

8th INTERNATIONAL FORUM ON FOOD AND NUTRITION

Milan, December 4-5 2017



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ALEX THOMSON

Anchor and Chief Correspondent Channel 4 News, UK



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USER: BCFNforum
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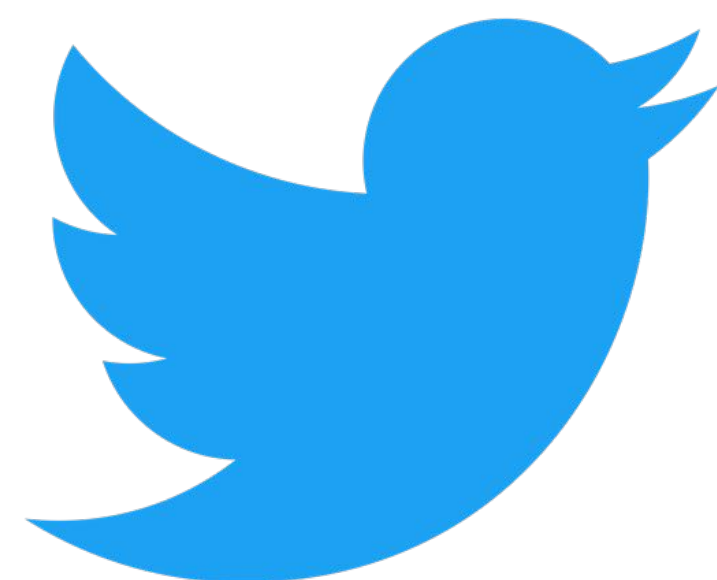
BCFN APP

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@BarillaCFN

live tweet: #BCFNforum



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MARTA ANTONELLI

Research Programme Manager BCFN Foundation



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JEFFREY SACHS

*Director, Earth Institute, Columbia University
and Director, Sustainable Development Solution Networks*



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MATERNAL AND CHILD NUTRITION AMONG REFUGEES AND HOST COMMUNITIES IN GREATER BEIRUT, LEBANON: A FOCUS ON ANEMIA



Joana Abou Rizk

Lebanon

University of Hohenheim - Germany



Theresa Jeremias

Germany

University of Hohenheim - Germany



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**Maternal and child
nutrition
among refugees and
host communities
in Beirut:
A focus on anemia**



A large crowd of people, mostly men and women, are walking down a street. The buildings on either side are heavily damaged, with rubble and debris visible. The crowd is dense, filling the street. In the foreground, a man with glasses and a woman wearing a black headscarf are visible. The overall scene suggests a displacement or refugee situation.

65.6

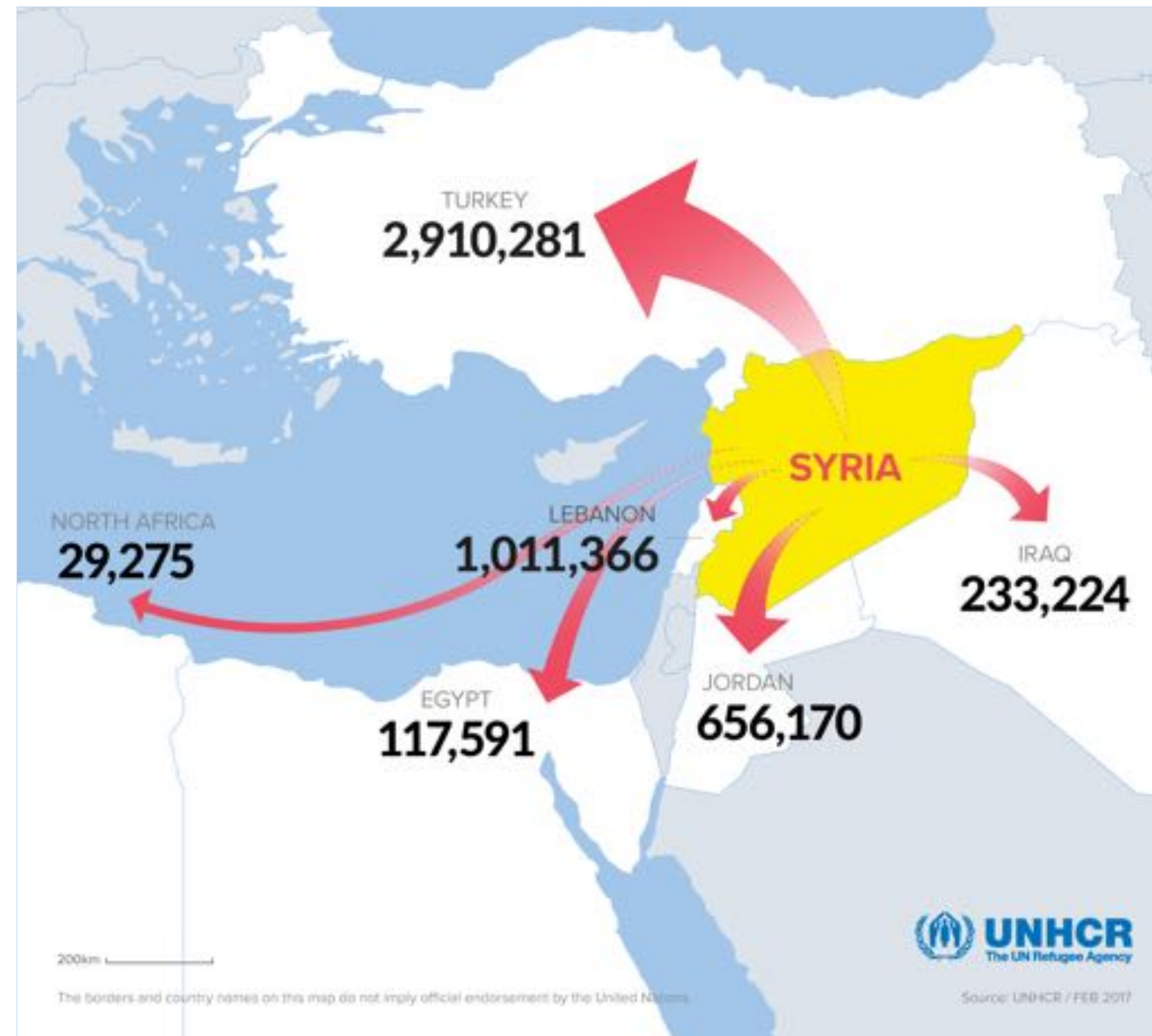
MILLION
FORCIBLY
DISPLACED
WORLDWIDE

UNHCR, 2017

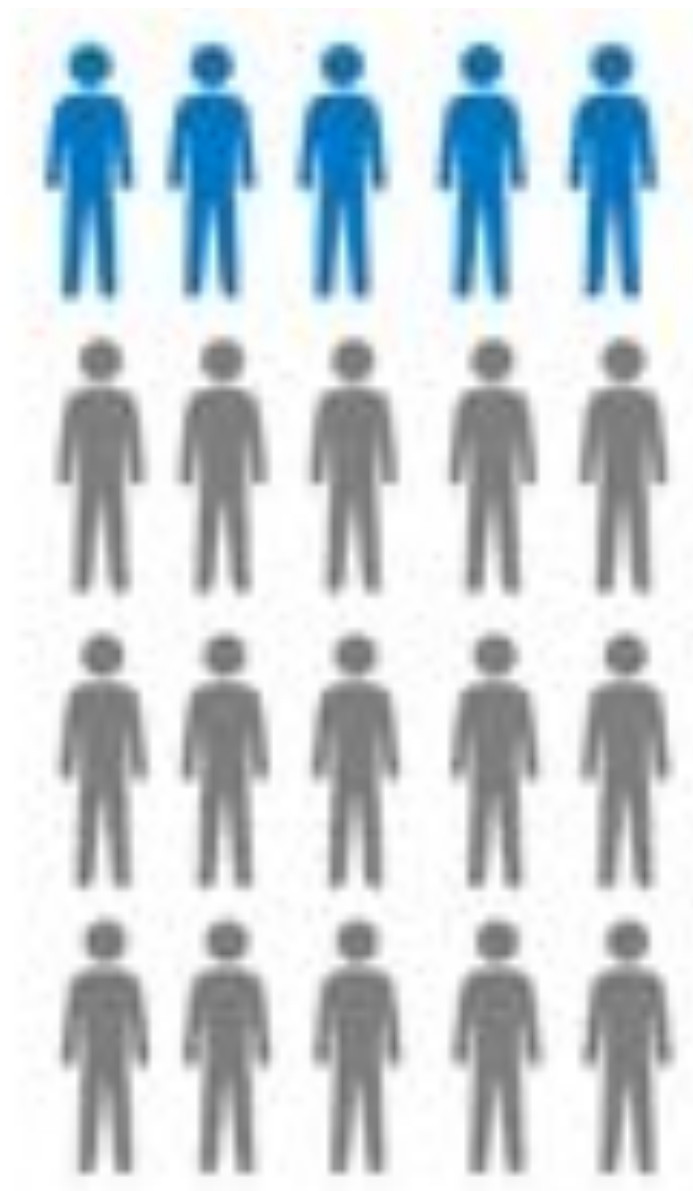
©UNRWA, via AP

5.3

MILLION SYRIAN REFUGEES WORLDWIDE

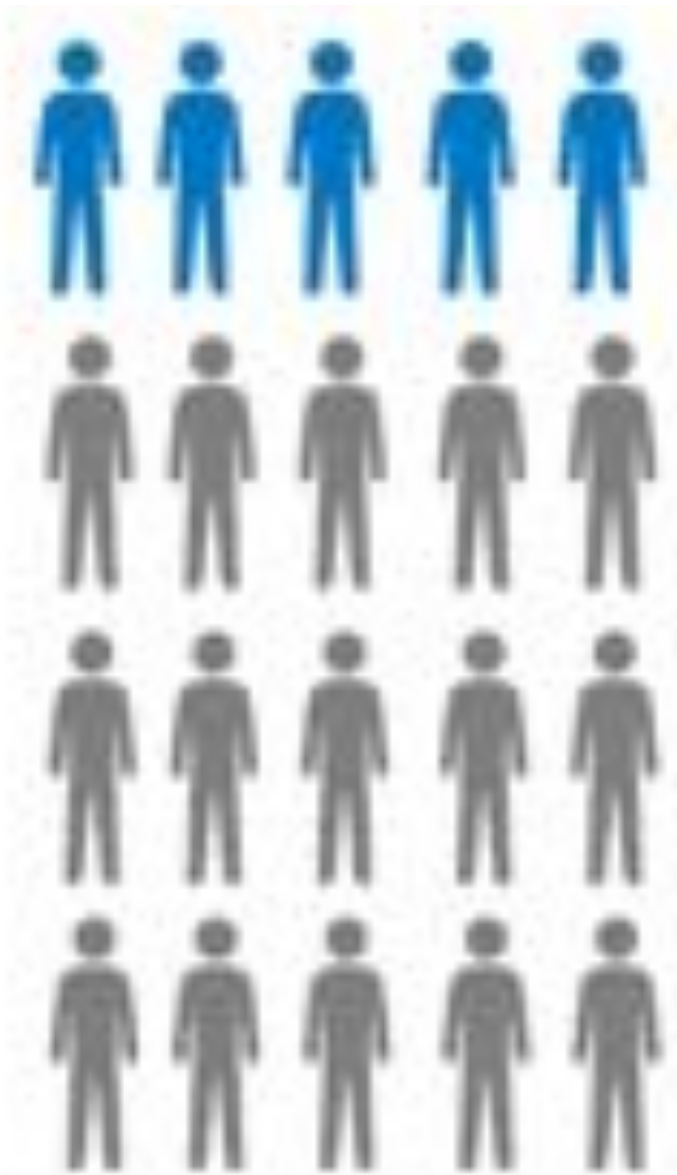


In Lebanon
1 in 4
is a Syrian
refugee

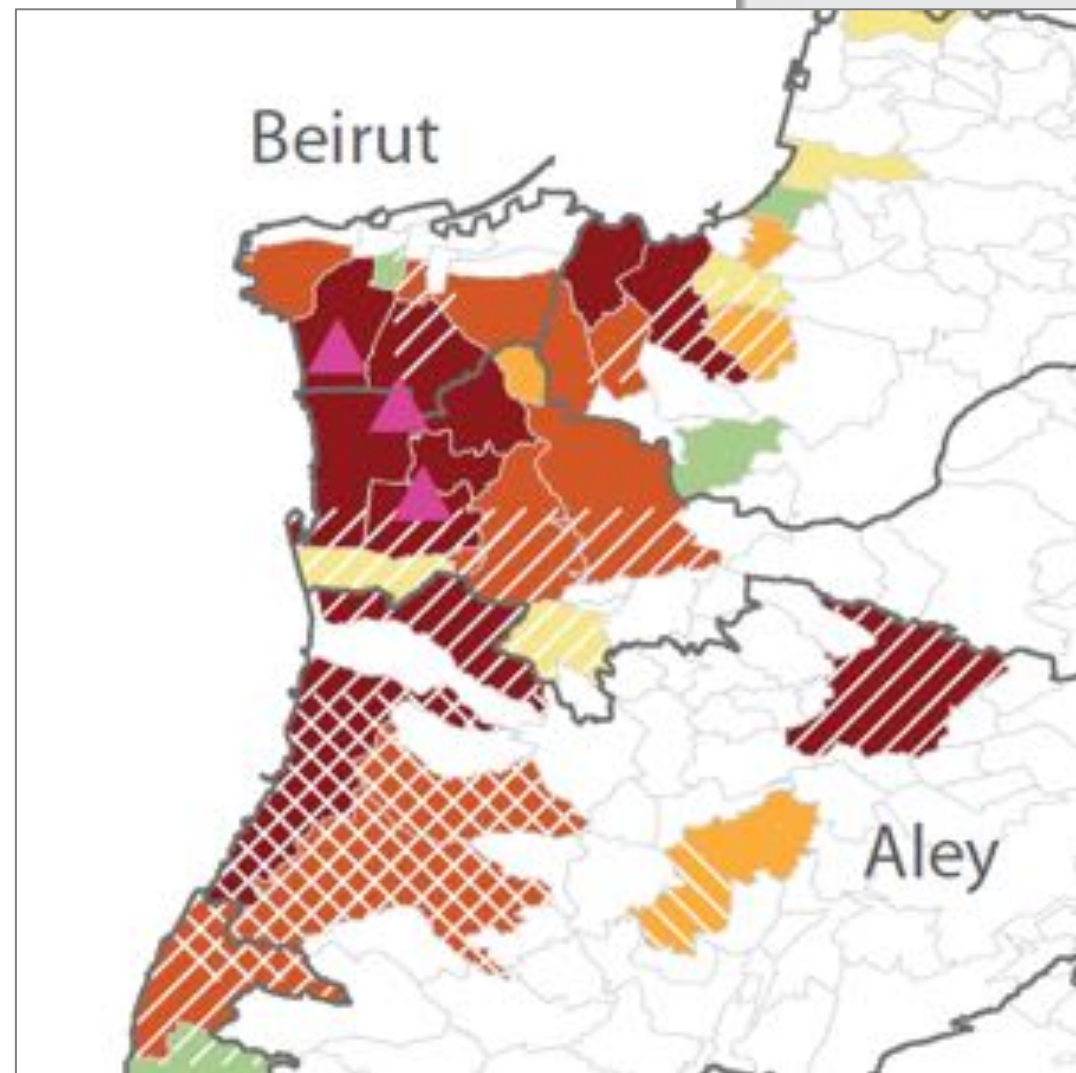


UNHCR, 2015

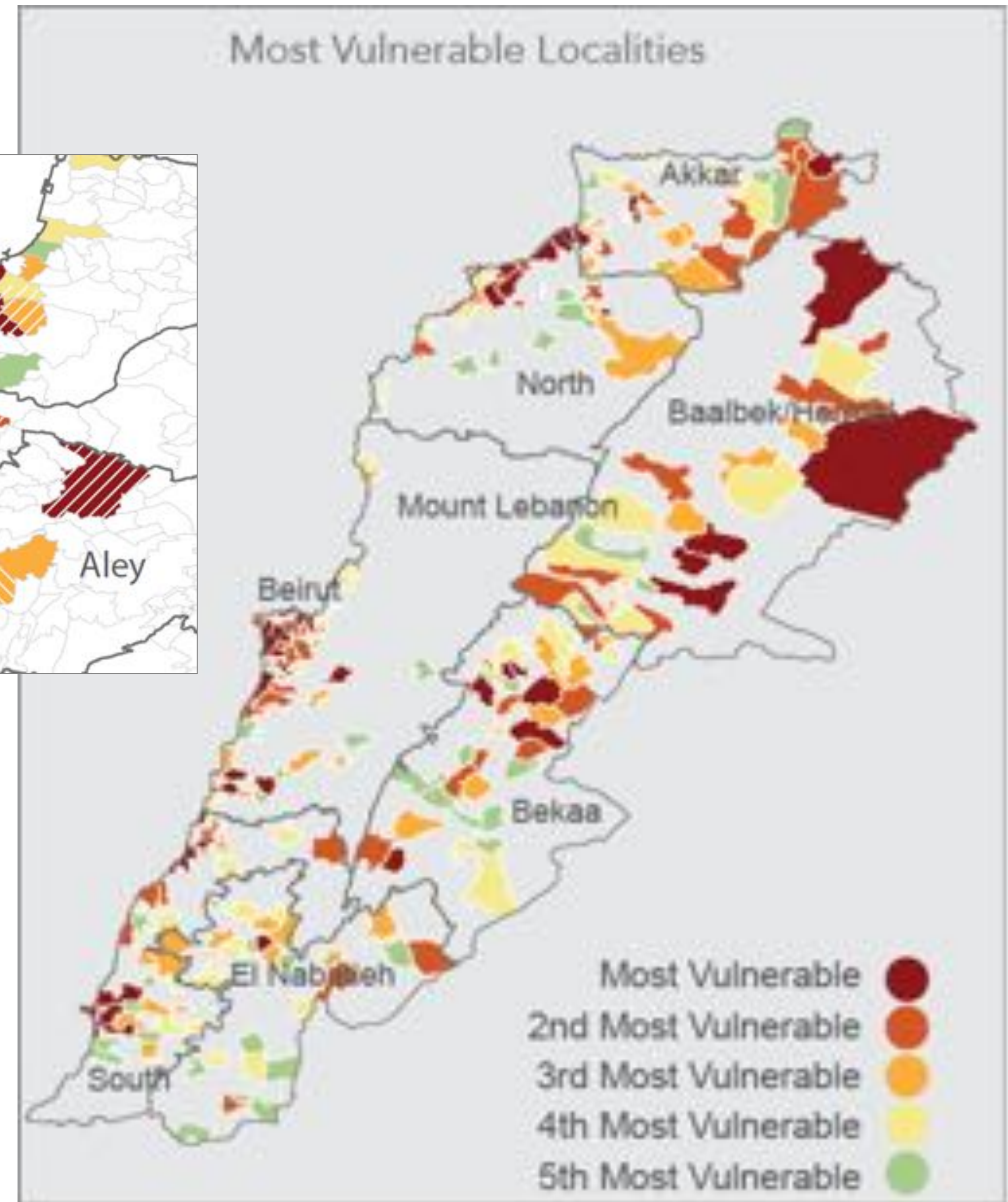
In Lebanon
1 in 4
is a Syrian
refugee



UNHCR, 2015



OCHA, 2016b



OCHA, 2016a

A close-up photograph of a baby lying in a hammock. The baby is wearing a light-colored t-shirt and has their hands near their mouth. The hammock is made of a brown and white striped fabric. A yellow text box is overlaid on the right side of the image.

