



UI GreenMetric Questionnaire

University : SONGKHLA RAJABHAT UNIVERSITY
Country : Thailand
Web Address : www.skru.ac.th

[2] Energy and Climate Change (EC) Carbon footprint per population (EC.8)

Scope	Activity	Emission Factor (kgCO ₂ e/unit)	Activity Data	Emissions (tCO ₂ e/year)
Scope 1	Vehicle transportation (Cars)	0.02	185 vehicles	0.0037
	Motorcycle transportation	0.01	489 vehicles	0.00489
Subtotal Scope 1				0.00859
Scope 2	Purchased electricity consumption	0.84	5,165,066.92 kWh	4,338.65
Subtotal Scope 2				4,338.65
Scope 3	General waste disposal (Landfill)	0.7933	30.44 tons	24.15
	Organic waste composting	0.3326	4,223.20 kg	1.404
	Fuel consumption for transportation	0.3522	52,453.25 L	18.47
Subtotal Scope 3				44.024
Grand Total Carbon Footprint (metric tons)				4,382.68

Description:

Carbon footprint per university population

$$= \frac{\text{Grand Total Carbon Footprint (metric tons) (tCO}_2\text{e/year)}}{\text{Total Campus Population (Students + staff)}}$$

$$= \frac{4,382.68}{12462 + 771}$$

$$= 0.33 \text{ metric tons/person/years}$$

1. Greenhouse Gas Emissions by Scope

- **Scope 1 (Direct Emissions):** Accounts for the lowest share of emissions at just **0.00859 (tCO₂e/year)** resulting from on-campus transportation involving 185 cars and 489 motorcycles.
- **Scope 2 (Energy Indirect Emissions):** The primary source of the university's greenhouse gas emissions, representing **98.9% of the total footprint**. It contributes **4,338.65 tCO₂e/year** driven by a total purchased electricity consumption of 5,165,066.92 kWh.
- **Scope 3 (Other Indirect Emissions):** Generates a total of **44.024 tCO₂e/year** This is mainly driven by general waste disposal via landfill **24.15 tCO₂e/year** followed by fuel consumption for other transportation purposes **18.47 tCO₂e/year** and organic waste **1.404 tCO₂e/year**



2. Grand Total Carbon Footprint

- The university's cumulative carbon footprint totals **4,382.68 tCO₂e/year** (metric tons of CO₂ equivalent per year).

3. Carbon Footprint per Capita

- **Total Campus Population:** 13,233 persons (comprising 12,462 students and 771 staff members).
- **Per Capita Emission Rate:** Calculated at **0.33 metric tons/person/years**