



**Centurion**  
**UNIVERSITY**  
*Shaping Lives...*  
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## Scope 3 Emissions Estimations

### Scope 3 Emissions (Estimated, tCO<sub>2</sub>e)

Centurion University has initiated **indicative tracking of Scope 3 emissions**, covering major indirect sources such as waste management, commuting, agriculture-related activities, and procurement.

Based on available data and standard emission factors:

- Waste management (organic waste): **~520 tCO<sub>2</sub>e**
- Transportation (staff & student commuting – estimated): **~900–1,200 tCO<sub>2</sub>e**
- **Agriculture & allied activities (fertilizer, irrigation, operations): ~300–500 tCO<sub>2</sub>e**
- **Procurement and other indirect sources (indicative): ~300–500 tCO<sub>2</sub>e**

### TOTAL SCOPE 3 EMISSIONS

Estimated Scope 3 emissions: **~2,000 – 2,700 tCO<sub>2</sub>e annually**

Estimated Scope 3 emissions are approximately 2,000–2,700 tCO<sub>2</sub>e per year, including contributions from waste management, transportation, agriculture, and procurement activities. These are currently indicative estimates, with plans to expand detailed Scope 3 accounting under the Climate Action Framework.

### Total Scope 1 & 2 Emissions for Baseline Year (2023)

Based on the baseline assessment conducted in 2023:

#### ♦ Scope 2 (Electricity Emissions)

- Total electricity (2023): **~8.16 GWh**
- Low-carbon share: **53.80%**
- Grid electricity **≈ 3.77 GWh (3,770,000 kWh)**

Using emission factor: **0.82 kg CO<sub>2</sub>/kWh**

$3,770,000 \times 0.82 = 3,091,400 \text{ kg CO}_2$   
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**Scope 2 ≈ 3,091 tCO<sub>2</sub>e**

#### ♦ Scope 1 (Fuel Emissions – Estimated)

- Diesel consumption (baseline estimate): **~230,000 liters/year**
- Emission factor: **2.68 kg CO<sub>2</sub>/liter**

$230,000 \times 2.68 = 616,400 \text{ kg CO}_2$   
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**Scope 1  $\approx$  616 tCO<sub>2</sub>e**

**TOTAL BASELINE EMISSIONS (2023)**

$3091 + 616 = 3707 \text{ tCO}_2\text{e}$