

Contribution of Higher Education Institutions in Environmental Conservation and Sustainable Development: An Example of Nangarhar University

Yasin Mumtaz¹, Rashid Mumtaz², and Ashutosh Shukla¹

1. Faculty of Civil Engineering and Architecture, Ryukyus University, Japan

2. Department of Environmental Engineering, IHE Delft, Netherlands

Abstract: The environment which has provided a kind shelter for humanity has never been treated equally or even reasonably. The world has witnessed the most significant loss of its time by losing an integral part of Amazon tropical forests, as they were on fire just recently. Humans' selfish act has posed a threat not to themselves but also millions of species living a symbiotic life with us. To solve environmental issues and to spread awareness regarding this, Higher education institutions have played and are currently playing a significant role. Higher education has changed people's perspectives in many ways; it has caused a significant boost of economies and made people aware of their surroundings. Higher education institutions have launched massive experimental studies and research to minimize human activities' impact on their environment. Furthermore, higher education institutions have included environmental studies as an integral part of studies for students, and curriculums are set specially to pursue a safe environment goal. Nangarhar University is the second-largest university in the western region of Afghanistan, intending to make the environment safe through their rich study curriculum, environmental campaigns, and environmental safeguard projects. This paper aims to assess the efforts of higher education institutions in environment safeguard and natural resources management.

Key words: awareness, environmental education, outdoor studies, curriculum

1. Introduction

The world has been struggling intensely with environmental issues recently. Air, water, and soil pollution have been the most threatening issues, global warming, ozone layer deterioration, ocean pollution, and plastic waste. Furthermore, rapid urbanization and population growth, unplanned cities and villages, illiteracy, war and nuclear waste, deforestation, and iceberg melting have caused severe environmental issues. Furthermore, people's interference with the environment and their environmentally unfriendly lifestyle has contributed to raising environmental problems [1, 2].

To deal with this international threat, professionals should take charge and work closely with governmental, international, and non-governmental organizations. However, to have professionals in this field, universities should provide a high quality of education with a rich curriculum, research work, and collaboration with government, national, and international NGOs. Universities throughout history have provided invaluable assistance in every field societies needed help. Several methods have been considered to implement environmental education, which involves all age groups to enhance their level of information, knowledge, and awareness to maintain their good behavior with the environment [3-5]. Higher education institutions were involved in research and environmental problem solving lately, but in recent years their efforts had quadrupled and have taken the

Corresponding author: Yasin Mumtaz, MSc. Student; research areas/interests: civil and environmental engineering. E-mail: yasin.mumtaz.malik@gmail.com.

initiative to provide different programs through which students can learn more. Universities recently have been working on SDGs and MDGs within these environments, and clean water and sanitation are the most important subjects to focus on. Thousands of students have availed from exchange programs within universities to share the same concerns and work on unique environmental issues related to a specific region of the world.

This paper aims to assess higher education systems' effectiveness and indoor and outdoor education's importance in promoting environmental protection. Furthermore, the role of Nangarhar University is assessed through a survey to observe the efficiency of environmental education in this university.

2. Responsibilities of Higher Education in Environmental Studies

As environmental issues are getting worst day by day, more professional steps should be taken to contribute to our surroundings' safety and sustainability of the environment. In recent years, universities have started extensive research, projects, and voluntary campaigns to tackle this issue more professionally. While other factors like students' gender and socio-economic status affect the level of environmental awareness, but it is mostly affected by education level and income of parents, and school location [6]. Universities have taken this responsibility to train students professionally and lead them to the NGOs, governmental or international organizations to work on contemporary environmental issues efficiently. Furthermore, Universities have maintained a strong connection with industry; thus, products in recent years are more environmentally friendly.

Environmental awareness can help enhance individuals' environmental knowledge and attitude, and the feeling that makes them think more responsibly [7], caring for the environment and acting accordingly is the expected result of environmental education [8].

Higher education institutions can provide their assistance in regards to promoting environmental safety through the followings:

- 1) Curriculum
- 2) Fieldwork/Practical work/Research work
- 3) Collaboration with society and industry

2.1 Curriculum

The study program in higher education institutions should cover environmental related subjects. The curriculum should be well prepared and must include site visits, research works, presentations, and voluntary activities; furthermore, students should be motivated to participate in activities such as: reusing products [9]. To spread the message of keeping the environment safe and sustainable, students should attend different exchange programs and visit different university campuses nationally and internationally to understand the national level and the international level of environmental challenges.

Furthermore, environmental studies should not be among elective subjects; environment and sustainability should be among the compulsory subjects of engineering faculty and every other faculty within the university. The overall aim of environmental education is to increase awareness and positive attitude towards the environment [10].

Although every university has a study theme based on coursework or research, environmental studies require both. Students should have the opportunity to implement their coursework education in research are. The best way to teach everyone about the environment is outdoor education, where they can learn through their experience [11, 12].

