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**GEN 203: Ecological System and Environment**

**Case Study**

**Day-time Noise pollution in East West University Premises.**

**Submitted to:**

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**Introduction**

Noise pollution, also known as environmental noise or sound pollution, refers to the presence of excessive or harmful levels of noise in the environment. This type of pollution is caused by various human activities such as: transportation (traffic noise from cars, trucks, buses, airplanes, and trains) or industrial activities like noise from factories, construction sites, and other industrial operations also could be urban development, loud music, shouting or public events such as noise from concerts, sports events, and public gatherings.

In this assignment, I will be describing what kind of noise pollution **EWU (East West University)** premises face due to huge number of students.

**Problem statement**

Sound pollution is an overlooked aspect of our campus culture, which might be unknowingly affecting the academic performance, health, and overall well-being of students, faculty, and staff. This case study aims to identify the primary sources of sound pollution on campus, evaluate their impact, and propose effective strategies to create a safer learning environment. Despite its potential impact, sound pollution remains unaddressed, leading to potential negative consequences for those within our university environment. **The findings will be benchmarked against the 45 dB standard for silent zones.**

**Objective of the study**

We want to see how loud it gets in places like the canteen, field, entry points, and basement of the university. Our goal is to understand how this noise affects students and find ways to make these areas quieter and more comfortable for everyone.

**Justification for Focus on East West University**

**Relevance**: As members of the East West University community, we are directly affected by the campus environment and its associated challenges.

**Responsibility:** As stewards of our campus environment, it is our responsibility to identify and address issues that impact the quality of life and learning experience at East West University. By focusing on our own institution, we can take proactive steps to improve the campus environment for current and future generations of students, faculty, and staff.

**Opportunity for Improvement:** By conducting a thorough assessment of sound pollution at East West University, we can implement targeted interventions and strategies that address specific challenges unique to our campus.

**Study Area**

Noise levels were measured at four specific times of the day (8 am, 11 am, 2 pm, and 5 pm), using sound level meters at each location. The study focuses on four primary locations within East West University:

**Entry:**

* Located at the main entrance of the university, the Entry area serves as a hub for student, faculty, and staff movement in and out of campus.
* This area experiences high foot traffic throughout the day, with students arriving for classes, faculty members entering campus, and visitors accessing university facilities.

**Ground:**

* The Ground area is a central gathering space within the university, surrounded by academic buildings, recreational facilities.
* It serves as a venue for outdoor activities, events, and informal gatherings among students.
* Facilities in this area include seating arrangements, walkways, and landscaped areas.

**Cafeteria:**

* The cafeteria is a vital social and dining space within East West University, providing meals and refreshments to students, faculty, and staff.
* It is a bustling area during peak dining hours, accommodating many individuals seeking meals, social interaction, and relaxation.
* Facilities in this area include food counters, seating arrangements, and dining amenities.

**Basement/Common Room:**

* The Basement or Common Room serves as a multipurpose space for various student activities, meetings, and events, indoor games.
* It provides students with a venue for group study sessions, and recreational activities.
* Facilities in this area may include study tables, seating arrangements, recreational equipment, and audio-visual resources (Tv).

**Characteristics of the Study Area**

* Each of the selected locations represents key points of interaction and activity within the East West University campus.
* The study area encompasses diverse environments, ranging from outdoor gathering spaces to indoor dining and recreational facilities.
* These areas are frequented by many students, faculty, and staff throughout the day, contributing to the overall ambient noise levels.
* Understanding the noise pollution levels in these specific locations is crucial for identifying potential sources of disturbance and implementing replacing measures to enhance the quality of the university environment.

**Method of the study**

**Data Collection:** Noise levels were measured at various locations on the East West University campus using sound level meters. Measurements were taken during peak hours (8 AM to 5 PM) over a period of two weeks to capture a representative sample of daytime noise levels.

**Surveys and Interviews:** Surveys were distributed to students, faculty, and staff to gather qualitative data on their perceptions of noise pollution and its impacts on their daily activities.

**Data Analysis:** The collected data was analyzed to identify the primary sources of noise pollution, average noise levels in different campus areas, and the correlation between noise levels and reported impacts on health and performance**.**

**Results of the Study**

The noise levels recorded at different times of the day are summarized below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Time** | **Entry** | **Ground (dB)** | **Cafeteria (dB)** | **Basement (dB)** |
| 8.00AM | 56.9 dB | 48.2 dB | 51.1 dB | 50.3 dB |
| 11.00AM | 80.2 dB | 67.1 dB | 76.5 dB | 77.8 dB |
| 2.00PM | 69.1 dB | 66.5 dB | 72.8 dB | 73.2 dB |
| 5.OOPM | 88.6 dB | 82.2 dB | 91.6 dB | 89.6 dB |

**Discussion**

**Let us try to understand the reason behind this:**

**The canteen** area at East West University gets loud because there are not any rules about keeping voices down. People talk loudly, laugh, and even sing sometimes, making it hard to hear. The canteen is not just for eating; it is a hangout spot where people chat, gossip, and sometimes play music. The way the canteen is built makes sounds bounce around, making the noise even louder. Since it is a casual place, people feel free to be loud and expressive, adding to the noise. Overall, the canteen is a fun but noisy place on campus, where everyone enjoys themselves but may not realize how loud they are being.

**The ground area** at East West University is where students often meet up and hang out. It is a fun spot, especially during special days like Valentine's Day and Pohela Falgun. Sometimes, the university also holds concerts and events there, making it even busier and noisier. With all the chatting, music, and excitement, it can get loud at the ground area.

**At the entry** area of East West University, there are 8 to 10 punching machines where students come in and out all day long. These machines make noise whenever someone uses them. Additionally, the constant arrival of cars at the entry gate adds to the overall noise level. So, between the punching machines and the car traffic, the entry area can get noisy throughout the day.

**The basement** has a common room and space for indoor games like badminton, table tennis, and carrom. These games can be noisy. People playing these games and watching TV in the common room also add to the noise. Additionally, there is a car parking area in another part of the basement, which also contributes to the noise.

The recorded noise levels exceed the 45 dB standard for silent zones across all surveyed areas and times of the day. The Entry and Cafeteria areas show significantly high noise levels, especially during peak hours (11 am and 5 pm), reaching up to 91 db. The Ground and Basement/Common Room areas also exhibit elevated noise levels, albeit slightly lower compared to the Entry and Cafeteria.

**Conclusion**

**The study concludes** that noise levels at East West University significantly exceed the recommended standard for silent zones. Immediate action is required to address noise pollution, ensuring a healthier and more conducive environment for academic activities. Potential measures include implementing soundproofing solutions, enforcing noise control policies, and raising awareness about the impacts of noise pollution among the university community.

**To reduce noise pollution** at East West University, immediate action is needed as noise levels are much higher than recommended for quiet areas. We can make the university quieter by using soundproof materials, making, and enforcing rules about noise, and telling everyone about how noise affects us. Additionally, we can create quiet areas around campus where noise is controlled, suggest using headphones or earplugs, adjust schedules for noisy activities, plant trees and bushes to block noise, and work with the community to tackle noise from outside. These steps will make the university a better place for studying and learning.