



Forum Nachhaltiger Kakao

German Initiative on Sustainable Cocoa



Vortrag

**Zahlung für Ökosystemleistungen für den Kakaosektor: Überblick,
Fallstudien und konzeptioneller Rahmen für neue Maßnahmen und
Nutzen für Kakao-bäuerinnen und -bauern und ihre Gemeinschaften
(ICCO Studie)**

Florent Dji

South Pole

Payment for ecosystem services for the cocoa sector: overview, case studies and conceptual framework for new measures and benefits for cocoa farmers and their communities (ICCO study)

GISCO General Meeting

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Forum Nachhaltiger Kakao
German Initiative on Sustainable Cocoa



The Problem



The Problem

- Increasing environmental and economic challenges related to productivity issues, access to living income and deforestation.
- Growing climate, water and biodiversity crisis, which significantly impacts the livelihoods of smallholders cocoa farmers.
- Uncertainty around the permanence of climate impact and alignment with national and international regulatory framework
- Farmers need support to transition to climate-smart cocoa production and agroforestry practices



Existing Approach

- **Cocoa sustainability and certification projects** (UTZ, RA, FT, Organic) focusing mainly on Good agricultural practice
- **Silo'd climate action projects** on the ground implemented within companies value chains
- **Scattered** interventions using **different approach**



Emerging Approach

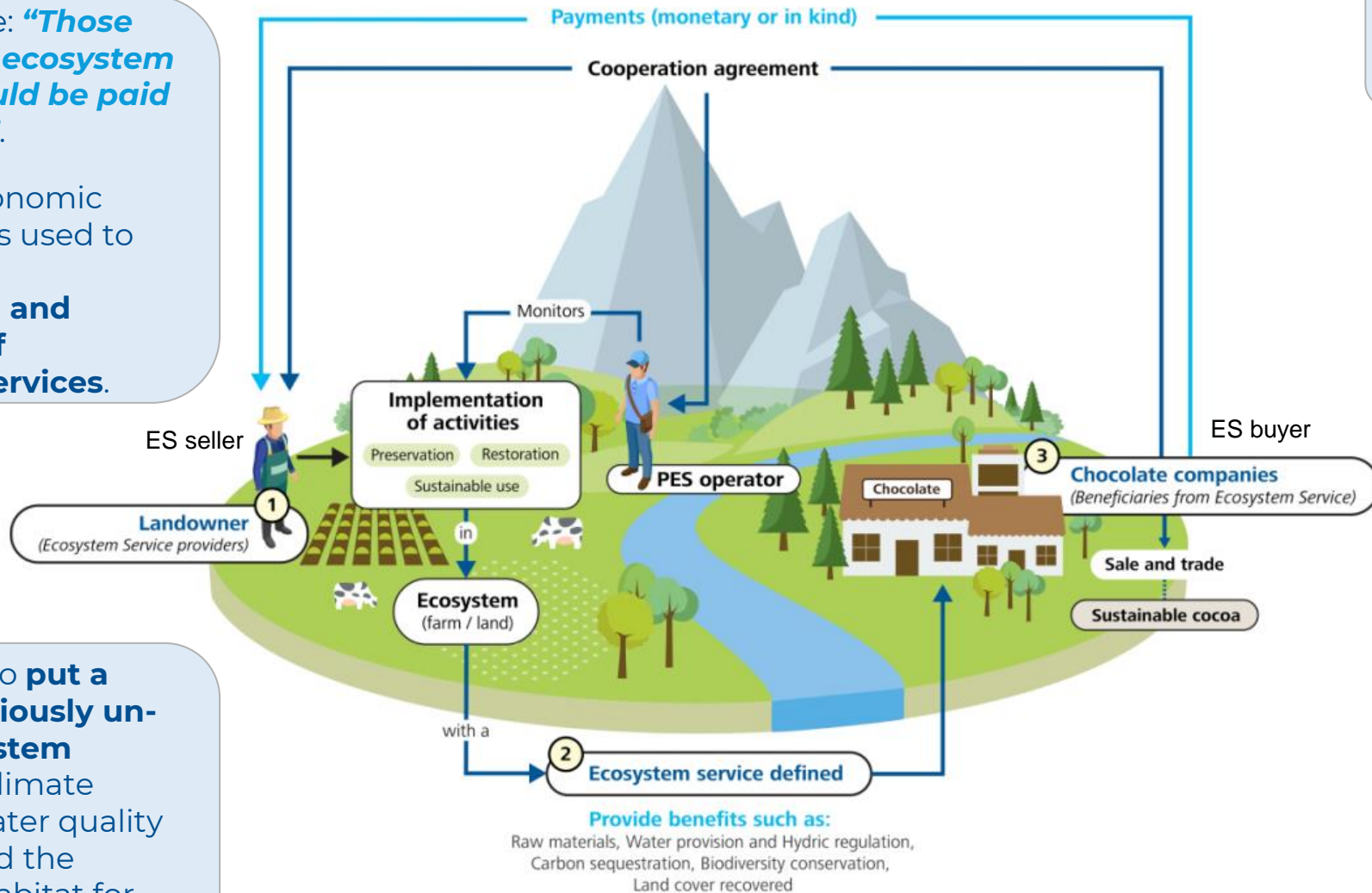
- Collective action through landscape approach to to avoid potential leakage and carbon reversal issues
- Pooling more public-private finance into sourcing landscapes
- Piloting landscape MRV to enable traceability and claims at the landscape level
- Explore options to provide sustainable incentives to cocoa farmers and communities for sustainable cocoa production, forest rehabilitation and protection

PES scheme in cocoa landscape

Basic premise: *“Those who provide ecosystem services should be paid for doing so”.*

Voluntary economic arrangements used to **reward the conservation and continuity of ecosystem services.**

Opportunity to **put a price on previously un-priced ecosystem services** like climate regulation, water quality regulation and the provision of habitat for wildlife.



Key principles of a PES Scheme

- Bound to **specific geographical area** (cocoa Landscape)
- The PES scheme must be **conditional and performance-based**
- **Ensuring permanence:** non reversibility of interventions to ensure continuation of ES
- The PES scheme **should be additional**
- **Avoiding leakage:** non displacement of environmental degradation to other areas
- Payments are made by the **beneficiaries** of ES
- Payment should be **directly made to the ES providers.**

Types of project

1- Off-farm carbon projects

Off-farm carbon in/offsetting credits
e.g. reforestation, conservation

2- Community projects

Off-farm natural capital assets or credits
e.g. water treatment, biodiversity conservation

3- On-farm projects

Supply chain SBTs low carbon emission cocoa
e.g. Zero deforestation, reduced fertilizer use, Tree planting, Tree Conservation etc



Potential Benefits of a Landscape PES schemes

For cocoa farmers

- Contribute to the improvement of income and livelihoods of farmers and their communities.
- Ensure the continued **provision of ecosystem services essential for the sustainability** of cocoa farming, nature and human well-being (mitigation of climate change impacts).

For cocoa companies

- **Improve market and international investor confidence and enable them to meet their climate commitments** (e.g. zero deforestation cocoa, SBTs and Net Zero, low carbon chocolate production, etc.)

For Cocoa Producing Countries

- An instrument to contribute to the **achievement of the country's NDC**, an emission reduction commitments taken by the country under the Paris Agreement
- A pilot to prepare for the entry into force of **international zero deforestation cocoa regulations** and to maintain the country's trade position (e.g. the European law on imported deforestation).
- **Mobilise climate finance** for forest conservation and rehabilitation, sustainable agriculture, including agroforestry on cocoa farms, watershed and biodiversity conservation.



About the ICCO PES project

Project Objectives

Design and promote a landscape level Payment for Ecosystem Services (PES) as a tool for alleviating poverty and fostering good stewardship of natural resources. Develop and implement 3 pilot projects in cocoa producing countries

- **Part 1 : PES research and development of the Cocoa Landscape PES Framework**
 - Reviewed for 3 ICCO country members (Indonesia, Cameroon, Peru) the existing PES schemes and their reported impact (in & outside of the cocoa sector and at regional/national levels)
 - Developed a tailored Payment for Ecosystem Services Framework for Cocoa Landscapes to pilot in these cocoa producing countries
- **Now moving into the Project Part 2 which is associated to developing 3 PES pilot projects**

