Environmental Sustainability Report

Generated Report for Ahmedabad, Nirma University

Factor	Value	Score	Explanation
Air Quality Index (AQI)	3	8.33	Low pollution, good for sustainability
Temperature	31.01°C	10	Ideal temperature range
Humidity	51%	7	Slightly elevated
Soil Type	None	10	Loam is ideal for agriculture
Flood Risk	1	9	Low flood risk
Seismic Activity	0.3067707070707071	8	Moderate risk, manageable
Wind Patterns	20 m/s	9	Moderate wind speeds

Environmental Sustainability Report for Nirma University, Ahmedabad

Introduction

This report presents an assessment of the environmental sustainability of the area surrounding Nirma University in Ahmedabad, India, based on available environmental data and the Environmental Sustainability Score (ESS). The ESS is a comprehensive indicator that evaluates the overall environmental performance of a given area.

Environmental Data

| Parameter | Value | Ideal Range | Score |

|---|---|---|---|

| Air Quality Index | 3 | Lower is better | 100% |

| Temperature | 31.01°C | -30°C to 50°C | 81.34% |

| Humidity | 51% | 50% | 90% |

| Soil Type | Not specified | Loam preferred | 0% |

| Flood Risk | 1 | 0-1 scale (0: no risk; 1: very high risk) | 0% |

| Seismic Activity | 0.306770707071 | 0-1 scale (0: low; 1: high) | 69.33% |

| Wind Patterns | 20 m/s | 3-10 m/s | 66.67% |

Environmental Sustainability Score (ESS)

The ESS for the study area is calculated as 65.24291792929293. This score indicates that the area has moderate environmental sustainability.

Key Strengths and Weaknesses

Strengths:

- Excellent air quality (AQI of 3)
- Moderate wind patterns
- Low seismic activity

Weaknesses:

- Lack of information on soil type
- High flood risk
- Relatively high temperature

Actionable Recommendations

Improving Air Quality:

- Promote the use of public transportation and electric vehicles
- Encourage tree planting and green spaces
- Implement stricter emission regulations

Managing Flood Risk:

- Upgrade flood control infrastructure
- Implement flood warning systems
- Restrict development in flood-prone areas

Other Recommendations:

- Conduct soil analysis to determine the soil type and make appropriate management recommendations
- Promote sustainable construction practices to reduce environmental impact
- Raise awareness about environmental issues and encourage responsible behavior

Long-Term Environmental Stability, Resilience, and Sustainable Development

The ESS provides valuable insights into the environmental resilience and sustainability of the study area. A higher ESS indicates better environmental health, which translates into improved long-term stability and resilience to climate change. A low ESS, on the other hand, suggests areas where environmental conditions need to be addressed to enhance sustainability and mitigate risks.

For the study area, the moderate ESS of 65.24291792929293 indicates that while some

environmental aspects are strong (e.g., air quality), others could be improved (e.g., flood risk, temperature). By implementing the recommended actions, the sustainability of the area can be significantly enhanced, creating a more resilient community and fostering sustainable development.