

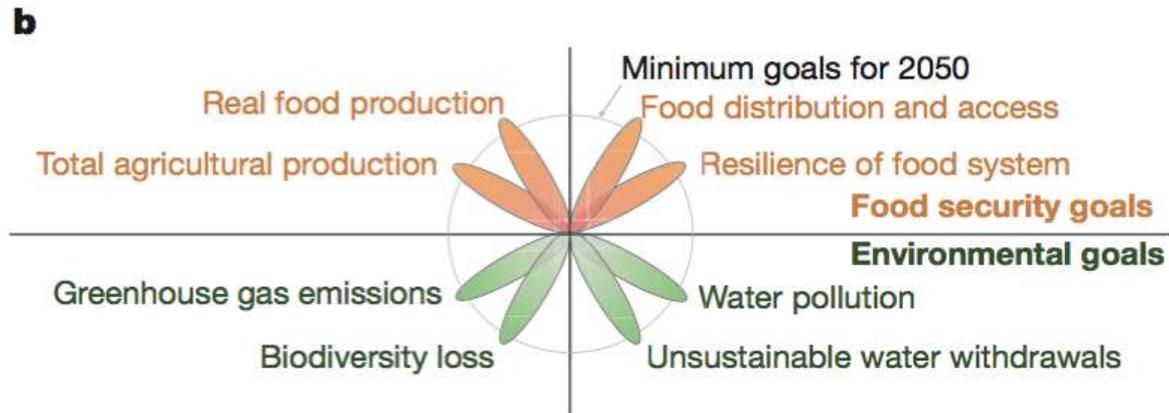
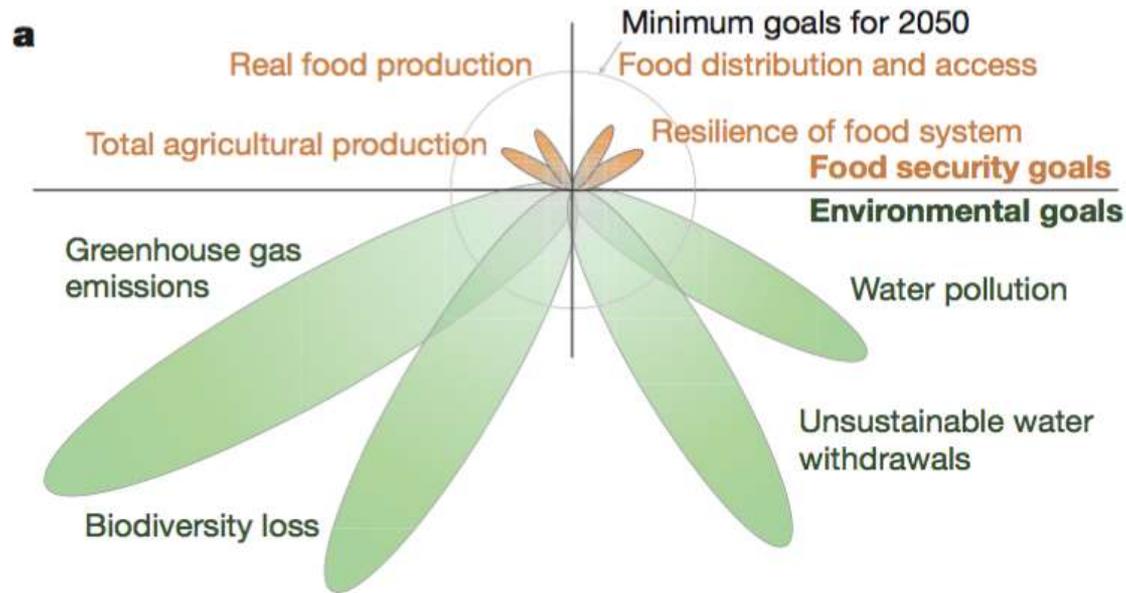


# Agricultural biodiversity can nourish people and sustain the planet

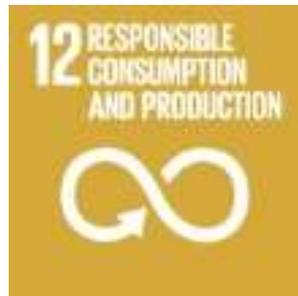
M. Ann Tutwiler, Director General, Bioversity International  
Trondheim Conference on Biodiversity, May 31<sup>st</sup> 2016