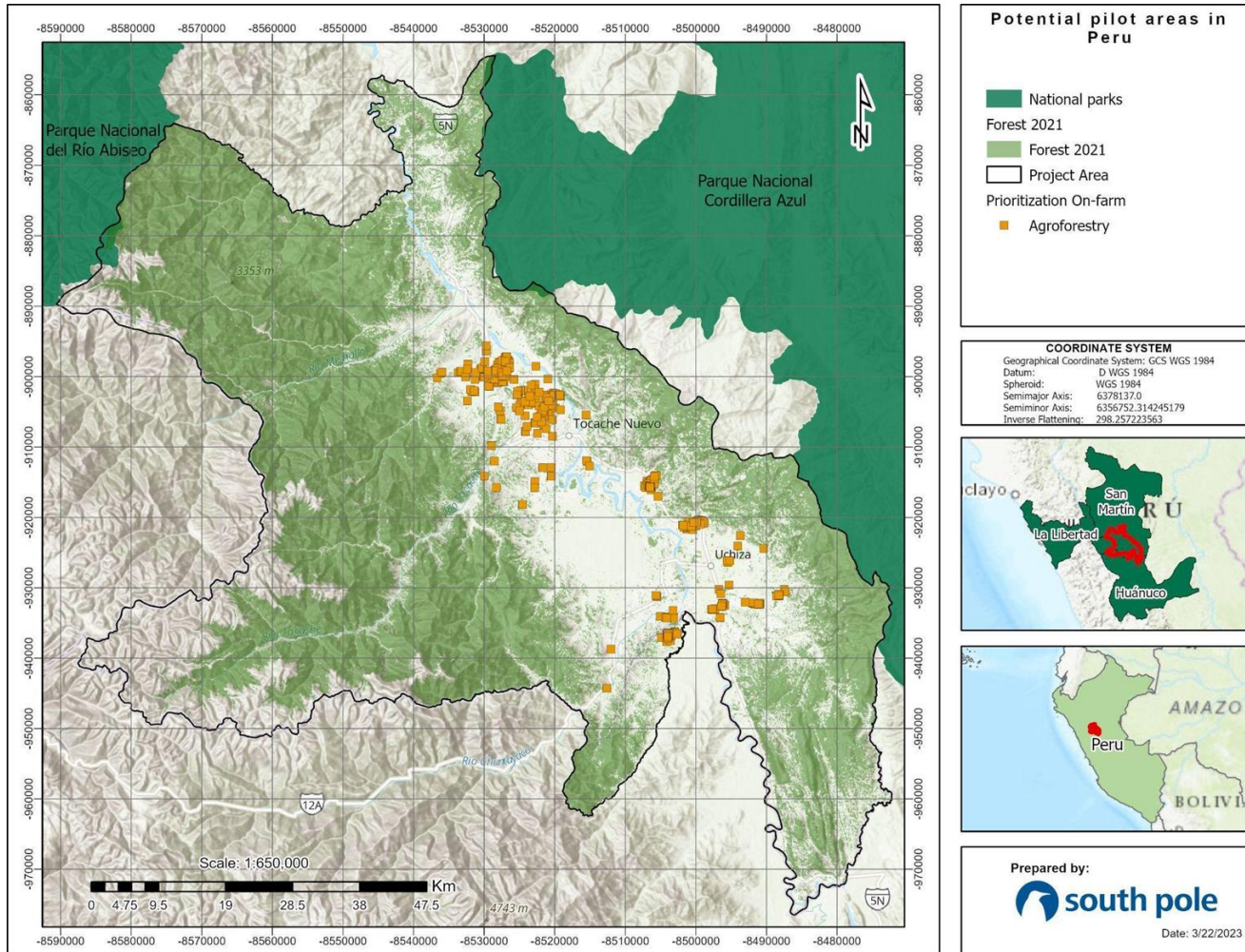
The countries pre-selected for the review:

Indonesia, Cameroon, and Peru



Location and PES options of the 2 Case studies

Map of project area in Peru: Tocache Landscape

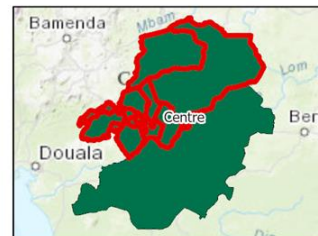
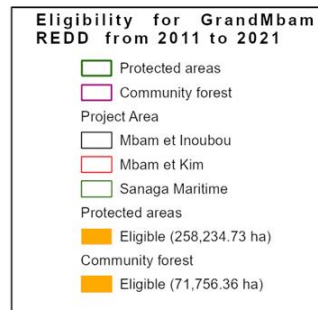
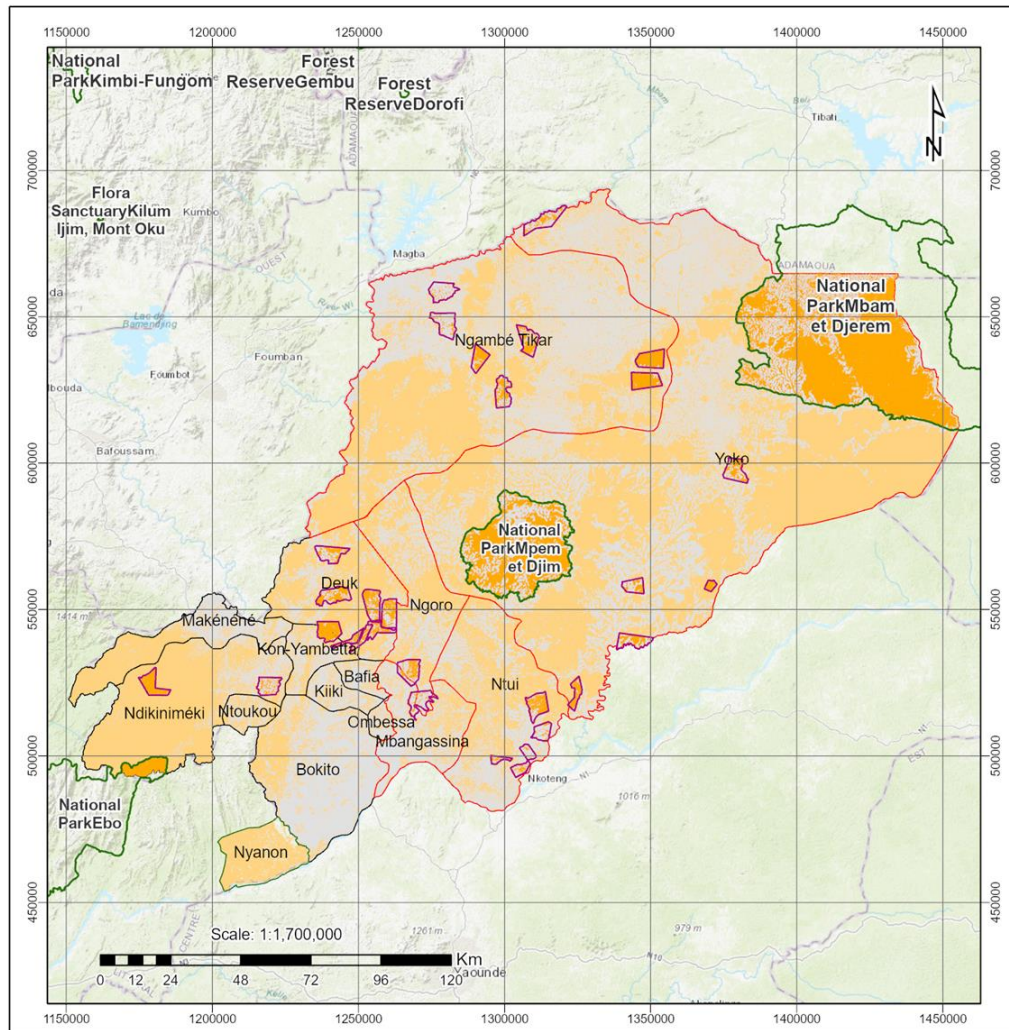


PES options selected

- **Option 1: On-farm Agroforestry and Climate Smart Cocoa**
 - **Project area target:** 2,000 hectares
 - **Targeted ES :** Reduced Emission Factor through carbon reduction and sequestration
- **Option 2: Off-farm PES via afforestation and reforestation opportunities**
 - **Project area target:** 1,500 hectares
 - **Targeted ES :** carbon credits (sequestration)
- **Option 3: Biodiversity PES**
 - **Project area target:** 647 hectares
 - **Targeted ES :** Biodiversity credits

Location and PES options of the 2 Case studies

Map of project area in Cameroon: Grand Mbam Landscape

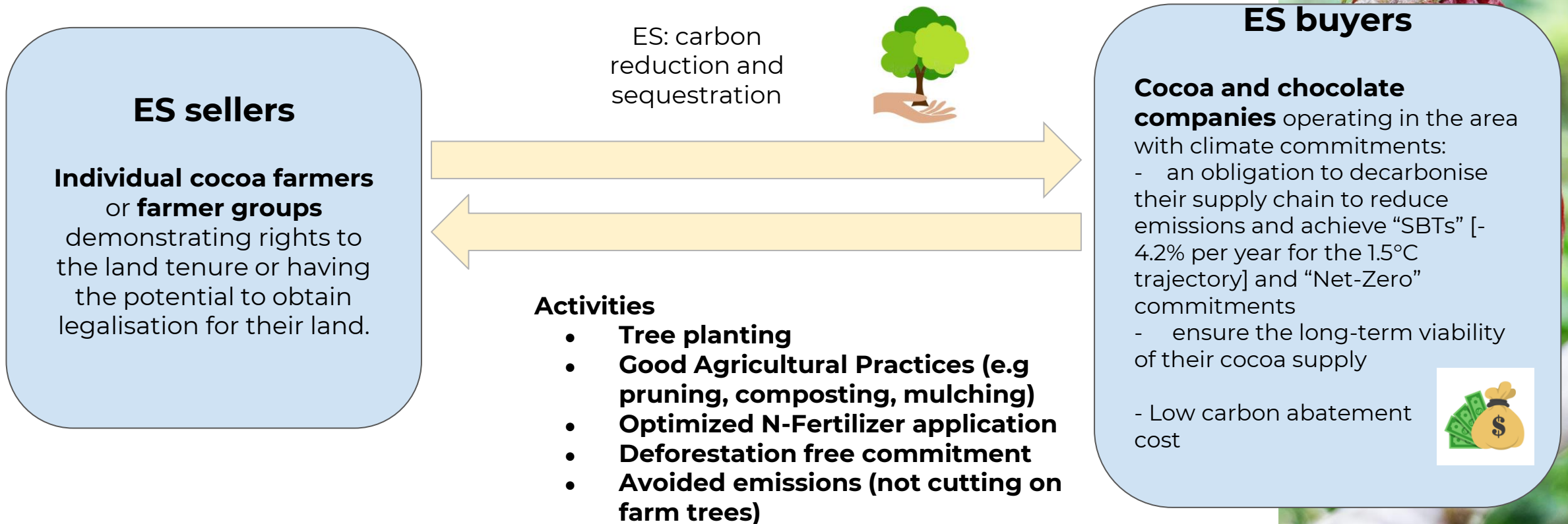


PES options selected

- **Option 1: On-farm Agroforestry and Climate Smart Cocoa**
 - **Project area target:** 10,000 hectares
 - **Targeted ES :** Reduced Emission Factor through carbon reduction and sequestration
- **Option 2: Off-farm PES via afforestation and reforestation opportunities**
 - **Project area target:** 2,500 hectares
 - **Targeted ES :** carbon credits (sequestration)
- **Option 3: Biodiversity PES**
 - **Project area target:** 667 hectares
 - **Targeted ES :** Biodiversity credits
- **Option 4: Water PES**
 - **Project area target:** 700 hectares
 - **Targeted ES :** Improved water quality and aquatic biodiversity around the Sanaga River