**Surviving on
sugar and water!**

Worldwide



Global Nutrition Report 2017

1 in 2

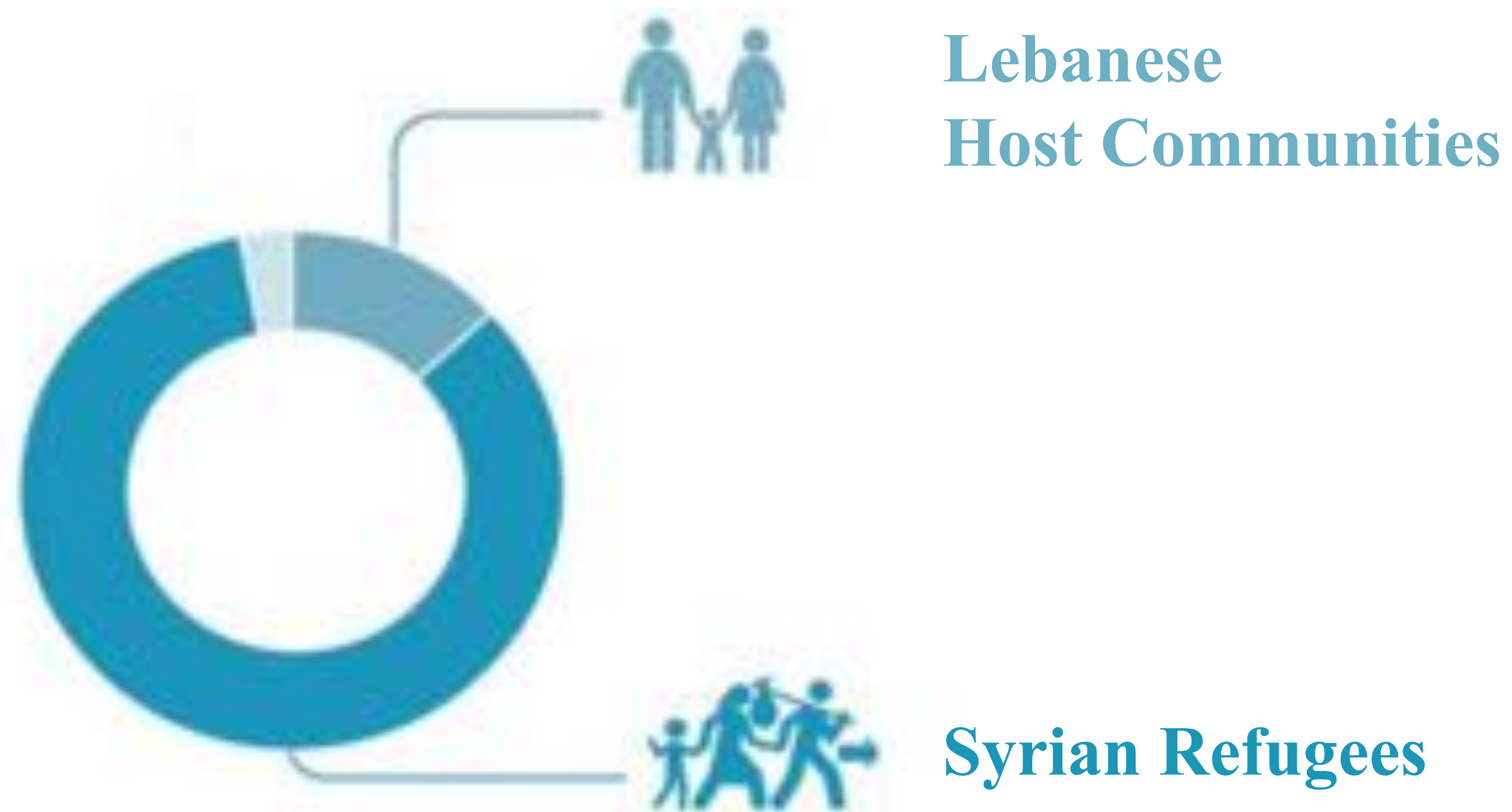
Children

1 in 3

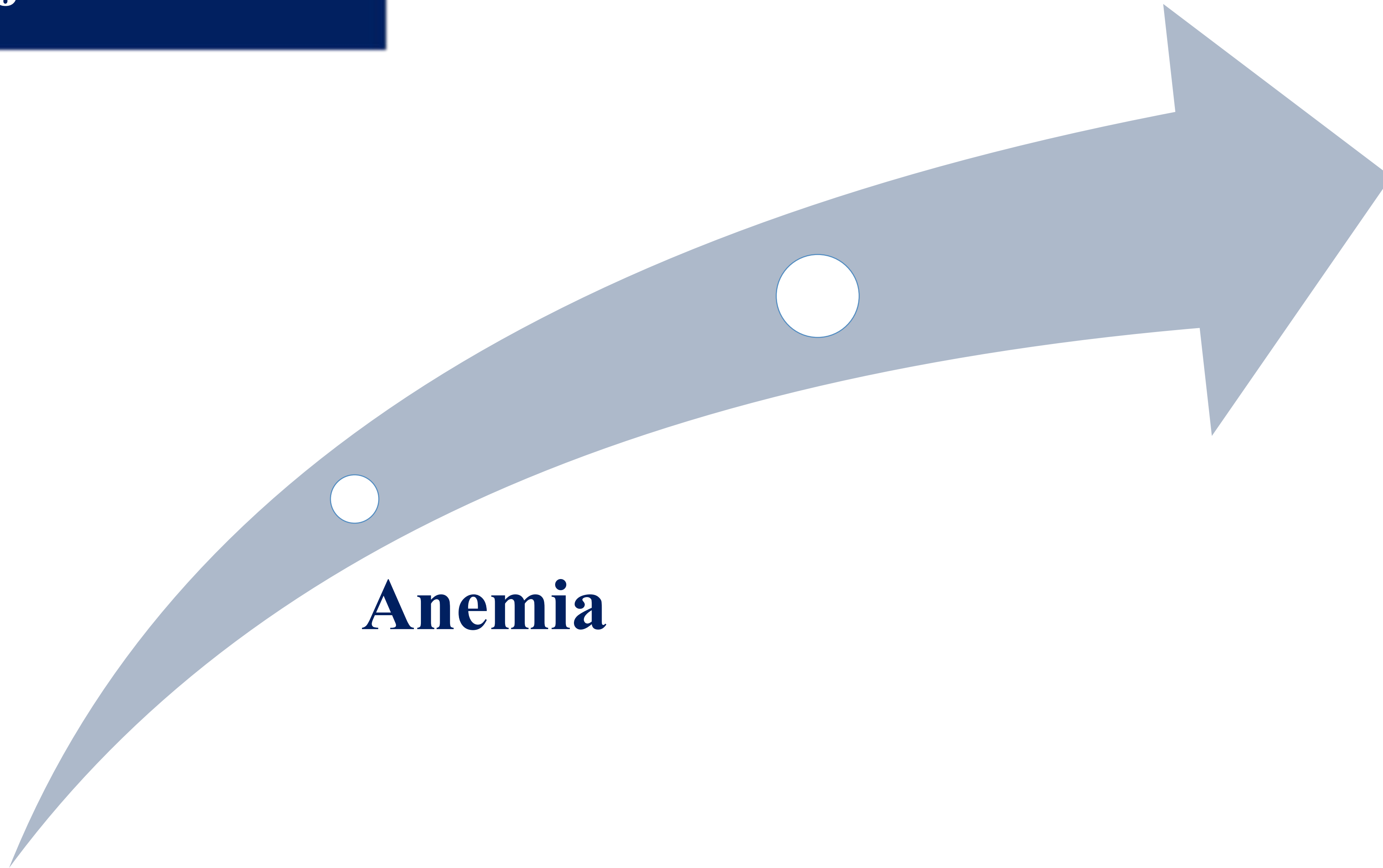
Women



People in Need of Food in Lebanon

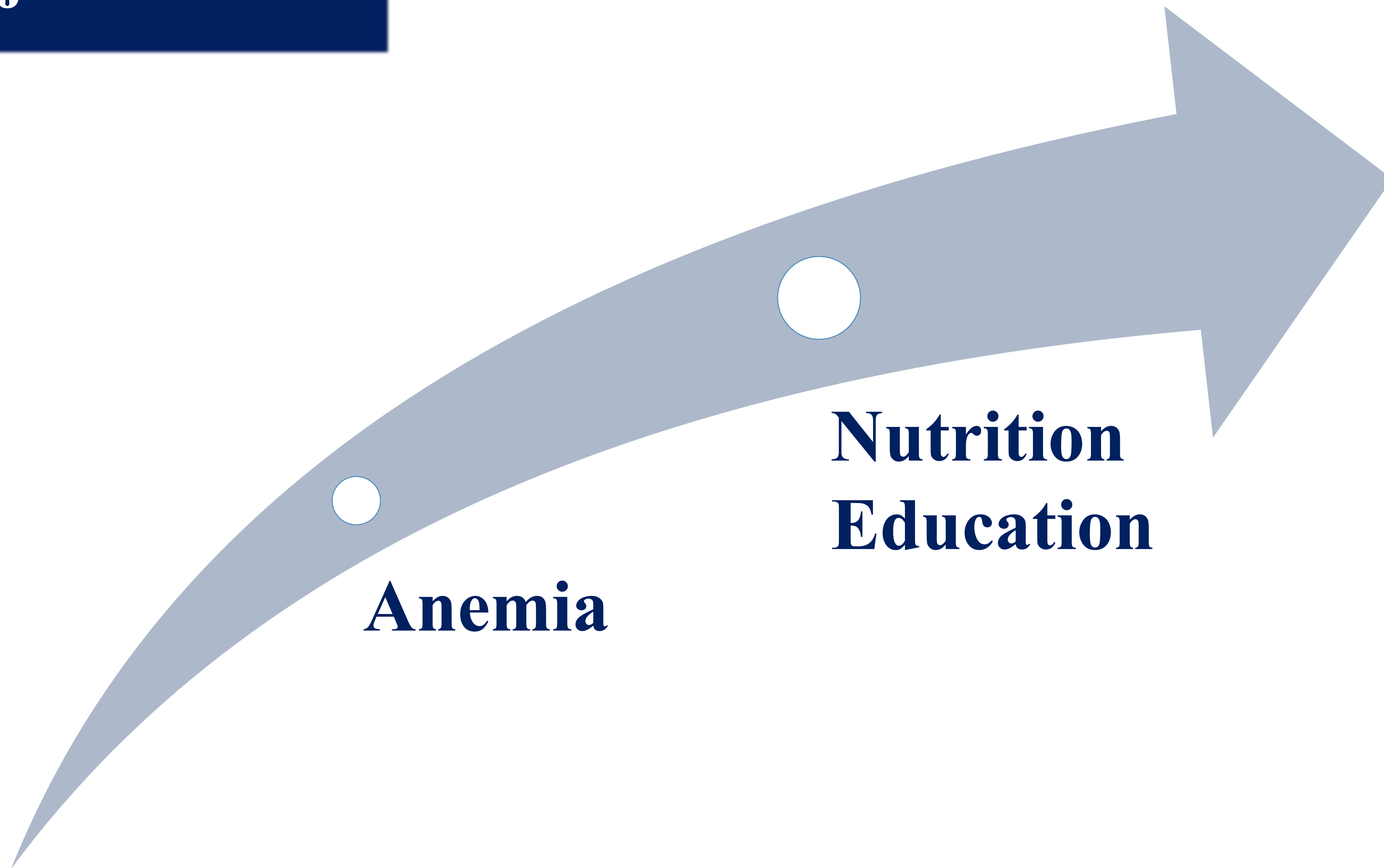


Objectives



Anemia

Objectives



Cross-sectional




UNICEF, 2012

Intervention



UNICEF, 2012

Cross-sectional



Anemia

Cross-sectional

Anemia

**Dietary
Intake**

**Food
Security**

**Mental
Health**

Intervention



Food-heritage.org



©WFP/Edward Johnson

**Nutrition
Education**

**Dietary
Diversity**

**Local
Recipes**

Budget

**Recipe
Trials**

**Nutrition
Education**

**Blood
Analysis**

Coordination

50%

40%

10%

Expected Results

Reduction of anemia

Call to Action



UNICEF, 2012

Scaling up across Lebanon

Sustainable solutions

Thank you





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APPROPRIATE INFORMATION TECHNOLOGIES FOR AGRICULTURAL SUSTAINABILITY (AITAS)



Christian Andres
Switzerland

Research Institute of Organic Agriculture (FiBL) - Switzerland
Swiss Federal Institute of Technology (ETH) - Switzerland
Cocoa Research Institute of Ghana (CRIG) - Ghana



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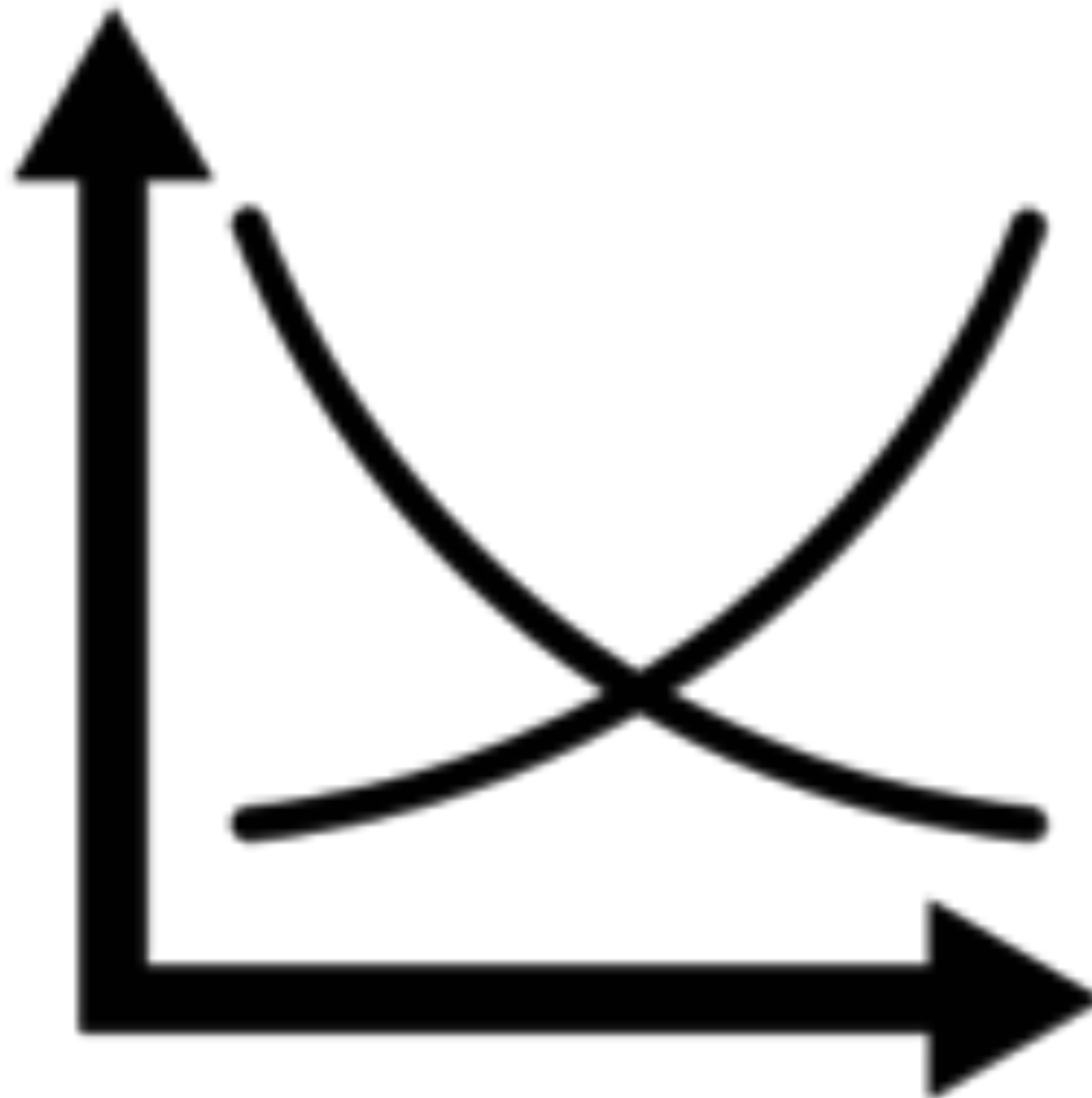
Improving the lives of Ghana's cocoa farmers



Chocolate!



Future of chocolate in danger!



Sustainable production system...



...unsustainable production system!



