

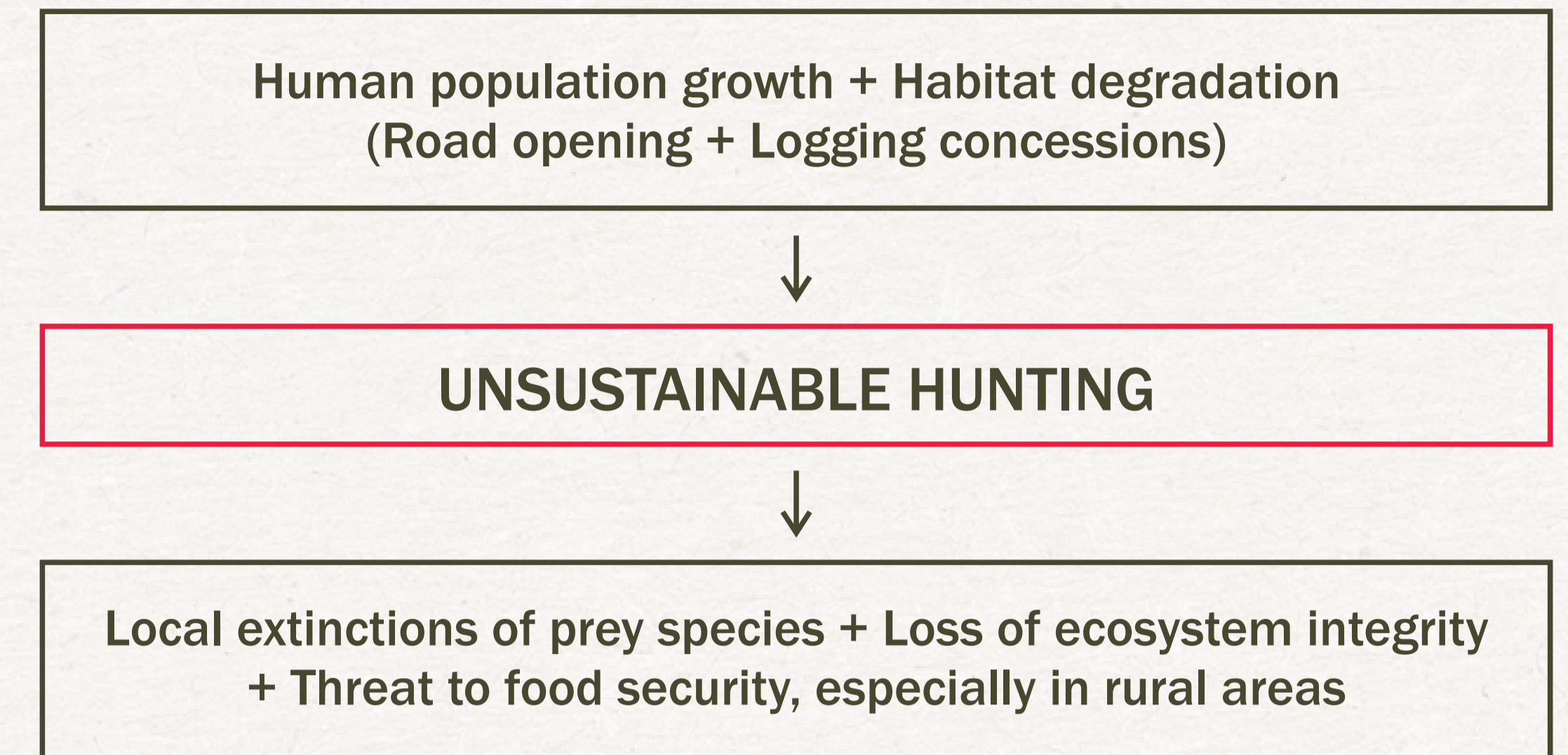
Bushmeat Hunting in Southeastern Cameroon

A 13-year longitudinal study

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4 million tonnes of wildlife are consumed per year as a staple food in the Congo Basin.

Several socioeconomic factors are fostering unsustainable bushmeat hunting, which poses a threat on wildlife and society.



Prey's average size reflects the level of hunting pressure. Overexploited catchment areas are characterised by a decrease in body size of hunted game.

Field data collection



Hunter surveys were held in three villages around the Dja Biosphere Reserve. All bushmeat brought to the village by resident hunters at the end of each study day was documented.

