

Aflatoxin M1-related health risk for milk consumers in dairy farms of Burkina Faso

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Burkina Faso

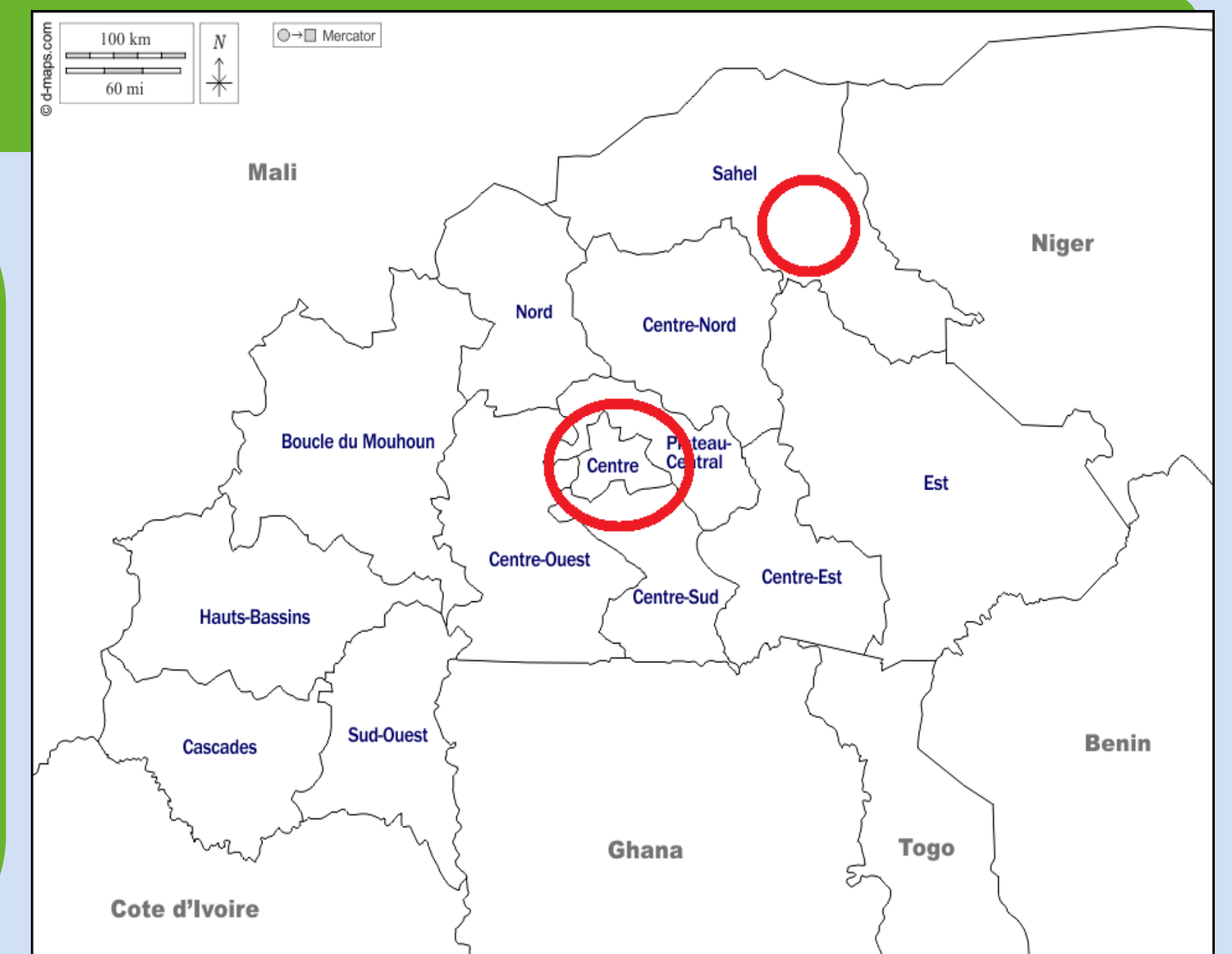
- Low per capita milk consumption
- Demand for milk expected to rise
- Production of milk expected to rise

Can the increase in milk consumption pose a health risk due to **aflatoxin M1 (AFM1)**?