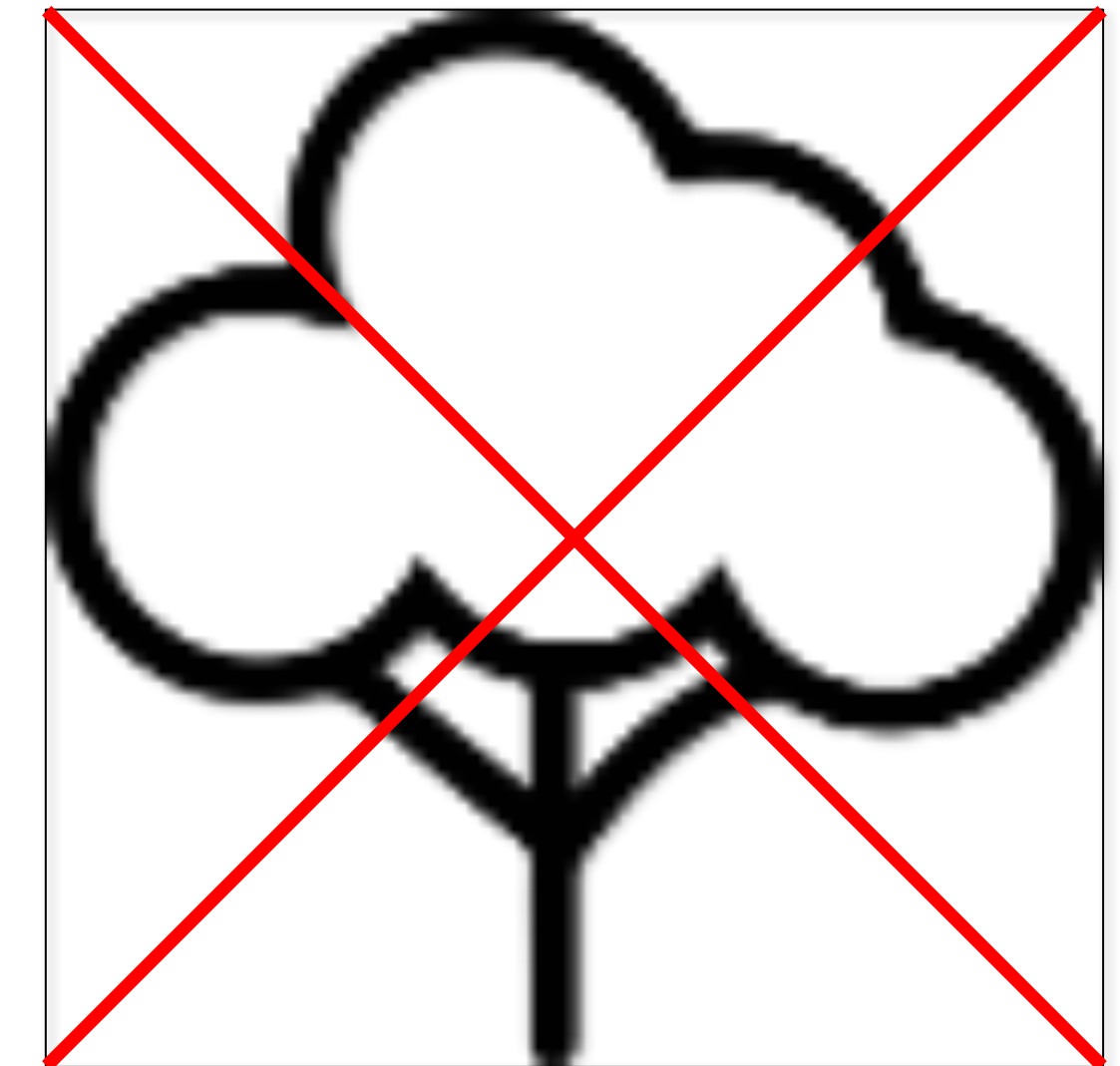
Factors influencing cocoa yield



Cocoa Swollen Shoot Virus Disease



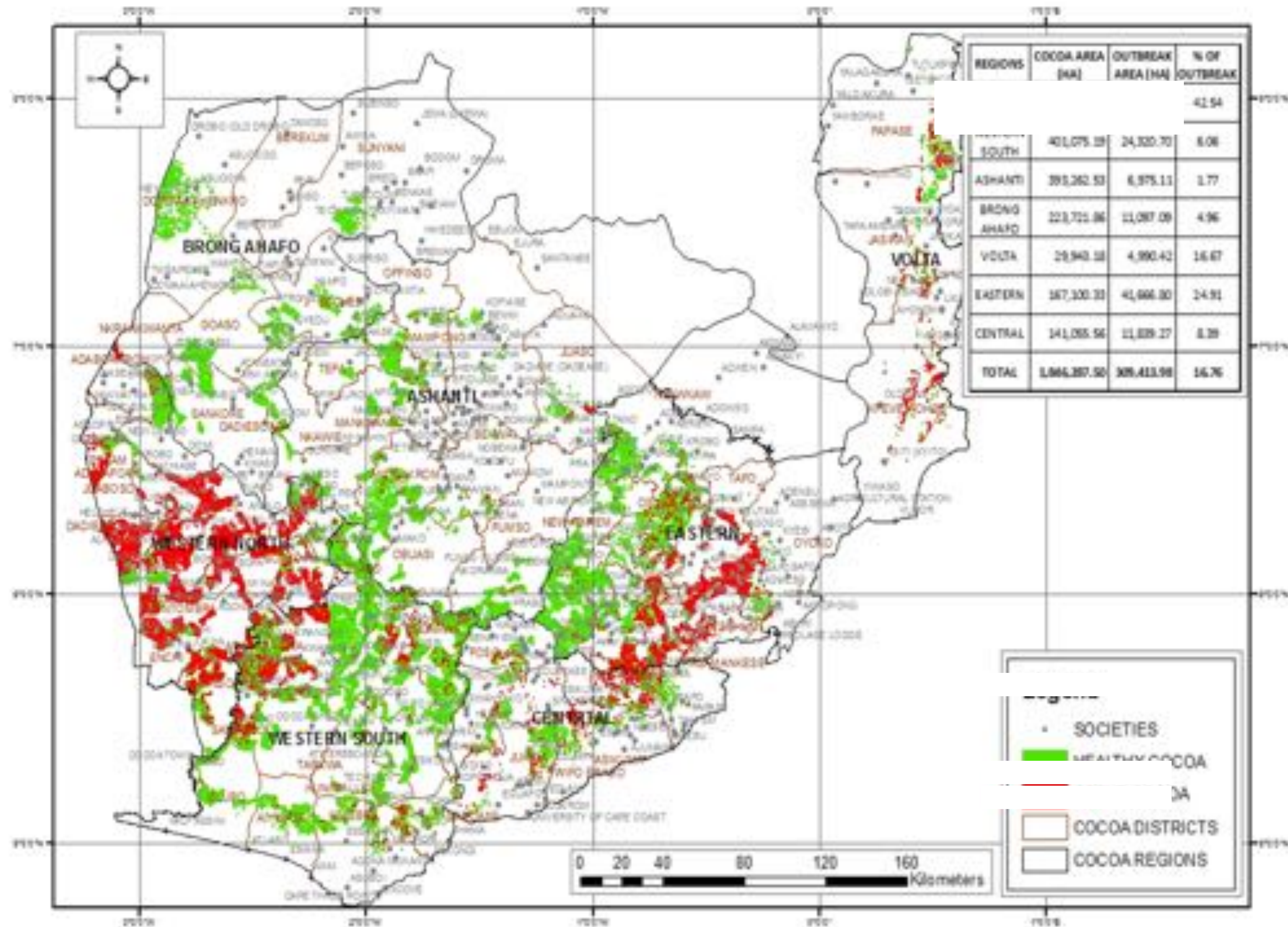
5 Mio (20%)



>300 Mio

(Andres et al., 2017)
(Dzahini-Obiatey, pers. comm)
(Ameyaw et al., 2014)

CSSVD prevalence



Recommendations CSSVD prevention



**Knowledge transfer:
top-down approach**

(Andres et al., 2017)
(Dzahini-Obiately, pers. comm)
(Ameyaw et al., 2014)

Use phones!



Phones are everywhere...



...also in the Global South!

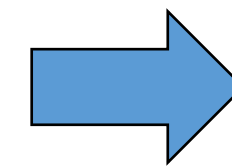
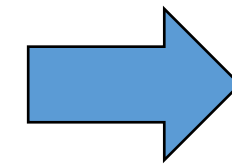


(Aguilar-Gallegos et al., 2015)
(Bentley et al., 2014)
(Sousa et al., 2016)

...which video works for cocoa in Ghana?

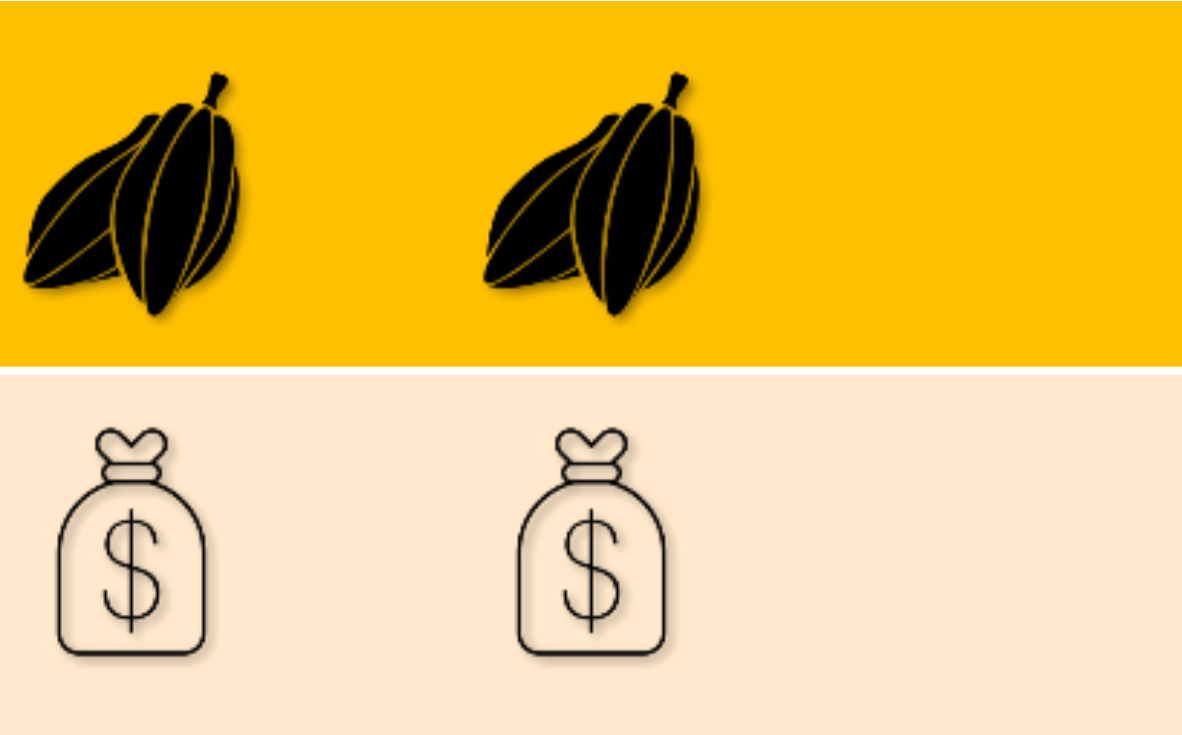
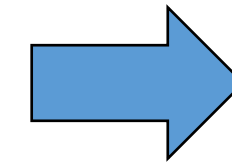
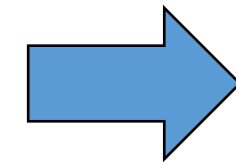


I will produce videos that work!

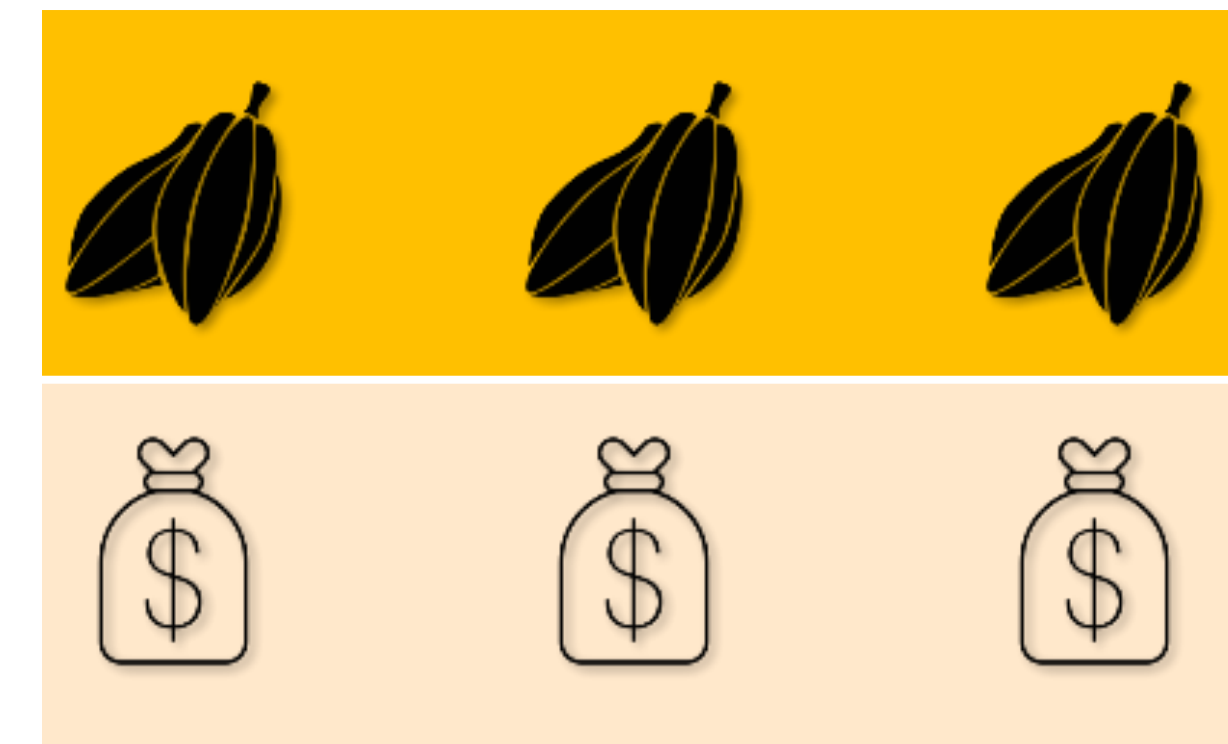
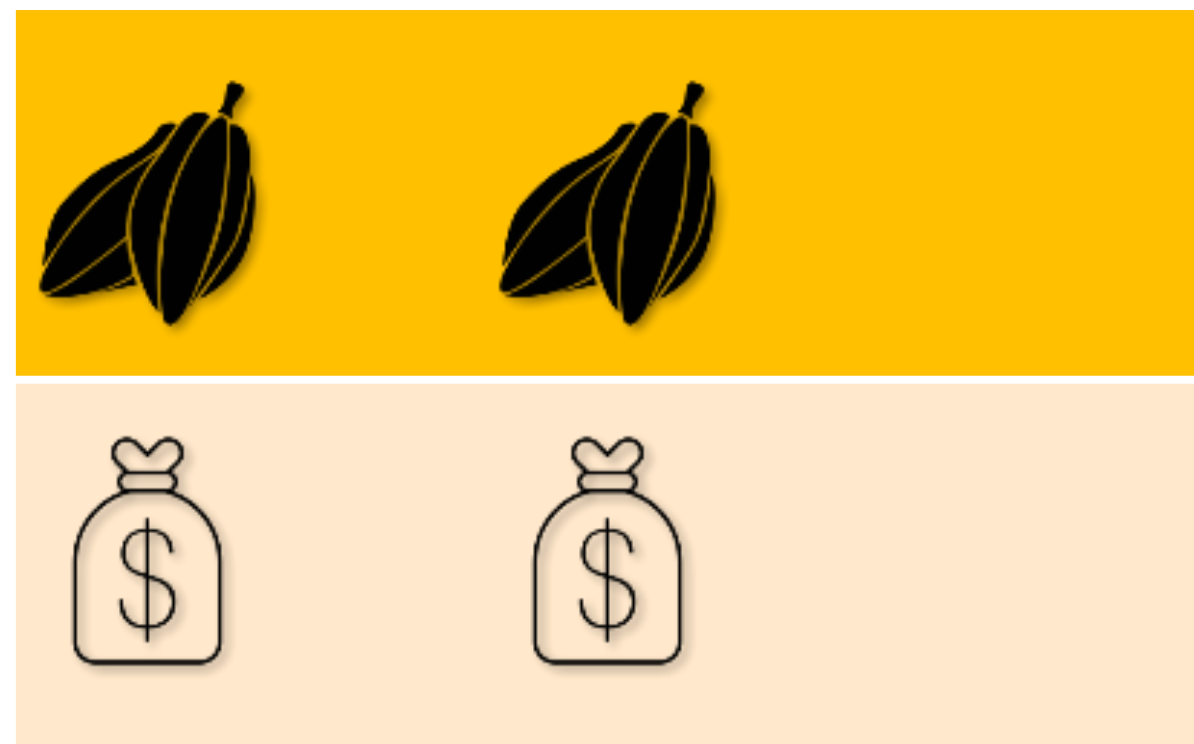
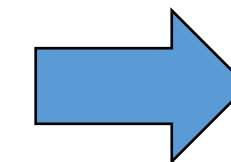
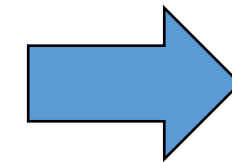


How will I do that?

January – June 2018



How will I do that?



July – December 2018

High adoption potential!



High adoption potential!