- 3 villages:** Malen V, Duomo Pierre, Mimpala
- Lowland rainforest. Habitat of western lowland gorilla and central chimpanzee
- 3 periods:** March-June 2003, 2009, 2016
- Hunter surveys:** Hunter's identity, prey species, hunting method (dogs, collected, traps, firearms)

Indexes

CPD (Catch per Day): measures hunting yields considering the hunting effort

$$CPD = \frac{MNC}{UE}$$

Where MNC is the monthly number of carcasses and UE is the hunting effort (hunting days per month).

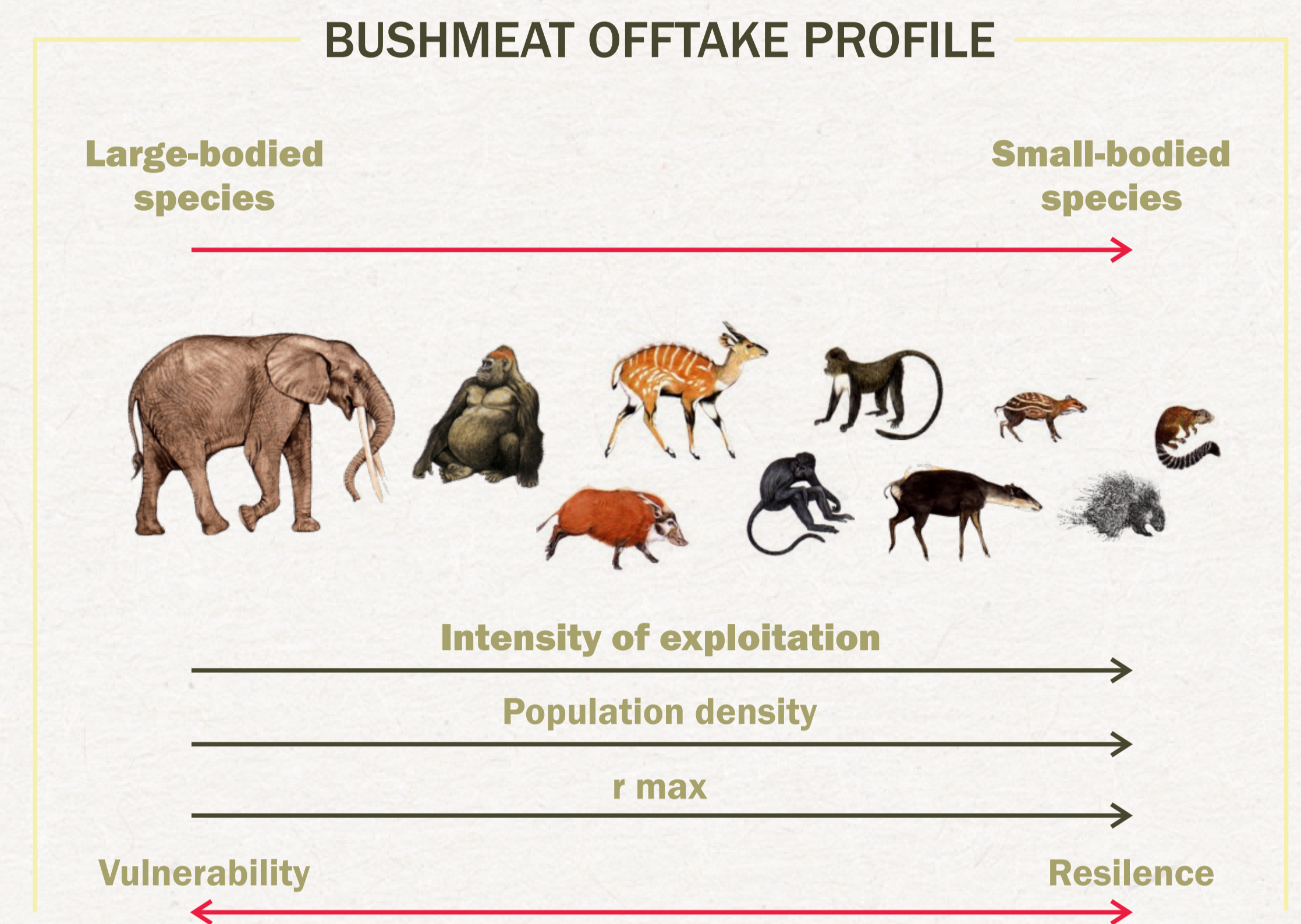
MBM (Mean Body Mass): measures prey's mean body size, as an indicator of depletion

$$MBM = \frac{\sum MBW_i n_i}{N}$$

Where MBW_i is a species' mean body weight, n_i is the number of carcasses of a species, and N is the total number of carcasses (calculated monthly).

