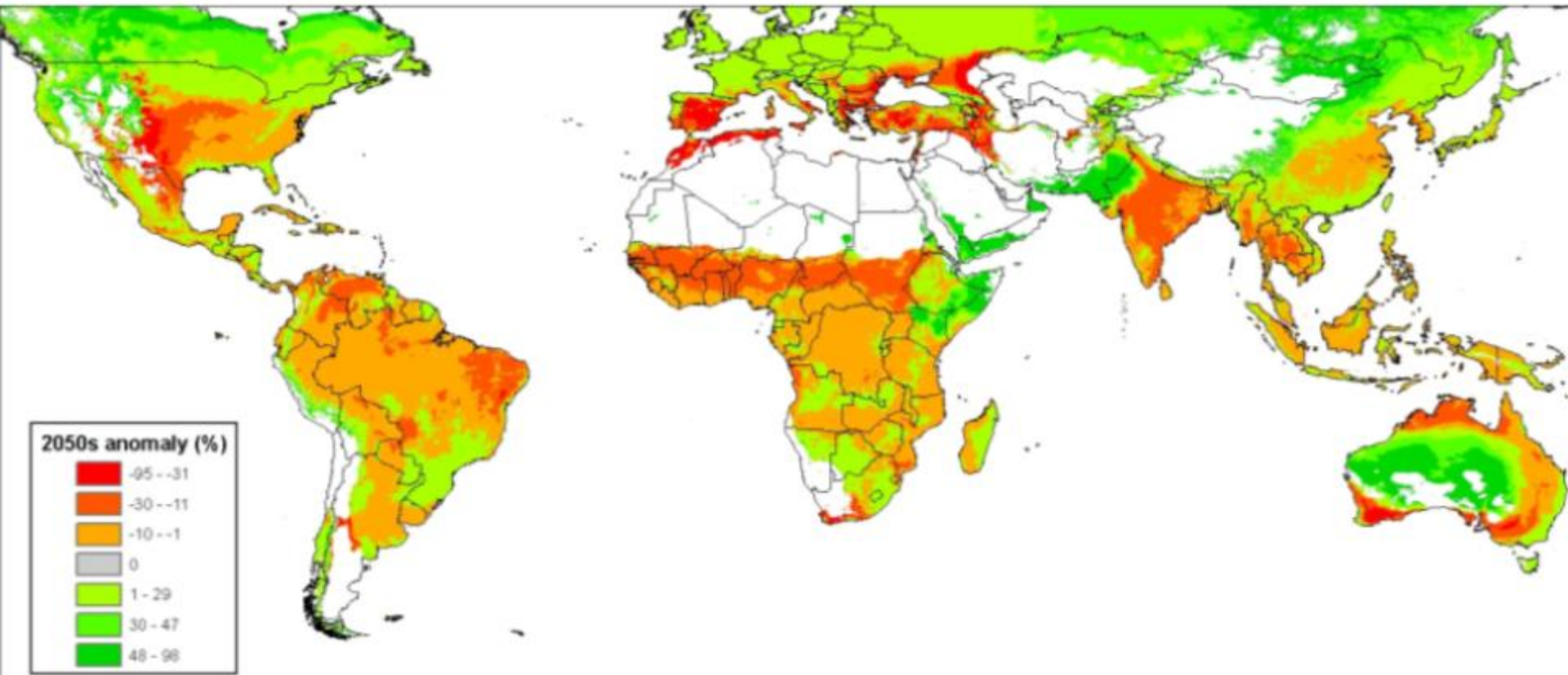
The greatest food security challenge ever in human history:

How to feed a growing population with scarce land and water, a fast-changing climate, and inadequate investment in agricultural research!

