

## **Human population, agricultural production and wildlife conservation**

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The harvest of bushmeat for human consumption constitutes a potential threat to wildlife populations worldwide. Bushmeat has also been identified as a key protein supplement in the diet of many rural peoples, acting especially as a fallback source of food on which rural people may depend in times of food scarcity. It is also possible that where infrastructure development and cultural tradition have facilitated the widespread commercialisation of bushmeat as a source of human food, the demand for bushmeat might be expected to vary inversely with the supply of conventional sources protein, such as domestic stock and fish. In this case, we might expect the demand for bushmeat to be expressed regionally, and to rise when alternative sources of protein are in short supply. Overall, these ideas suggest that understanding what factors influence the sustainability of bushmeat harvests will be crucial to the design of effective wildlife conservation policy, and to insuring the availability of bushmeat as a secure source of food for rural people in future. We describe regional patterns of change in wildlife biomass, human population, and agricultural, fisheries and livestock production in Ghana. We show that the rate of biomass decline in wildlife has been linked to annual variation in the supply of conventional food sources, as expected if bushmeat comprised a key source of food for a growing human population. We discuss the implications of our results in light of recent suggestions that the intensification of livestock production might alleviate pressure on declining wildlife stocks. We conclude that the implications of such a policy are unclear, and outline some predictions of competing hypotheses for the interaction of human populations, agricultural production and wildlife conservation.