Research questions

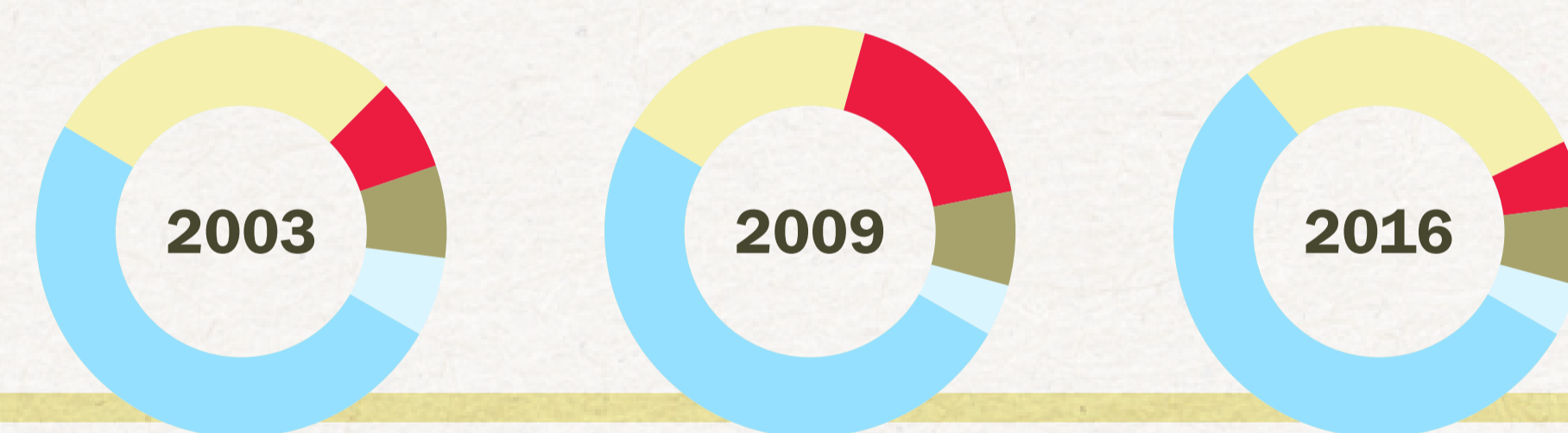
1. How has bushmeat offtake changed over time?
2. Are there differences in bushmeat offtake between villages and does offtake differ between the main game animals?
3. What are the current and potential impacts of bushmeat hunting in the area?



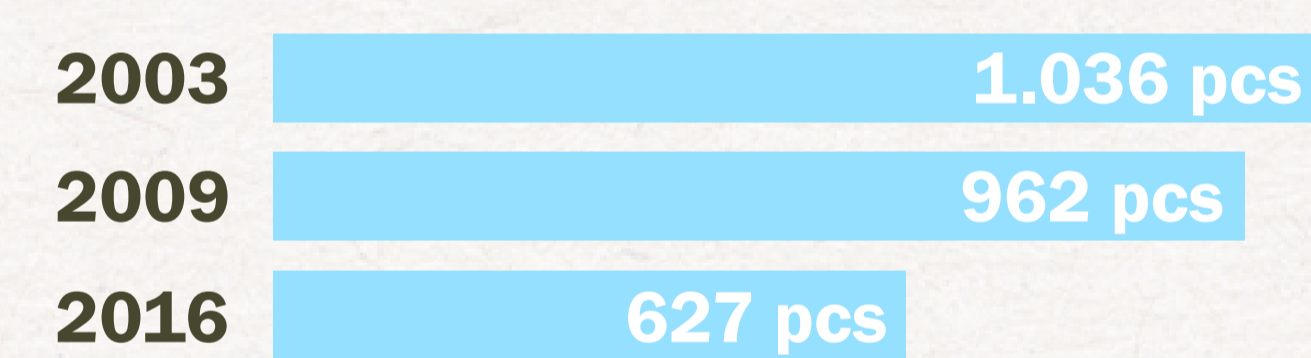
Results

Around 37% of carcasses were **blue duikers** every year

Ungulates were the dominant group, followed by **rodents, pangolins, primates** and **carnivores**