Potential PES type - Option 1

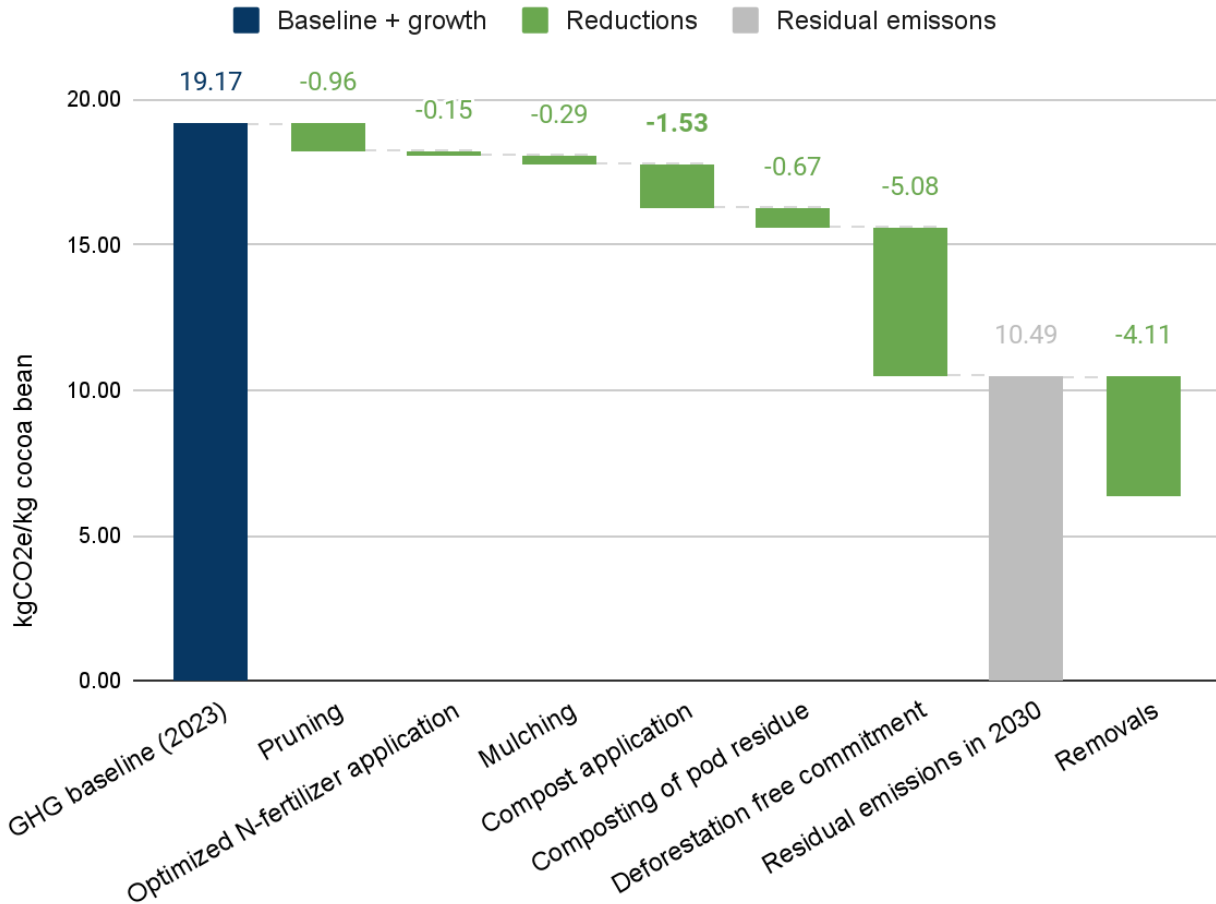
PES based on carbon reduction and sequestration on cocoa farms (ON-FARM) through the adoption (and improvement) of high-shade cocoa agroforestry systems and climate-smart agriculture.



Project Findings

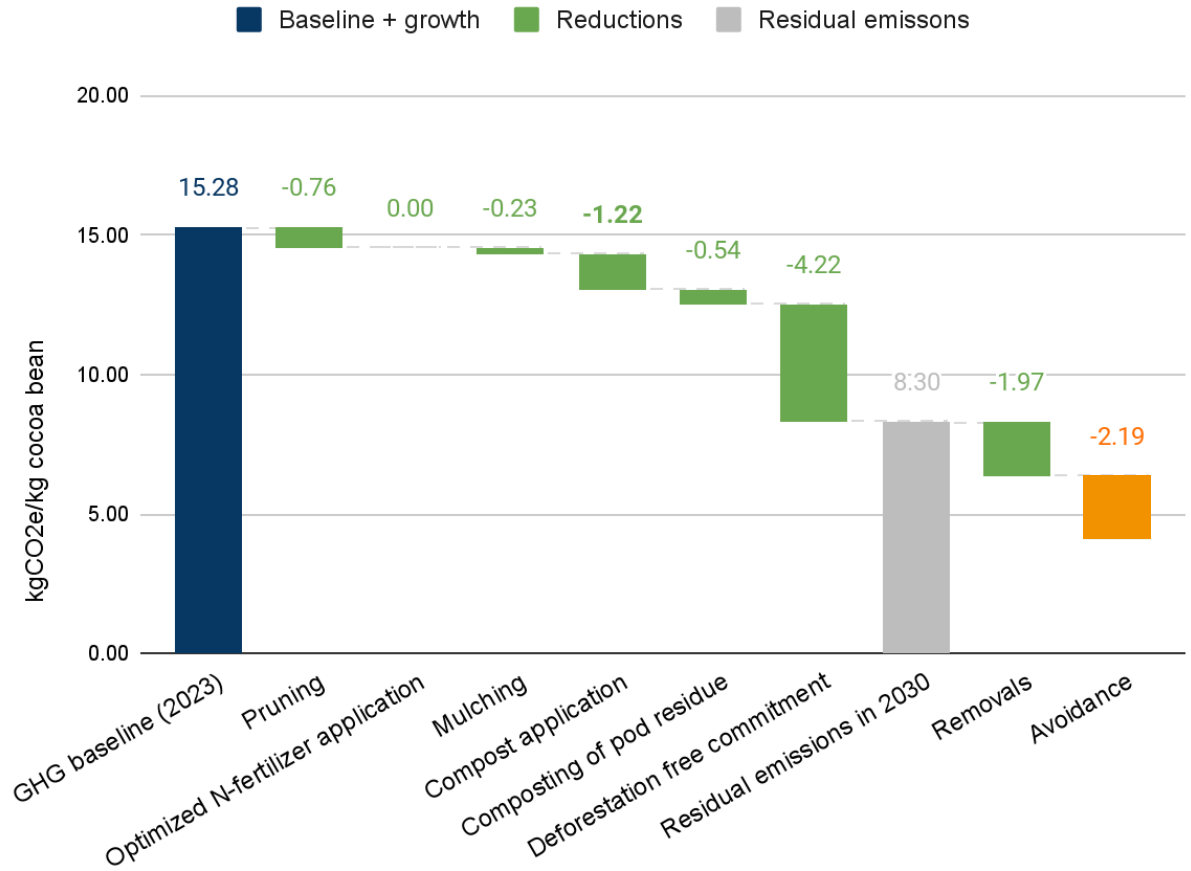
Intervention roadmap per country

Peru



Potential reduction per year: 45.3% reduction, from 19.17 to 10.49 of kgCO₂/kg cocoa
 Total carbon impact per country: 13,046 tCO₂e per year assuming 2,000 hectares

