

# Conservation and food security: the bushmeat conundrum

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# Bushmeat



A widespread essential and socially acceptable informal sector... but *de facto* a criminal activity in most of the countries

5 million tonnes/year

[www.cifor.org/bushmeat](http://www.cifor.org/bushmeat)

# Financial and economic evaluation of the bushmeat sector in Cameroon, Congo and Gabon (€/yr)

	Cameroon	Congo-Brazza	Gabon
Financial profit	9,8 million €	42,3 million €	30,9 million €
- Rural areas	2,1 million €	21,8 million €	17,7 million €
- Urban areas	7,6 million €	20,2 million €	13,2 million €
- Export	0,2 million €	0,7 million €	0,1 million €
(Informal) Contribution to non-oil GDP	0,14%	1,9%	0,42%
Gross economic benefit (incl. self-consumption)	122 million €	108 million €	85 million €
Net economic benefit (incl. opportunity cost of labour)	58 million €	5 million €	62 million €





TABLE 2 Prices of bushmeat carcasses and alternative sources of protein in the market of Kisangani in 2002 and 2008–2009, with probability of pairwise Mann–Whitney tests between the two periods.

	Mean price $\pm$ SD in 2002	Mean price $\pm$ SD in 2008–2009	P
<b>Wild species, smoked (with equivalent value for fresh meat in parentheses)</b>			
Brush-tailed porcupine (n = 30)	3.6 $\pm$ 0.7 (2.98)	2.9 $\pm$ 0.5 (2.44)	0.001
Blue duiker (n = 30)	3.2 $\pm$ 1.3 (2.66)	3.2 $\pm$ 1.1 (2.68)	0.90
Small diurnal monkeys (n = 30)	2.7 $\pm$ 1.0 (2.26)	3.3 $\pm$ 0.7 (2.77)	0.01
Emin's pouched rat (n = 30)	3.7 $\pm$ 1.0 (3.09)	3.2 $\pm$ 0.5 (2.70)	0.01
Caterpillars (n = 30)	1.8 $\pm$ 0.2 (1)	0.3 $\pm$ 0.3 (0.26)	< 0.0001
<b>Alternative protein, fresh</b>			
Goat (n = 30)	15.8 $\pm$ 0.2	4.5 $\pm$ 0.1	< 0.0001
Chicken (n = 30)	10.2 $\pm$ 0.2	3.5 $\pm$ 0.2	< 0.0001
Pork (n = 30)	3.3 $\pm$ 0.2	1.1 $\pm$ 0.2	< 0.0001
Beef (n = 30)	13.9 $\pm$ 0.2	6.1 $\pm$ 0.2	< 0.0001
Fish (n = 30)	5.1 $\pm$ 0.3	4.9 $\pm$ 0.4	0.193