The total number of **carcasses** has decreased significantly over time



The use of **firearms** has increased:

2003: **6%**
2016: **>60%**



Most hunted species

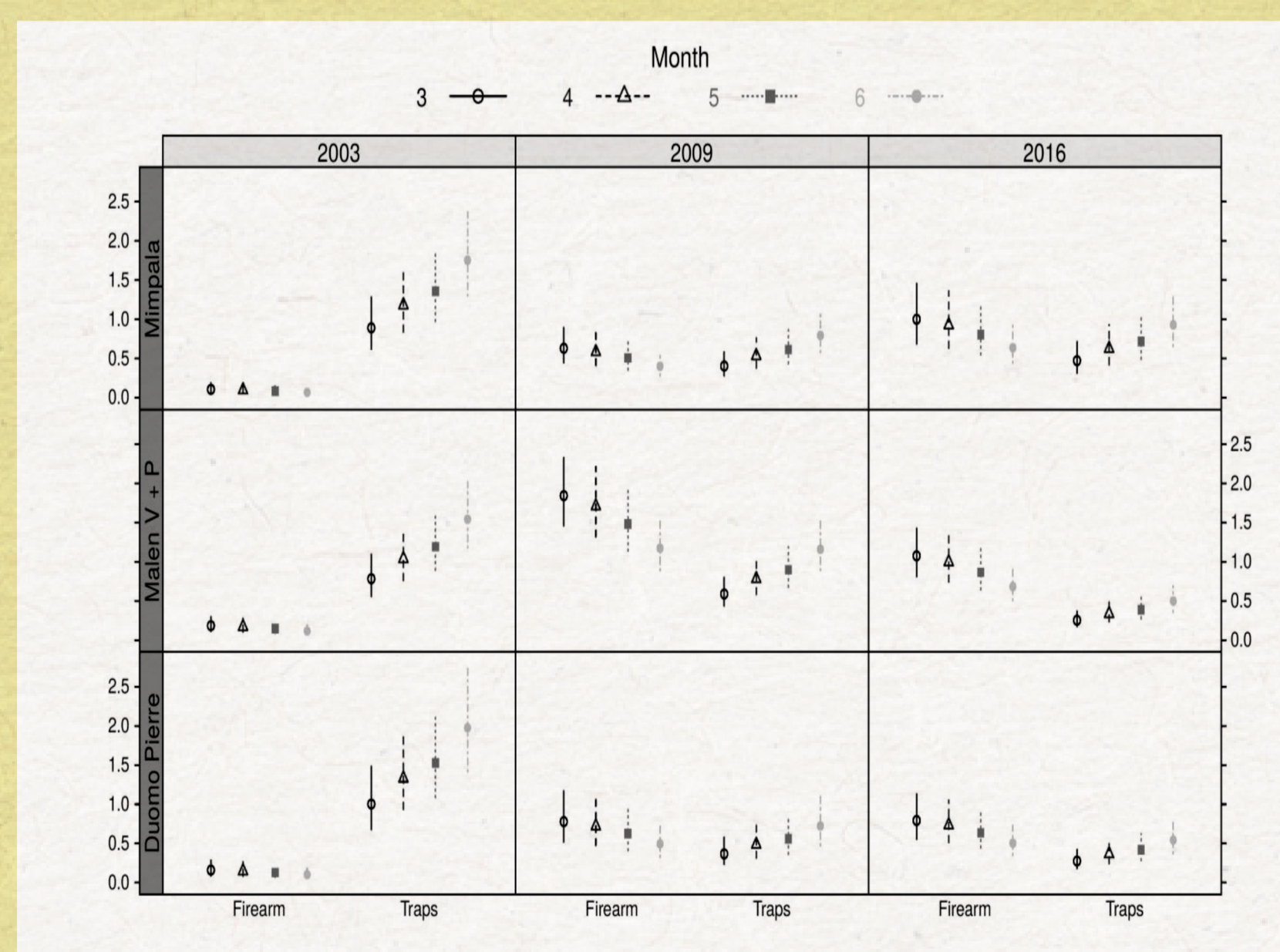


Fig. 1 – CPD values per hunting method, village, month and year
 • CPD values remained fairly constant, suggesting **game populations have not diminished**.
 • The shift from Traps to Firearms is reflected in CPD values.