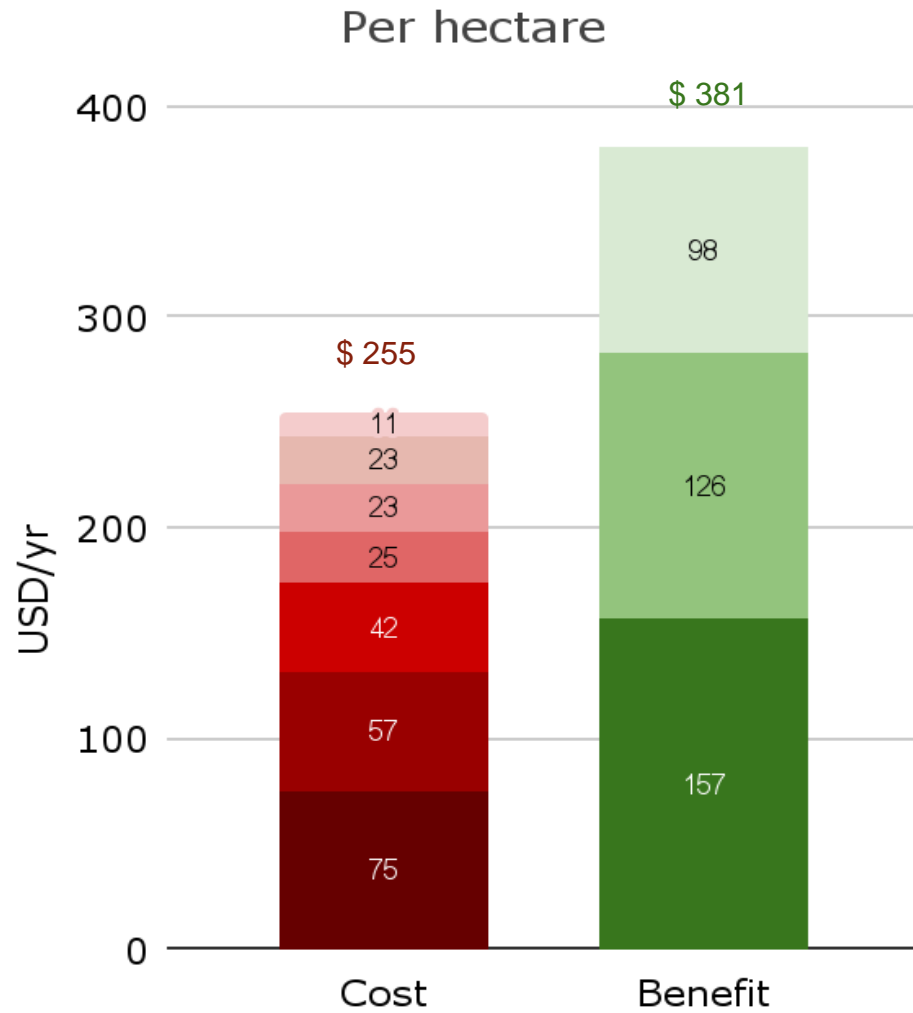
Cameroon



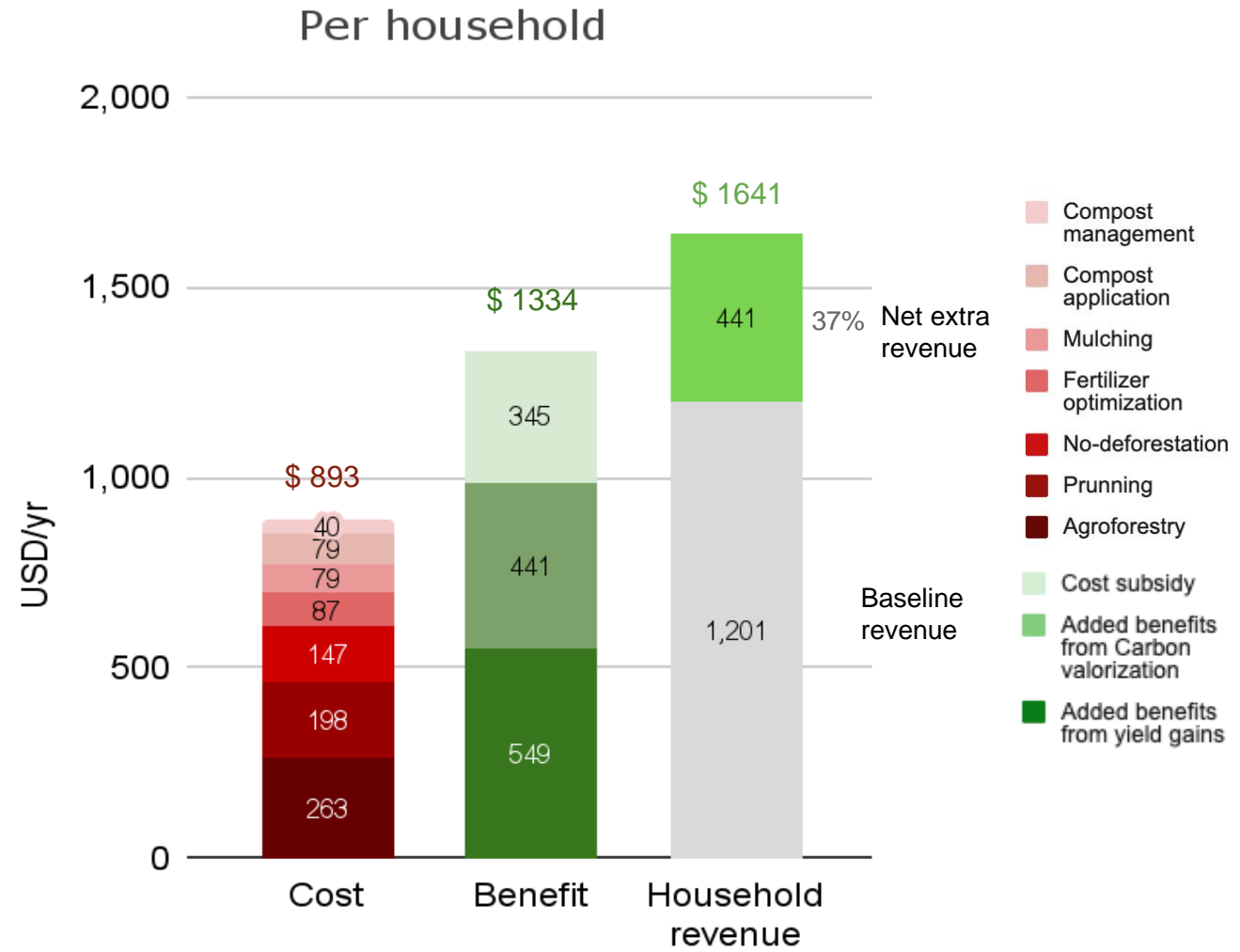
Potential reduction per year: 45.6% reduction, from 15.28 to 8.3 of kgCO₂/kg cocoa
 Total carbon impact per country: 45,018 tCO₂e per year assuming 10,000 hectares exc. avoidance

Project Findings

Cost benefit analysis for farmers



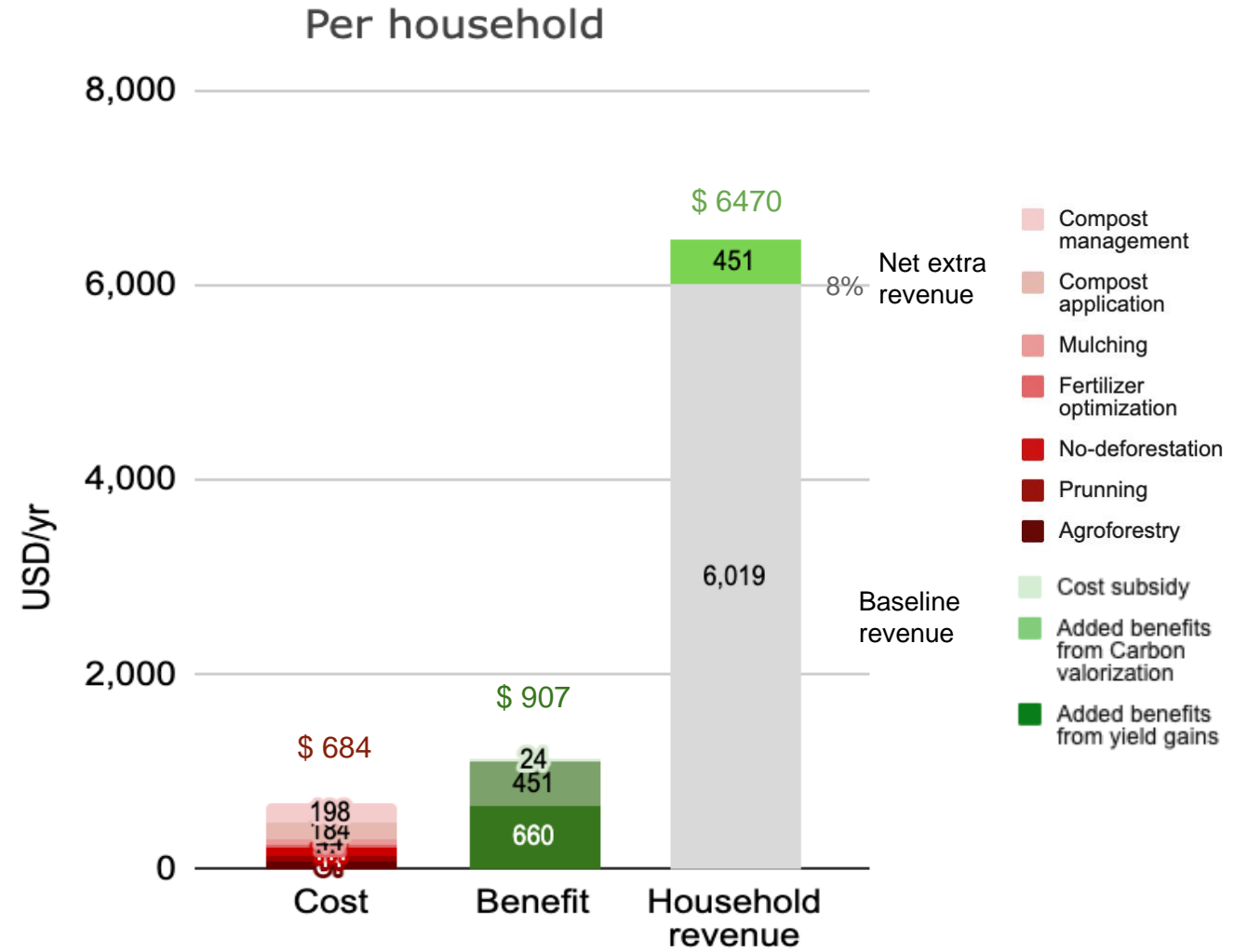
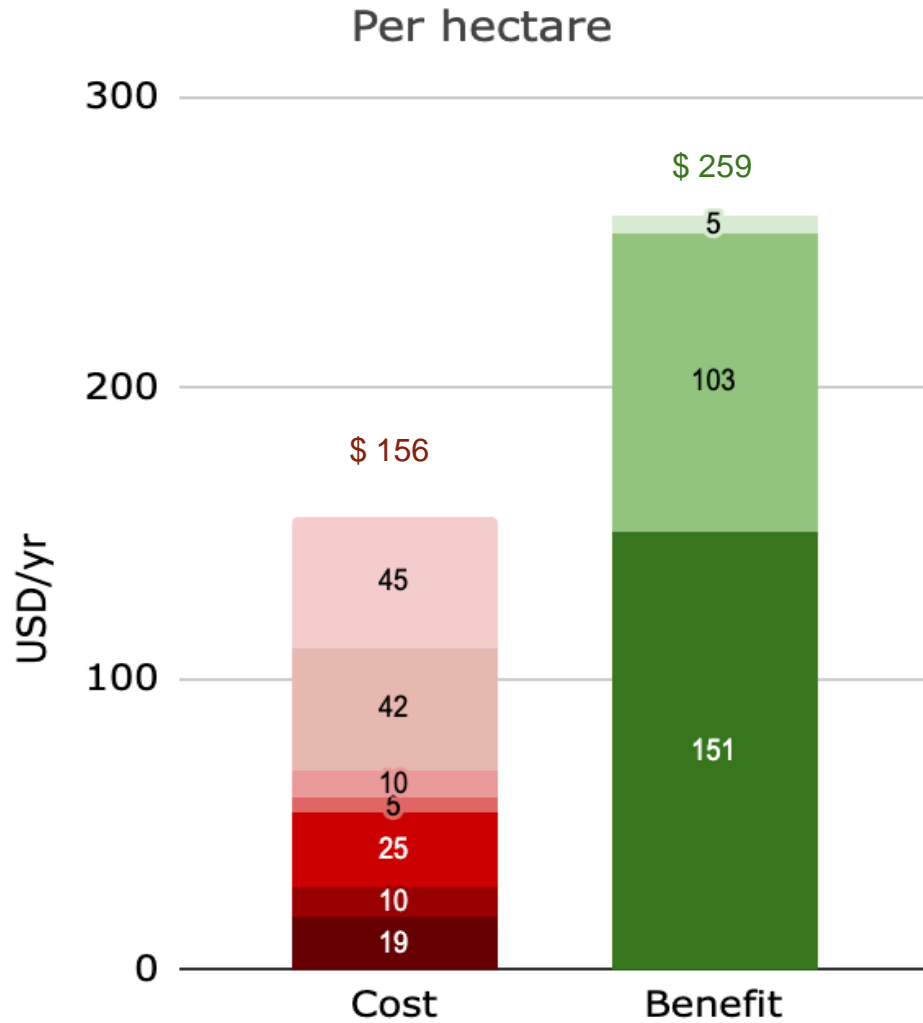
Peru