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



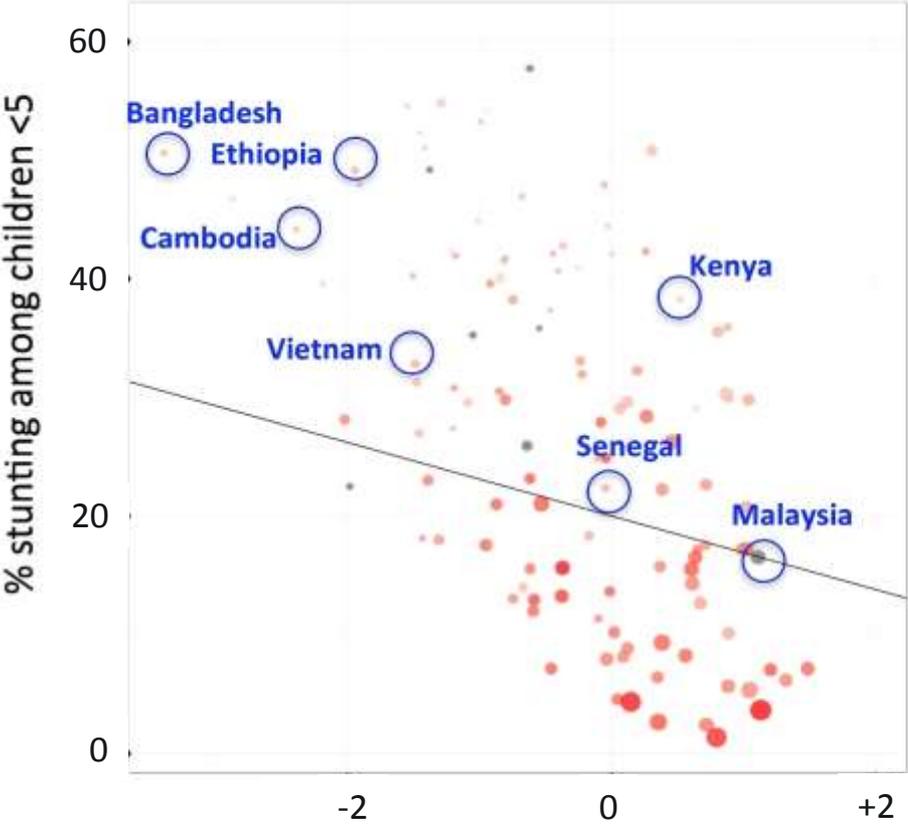
Nepal