Food Insecurity and Undernutrition Remain Persistent



Our ability to grow food is at risk



Average projected % change in suitability for 50 crops, to 2050

CGIAR Consortium



CGIAR mission: Sustainable Intensification by and for the Poor



- 75% from land already in use
- By small-scale farmers, majority women
- Where the food is consumed
- In a climate smart way

CIAT, N. Palmer

CIAT's Contribution to the CGIAR Research Programs



Climate Change, Agriculture & Food Security

- More than 400 partners, including climate change research community
- Overcome threats of CC to food security, find more effective ways of adjustment for vulnerable rural communities. Identify and test pro-poor mitigation and adaptation policies and technologies.
- By 2020, reduce poverty by 10 percent, lower number of malnourished rural people by 25 percent in targeted regions. Reduce greenhouse gas emissions by equivalent to 1,000 million tons of CO₂



Global Rice Science Partnership (GRISP)

- More than 300 partners
- To break yield ceilings using genomics - through breeding better drought and flood tolerant varieties and finding innovative ways for new varieties to reach farmers and for increasing equity and efficiency of rice sector
- Expected outcomes: *by 2020 income gains of US\$11 billion annually, should lift about 72 million people out of poverty and 40 million people reach food security.*



CIAT: A partner in global research for a food secure future



- One of the 4 Centers that started the CGIAR, (founded in 1967) and currently operates from Kenya, Vietnam, and Colombia (HQ)
- 400 professional staff, 200 scientists working across Africa, Asia, and Latin America. Annual budget close to \$100USM