Project Findings

Cost benefit analysis for farmers

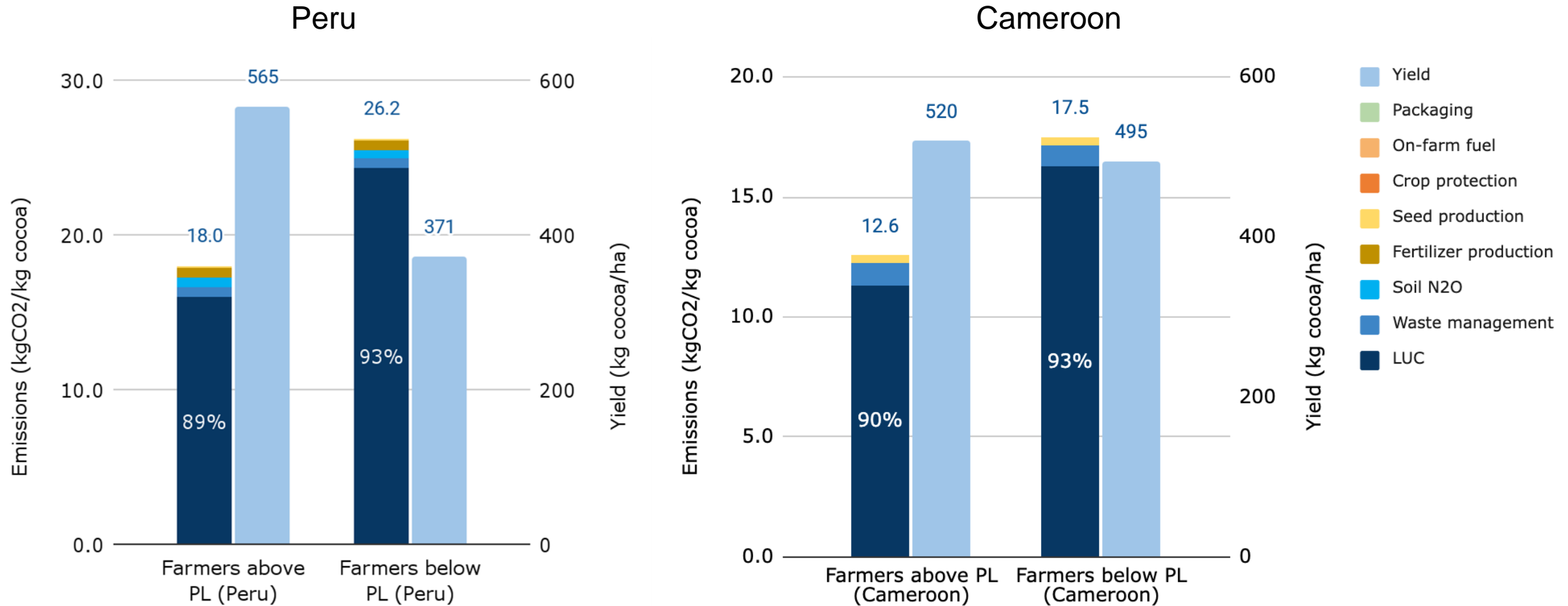
Cameroon



- Compost management
- Compost application
- Mulching
- Fertilizer optimization
- No-deforestation
- Pruning
- Agroforestry
- Cost subsidy
- Added benefits from Carbon valorization
- Added benefits from yield gains

