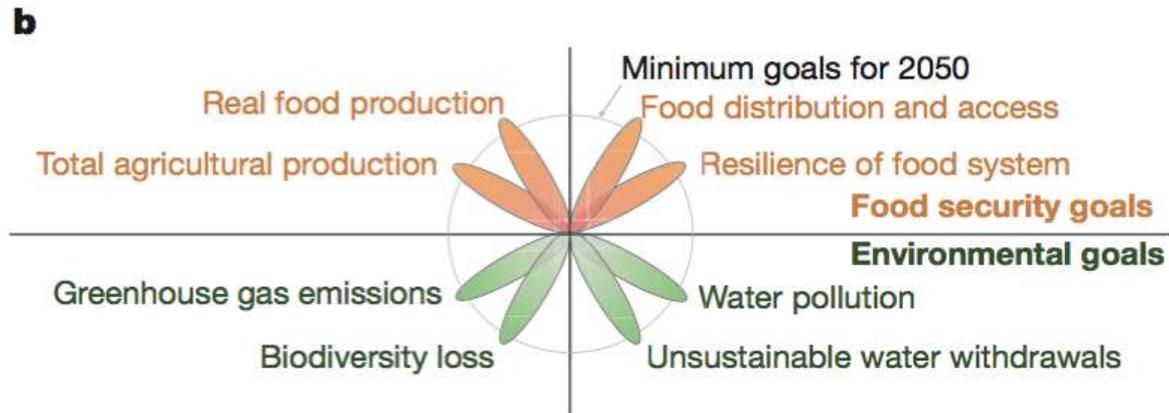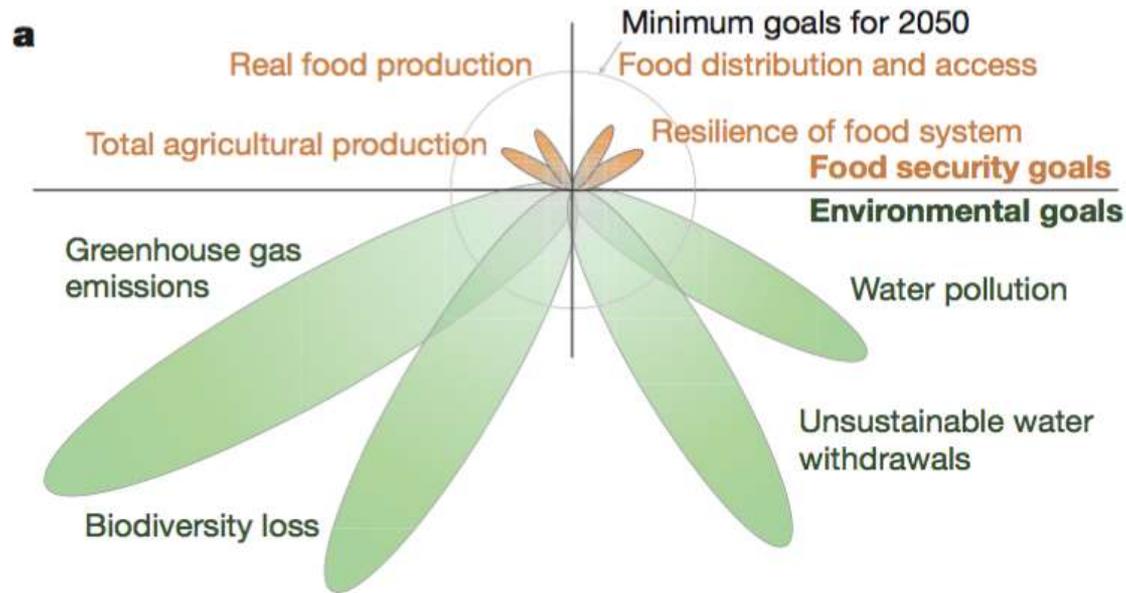# Agricultural biodiversity can nourish people and sustain the planet
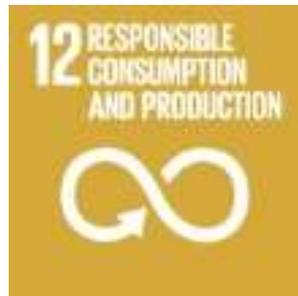
M. Ann Tutwiler, Director General, Bioversity International
Trondheim Conference on Biodiversity, May 31st 2016

Photo: Farming family in their field of eggplant and bananas, Burundi.
© Bioversity International/P. LePoint