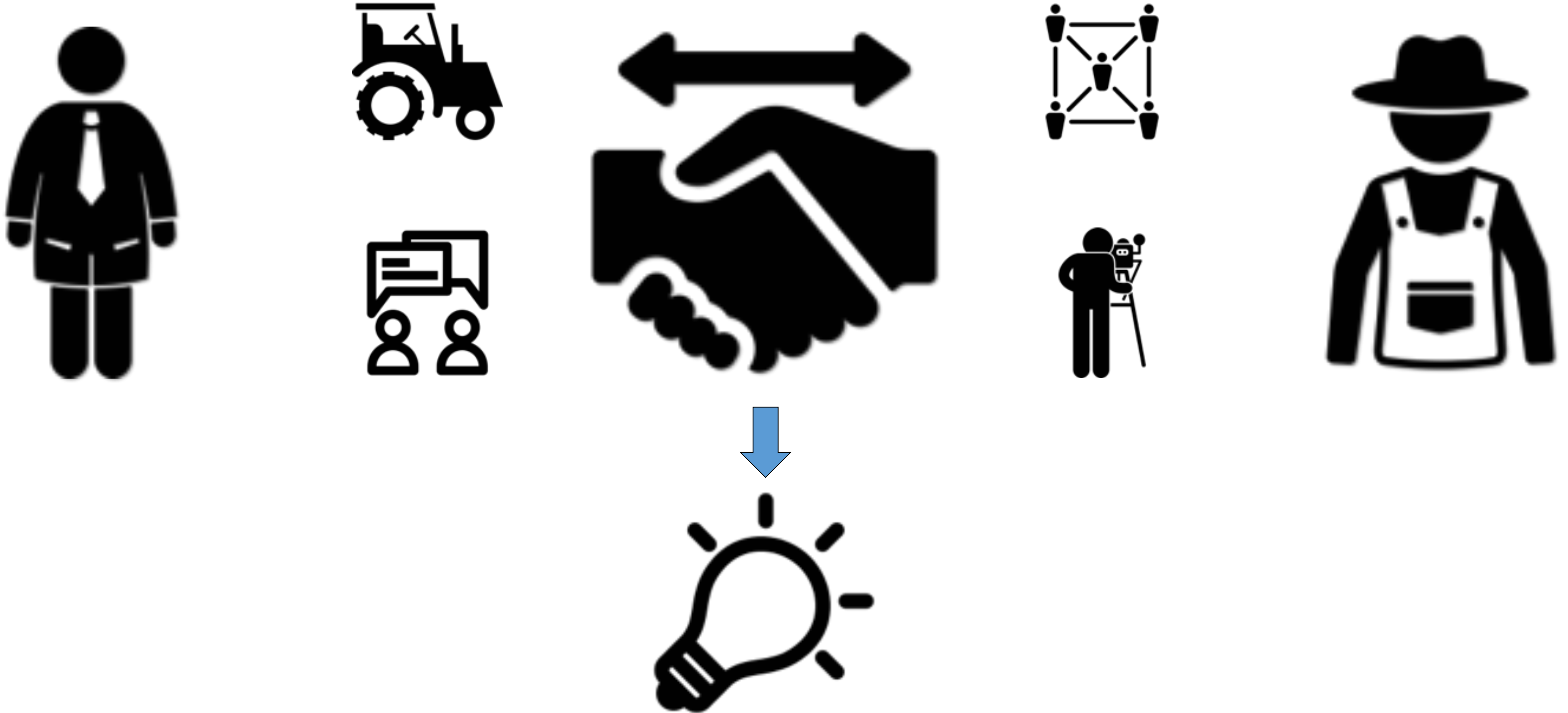
As a scientist, I am a knowledge broker!

High adoption potential!



As a scientist, I am a knowledge broker!

High adoption potential!



Expected impact



5 Mio (20%)



Up to **100%**



Up to **100%**

The time is now, the place is Ghana, I am your guy...



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...let's shake hands to safeguard the future of chocolate! Thank you very much!



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EFFECTS OF DOMESTIC MARKET INSTITUTIONS ON THIRD-PARTY CERTIFICATION PROGRAMS AND ATTENDANT IMPACTS ON INTERMEDIARY BUYERS AND SMALLHOLDERS



Ebenezer Offei Ansah
Ghana

Michigan State University - USA



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**How Intermediaries
Facilitate
Smallholder
Certification for
Sustainable Food
Production**

Certification as a Bridge



Certification as a Bridge



Certification Creates Incentives



There are Concerns about Certification



Roles of Intermediary Buyers



What Happens in Different Markets?

Roles of Intermediary Buyers

Viability of Certification

Outcomes of Certification



Learning from “Fairtrade” in Ghana



What Works and Where?



Policy Development Framework

Viable Smallholder Certification...

Sustainable Food



Improved Livelihoods



Resilient Earth





KEEP YOUR

FRIENDS CLOSE



YOUR FARMERS

~ CLOSER ~



Thank You



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POLLUTION TO PRODUCTION: AN ENVIRONMENTAL REMEDIATION APPROACH FOR BIOGAS PRODUCTION UNDER COWPEA CULTIVATION



Ikoko Chioma Bella

Nigeria

University of Nigeria, Enugu Campus - Nigeria



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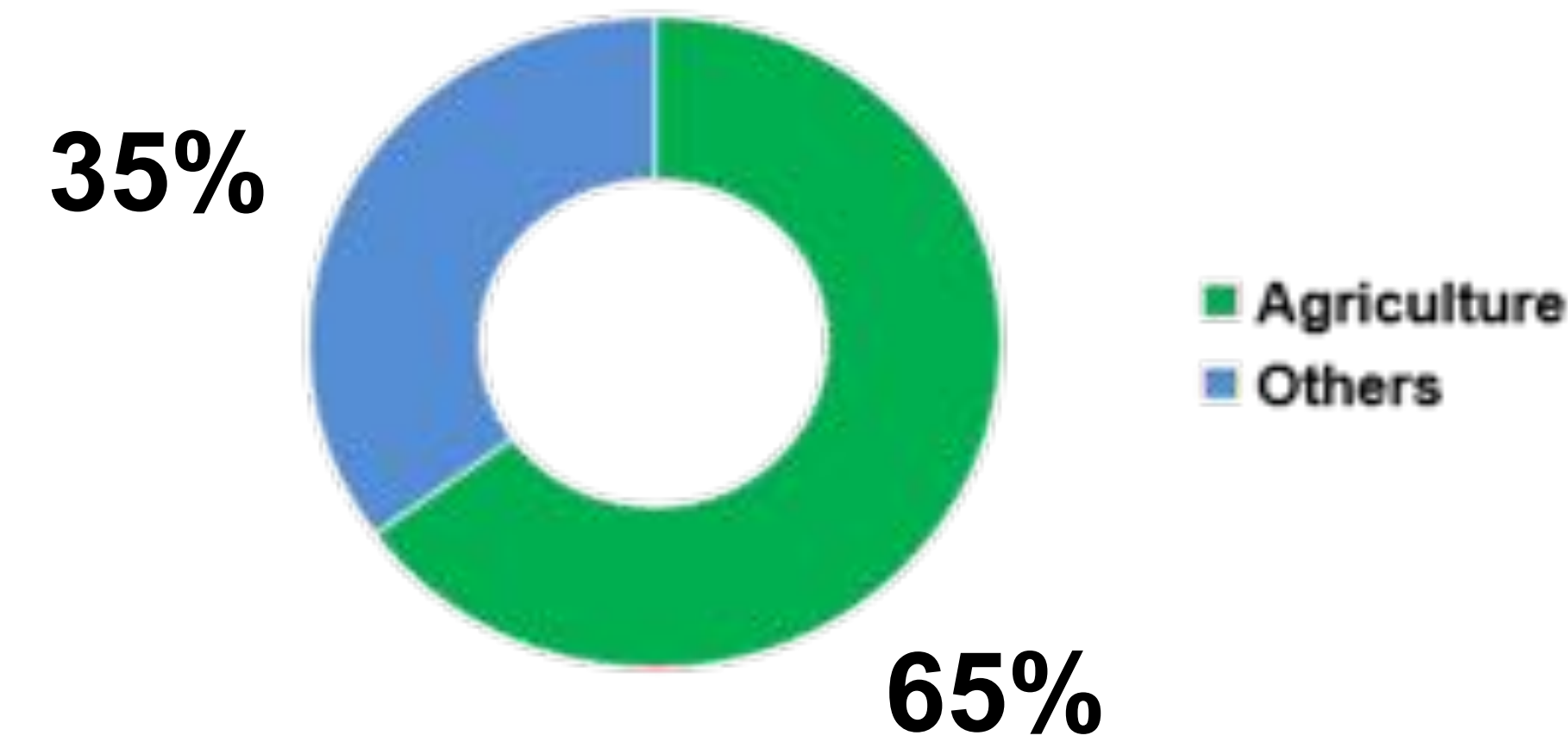
**Pollution to production:
An Environmental remediation
approach for biogas production
under cowpea cultivation**



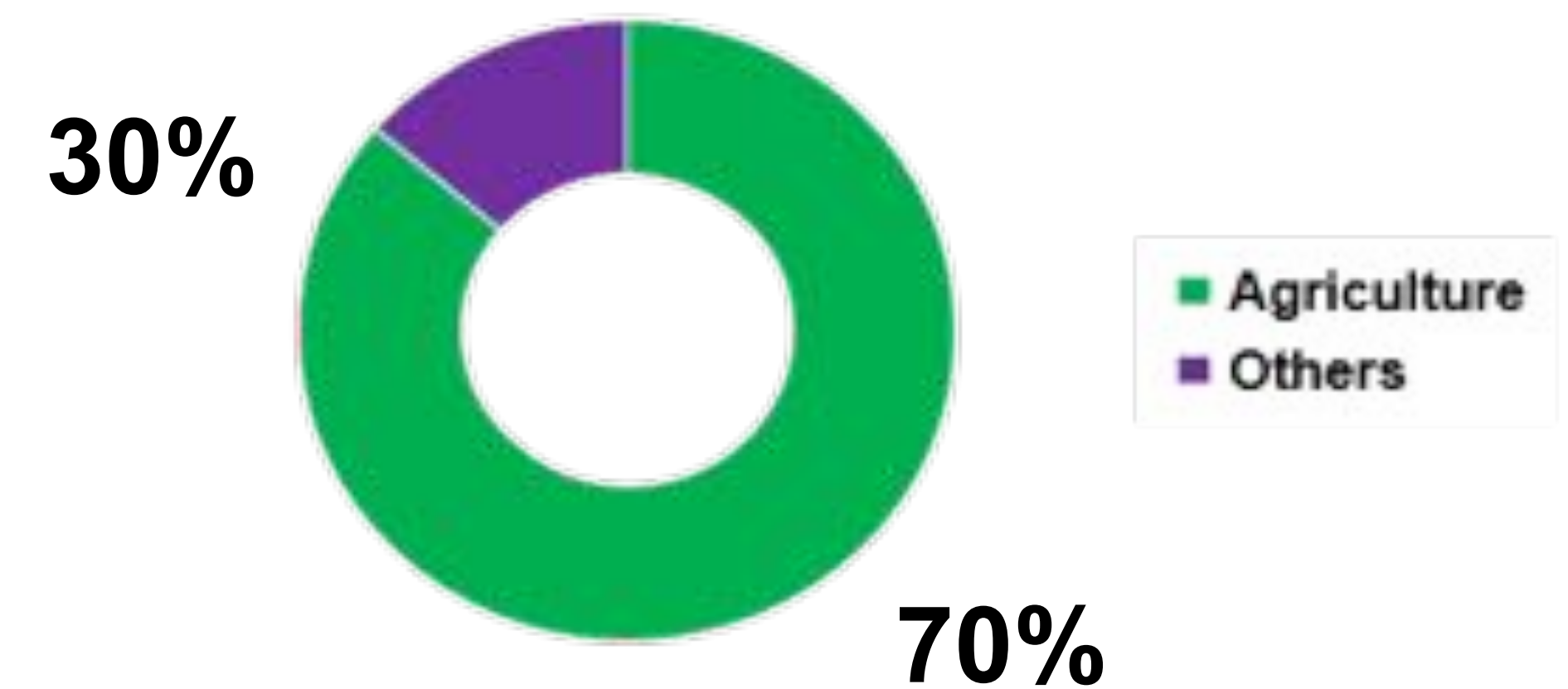
Once upon a time....



GDP



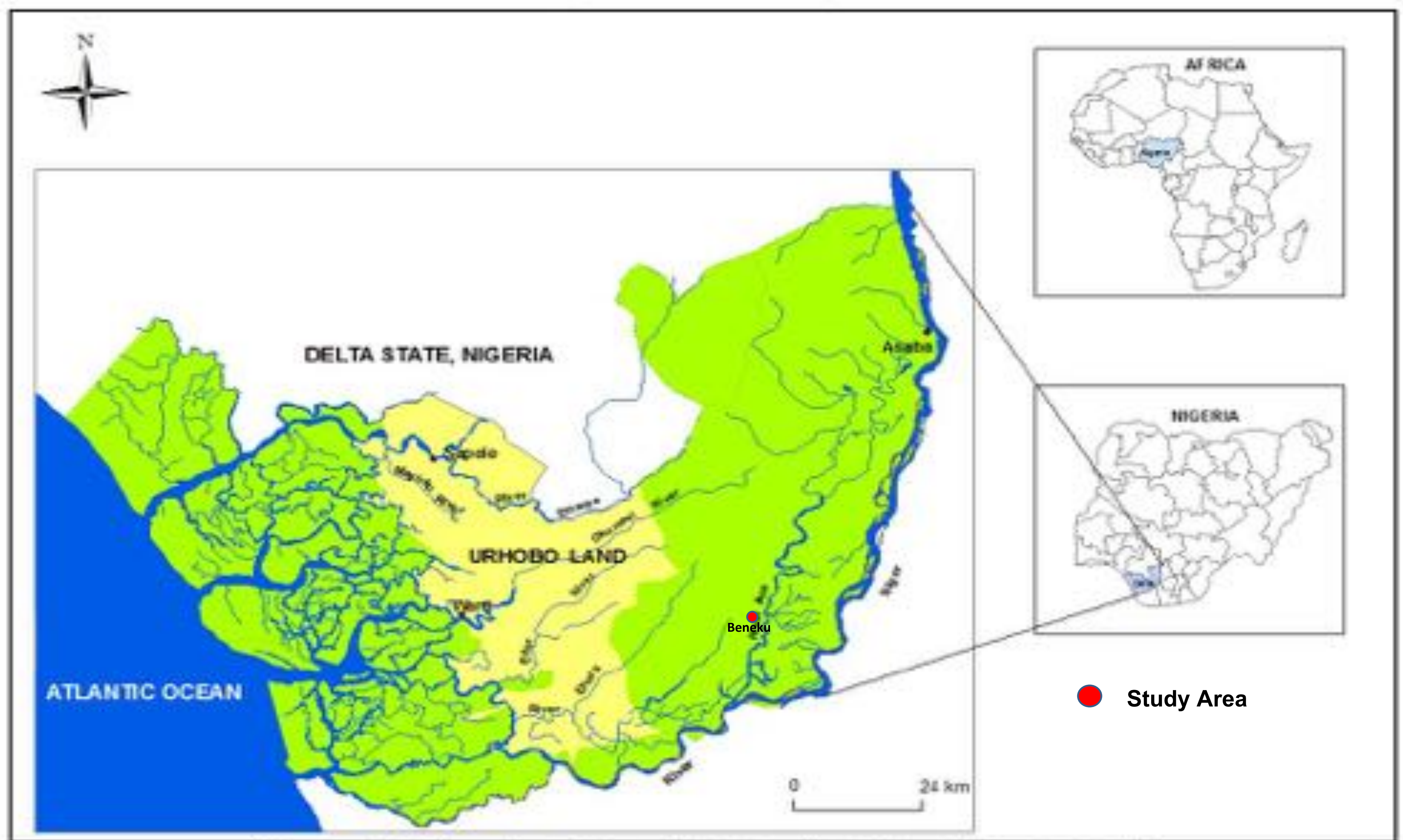
Total Export



Nigeria's agrarian economy (1956 – 1971)



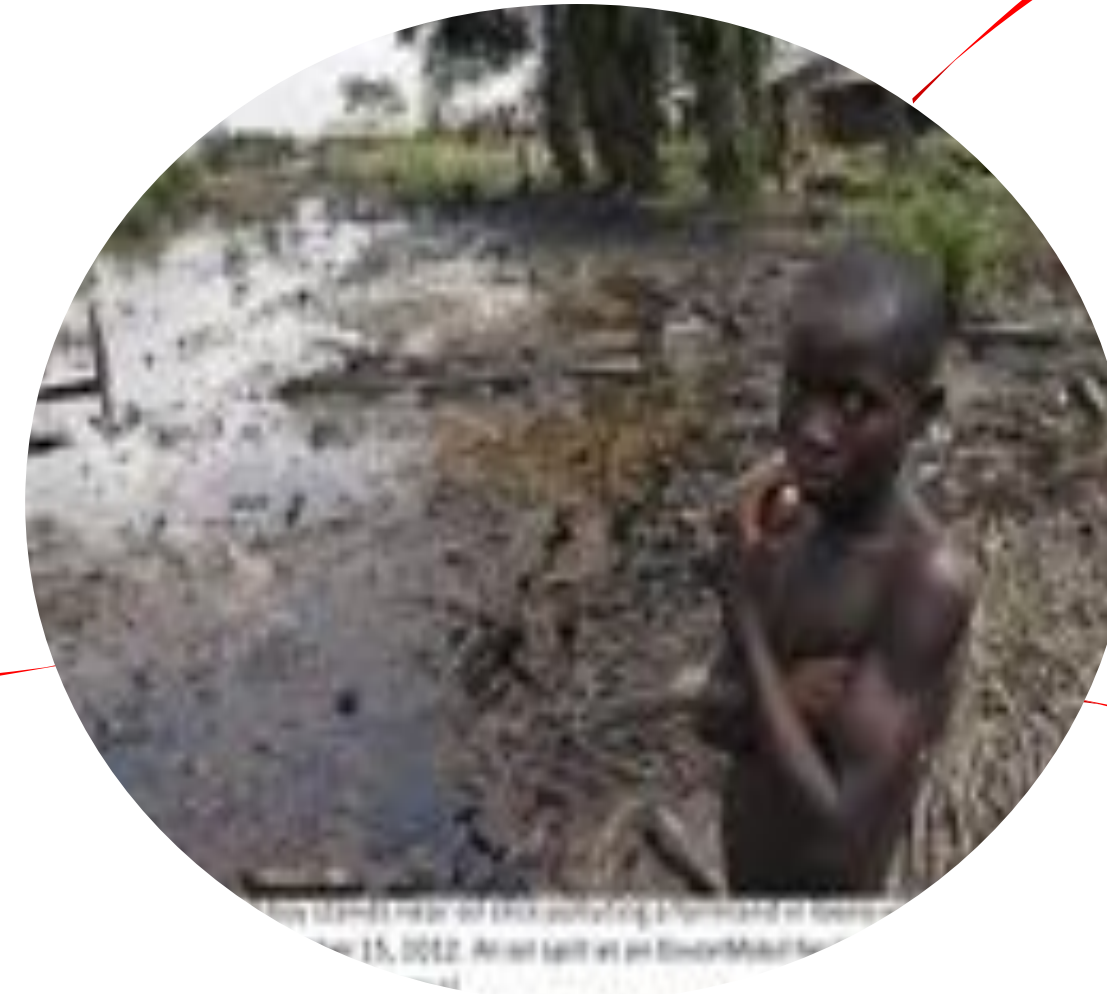
Crude oil exploration and effect on farm lands



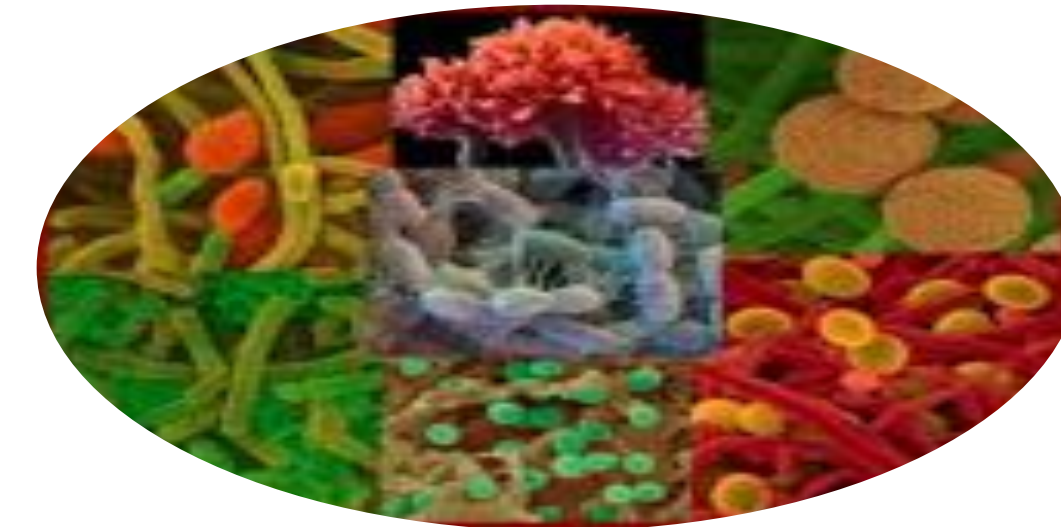
Map of the Study Location



Excavation



Chemical



Biological

Remediation of oil polluted lands

**Pawpaw
seeds**



**Moringa
seeds**



The pollution to production approach



Why Cowpea?