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

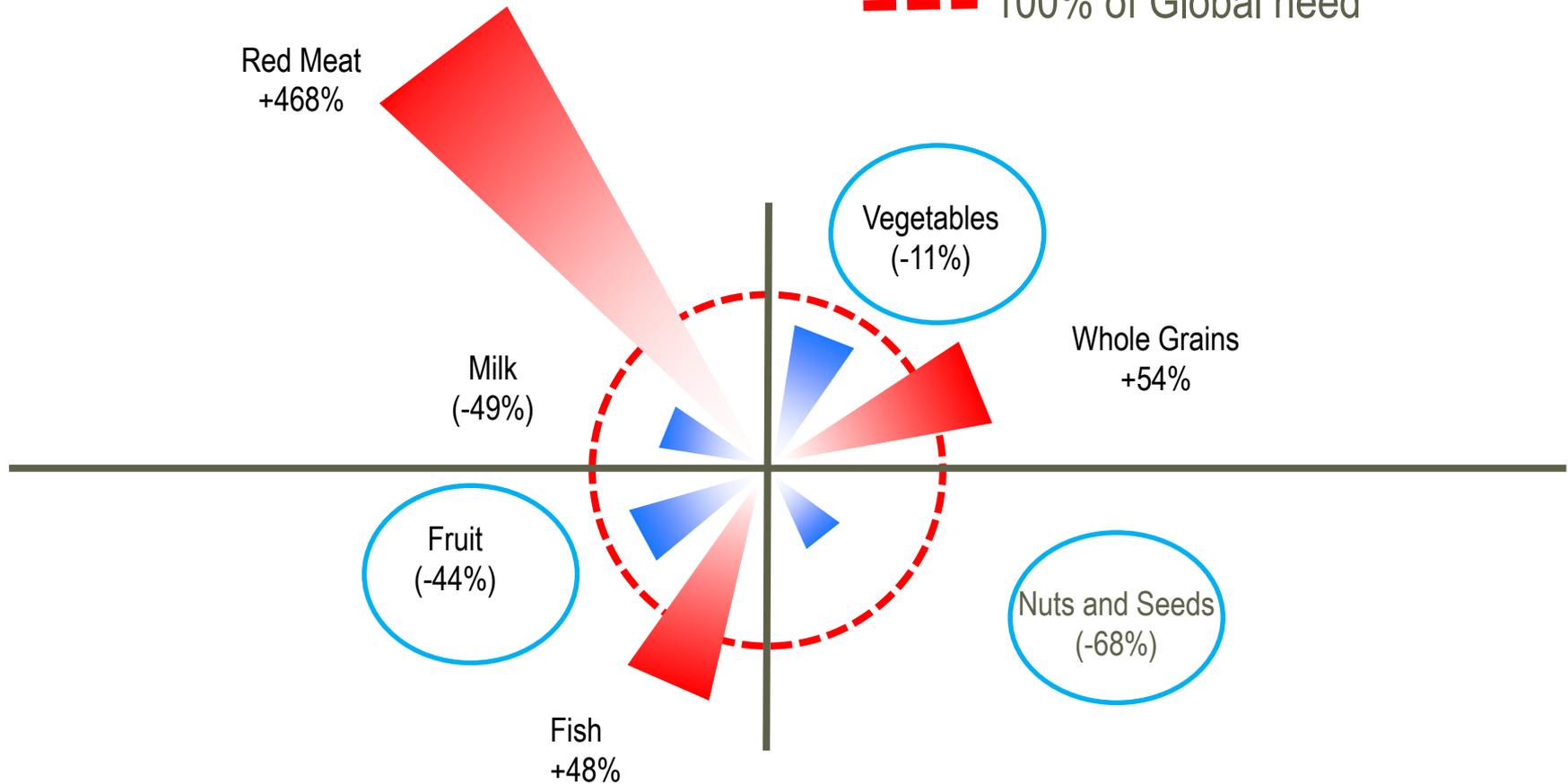


Vietnam: Bioversity International/J. Raneri