# Nutrition

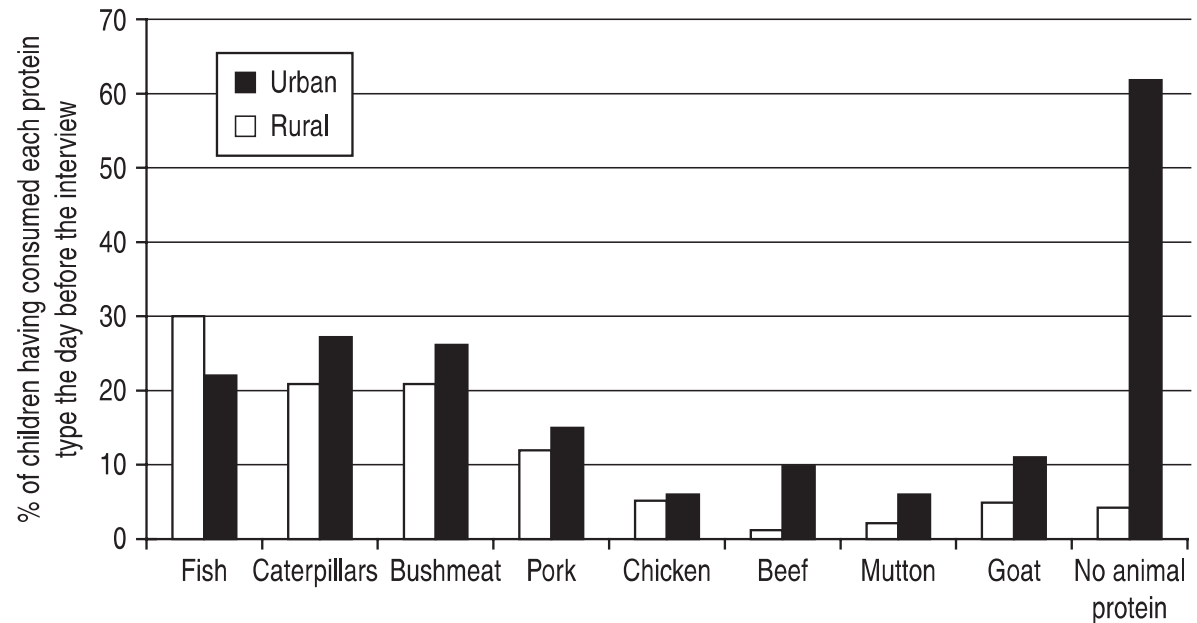


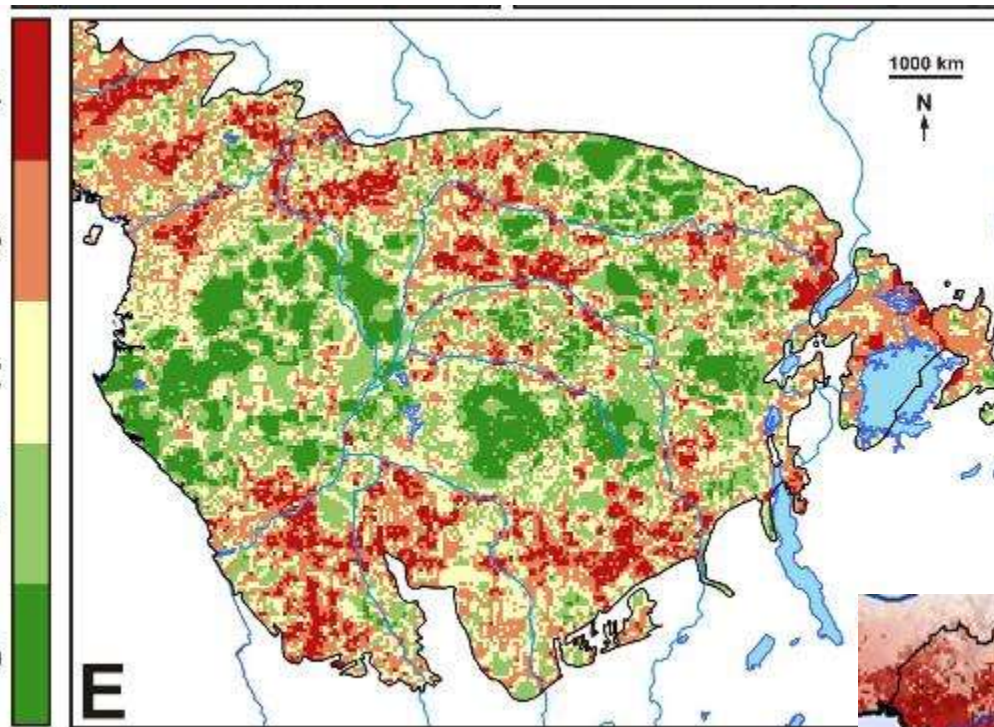
FIG. 2 Percentage of rural and urban children who reported having consumed each protein type the day before the interview.