Data dissemination: Conferences, Workshops and Publications

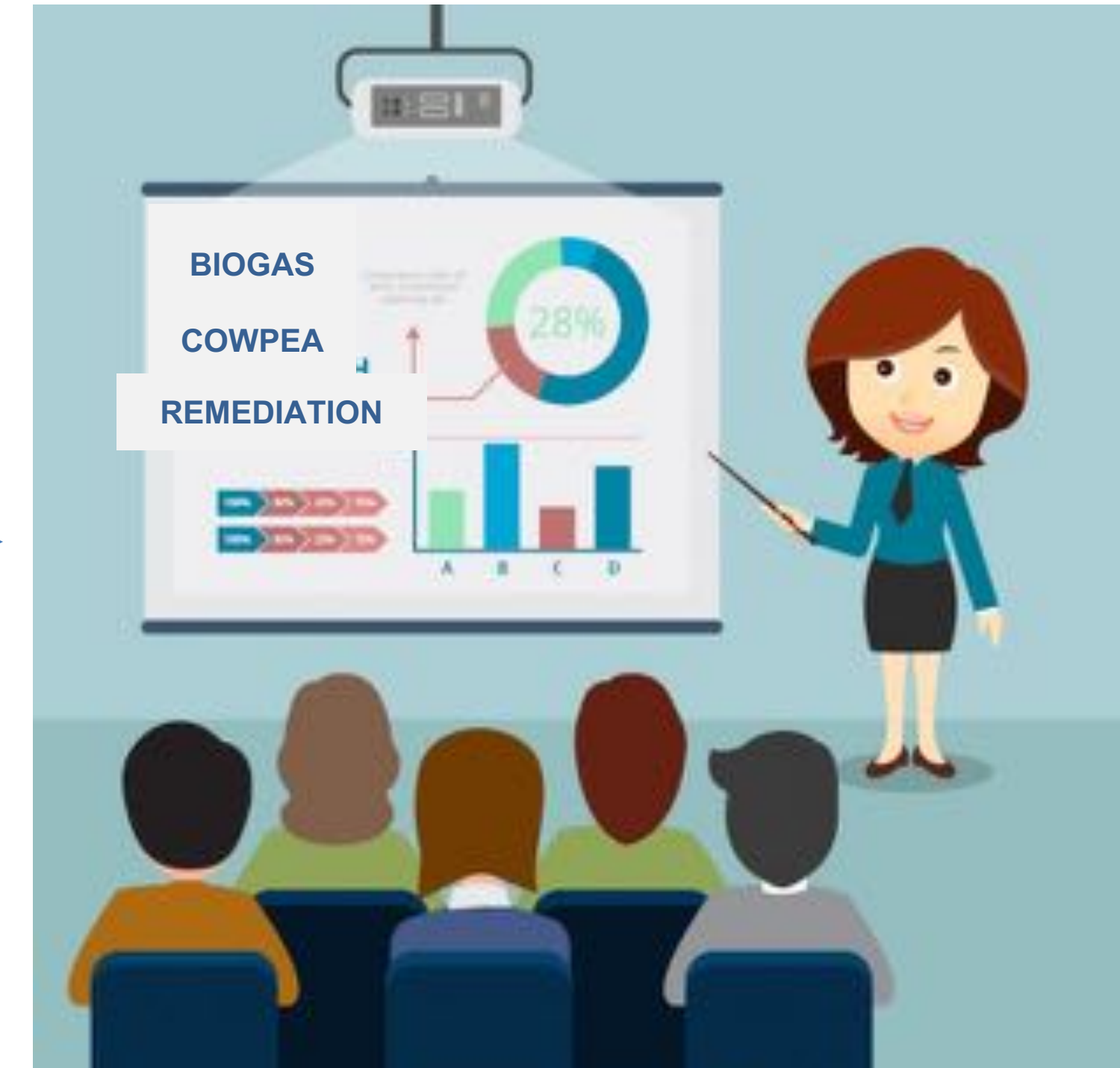
Preliminary study



Field study



Residual study



20%

33%

30%

13%

Pollution to production budget and work plan



The BCFN Grant would help translate the pollution story into sustainable livelihood



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USING FORESTS TO SUPPORT NUTRITION DURING TIMES OF DROUGHT: A MULTINATIONAL SOCIAL-ECOLOGICAL ANALYSIS



Matthew Cooper

United States of America

University of Maryland - College Park - USA



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Conservation for People: Mapping Forests That Prevent Malnutrition

**University of Maryland
Conservation International**

A person wearing a white garment and a blue head covering is walking away from the camera across a vast, dry, and cracked landscape. The ground is parched and covered in a network of deep, irregular cracks. The horizon is flat with sparse, low-lying vegetation under a clear, pale blue sky. The overall scene conveys a sense of aridity and hardship.

Low Rainfall Leads to Malnutrition

Forests Make Agriculture Resilient



Forests Make Agriculture Resilient

- Water Retention



Forests Make Agriculture Resilient

- Water Retention
- Fight Erosion and Desertification



Forests Make Agriculture Resilient

- Water Retention
- Fight Erosion and Desertification
- Microclimates



Forests Make Agriculture Resilient

- Water Retention
- Fight Erosion and Desertification
- Microclimates
- Pollination and Pest Regulation



Forests Provide Foods



Forests can Buffer Child Nutrition From the Effects of Drought



There Is A Lot Of Evidence



Contents lists available at ScienceDirect

Forest Policy and Economics

journal homepage: www.elsevier.com/locate/forpol



Trees for life: The ecosystem service contribution of trees to food production and livelihoods in the tropics

James Reed ^{a,b,*}, Josh van Vianen ^a, Samson Foli ^a, Jessica Clendenning ^a, Kevin Yang ^c, Margaret MacDonald ^a, Gillian Petrokofsky ^d, Christine Padoch ^a, Terry Sunderland ^{a,e}

^a Center for International Forestry Research, Bogor, Indonesia
^b Lancaster Environment Centre, University of Lancaster, Lancaster, LA1 4YQ, UK
^c University of British Columbia, Vancouver, BC V6T 1Z4, Canada
^d University of Oxford, Oxford, UK
^e Center for Tropical Environmental and Sustainable Science, School of Earth and Environmental Sciences, James Cook University, Cairns, Qld 4870, Australia

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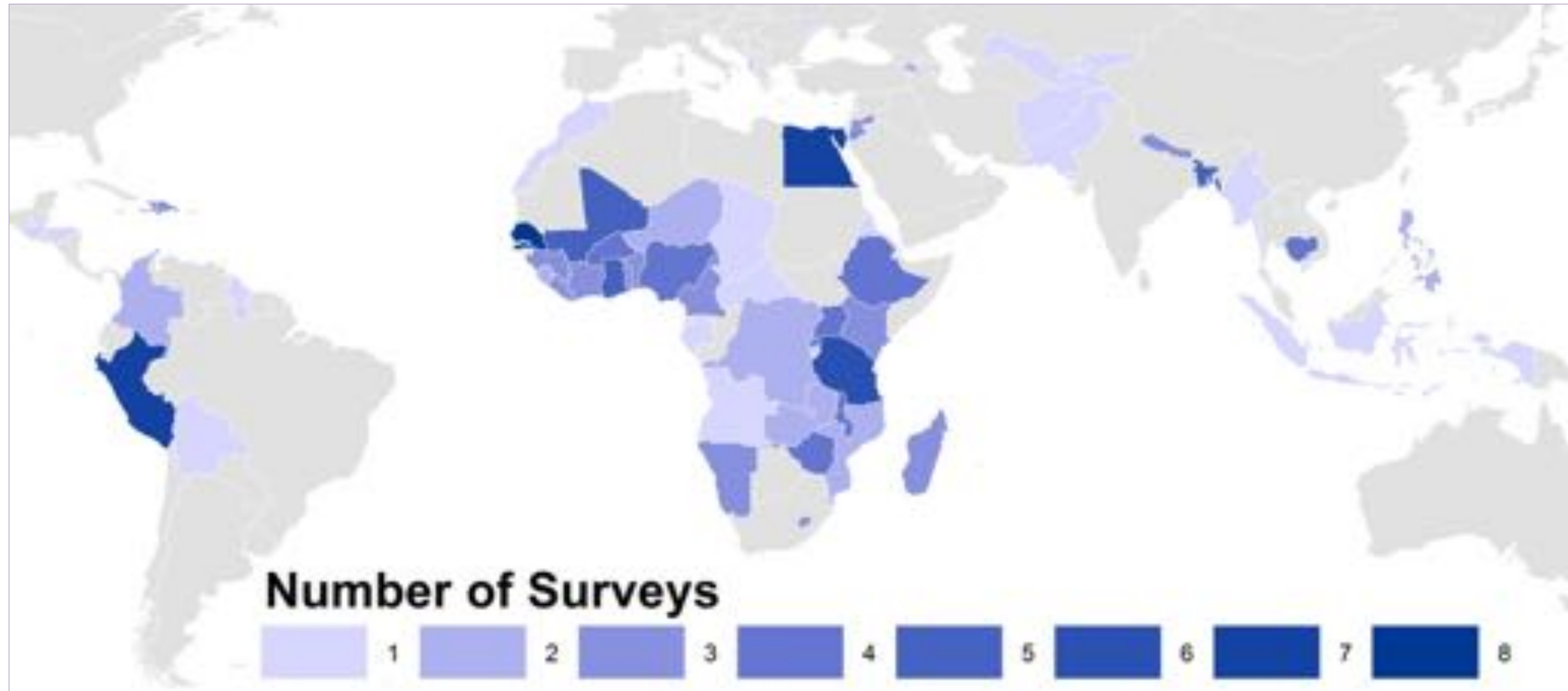
ABSTRACT

Despite expanding interest in ecosystem service research over the past three decades, in-depth understanding of the contribution of forests and trees to food production and livelihoods remains limited. This review synthesizes the current evidence base examining the contribution of forest and trees to agricultural production and livelihoods in the tropics, where production often occurs within complex land use mosaics that are increasingly sub-