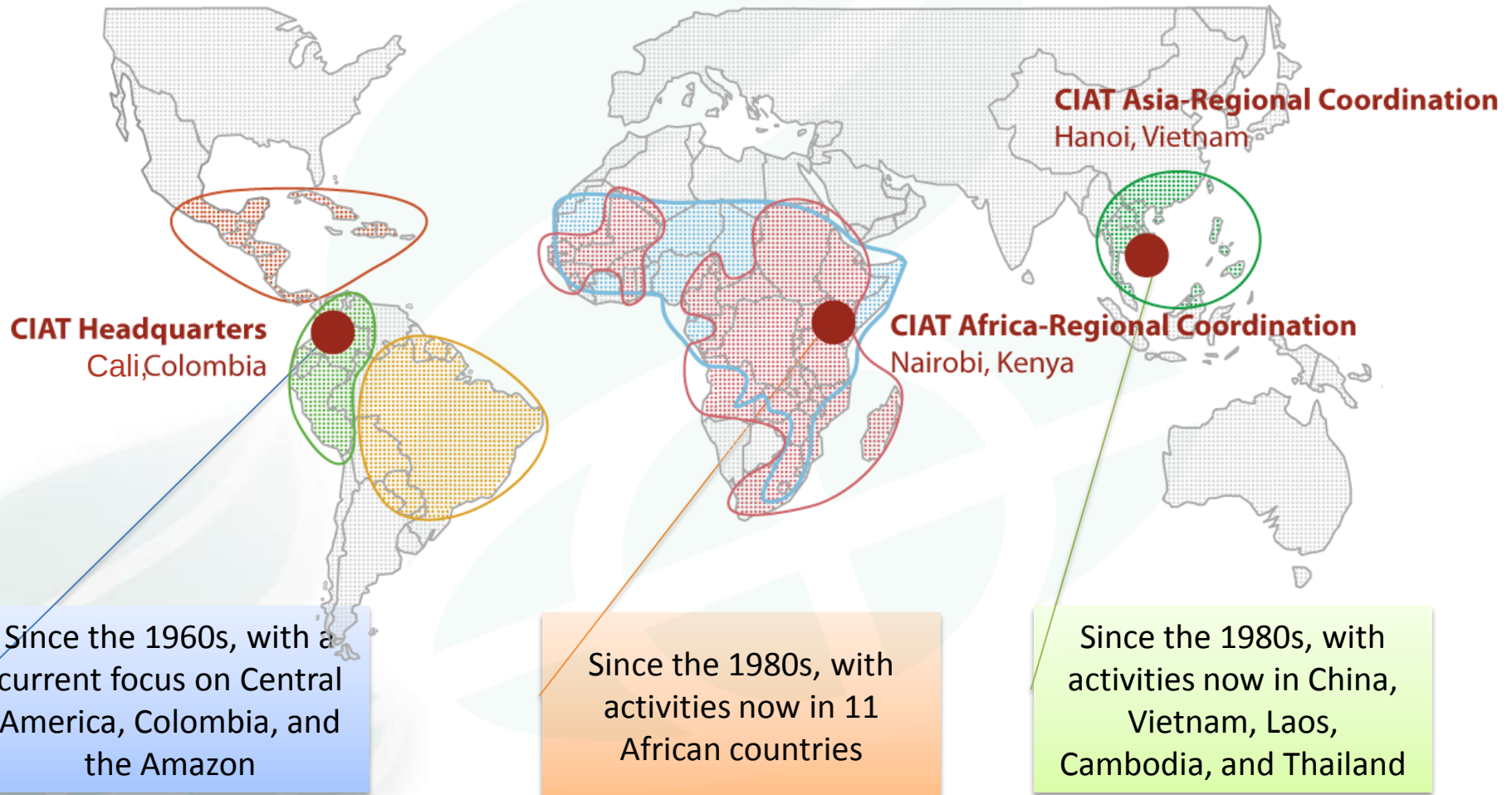


CIAT's Mission

To reduce ***hunger*** and ***poverty***, and improve human ***health*** in the tropics through ***research*** aimed at increasing the eco-efficiency of agriculture

Science for Impact

Improving agriculture and changing lives across the tropics



Delivering on the Promise of Tropical Agriculture

Creating Quick Wins

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

Crafting the Crops of the Future

Efforts intensify to decode cassava "alphabet soup"

"Rambo root" could beat climate change in sub-Saharan Africa

Hybrid rice for Latin America

Regional action to strengthen biosafety

Better crops, better nutrition

Value Chain Reactions

Four-legged futures – Turning Vietnam's cash cows into productive assets

Agricultural transformation in Ethiopia and beyond

Results in the Ground

Quesungual – Remember the name and not just for Scrabble

Africa in the forefront of soils research

Climate Change Exposés

Tortillas on the roaster

Eye in the sky – Terra-i keeps track of deforestation

Colombia and CIAT – Partnering with a Purpose

Ecosystem signposts in Orinoquia

Biopacific Park – Toward a culture of competitive strength

Partnership platforms

Connecting with Colombia's scientific diaspora



CIAT
International Center for Tropical Agriculture
Since 1962

CIAT Annual Report
2012-2013

The impact of CIAT's collaborative research



Commons Beans

The adoption of improved beans in Africa will generate net benefits worth nearly **\$200 million** against investments of \$16 million from 1986 to 2015, with an internal rate of return of 81%



Cassava

In Thailand and Vietnam 90% adoption of improved cassava has generated gains worth **\$12 billion** over the last 2 decades



Tropical Forage

Estimates for Central America suggest that *Brachiaria* adoption generated additional value of about **\$1 billion in 1 year, with 80%** of the gains accruing to the beef and **20%** to the milk industries



Rice

In Latin America and the Caribbean improved rice varieties produced benefits worth **\$860 million** over 3 decades



Capacity Strengthening

More than **12,000** professionals from Latin America, Africa, and Asia have benefited from training offered by the Center

Focus of CIAT's R4D



Productivity

- Bean
- Tropical Forages
- Cassava
- Rice
- Genetic Resources



Natural Resources

- Soil Health
- Soil & Ecosystem Assessment
- Soil & Land Information
- Agronomy & Agriculture



Policy

- Climate Change
- Ecosystem Services
- Linking Farmers to Markets



Colombia: Climate Change Agreement

- Increased knowledge and capacity for agroclimatic risk management in Colombia
- Capacity to adapt to climate change, through the evaluation and validation of crop models
- Climate-smart options for crop adaptation tested and validated
- Productivity gaps narrowed



Coffee, Colombia



A 2 °C increase equals a difference of 440 meters altitude and major shifts of crops to new areas