Risk assessment

- **Dori** and peri-urban area of **Ouagadougou**, dairy farm households, May 2019
- 24-hour recall of milk consumption
- **Children (1 - 5 years old), breastfeeding women, pregnant women**
- Quantify AFM1 levels in samples of milk
- Estimate number of hepatocellular carcinoma (HCC) cases attributable to AFM1



Findings

- 268 farm households enrolled (104 peri-urban Ouagadougou and 164 Dori)
- 241 milk samples (98 milk peri-urban Ouagadougou and 143 Dori)
- **No sample** had values higher than Codex Alimentarius recommendation for AFM1 (Fig. 1)
- Higher per capita consumption than general population in Burkina Faso
- Relatively **low exposure** and **low number of HCC** attributable to AFM1 (highest in children) (Fig. 2)

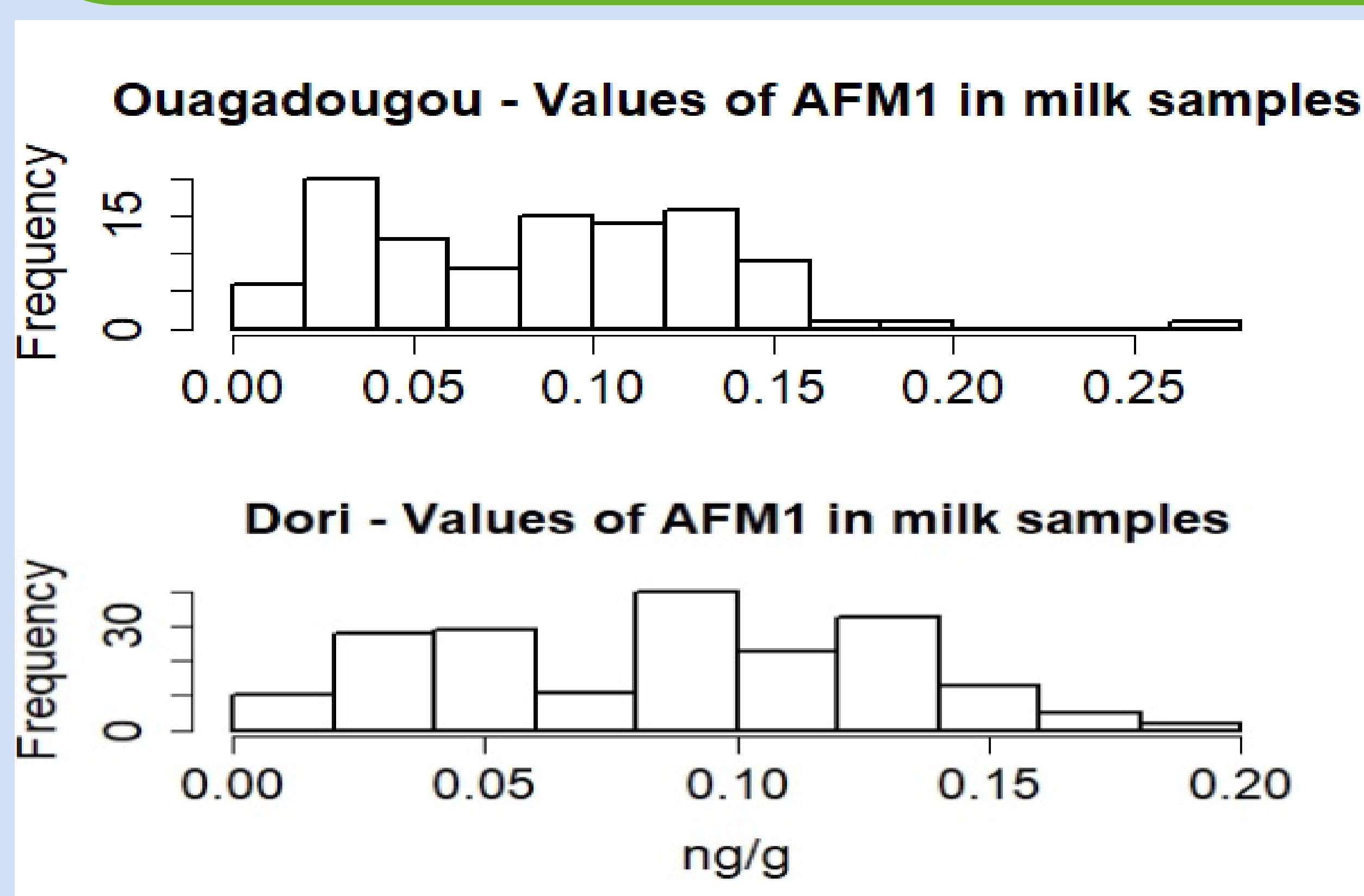


Figure 1: Concentration of AFM1 in the samples of milk from farms in each region

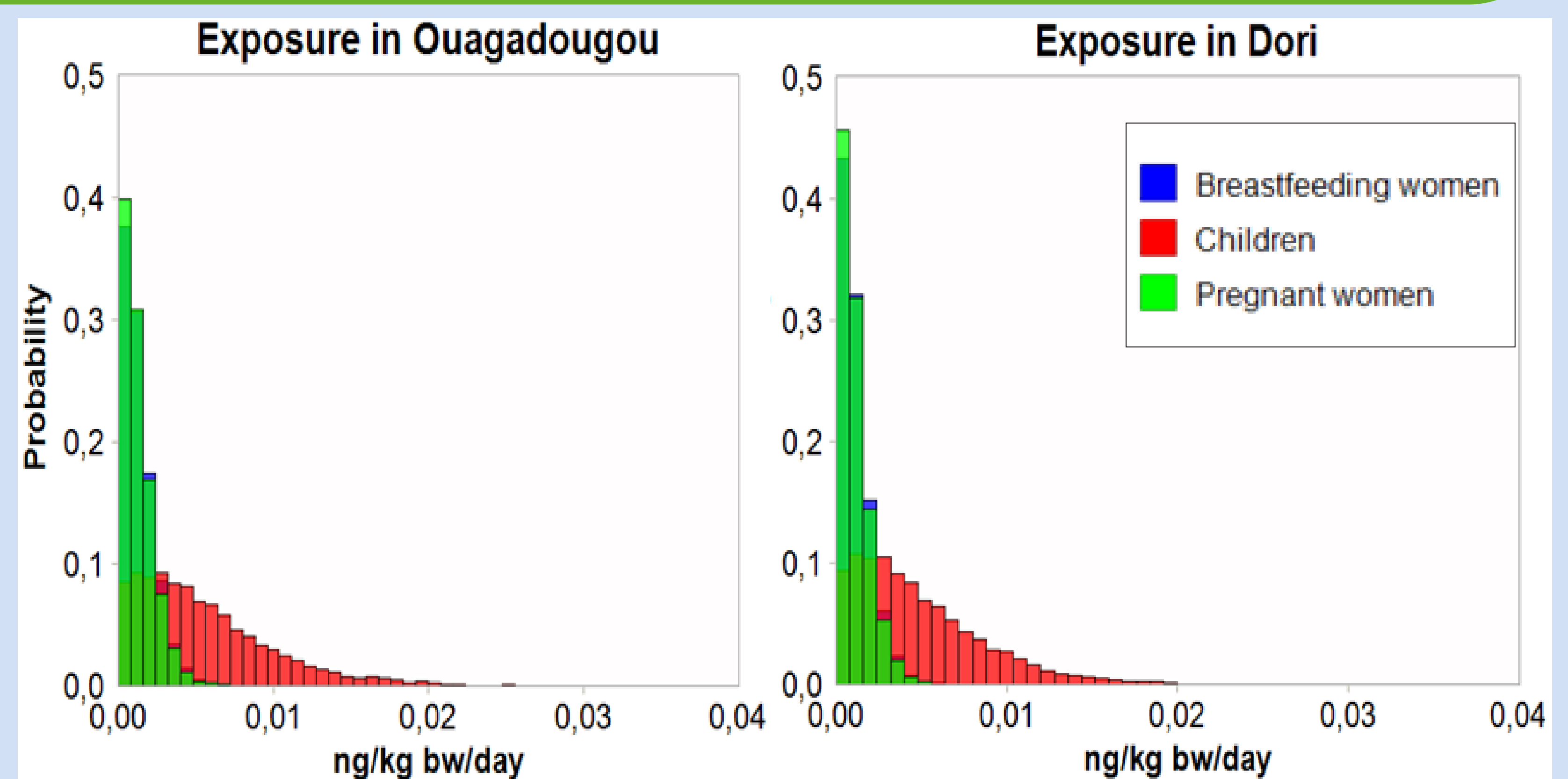


Figure 2: Exposure in ng/kg bw/day (X axis) and probability (Y axis) for each demographic group in each region.

Conclusions

- With these milk consumption patterns and AFM1 levels, risk for HCC development seems low
- Impact of lifelong exposure and other potential negative impacts ?
- Children between 12 and 60 months old are the most at risk, due to lower body weights
- Important to monitor AFM1

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