But It Is All Site-Specific

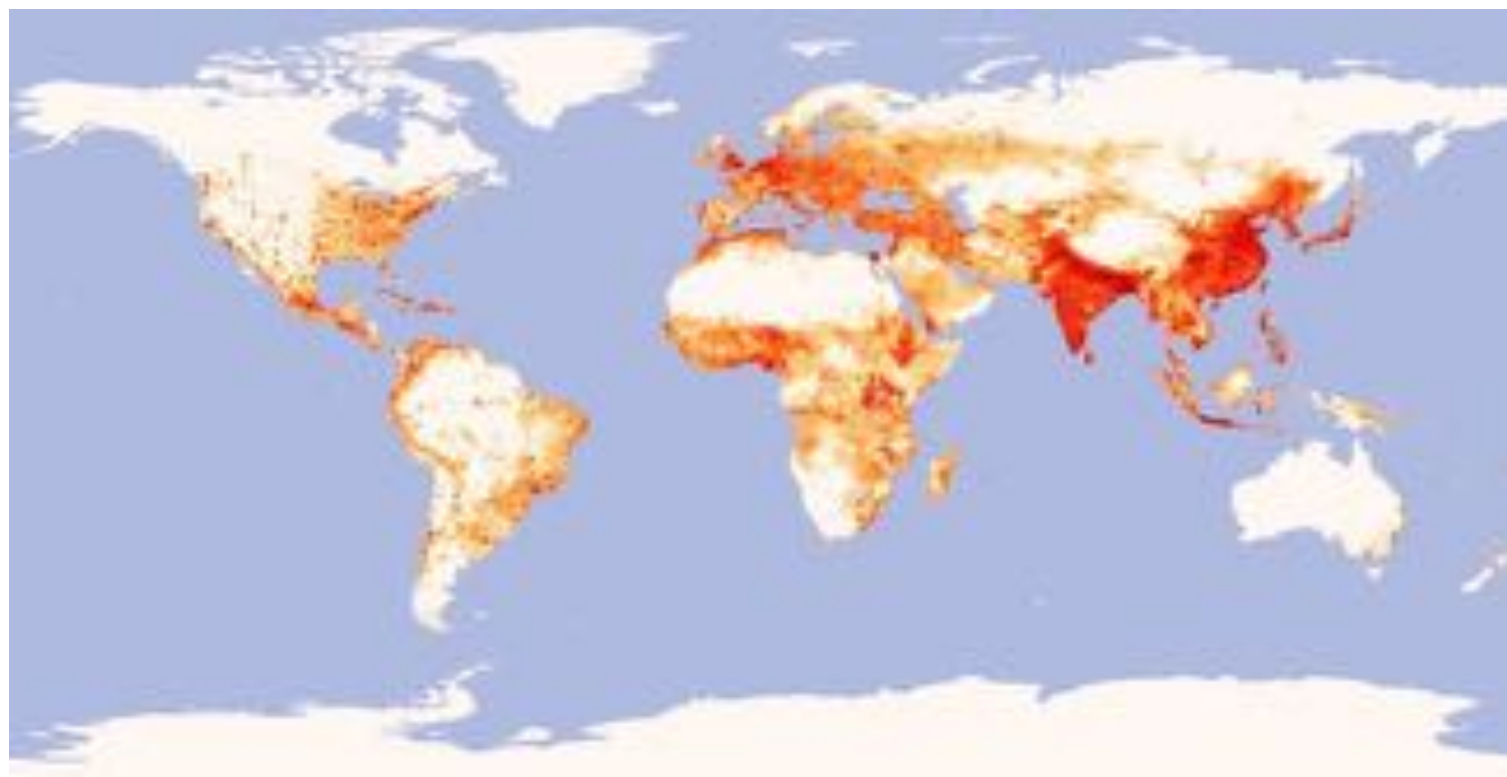


Solution: **Integrate Global Nutrition Data with Geospatial Data**

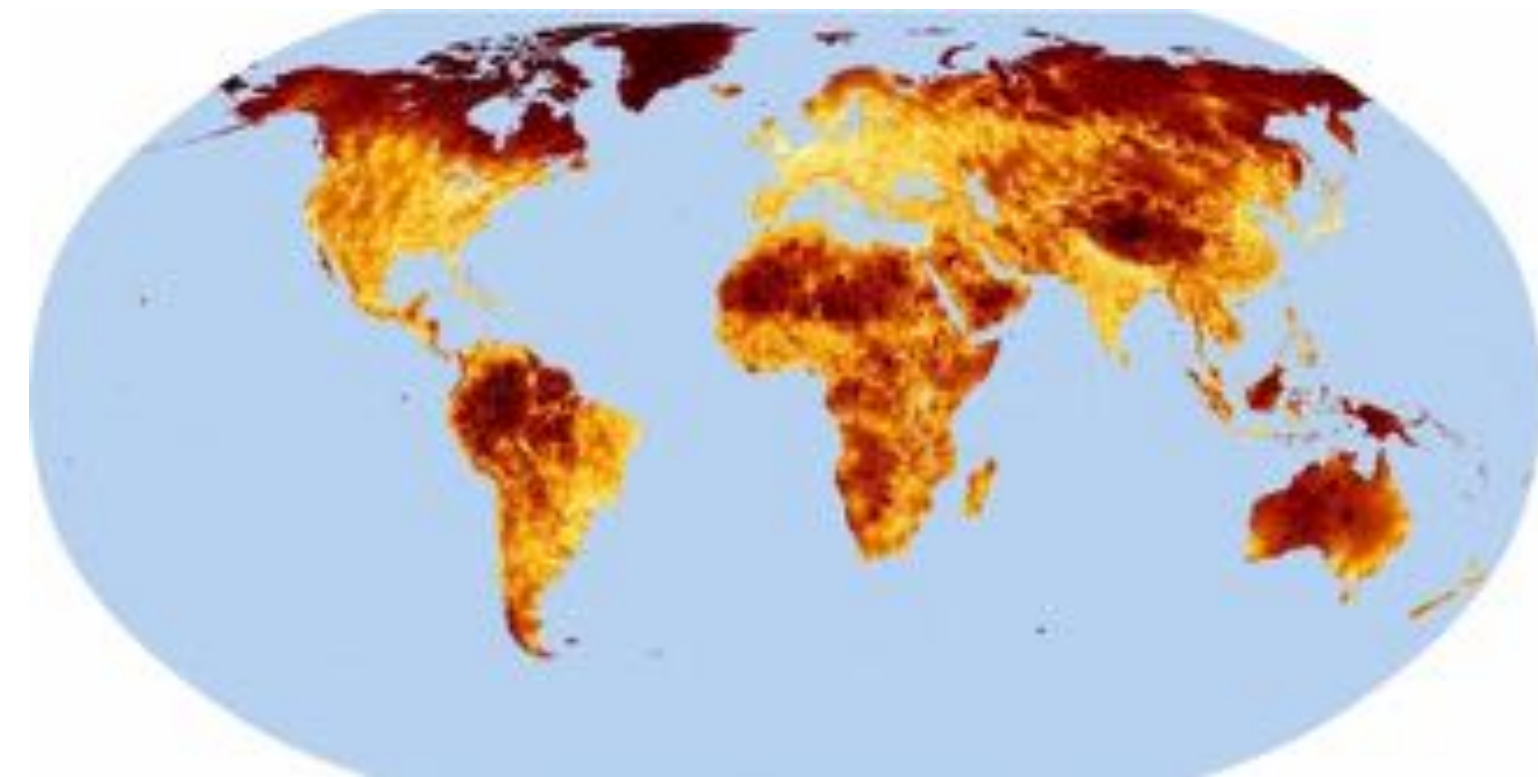


500,000 child health observations from 20 years

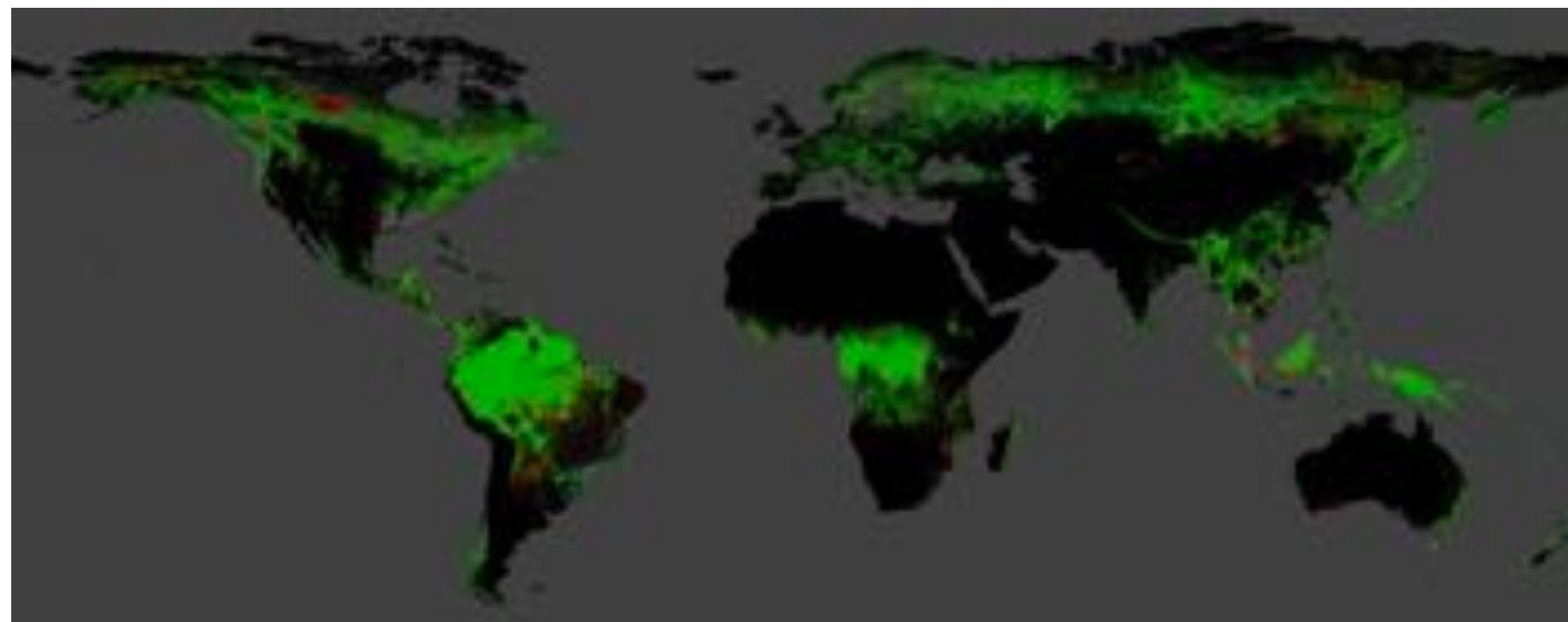
Integrate Long-Term Global Nutrition Data with Global Geospatial Data



Population Density



Market Access



Forest Cover



Climate History

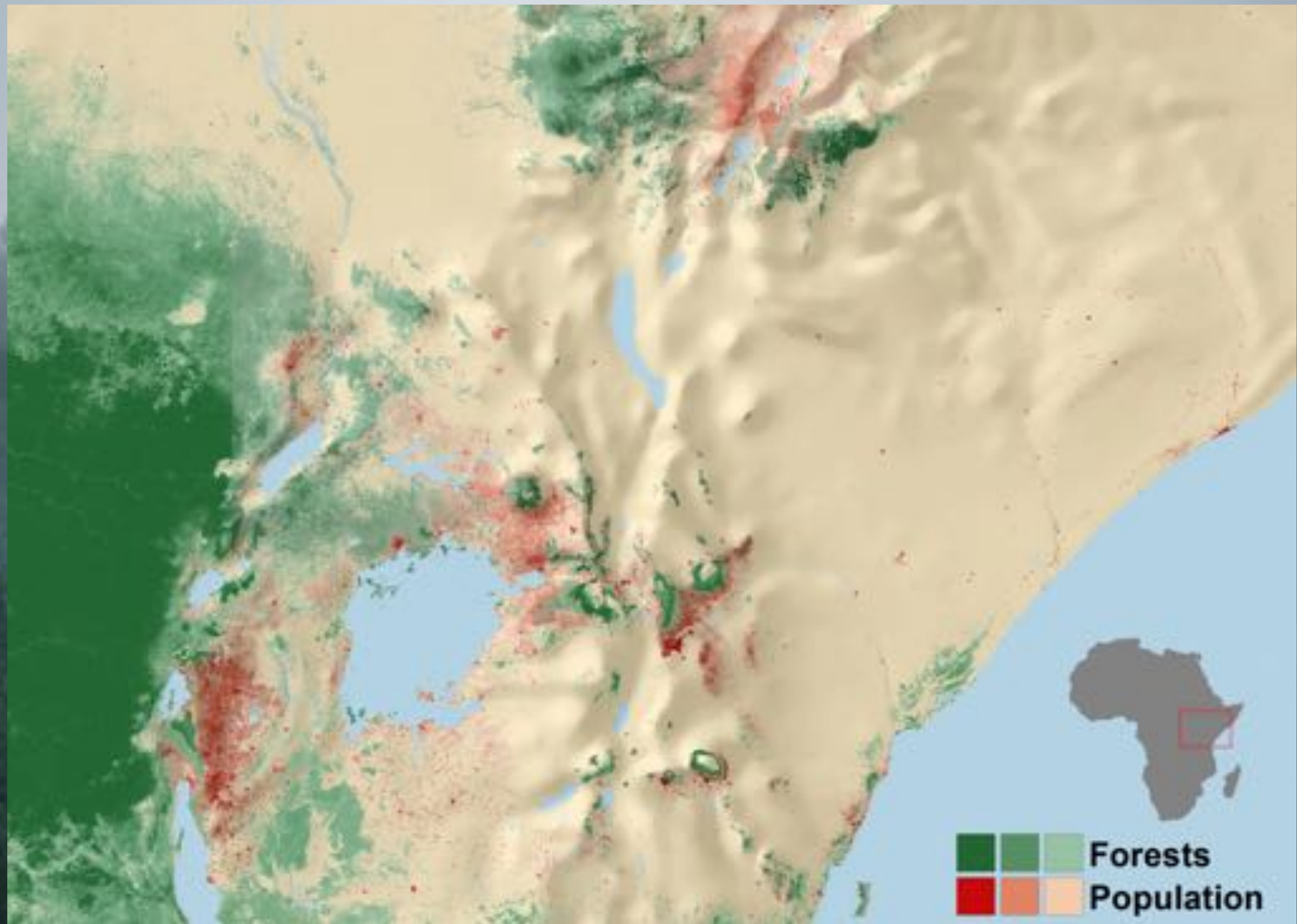
Modeling Child Nutrition

$$\text{Nutrition} = \text{If Child Was Breastfed} + \text{Child's Age} + \text{Household Income} + \text{Household Size} + \text{Household Education Levels} + \text{Market Distance} + \text{Population Density} + \text{Rainfall}$$

Modeling Child Nutrition

$$\text{Nutrition} = \begin{aligned} &\text{If Child Was Breastfed} + \\ &\text{Child's Age} + \\ &\text{Household Income} + \\ &\text{Household Size} + \\ &\text{Household Education Levels} + \\ &\text{Market Distance} + \\ &\text{Population Density} + \\ &\text{Rainfall} + \\ &\text{Forests} \end{aligned}$$

Which Areas
are Most
Critical to
Conserve **for**
People.



Which Areas
are Most
Critical to
Conserve **for**
People.



Which Areas
are Most
Critical to
Conserve **for**
People.



A photograph of a dense forest with tall, thin trees, overlaid with a semi-transparent green filter. The text "Thank you!" is centered in the middle of the image in a white, sans-serif font.

Thank you!



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YES!BAT - SUSTAINABLE RICE FIELDS: SAY YES! TO BATS



Laura Garzoli
Italy

National Research Council - Institute of Ecosystem Study (CNR-ISE) - Italy



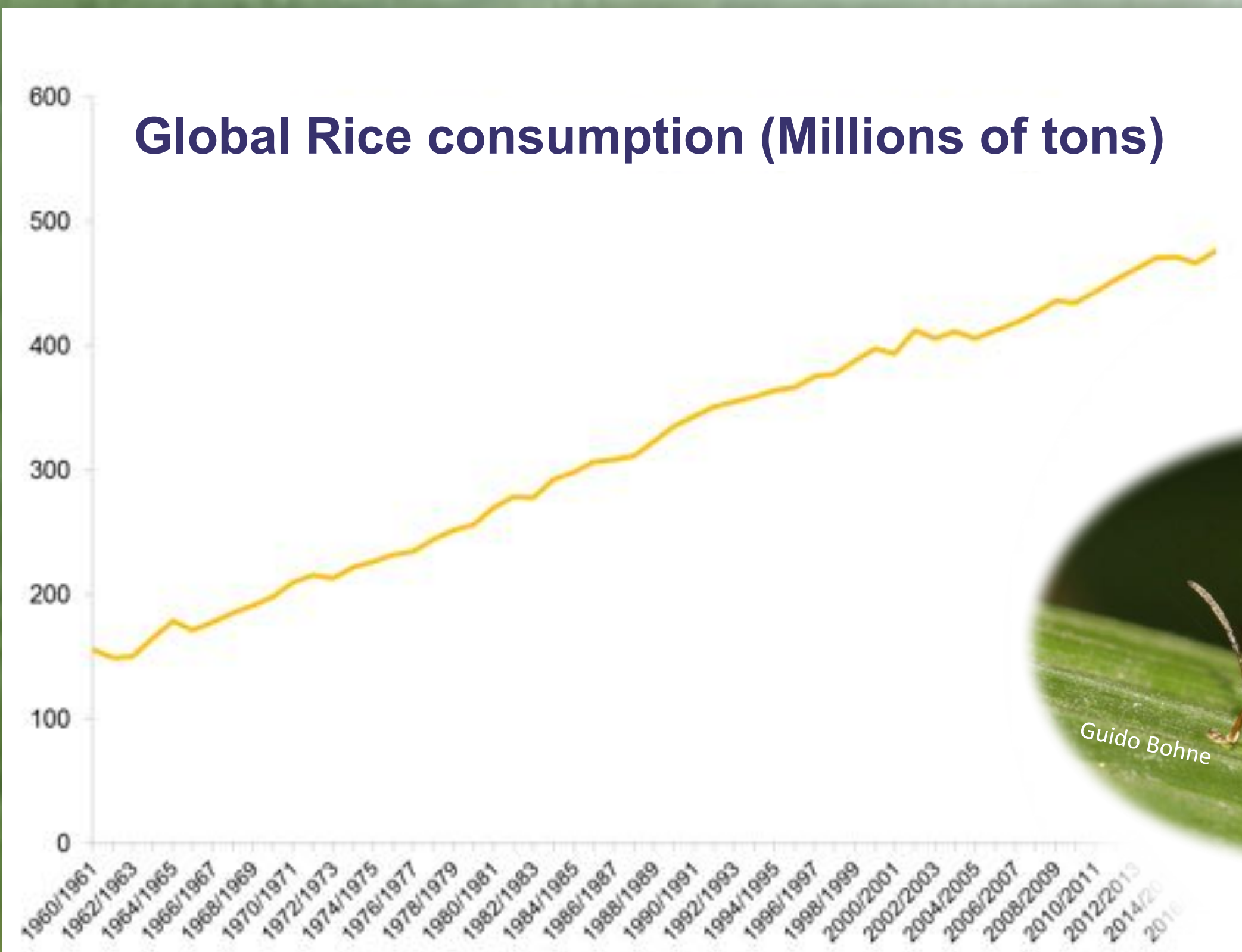
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Sustainable rice fields say **YES!** to bats



World rice production...



... and threats



Human health

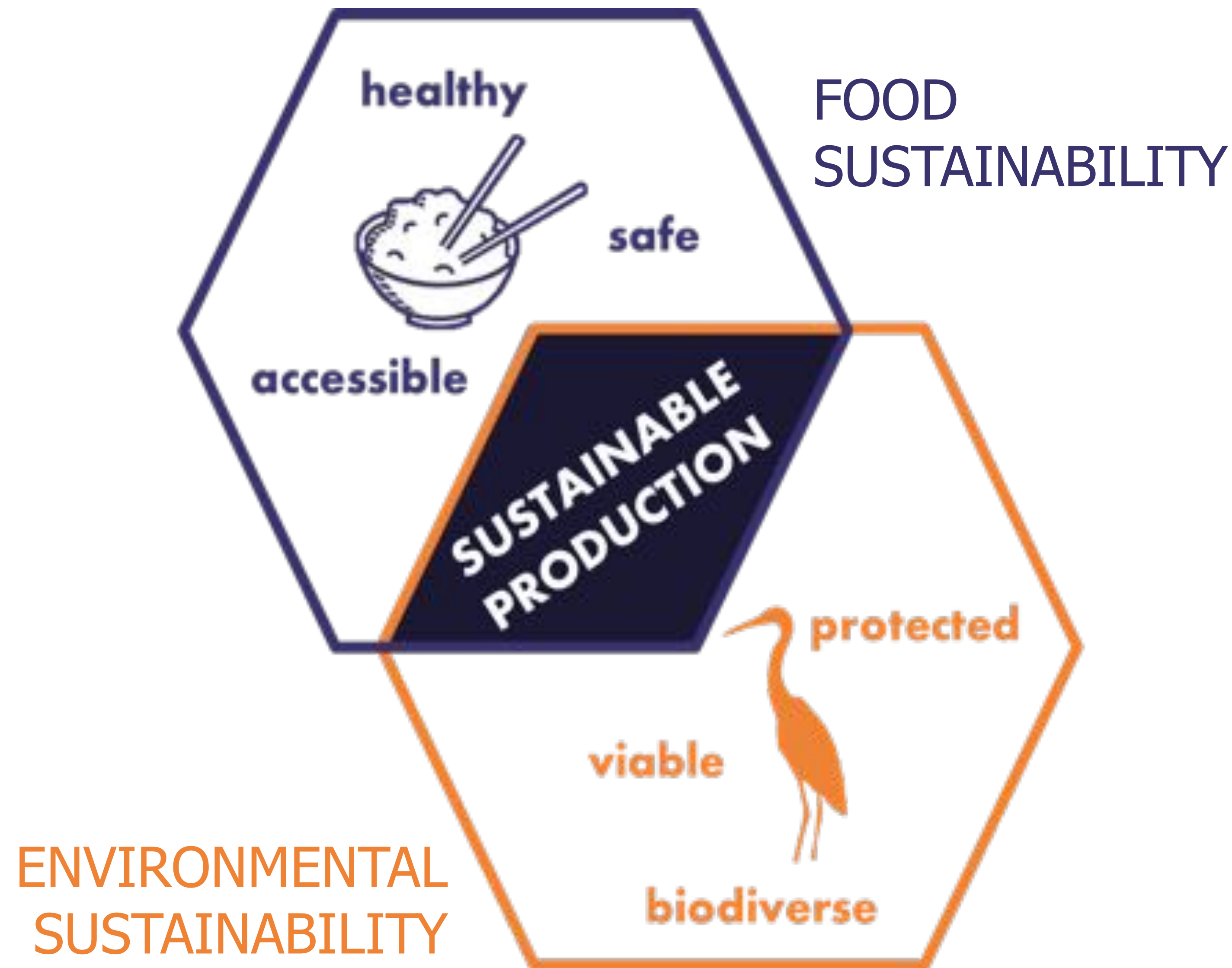


Environmental damages



Long-term effects

IPM Integrated Pest Management

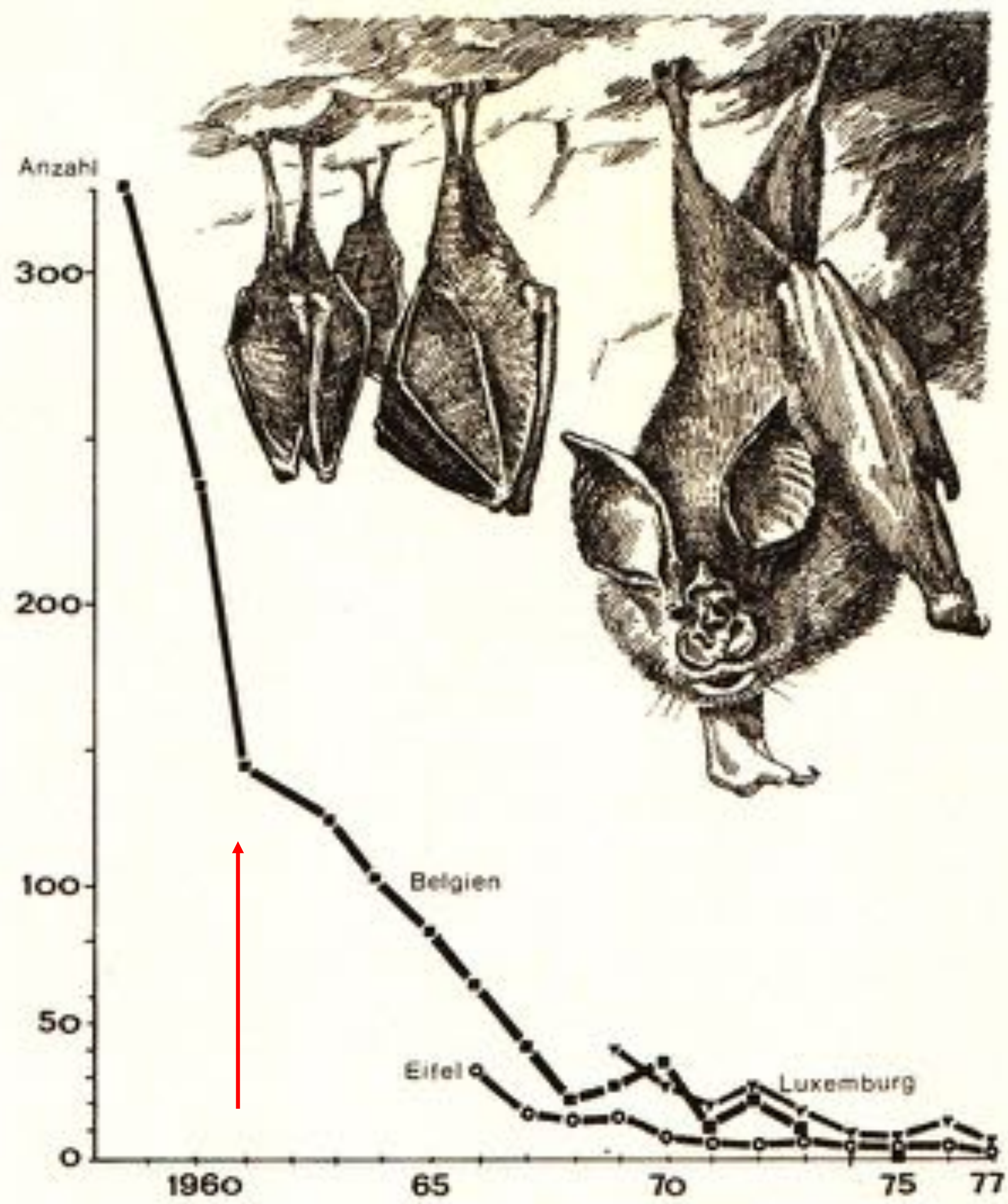




*The value of bats to the
agricultural industry across
the US is about
\$23 billion annually*