Colombia and Nicaragua: Forages Research

- Improved forages for ruminant and monogastric animal feed
- Improved crop-livestock productivity
- Degraded land restoration
- Enhanced soil fertility
- Carbon sequestration
- Reduced pressure on deforestation



Peru:

Water Resource Management

- Technical cooperation on applications of Soil and Water Assessment Tool (SWAT) to benefit the Ministry of Environment and National Water Authority
- Design of mechanisms for sharing benefits and costs of improving water resource management
- New law implemented to incentivize public and private investment for water conservation



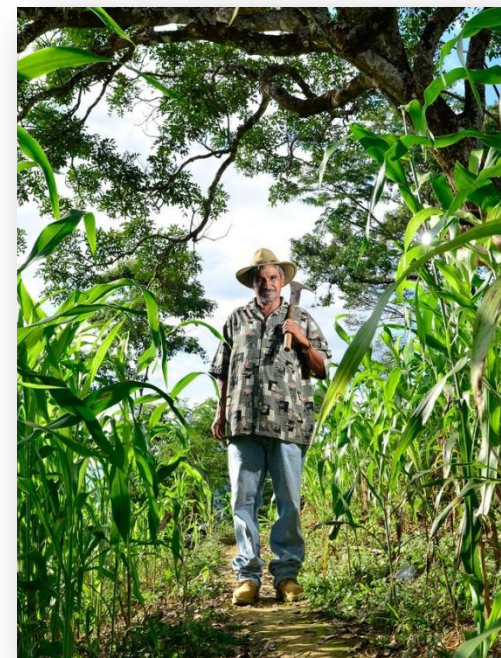
Peru, Nicaragua, and Honduras: Learning Alliances

- Collaboration between NGOs, research organizations, and governments
- Knowledge exchange and design of more effective development strategies that respond to the demands of the rural sector
- Establishment of long-term, trust-based relationships
- Diversified livelihoods through effective agro-enterprise interventions



El Salvador, Honduras & Nicaragua: Agroforestry and Silvopastoral Systems

- Sustainable and resilient alternative to traditional unsustainable systems (e.g., slash and burn)
- Safeguarding long-term soil fertility and food production
- Smallholders adapted to extreme weather
- Restoration of degraded lands for biodiversity regeneration and other ecosystem services



South Sudan: Pan-Africa Bean Research Alliance

- Access to improved bean varieties and expert technical advice
- Domestic bean research and production boosted
- Reduced reliance on imports and lower prices



Haiti:

Climate Change Impacts

- Research on the impact of climate change on coffee and mango growing areas in Haiti
- Changes in temperature and rainfall patterns will cause a decrease of areas suitable for coffee
- Mangos will remain highly suitable in many regions of Haiti
 - Altitudes of 500 to 700 meters above sea level will benefit



CIAT & Haiti:

Collaboration for Food Security

A series of measures that CIAT can take, in collaboration local partners, to help remedy Haiti's severe food production constraints.

- **Seed Solutions for Food Security:** Help get local seed systems moving through large-scale introduction, evaluation, and dissemination of improved beans, cassava, rice (for both irrigated and upland areas), and tropical forages.
- **Resilient System Solutions for Sustainable Growth:** Enhance resilience of crop production through sustainable agroforestry/agrosilvopastoral systems to help restore degraded soils to health.
- **Linking Smallholders to Markets for Poverty Reduction:** Help realize the enormous potential of smallholder agriculture as an engine of inclusive economic growth requires well-targeted, collaborative efforts to strengthen the links between rural communities and markets.

Cassava an entry point for Sustainable Agricultural Production

A stepwise strategy to improve livelihoods and restore degraded lands. Meeting the immediate need for improved food supplies, higher rural incomes, and renewable fuel sources, while showing remarkable resilience under various stresses .

- **Transitioning to higher value products:** Using farmer participatory methods, can reverse land degradation and intensify production sustainably :
 1. Site selection
 2. Introduce improved varieties
 3. Control soil erosion
 4. Develop new markets
 5. Land restoration
 6. Move to high value crops

CIAT: Science to cultivate change



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