Existing system doing neither well

Agricultural biodiversity can help achieve global goals

Agricultural biodiversity nourishes people
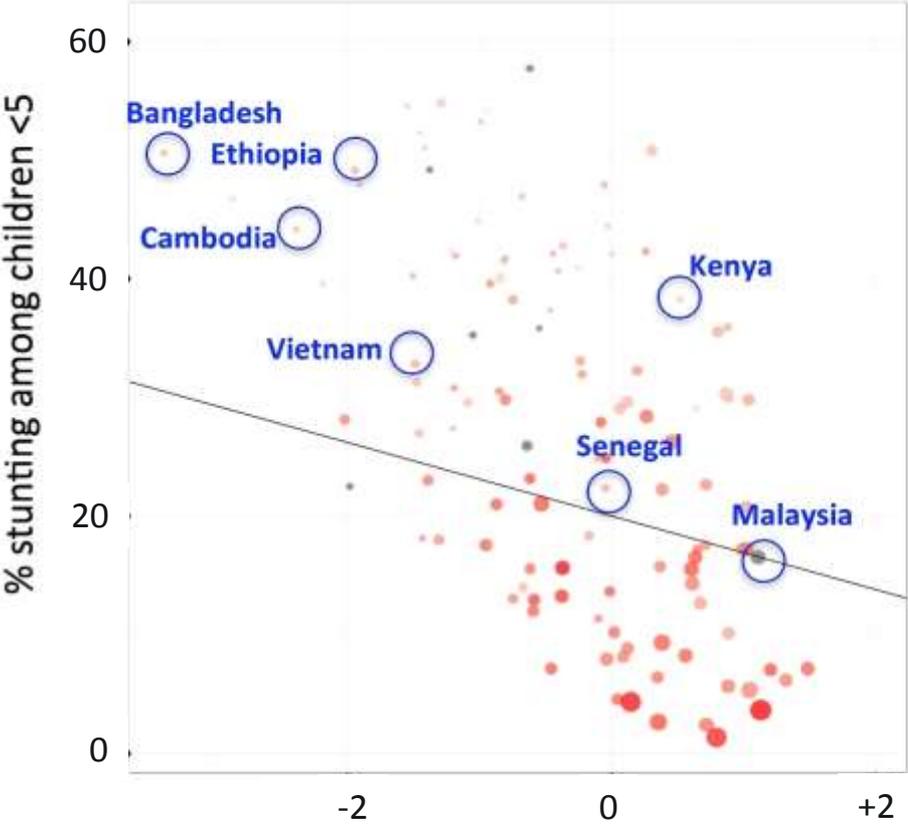