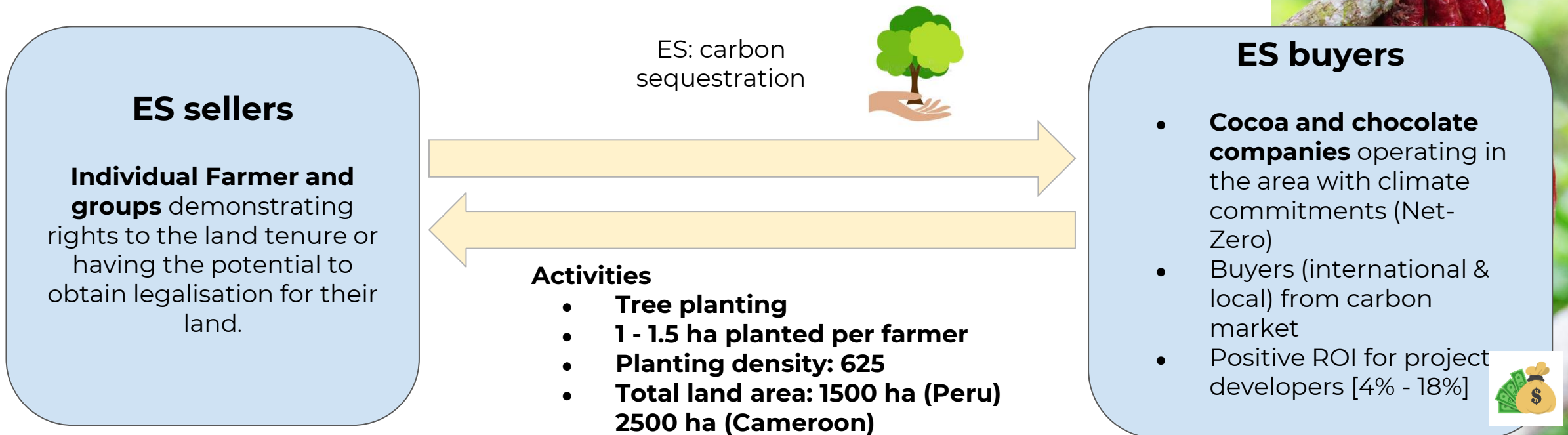
Project Findings

Strong correlation between poverty and farmers carbon footprint



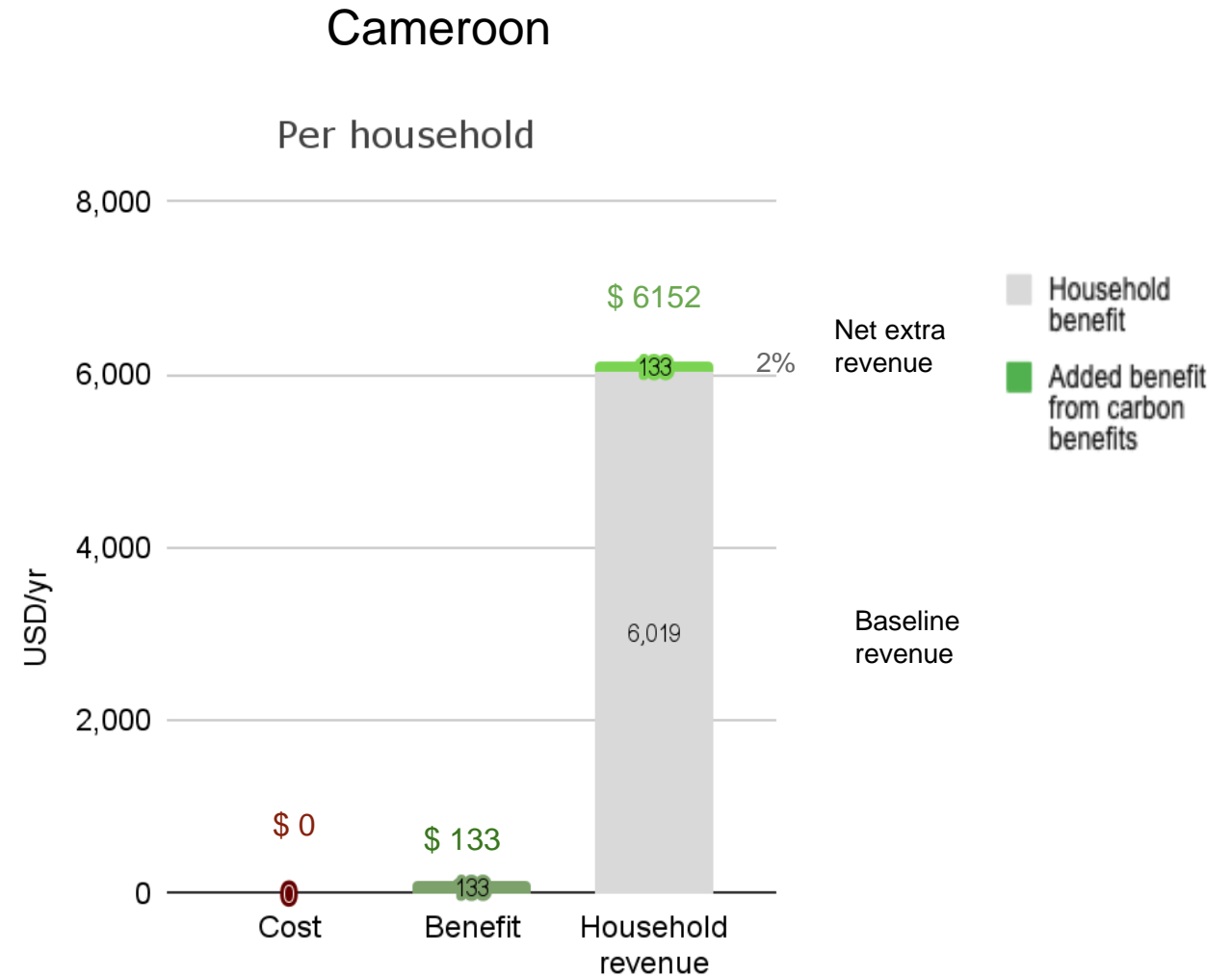
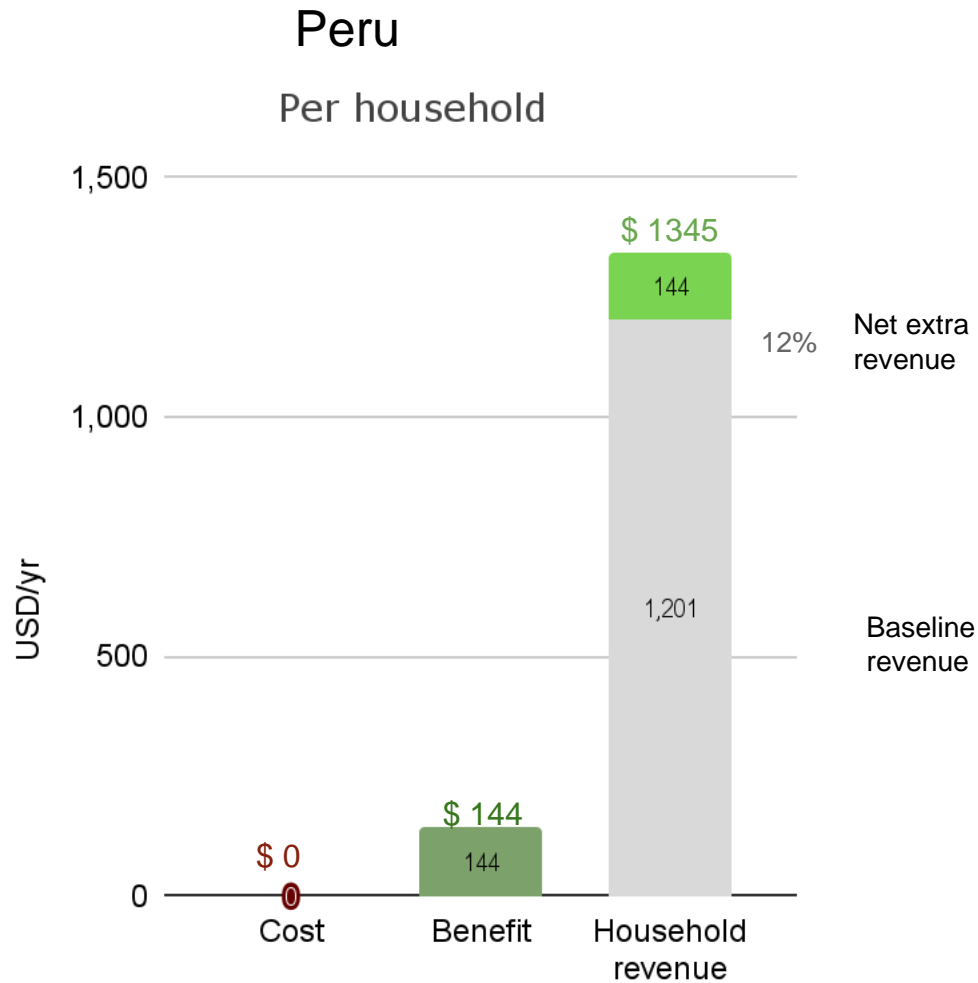
Potential PES type - Option 2

PES based on carbon sequestration outside cocoa farms (OFF-FARMS) via afforestation and reforestation opportunities



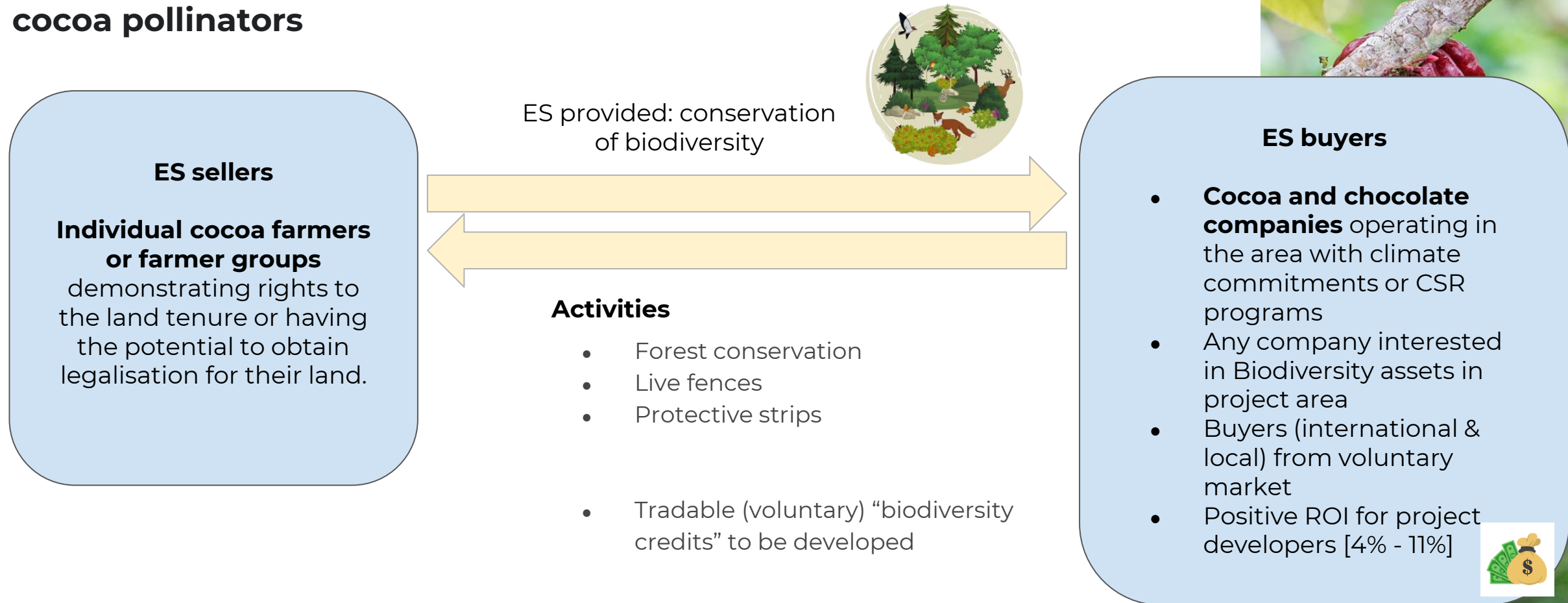
Project Findings

Cost benefit analysis for farmers



Potential PES type - Option 3

PES biodiversity: protecting flora, fauna and increasing the population of cocoa pollinators