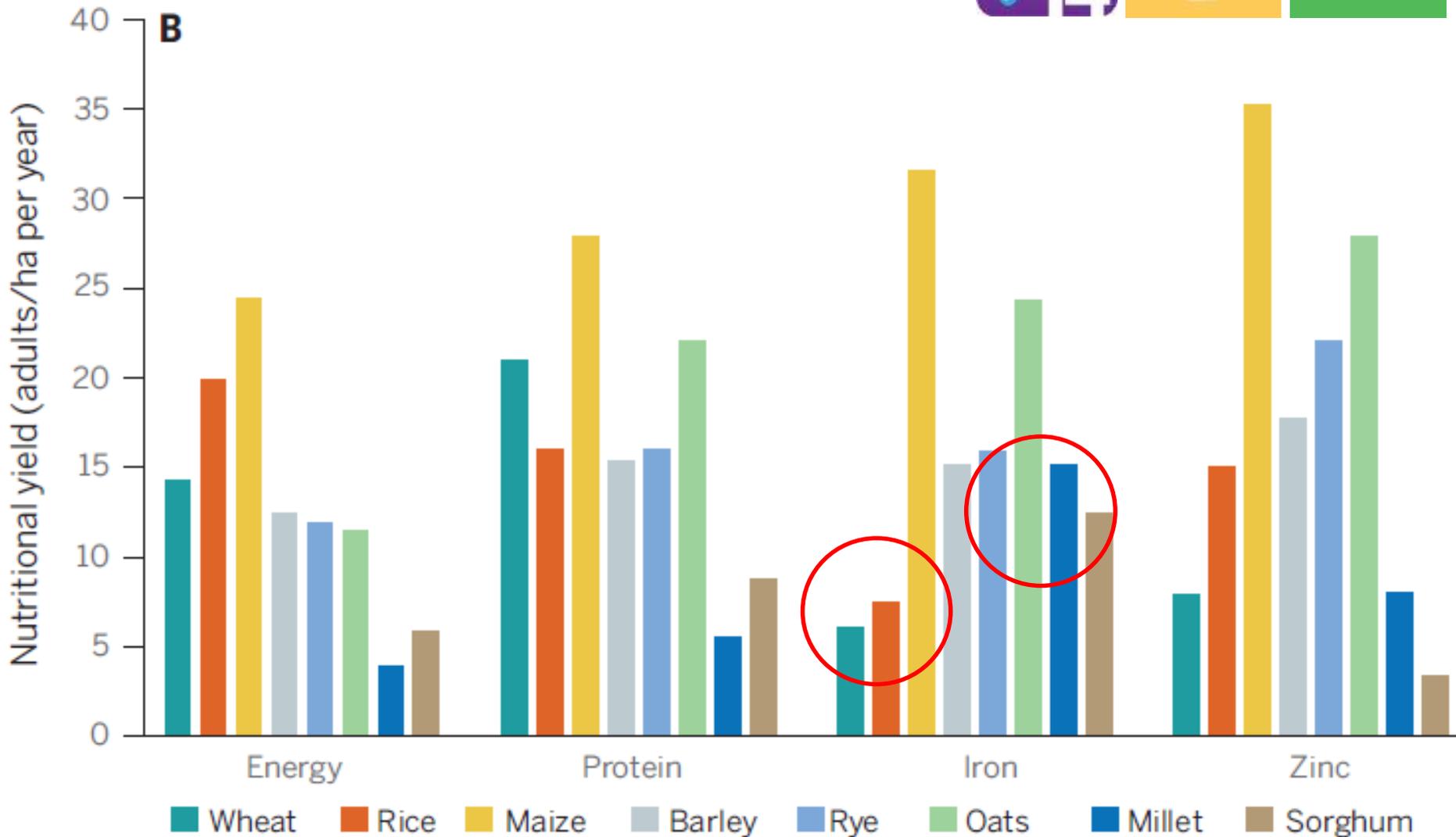
# We don't grow enough vegetables, fruits, nuts and seeds