Zambia

Vietnam

Indonesia

Italy

Nepal

Mexico

Photo credit: Top – Bioversity International (E. Hermanowicz, J. Raneri, B. Sthapit)
Bottom – Bioversity International/R. Faidutti, LI-BIRD/P. Shrestha, Nicolas Kniseley
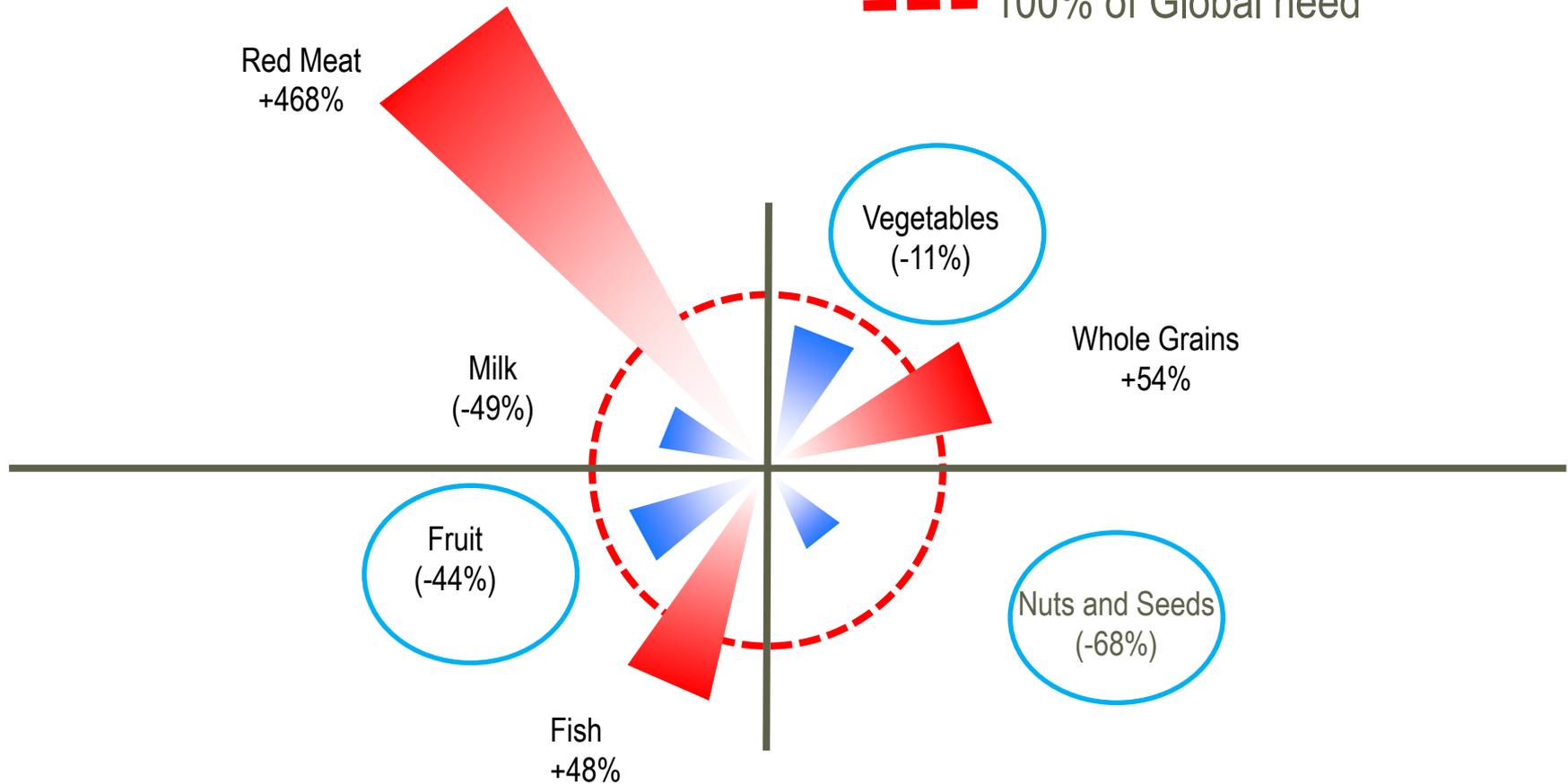
Diversity and health are linked