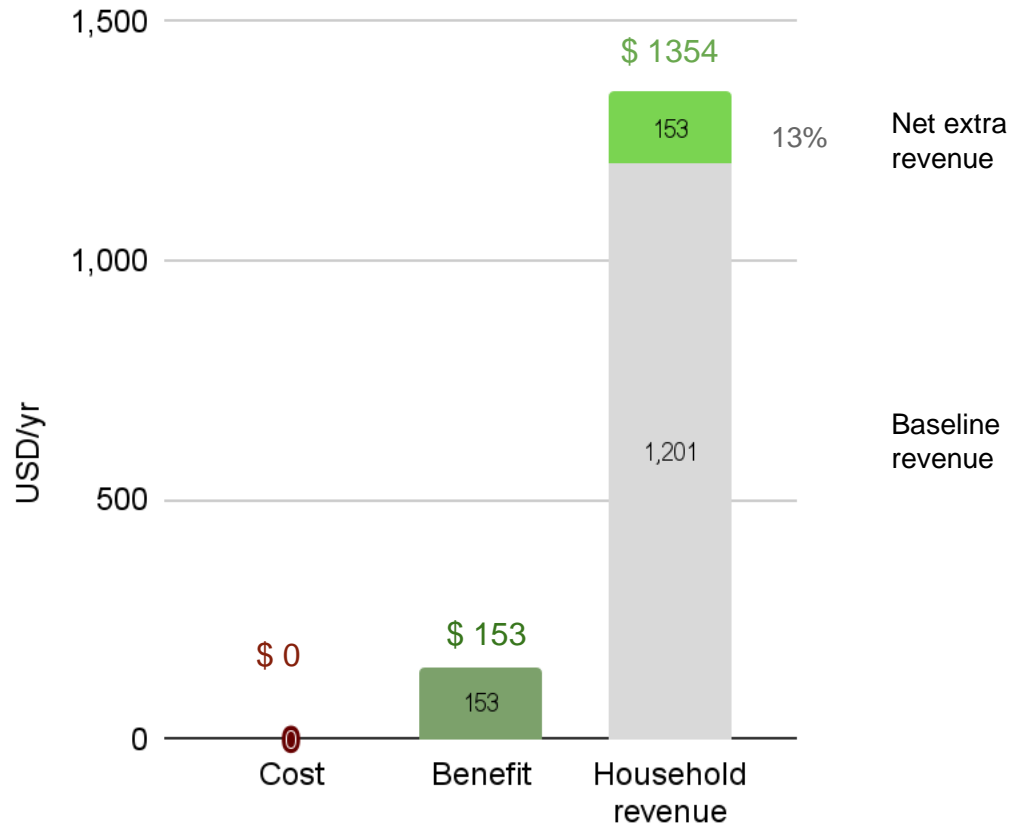


Project Findings

Cost benefit analysis for farmers

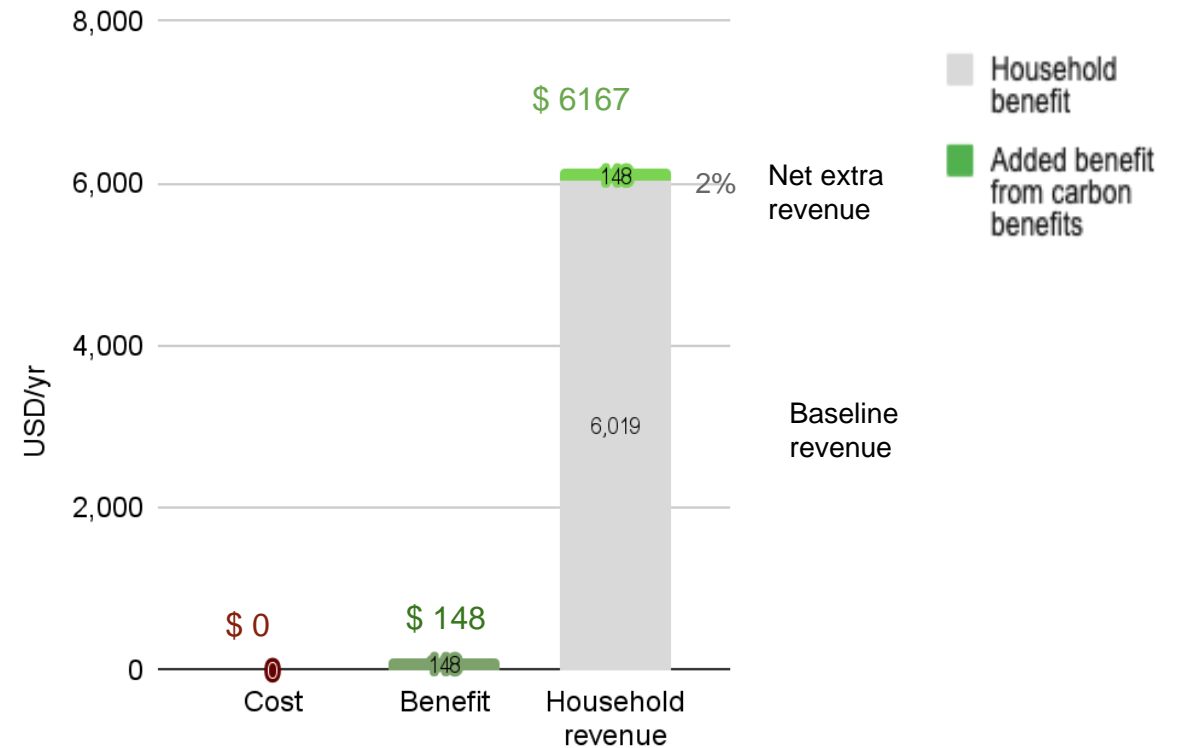
Peru

Per household



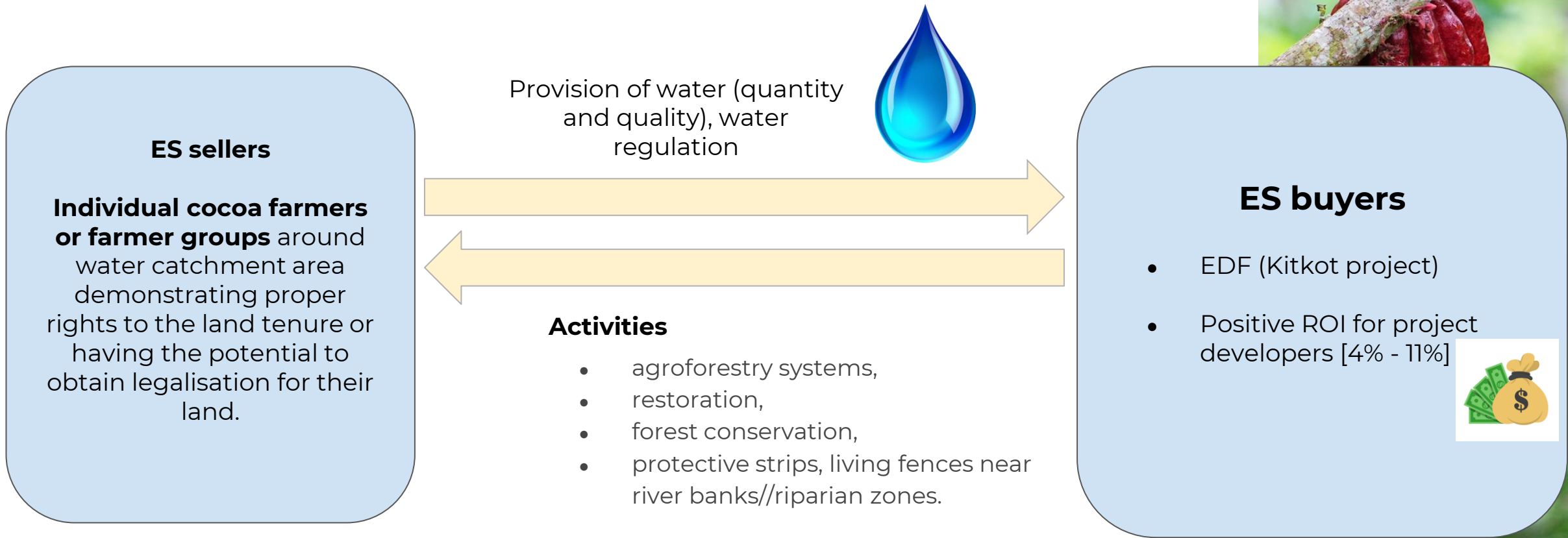
Cameroon

Per household



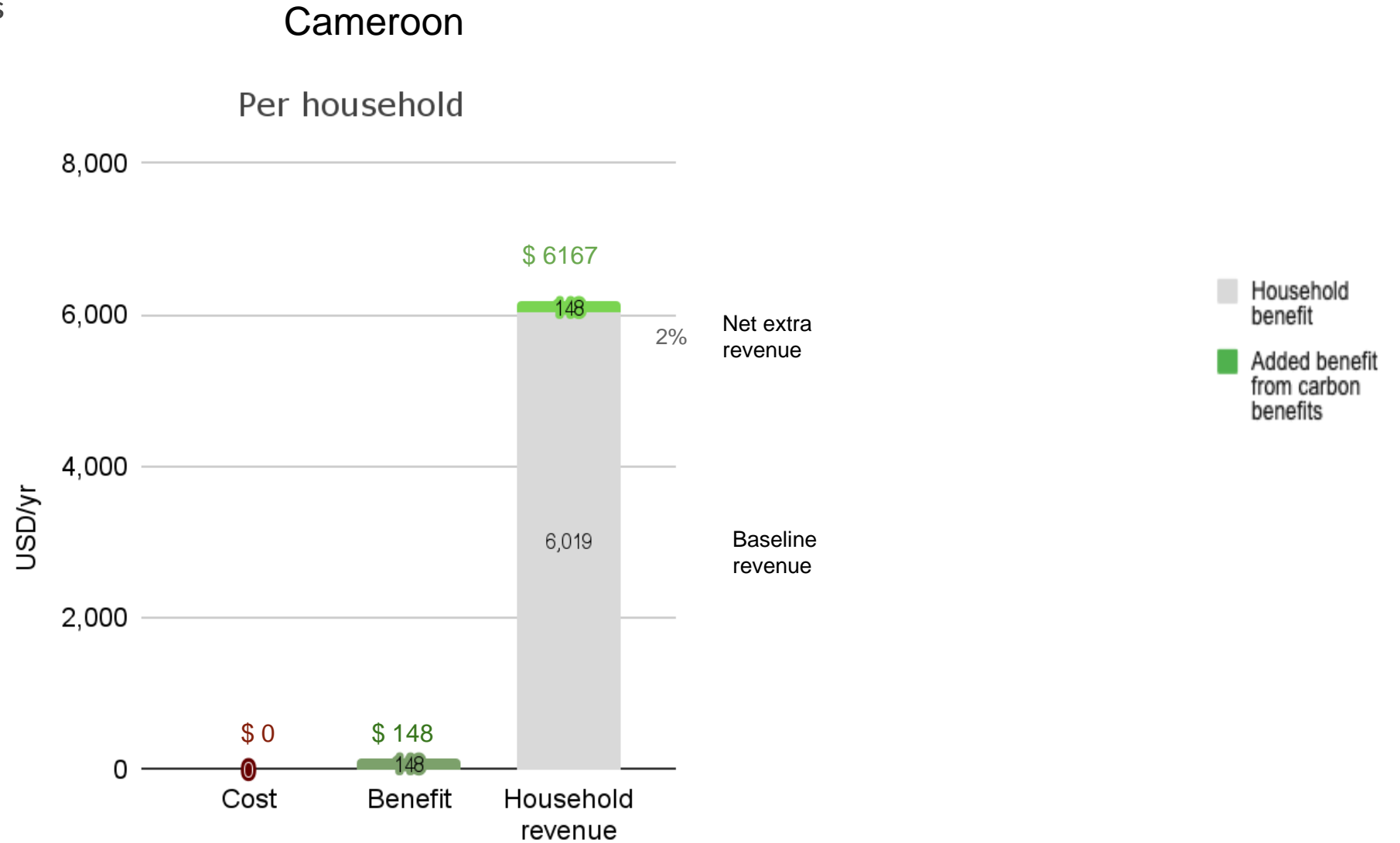
Potential PES type - Option 4

PES on water provision and regulation: Bokito and Nyanong districts, Cameroon, Sanaga river



Project Findings

Cost benefit analysis for farmers



Projected timeline and costs for pilot projects

Country	Pilot project Budget	PES options	Potential impacts (carbon / biodiversity) Impact on farmer's revenue	Impact on farmer's revenue	Key stakeholders/ Partners
Peru	USD 3-15 millions	<p>Option 1: On-farm Agroforestry and Climate Smart Cocoa</p> <p>Option 2: Off-farm PES via afforestation and reforestation opportunities</p> <p>Option 3: Biodiversity PES</p>	<p>~ 90,000 tCO₂e over 5 years</p> <p>~ 647,000 Biodiversity credits</p>	Between 12% - 37% increase in household income	<p>ICCO</p> <p>Government agencies (MINAM, MINAGRI, PROMPERU, SERFOR, GORESAM, Rural development Agencies, Tocache Municipality)</p> <p>Producer organizations (e.g CP-Cacao, ACOPAGRO, Central cacao de Aroma)</p> <p>Cocoa companies (e.g Olam, Ecom)</p> <p>NGO (e.g Alianza Peru cacao, Rainforest Alliance, Earth Innovation Institute) and the Coalition for Sustainable Production</p>

Projected timeline and costs for pilot projects

Country	Pilot project Budget	PES options	Potential impacts (carbon / biodiversity) Impact on farmer's revenue	Impact on farmer's revenue	Key stakeholders/ Partners
Cameroon	USD 5-25 millions	<p>Option 1: On-farm Agroforestry and Climate Smart Cocoa</p> <p>Option 2: Off-farm PES via afforestation and reforestation opportunities</p> <p>Option 3: Biodiversity PES</p> <p>Option 4: Water PES</p>	<p>~ 260,000 tCO₂e over 5 years</p> <p>~ 667,000 Biodiversity credits</p>	Between 2% - 8% increase in household income	<p>ICCO</p> <p>Ministries (Ministry of Trade; MINFI (Ministry of Finances); MINFOF (Ministry of Forests and Fauna); MINADER (Ministry of Agriculture and rural development))</p> <p>Government agencies (e.g., Cocoa and Coffee Sector Development Fund (FODECC); Cocoa Development Company (SODECAO); Cocoa Development Support Project (PAD-CACAO); Cocoa and Coffee Interprofessional Council (CICC); National