In Afghanistan, universities have given priority to environmental studies and have placed environment-related subjects almost in every faculty. However, environmental issues are still taken very lightly in this country because it is currently fighting terrorism and extremists, which is considered a priority for the government.

Finally, universities should prepare seminars, voluntary activities, competitions, discussion clubs, or celebrate days entitled to the environment, such as: global earth day, water day, or clean environment days.

2.2 Fieldwork/Practical Work/Research Work

Research is an integral part of the learning system, through which a student can locate an issue and then search for solutions. Through the research method, students can learn the concept of self-discipline, perseverance, and commitment and can have the chance to make plausible decisions. This study method has been admired worldwide and has had significant achievements, especially in environmental engineering. Activities like hiking, trekking, scientific tours, and all those activities allow an individual to feel the environment from near gives a meaningful and satisfactory experience [10]. The outdoor study mostly focuses on the relationship between humans and nature [12-15]. Research work, site visits, and outdoor studies can help individuals in various aspects of life, including strongly affecting their intellectual, physical, spiritual and, moral abilities [16, 17].

Through research, universities can maintain a strong academic connection with industry, national and international organizations. Research works of the university have a substantial impact on government policies and environmental politics; the world has owed to the researches and achievements of researchers in the various fields of the environment such as water, waste, sanitation, and many more.

Some of the national and international levels of research organizations in Afghanistan with whom Afghan universities have collaboration are USAID, UNESCO, WHO, CRIDA, GIZ, JICA, MoPH, MoEW, MAIL, AREU (Afghanistan Research and Evaluation Unit), AREU (Afghanistan Renewable Energy Unit), etc. These organizations are working on different environmental challenges and have provided tremendous research opportunities to students and researchers.

2.3 The Collaboration of Academic Associations, NGOs, Government and Society

To bring researches to life, many critical factors should be taken into consideration such as; connections with national and international organizations, proper support by universities and government. Thus, research only on paper is worth nothing as long as it is taken seriously by academic institutions by explaining it to students and making the research result a part of new study material and making policies regarding that and implementing the research.

The current generation worldwide has enough awareness regarding environmental issues, and most of them tend to act environmentally friendly. Most of the young generation is complaining about pollution and environmental mistreat; thus, students worldwide have created different debates, activities, and research clubs to solve contemporary environmental issues. These institutions can increase students' competence and familiarize them with their societies' needs favorable for sustainable development [18].

After industry, organizations, and government contribution to the environmental researches, final stage concerns the society to accept the facts and then act accordingly. The current young generation has had a significant influence on their societies through different activities, clubs, hubs, and social media. Creating opportunities for students inside and outside higher education institutions creates the "Bio-fuel" that will energize the next generation to continue the sustainability movement [19].

Finally, research work and contribution of all the factors mentioned can promote environmental safety and the activities regarding that and put pressure on industry or government to make their products environmentally or the government to make policies to reduce pollution and make the environment safe.

3. Contribution of Nangarhar University to Environmental Protection

Nangarhar University is the second biggest higher education institution in Afghanistan after Kabul university being the first. Nangarhar university was established in 1963 with only 48 students, with 5 American and 3 Afghan professors in the medical field. However, today, it has 13 faculties, 73 departments, 14004 students, and 467 lecturers. The university is located far from the city, and the noise in a calm area is covered by trees and greenery.

The university provides adequate research space for students and encourages the students and professors to work on contemporary issues.

The university has had different projects on awareness and environmental cleanness voluntary campaigns. The university had a very successful student project on minimizing electricity consumption. Furthermore, through the student's innovation, they initiated an awareness program for families in Jalalabad city to reduce daily water consumption, resulting in great success. Furthermore, the university administration had recently decided to turn the campus green and make use of animal waste for producing biogas; the Agriculture Faculty of Nangarhar University is currently engaged in such activities. Most of the projects related to the environment, gender equality, and education quality are funded by MoHE (Ministry of Higher Education) or other international organizations such as USAID and GIZ.

Moreover, the university has rented buses for student transportation for and to university to reduce the number of cars, resulting in lesser CO₂ emission. The rest of the students use bicycles for commuting purposes, which means the usage of cars within the university is strongly discouraged. Moreover, the Kabul river (one of the major rivers of Afghanistan) flows nearby the university, which provides a good research and study area for students from a variety of backgrounds. It is good to mention that students take good care of the river and clean and appreciate mother nature's gift. This university has also organized several

workshops, long-term training, and consultation for other ministries and NGOs.

4. Conclusion

Higher education institutions have a firm promise and capacity to handle and deal with different environmental issues. The highly qualified professors and research members of these academic institutions can provide consultation for students, other researchers, NGOs, and, most important, the government. Furthermore, academic institutions are the centers of receiving and spreading education and environmental awareness by providing students opportunities to visit other universities worldwide.

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