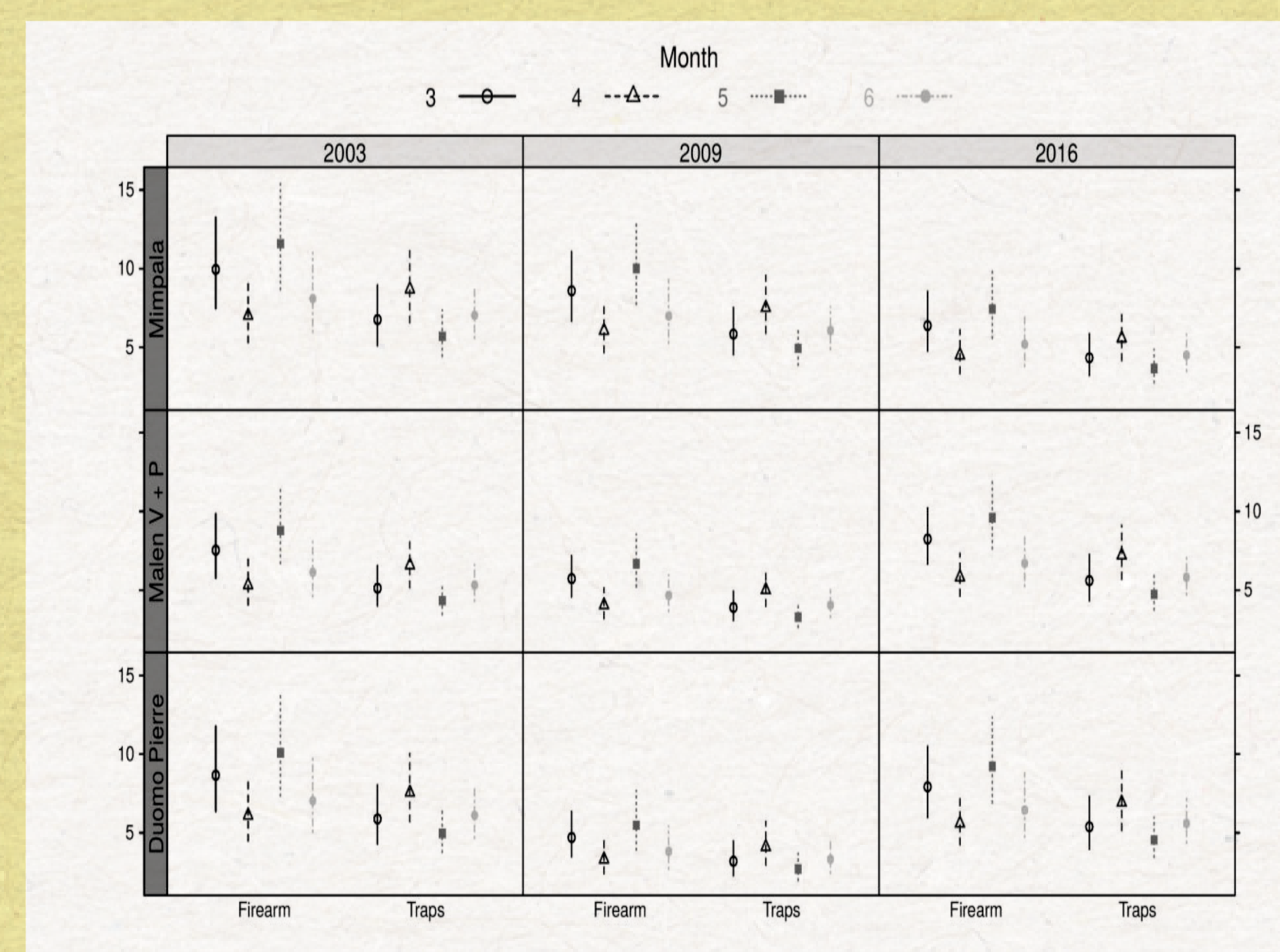


Fig. 2 - MBMI values per hunting method, village, month and year
 • MBM in Mimpala, the most isolated location, decreased significantly over time, suggesting the **depletion of larger-bodied preys**.
 • MBM of Firearms is significantly bigger than Traps', which indicates **firearms actively select on larger-bodied preys**.

1. No alarming signs of over-hunting were found in our study area.
2. The increasing reliance on firearms may have dramatic consequences for larger-bodied taxa, such as primates.
3. Bringing in spatial hunting data shall help gauge sustainability in future studies.
4. We found no gorillas or chimpanzees hunted along the study periods: PGS may be having a positive impact through sensitization.