*Van Vliet et al., 2012*





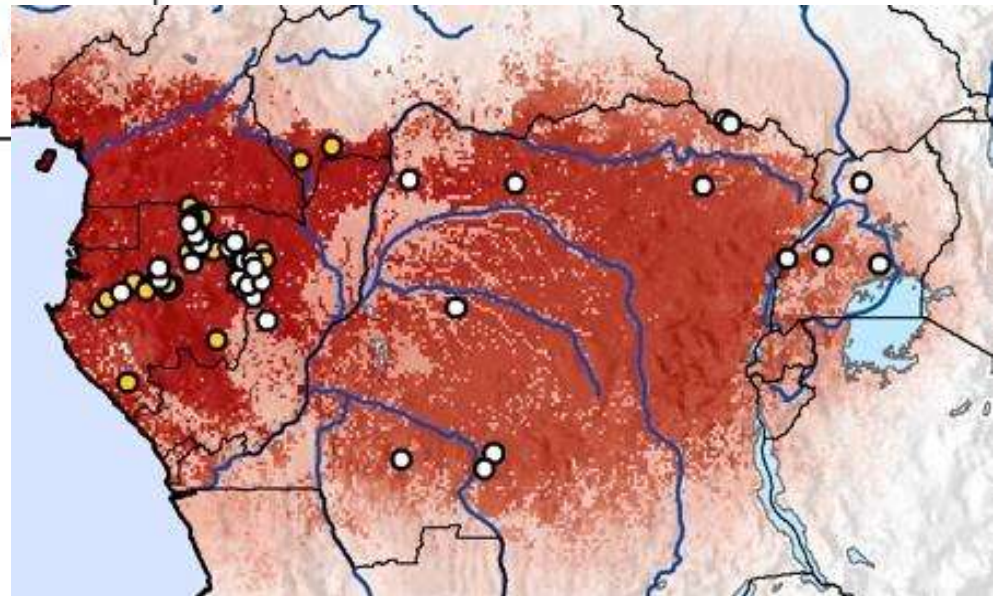
# Public health



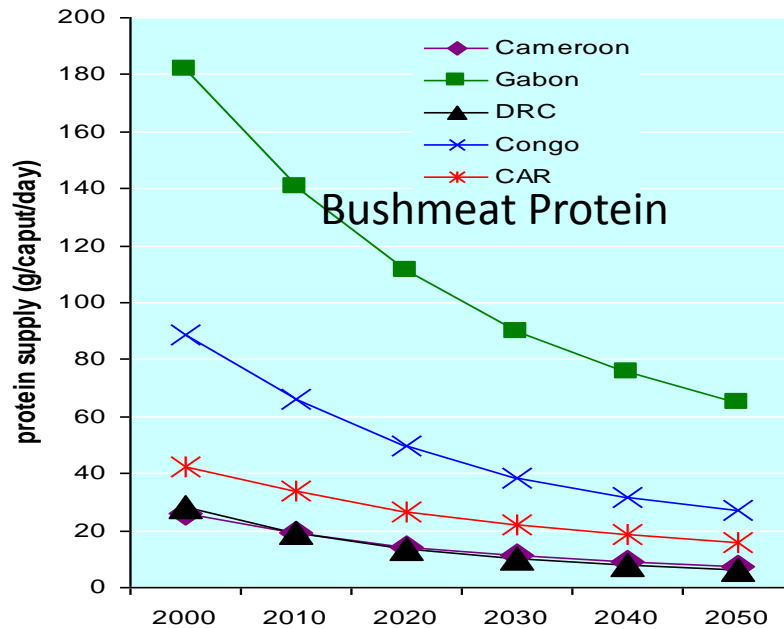
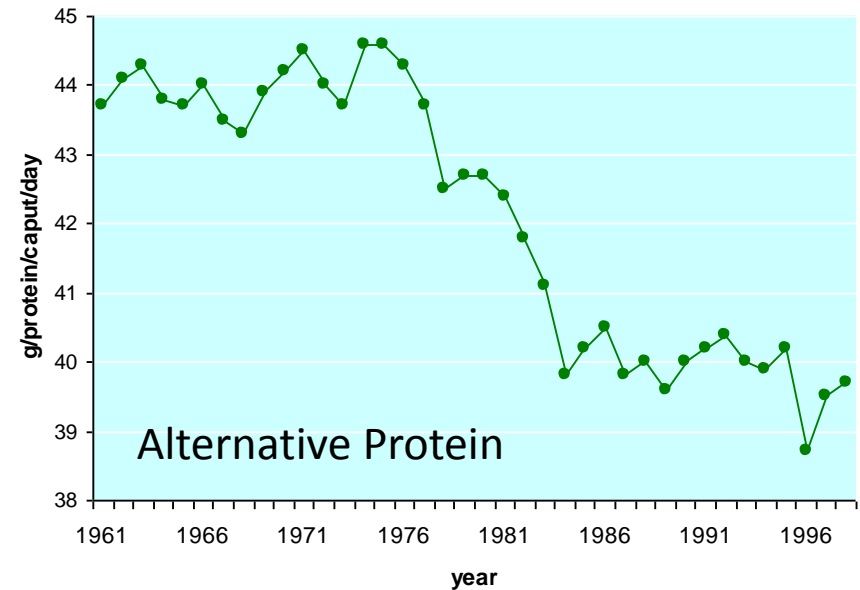
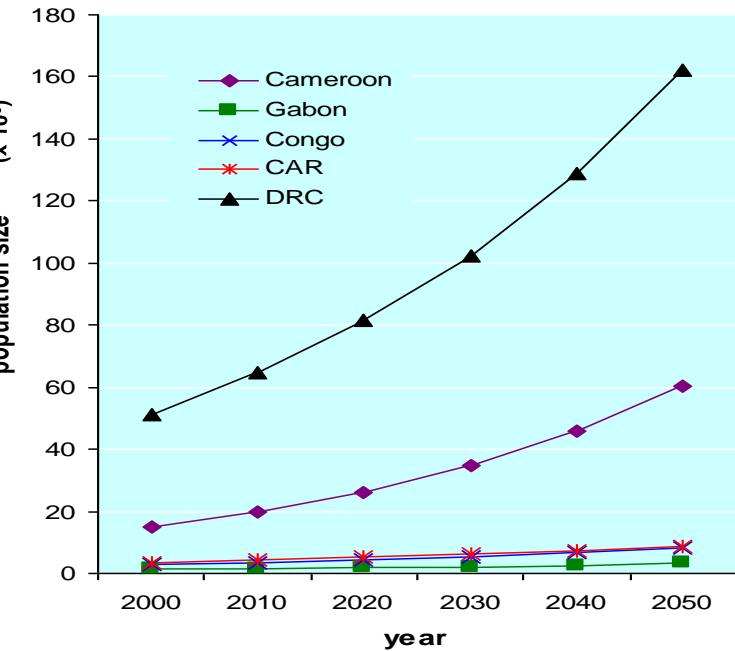
High extraction/impact (red) where we know stunting is higher in children

Ebola potential

Areas with more bushmeat extraction, more food insecurity are also the areas most likely to be affected by Ebola in central Africa.



# Food security... the protein gap?



# Gender issues

- Informal sectors play a disproportionately important role in the livelihoods and well-being of women (and children)
- Women play an important role in the different value chains of these products and derive crucial income from the sales
- Women generally invest back their income into household food and wellbeing; men more into non essential goods







# Characteristics

- Economically significant
  - Socially acceptable
  - Largely non substitutable
  - Gender differentiated
  - Regulated but not controlled
  - Poor's people businesses
  - Unsustainable
  - Resource base is degraded or capital depleted
  - State has no revenues
  - Corruption reigns
- LOSE-LOSE situation, everyone lose!

# Is there a way forward?

- Repression only won't work! "Laissez-faire" won't work either!
- Some principles:
  - Legitimize the debate around bushmeat
  - Make an economic assessment of the sector and include in national statistics
  - Acknowledge contribution to food security and health in national strategies
  - Develop a framework to "formalize" parts of the trade
  - Analyze both the livelihood and conservation implications of a given intervention on all stakeholders (consider gender)
  - Review national legislation for coherence, practicality and to reflect actual practices (without surrendering key conservation concerns)





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