- Boyles et al. 2011





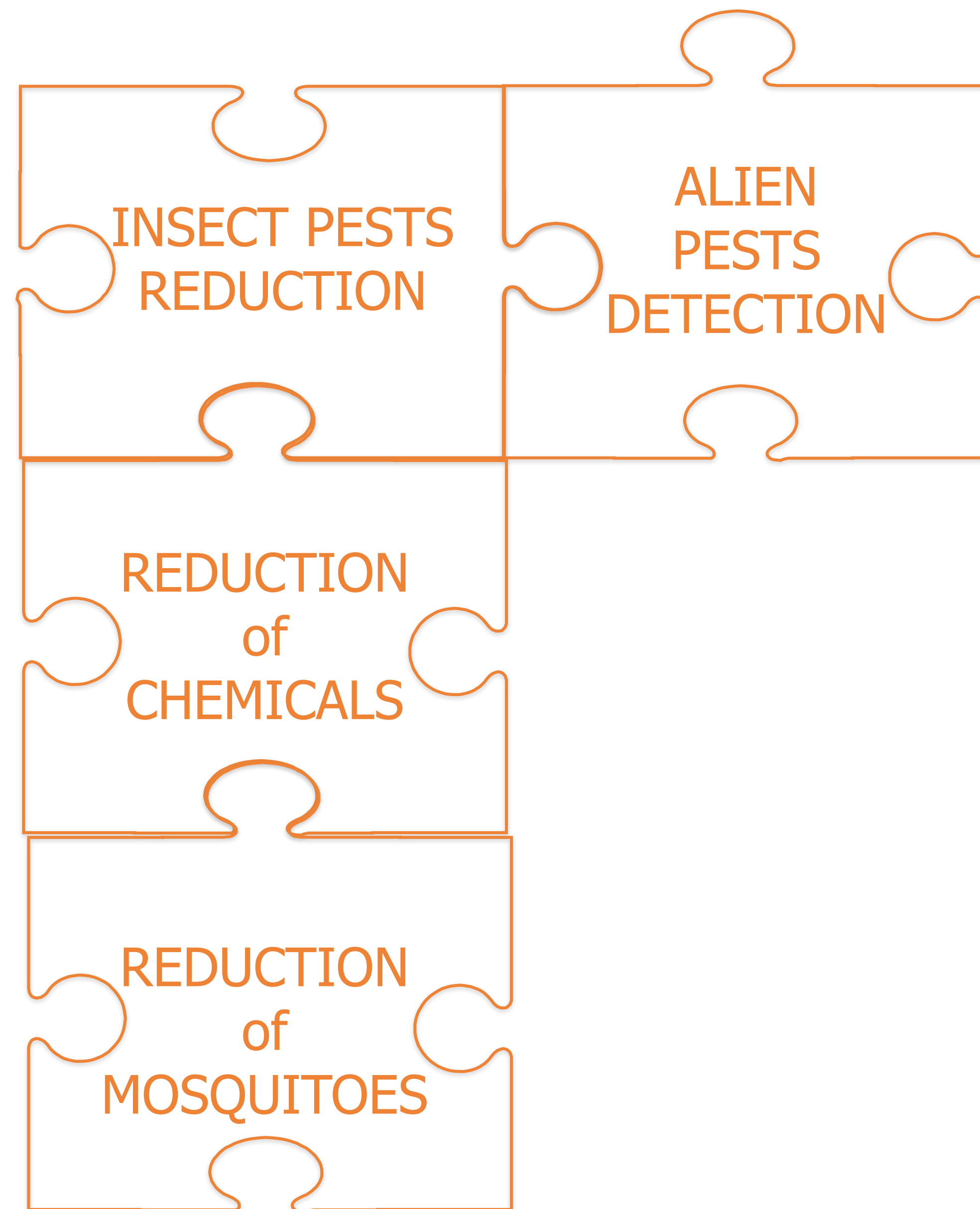
Die Kleine Hufeisennase (*Rhinolophus hipposideros*) steht in Mitteleuropa unmittelbar vor dem Aussterben (vergl. S. 114 - 117)



92/43/EEC Habitats Directive



Agreement on the Conservation of Populations of European Bats – EUROBATS, UNEP 2001





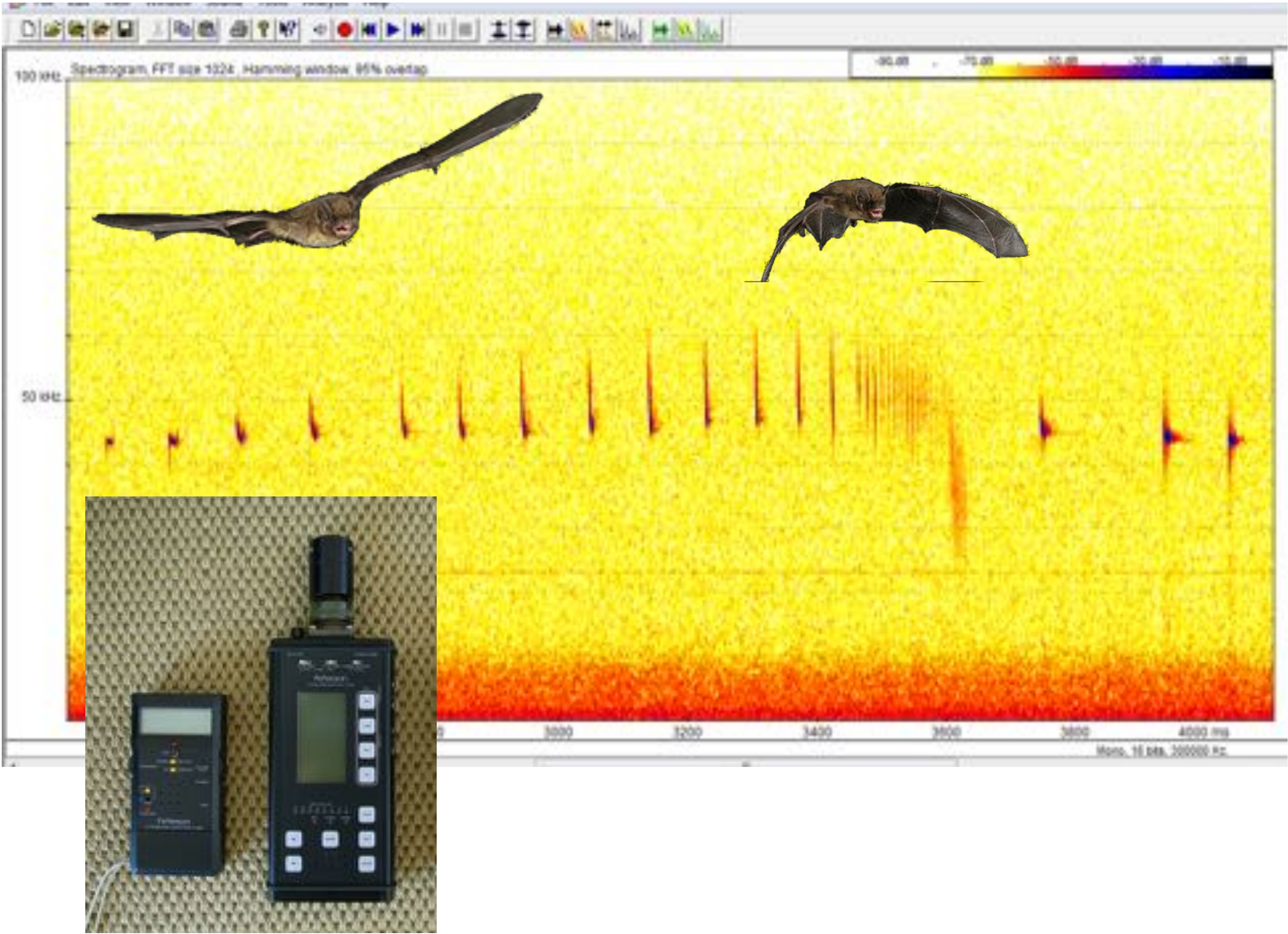
20 bat boxes
per field



BAT-TOOLS 1

3 fields





BAT-TOOLS 2



✓ **DIET** and **PEST** consumption information

✓ **CHIROSURVEILLANCE SERVICE**
use of native bats for the early detection
of invasive and emerging agricultural
pests



UNIVERSITÀ
DEGLI STUDI
DI MILANO

Budget

Batboxes realization and placement

13%



Acoustic survey

16%



Chirosurveillance service development

30%



Dissemination

15%



Best practice document

26%



The power of communication: from evil to heroes!



Say **YES!** to bats





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TOWARDS DESIRED FOOD SYSTEMS: A COMMUNITY VISIONING APPROACH



Leon Gwaka

Zimbabwe

University of the Western Cape - South Africa



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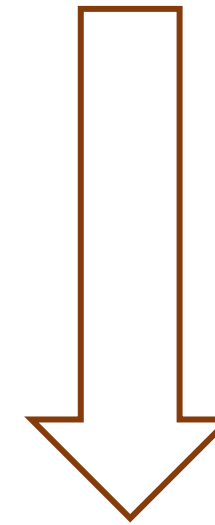
Towards desired food systems:

A community visioning approach

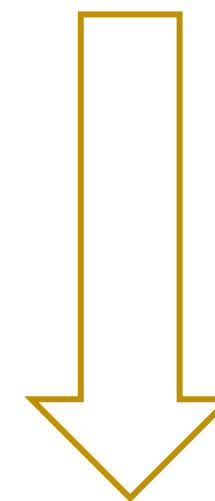
***Create your future
from your future,
not your past***

— Werner Erhard

9 billion people in 2050



Fragile food systems



Food insecurity

Progress or Regress?



2030



Communities need to be heard



How so?

- Participatory foresight technique
 - Inclusive
 - Community-led
 - Focusing on positive futures not problems

Intervention

Community Visioning: create a common vision of a desired future food system & a strategy to achieve it



Beitbridge District – Zimbabwe

Proposed activities



20% - Identify & Invite participants
(e.g. livestock system actors)

45% - Engage participants using
scientific methods e.g. community
visioning workshops

35% - Reflect on engagement
outcomes (visions) against existing
policies

Intended Outcomes

- Stimulate creativity
- Stop imposing solutions
- Avoid solving imaginary problems
- Improved community cohesion

Next steps ...

2015 -17
Community Needs
Finding



Engage diverse food
system actors



Thank you!



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OVERCOMING THE OBSOLETE OPPOSITION BETWEEN FORMAL AND INFORMAL SEED SYSTEMS: TOWARD THE NECESSARY COHERENCE OF WEST AFRICA SEED LEGISLATIONS



Morgane Leclercq
France
Laval University - Canada



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Overcoming the Obsolete Opposition Between Formal and Informal Seed Systems

Toward the necessary pluralism within
West Africa seed legislation



©Bioversity International-R.Vernooy, 2013



©CIAT-Georgina Smith, 2016

Perceived Formal/Market-based Seed System

- Private seed sector and agronomic research centers
- Protected by laws
- Often subsidized



©IRD -A. Barnaud



©IRD -A. Barnaud

Perceived Informal Seed System



- Governed by practices and social norms
- Encompass the highest diversity of seeds
- Crucial for the access to food locally

The so-called informal and formal seed systems are in fact interacting in very complicated ways.





Agricultural Research Center for
International Development (France)



Legal Research Chair in Food Diversity
and Security (Laval University, Canada)

Empirical Surveys in Burkina Faso and Senegal



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©CIRAD –V. Labeyrie



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Individual Surveys and Focus Groups



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Main Expected Results

Propositions to improve and modify the existing legal framework to better support interactions between seed system actors.



« Goal 17: Revitalize the global partnership for sustainable development »





BCFN YES!

2017



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Center
FOR FOOD
& NUTRITION

8th INTERNATIONAL FORUM ON FOOD AND NUTRITION
Milan, December 4-5 2017

ADDRESSING THE REGIONAL FOOD SECURITY ISSUES: THE SMALL ISLAND ECOSYSTEM STABILITY AND FOOD SECURITY NEXUS



Edgard Jr. Reyes
Philippines

Technical University of Dortmund - Germany



Barilla
Center
FOR FOOD
& NUTRITION

BCFN YES!
2017

A collage of images related to food security and community development. The background features several overlapping photographs: a group of people working together, a tropical beach with turquoise water, a traditional thatched-roof hut, and a sunset over a body of water. The text is overlaid on this collage in a large, bold, black font.

Addressing the Regional Food Security Issues: The Small Island Ecosystem Stability and Food Security Nexus



AGENDA 21

small islands are
strategically
important
**environment
and develop
management
resource**

*Photo Source:
Luther, Daisy (The Sleuthjournal)*



Small Islands Vulnerability



Photo Source: Google Photos

**Small
Island
Ecosystem
Stability**

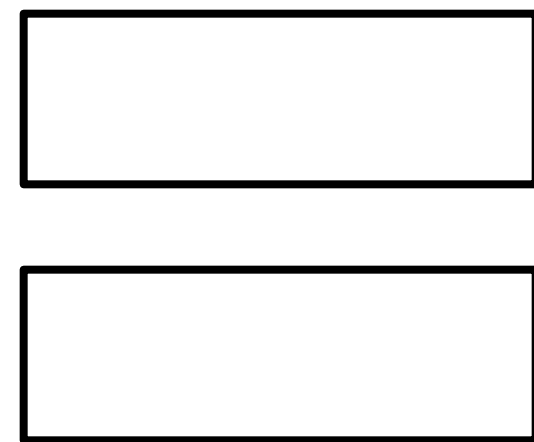
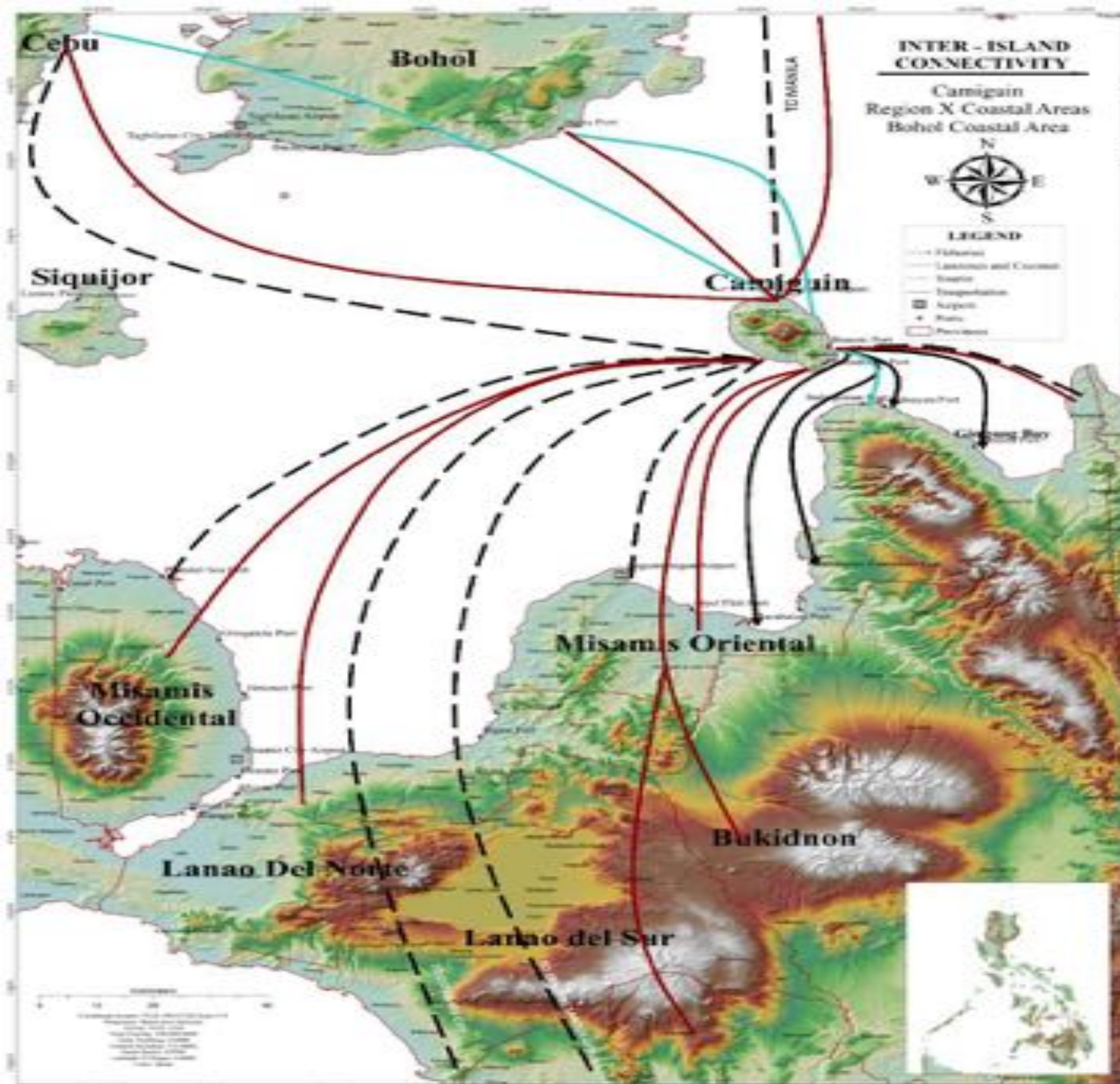
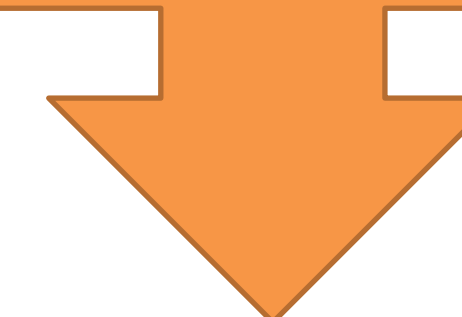