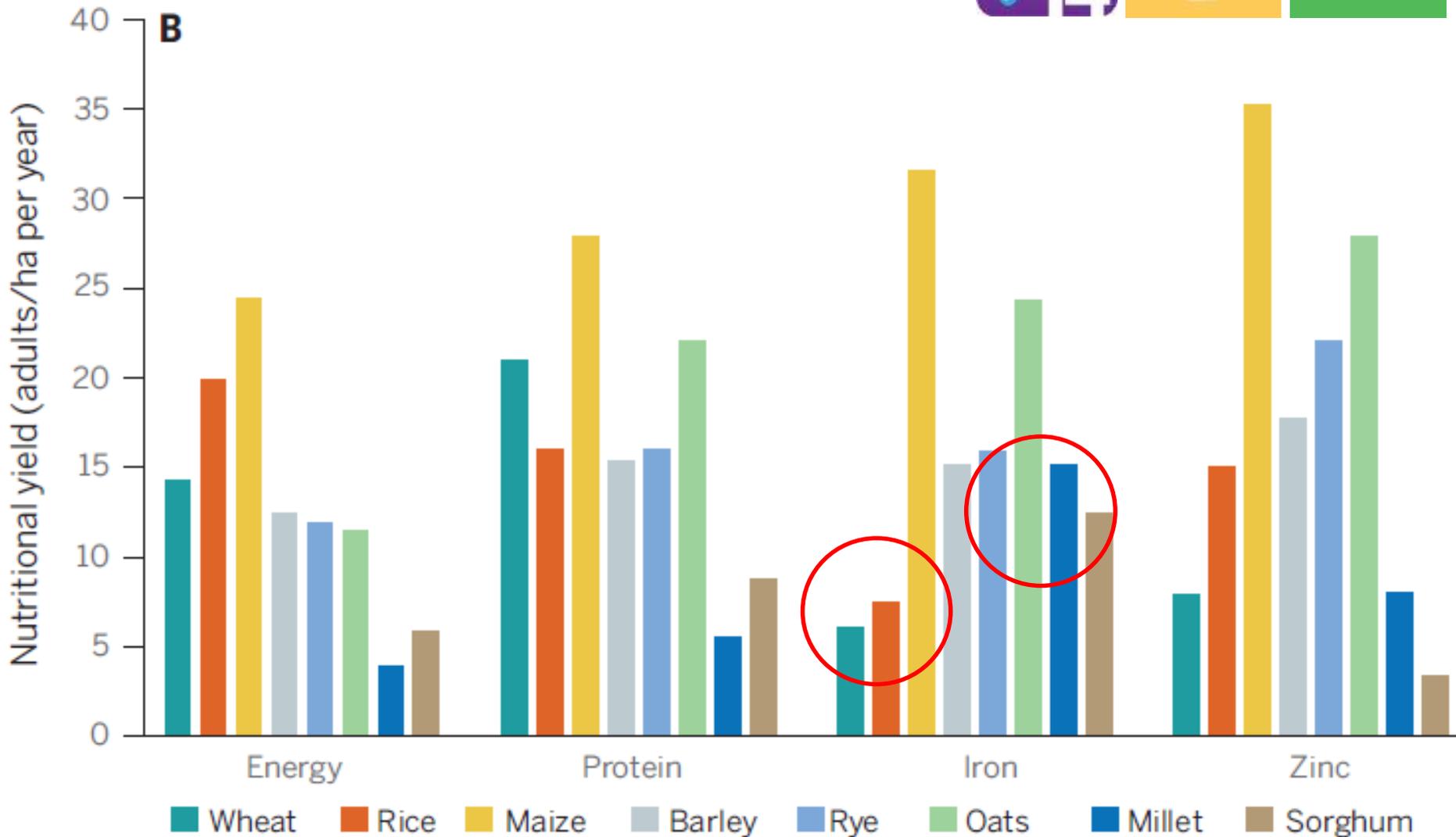Vietnam: Bioversity International/J. Raneri

We don't grow enough vegetables, fruits, nuts and seeds

- - - - 100% of Global need

Red Meat
+468%

Vegetables
(-11%)

Whole Grains
+54%

Milk
(-49%)

Fruit
(-44%)

Nuts and Seeds
(-68%)

Fish
+48%

Adapted from Murray 2014

Counting nutrition, not calories

Agricultural biodiversity sustains the planet: services to agriculture
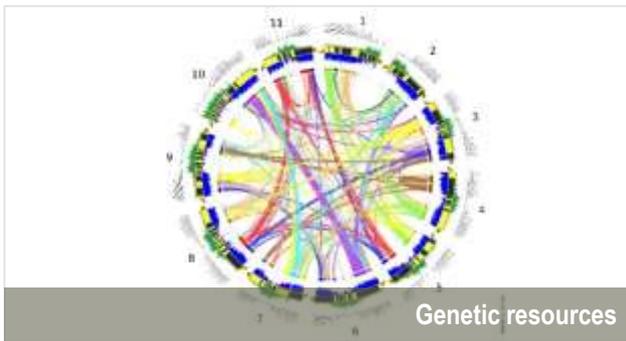

Pollination

Pest control

Nutrient cycling

Soil conservation

Genetic resources

Water

Photo credit: Top – Bioversity International (C. Zanzanaini, N. Capozio, P. Lepoint)
Bottom – Bioversity International/A. Grasso, G. Martin, Bioversity International/C. Zanzainini