--- 100% of Global need



# Counting nutrition, not calories



# Agricultural biodiversity sustains the planet: services to agriculture



Pollination



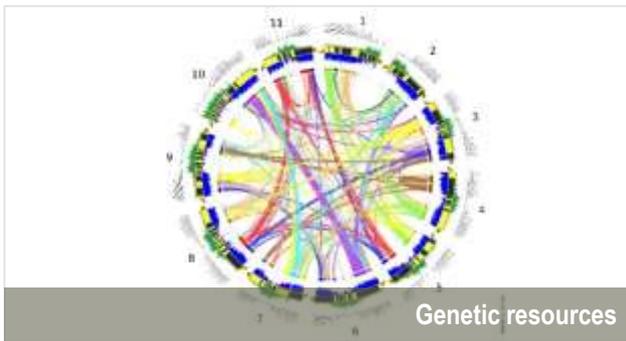
Pest control



Nutrient cycling



Soil conservation



Genetic resources



Water

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

# Diversity in farmers' fields reduces pest and disease damage

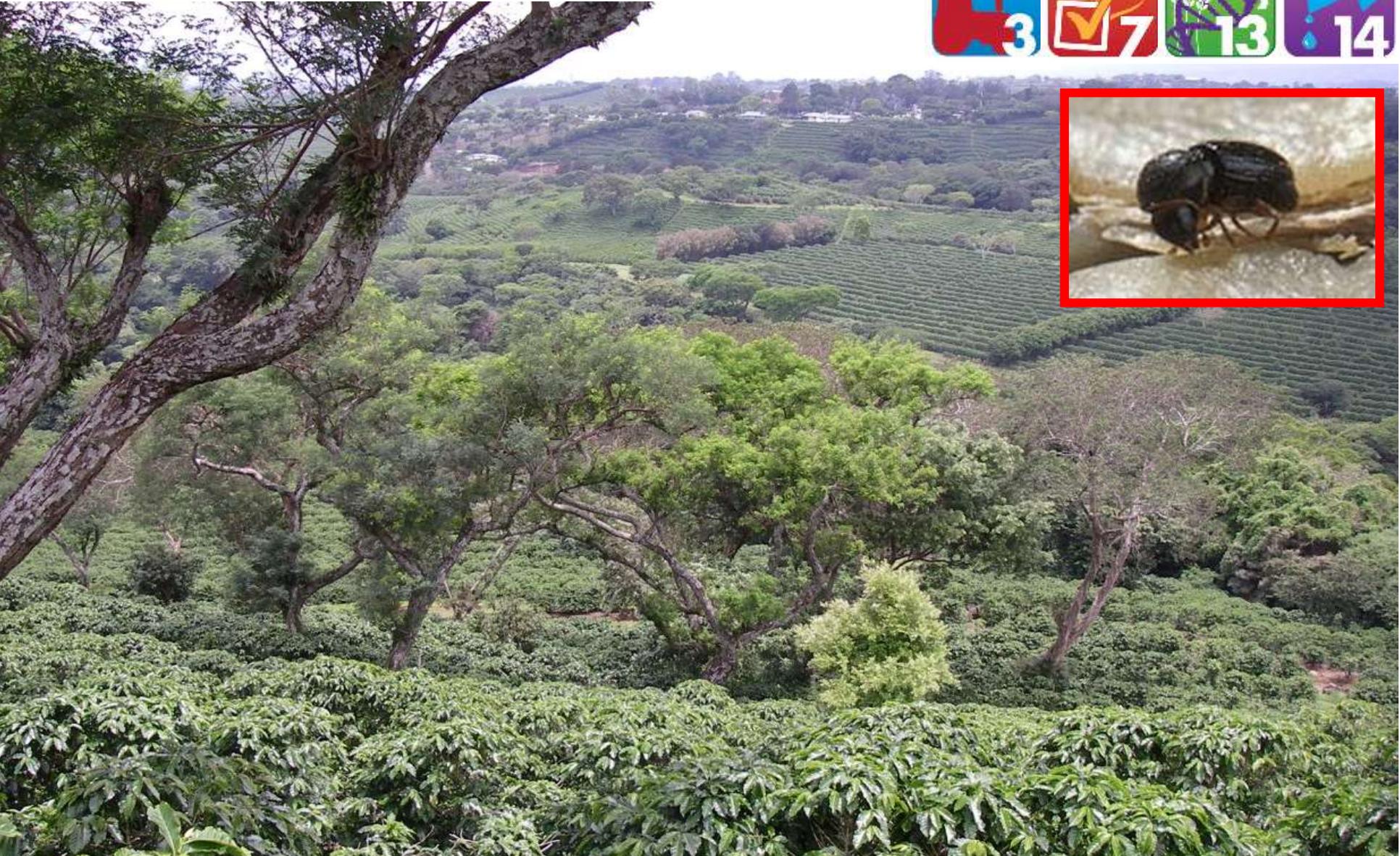


Worldwide farmers lose on average 13% of annual harvest to pests and diseases.

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

3. Run the models

2. Select relevant ES

The screenshot displays the MESH-SDG Model software interface. The main window is titled "Run MESH model" and contains several panels:

- Define Scenarios:** A panel on the left showing a list of scenarios under the "Baseline" category. A "Create a report from this run" dialog box is overlaid on this panel, offering options: "Executive Summary", "Policy Brief", "In-depth Scenario Comparison", and "Full Technical Report".
- Run MESH model:** The central panel with a "Run" button and a "View Input and Output Maps" section. A map titled "Baseline nitrogen export" is displayed, showing a red and yellow area with a color scale from 50 to 100 tons.
- Choose which Models to Run:** A panel on the right with a red border, listing various ecosystem services (ES) with checkboxes and "Setup" buttons. Selected ES include Food Security and Nutrition, Nutrient Retention, Hydropower Water Yield, Carbon Storage, and Pollination.

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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