Photo Source:> Google photos



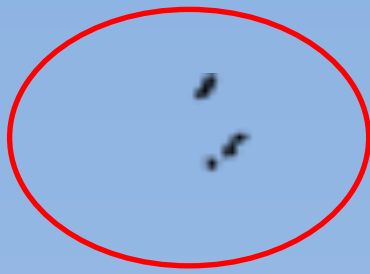
**Environmental
Stability**



**REGIONAL
LANDSCAPE
DYNAMICS**



**Socio – Economic
Security**



Local Plans/
Documents
Maps
Regional
Reports

**SECONDARY
DATA**



**DATA
ANALYSIS**

Scalogram and
Centrality

Commodity Flow
and Value Chain

Focus Group Discussions

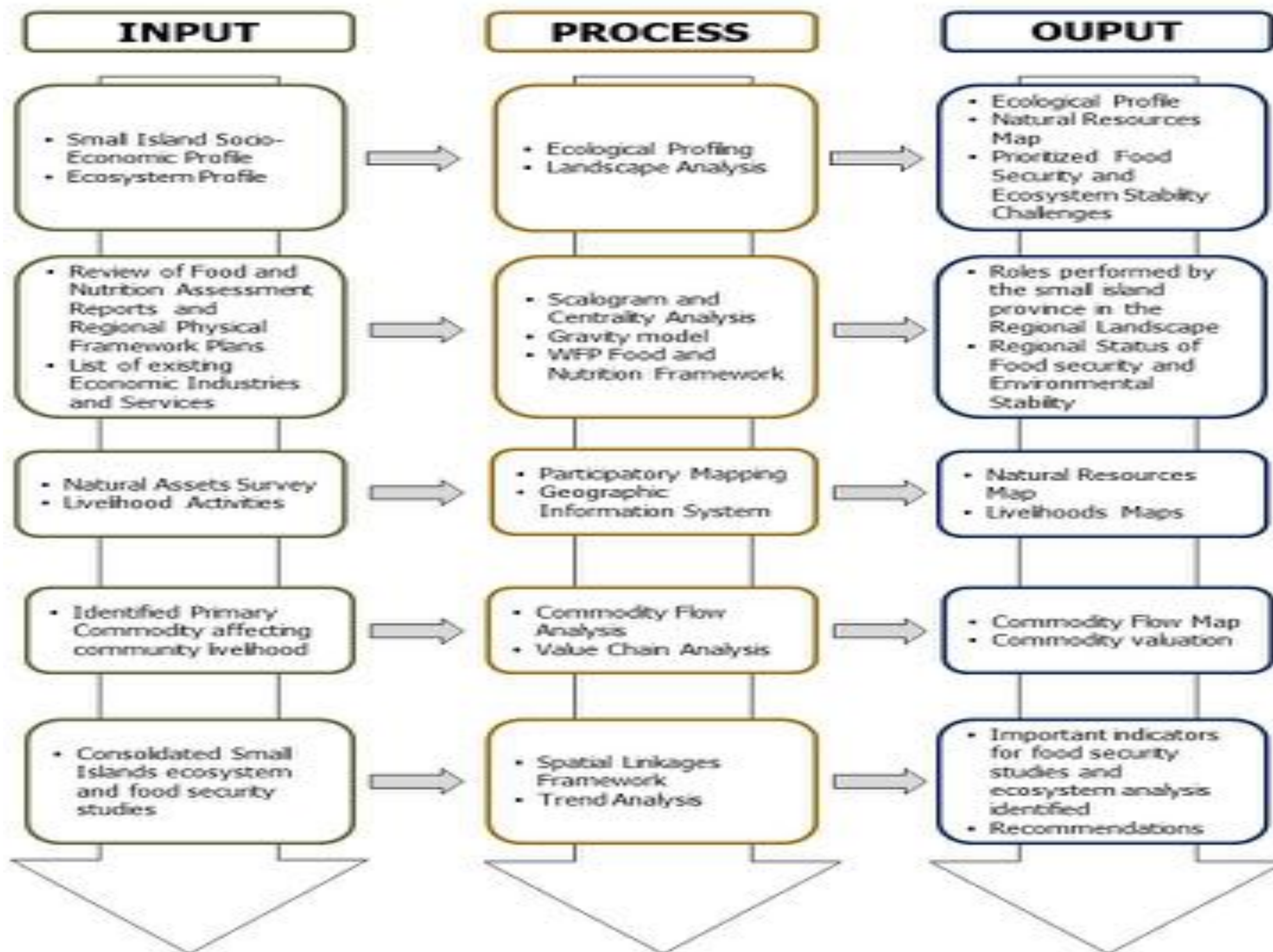
**PRIMARY
DATA**

Key Informant Interviews



Participatory Mapping





A Model Island Community

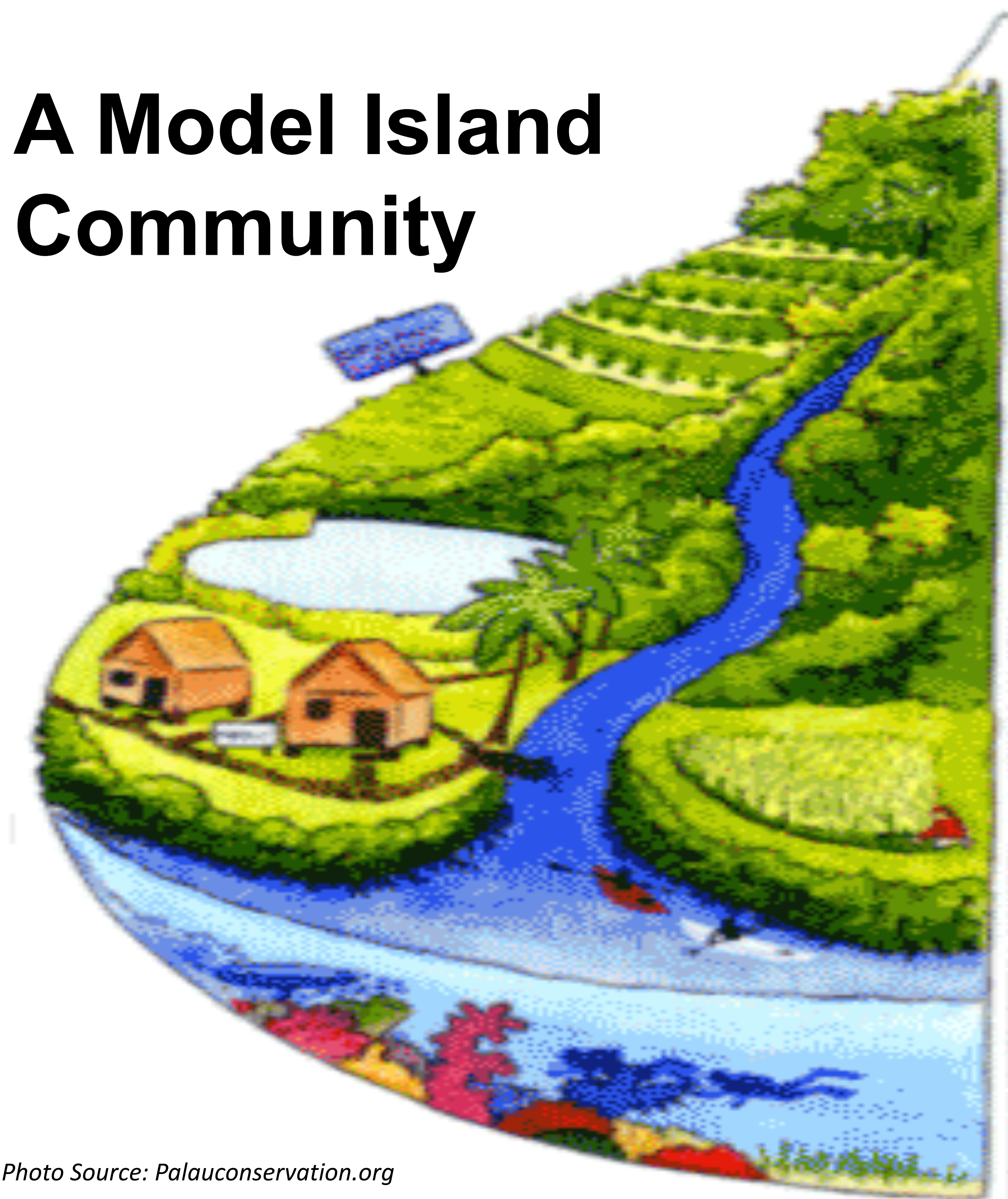


Photo Source: Palauconservation.org



**Patak-patak magiging
Dagat, Tuldok-tuldok
magiging Bundok...**

- Prof. Alleli Domingo



BCFN YES!

2017



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CDC - CLIMATE AND DIET CHANGE: THE ROLE OF INTERNATIONAL LAW



Giovanni Sciaccaluga
Italy

Università degli Studi
di Genova - Italy



Isabella Querci
Italy

Università degli Studi
di Genova - Italy



Francesca Maoli
Italy

Università degli Studi
di Genova - Italy



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& NUTRITION

BCFN YES!
2017

CDC

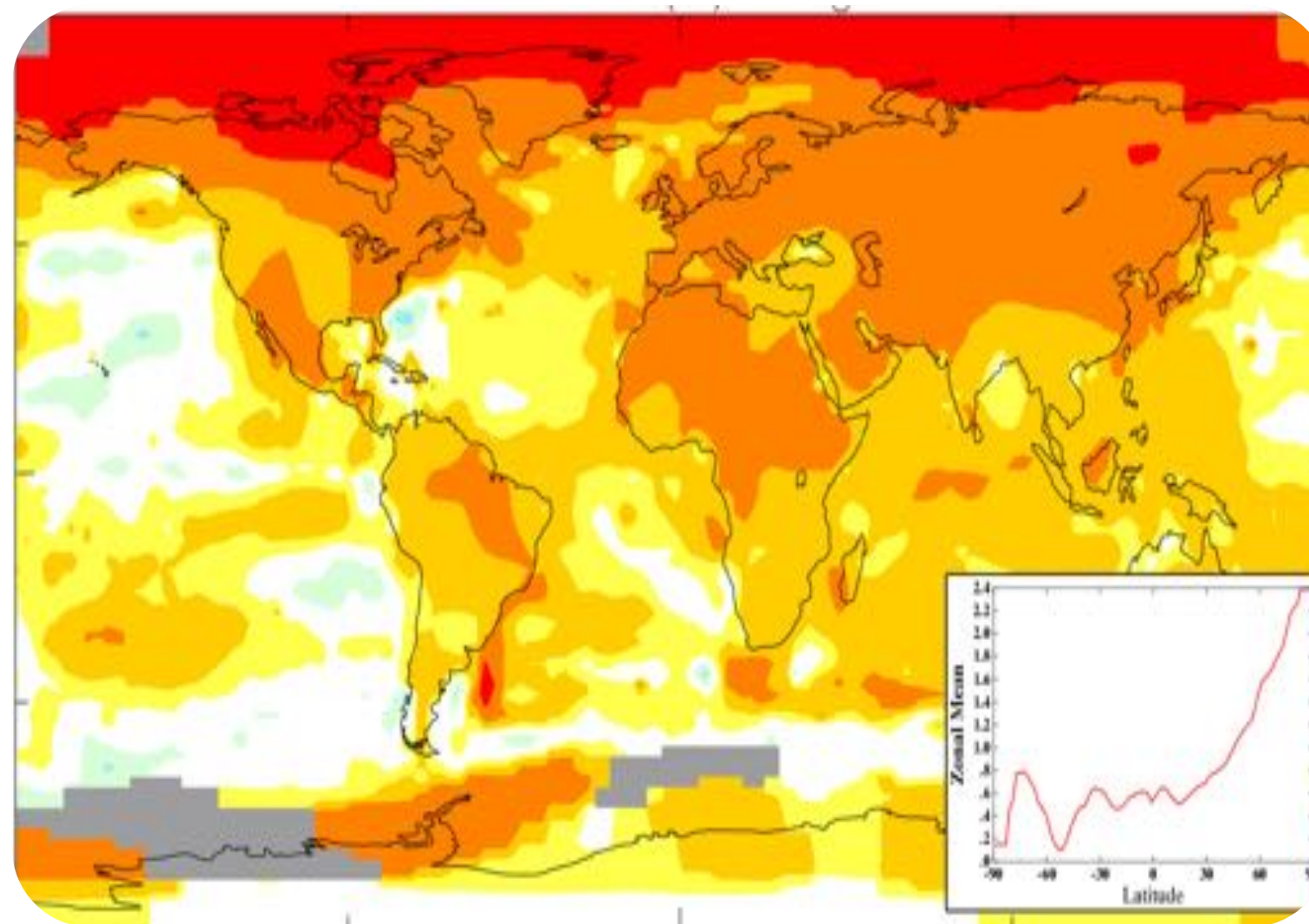
CLIMATE AND DIET CHANGE

The role of international law



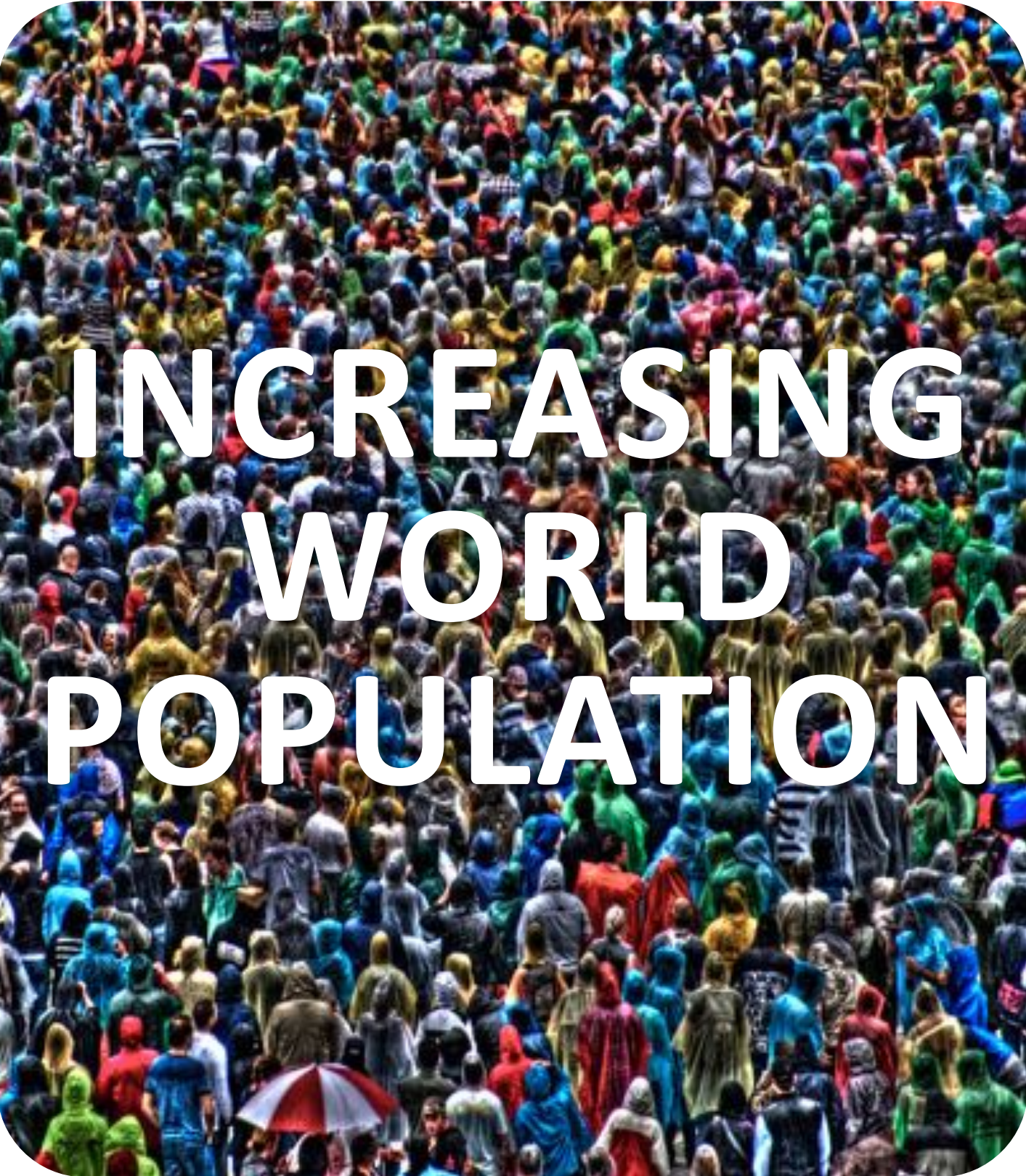


CLIMATE CHANGE: a global challenge

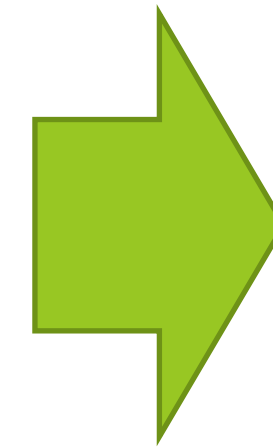


Meat-intensive diets: environmental degradation, climate change





**INCREASING
WORLD
POPULATION**



**+ INTENSIVE
LIVESTOCK**



**Changing climate,
changing diets?**



The role of the International Community



How to foster environmentally sustainable diets?

Feasibility of top-down measures

Public food supply



Carbon tax



Consumers' awareness



How to foster environmentally sustainable diets?

Feasibility of top-down measures

Public food supply



Carbon tax



Consumers' awareness



Balance-test with market-oriented commitments



WORLD TRADE ORGANIZATION





WP-1:
**Mapping the state
of the art**



WP-2:
Workshop



WP-3:
Research report



WP-0:
Sustainability



Expected outcomes

Top-down food policies



FIGHT CLIMATE CHANGE