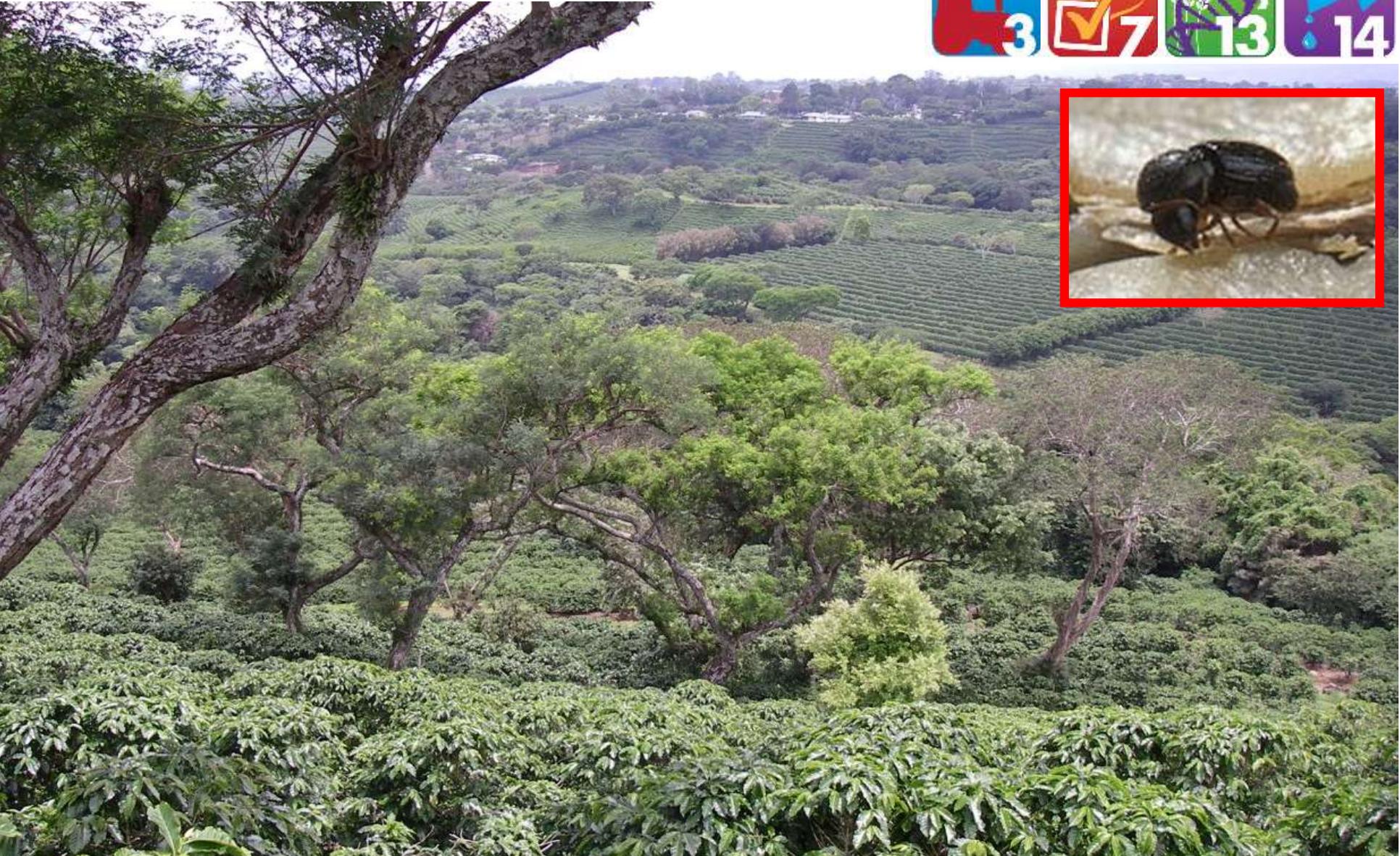# Diversity in farmers' fields reduces pest and disease damage

Worldwide farmers lose on average 13% of annual harvest to pests and diseases.

A farmer can lose 100% of entire crop from a single pest or disease.

Angular leaf spot disease on bean plant, Uganda
Credit: Bioversity International/P. de Santis

Diversity in landscapes stops pests in their tracks

Diversity in fields enhances soil conservation and reduces sedimentation

Seeds for needs

Over 20,000 smallholder farmers in 13 countries to assess how agricultural biodiversity can minimize climate change risks.

Program provides farmers with more information and access to diversity, enabling them to choose the best options to address their particular climate challenges.

Agricultural biodiversity provides services to the people

Carbon

Water Quality

Habitat

Scenic Value

Flood Protection

Connectivity

Photo credit: Top – Bioversity International/N.Capozio, C.Zanzanaini, C.Zanzanaini
Bottom – Bioversity International/S.Padulosi, B.Saugat, S.Edake

Diversified agricultural landscapes protect wild biodiversity

and profits farmers

A decision tool for integrating agriculture and ecosystem services

1. Scenario Generator

2. Select relevant ES

3. Run the models

5. Report describing link and contribution to SDGs

4. Results output

A single seed can deliver multiple SDGs if it is planted into a healthy, productive and biodiverse agroecological system

Agrobiodiversity for Sustainable Food Systems

Report on the
State of Knowledge

2016

COMING SOON

Thank you

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