

# Plantations And Development In Western Cameroon, 1885-1975: A Study In Agrarian Capitalism

RESEARCH ARTICLE

## Rural protein insufficiency in a wildlife-depleted West African farm-forest landscape

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### Abstract

#### Introduction

Wildlife is an important source of protein for many people in developing countries. Yet wildlife depletion due to overexploitation is common throughout the humid tropics and its effect on protein security, especially for vulnerable households, is poorly understood. This is problematic for both sustainable rural development and conservation management.

#### Methods

This study investigates a key dimension of protein security in a cash-crop farming community living in a wildlife-depleted farm-forest landscape in SW Ghana, a region where protein-energy malnutrition persists. Specifically, we monitored protein sufficiency, defined as whether consumption met daily requirements, as benchmarked by recommended daily allowance (RDA). We focus on whether more vulnerable households were less likely to be able to meet their protein needs, where vulnerability was defined by wealth, agricultural season and gender of the household head. Our central hypothesis was: (a) vulnerable households are less likely to consume sufficient protein. In the context that most plant proteins were home-produced, so likely relatively accessible to all households, while most animal proteins were purchased, so likely less accessible to vulnerable households, we tested two further hypotheses: (b) vulnerable households depend more on plant protein to cover their protein needs; and (c) vulnerable households are less likely to earn sufficient cash income to meet their protein needs through purchased animal sources.

#### Results

Between 14% and 60% of households (depending on plant protein content assumptions) consumed less than the RDA for protein, but neither protein consumption nor protein sufficiency co-varied with household vulnerability. Fish, livestock and food crops comprised 85% of total protein intake and strongly affected protein sufficiency. However, bushmeat remained an important protein source (15% of total consumption), especially during the post-harvest season when it averaged 26% of total protein consumption. Across the year, 89% of households experienced at least one occasion when they had insufficient income to

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**Citation:** Schulte-Herbrüggen B, Cowlishaw G, Homewood K, Rowcliffe JM (2017) Rural protein insufficiency in a wildlife-depleted West African farm-forest landscape. PLoS ONE 12(12): e0188109. <https://doi.org/10.1371/journal.pone.0188109>

**Editor:** Alexander J. Travis, Cornell University College of Veterinary Medicine, UNITED STATES

**Received:** February 2, 2016

**Accepted:** November 1, 2017

**Published:** December 13, 2017

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**Data Availability Statement:** All relevant data are available from the [figshare](https://figshare.com) repository at the following DOI: [10.6084/m9.figshare.5621371](https://doi.org/10.6084/m9.figshare.5621371).

**Funding:** This work was supported by a joint research studentship of the U.K. Economic and Social Research Council (ESRC) and the National Environmental Research Council (NERC) with additional support from The Parkes Foundation (<http://www.parkesfoundation.org.uk/>) to BSH. The funders had no role in study design, data collection

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