

$$2000\text{hectares} \cdot \frac{4.5 \cdot 10^7\text{termites}}{1000\text{hectare}} \cdot \frac{70\text{kg CH}_4 \text{ /year}}{1000\text{termites}} = 6.3 \cdot 10^9\text{kg CH}_4 \text{ /year}$$

$$\frac{0.09}{0.27} \cdot 6.3 \cdot 10^9\text{kg CH}_4\text{/year} = 2.1 \cdot 10^9\text{kg CH}_4\text{/year}$$