Observatory on Climate Change (ONACC); National Office of Cocoa and Coffee (ONCC))</p> <p>Producer organizations (e.g., CONAPROCAM (National confederation of producers in Cameroun))</p> <p>Cocoa companies (e.g., OLAM, Telcar Cargill, Barry Callebaut, Neo INDUSTRY) and Exporters' Union (GEX)</p> <p>Private companies (e.g., EDF Cameroun for energy development)</p> <p>Social entreprise (e.g., IDH (the Sustainable Trade Initiative)</p> <p>Research organizations (e.g., ICRAF/CIRAD)</p>

Projected timeline and costs for pilot projects



How can we implement PES at scale within the cocoa sector

Key take aways

PES programmes is not a magic bullet for poverty reduction, but there can be important synergies and additionality with existing programmes

Application of the PES concepts to cocoa producing landscapes is still relatively new.

Ensuring the continuity of the provision of the ES through the continuity of the payment might be a challenge

Ensuring certainty of claims and alignment with national accounting regulatory framework is essential

High transaction costs are still seen as a barrier to the participation of poor households in PES schemes

Call for action

- Integrate concrete Climate & Nature impact targets and PES within the Cocoa & Chocolate sector key initiatives

- Urgent need to equip cocoa and chocolate companies and cocoa communities with the knowledge, skills and expertise needed to fully participate in PES on the ground

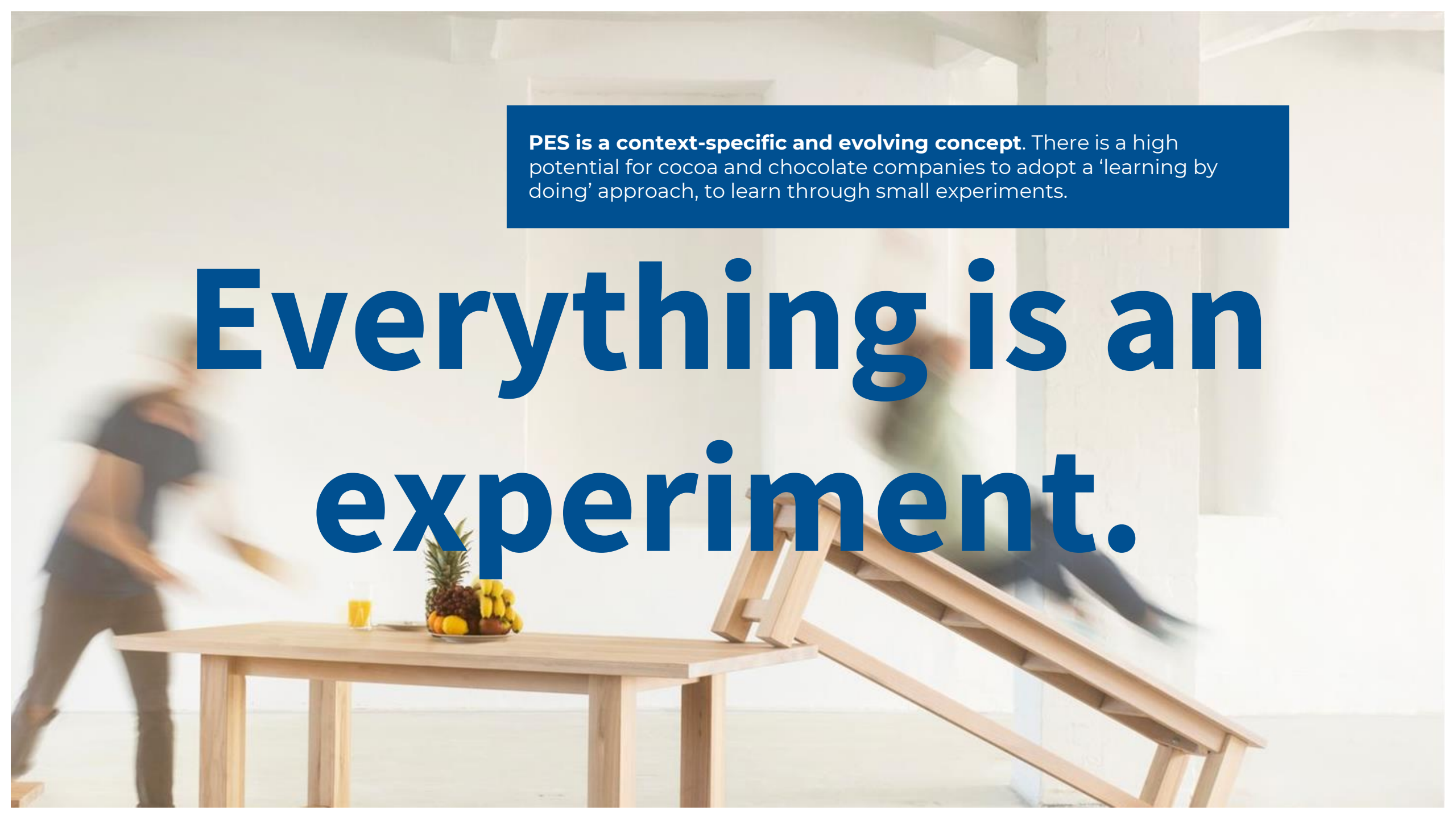
- Upfront identification of ES buyers and sales of ES products is key
- Develop collective and credible MRV system to track changes

- Increased engagement and advocacy with governments through Multi-Stakeholders Platforms

- *Providing upfront financial support for the implementation of activities generating Ecosystem Services is key*
- *Encourage co-claiming business models to collectively finance the transition to low carbon cocoa & chocolate*
- *Explore sectoral partnerships and public-private co-financing potentials*

PES is a context-specific and evolving concept. There is a high potential for cocoa and chocolate companies to adopt a 'learning by doing' approach, to learn through small experiments.

Everything is an experiment.



Our contacts



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