# SDG.6.3.4

1. Newly constructed campus buildings, including the College of Humanities and Social Sciences, the Administration Building, the Student Activity Center, and the Second Student Dormitory, have all been awarded the Green Building Label. The evaluation is based on the seven indicators of the Green Building Assessment System: “Site Greening,” “Water Retention,” “Water Resources,” “Daily Energy Saving,” “$CO_2$ Emission Reduction,” “Waste Reduction,” and “Sewage and Garbage Improvement.”r.
2. For related outcomes, please refer to the Sustainability Report website: https://ces.nuk.edu.tw/p/412-1011-5978.php?Lang=en. The summary is as attached.

Attachment 1


▲ List of lab protective gear

D. Accident investigation: When an accident occurs in school, the person who finds it must report to the department supervisor and immediately report to the Environmental Safety and Health Unit in the General Affairs Office. The department supervisor should take response and handle in accordance with the relevant emergency response procedures. After the accident is handled, the Environmental Safety and Health Unit convenes relevant departments to investigate, analyze and confirm the circumstances and causes of the incident, and submit "School Disaster Accident Report" to the management representative for confirmation, review and improvement. If necessary, the report is submitted to the Environmental Protection and Safety and Health Committee for explanation.

**7. Safety and health education and training**

A. For freshman education and training, the Safety and Health Center hires experts and scholars in the field of occupational safety to schedule 3 hours of related courses every academic year. In addition, 3 hours of safety and health education and training are scheduled for lab personnel to strengthen the implementation of lab safety and health. In addition, lab instructors are invited to promote the safety and health rules of each lab for students in the first week of the lab course.

B. Ionizing radiation education and training are regularly held once a year for 3 hours. All faculty, staff and students who use radiation equipment must attend.

**8. Occupational safety management of contractors**

A. accordance with Article 26 of the Occupational Safety and Health Act, when all or part of the University business is handed over to contractor, the contractor shall be informed in advance of the working environment, hazards, and safety and health requirements to take necessary measures. Before each outsourcing work is delivered to the contractor, both parties must jointly sign a contract. During the contract period, in addition to complying with the provisions of the contracted project, they must abide by the government's occupational safety and health, environmental protection, and fire protection laws and other relevant laws and regulations.

B. The school also requires the contractor to designate the person in charge of the contracted project in the design phase and before the construction of each project phase for the public construction project in the school, and to act as command, supervision and coordination work. According to its design planning, construction method or operation type, reports on hazard identification, risk assessment, and control measures taken based on the assessment results are submitted, and the formal construction can be carried out after the school's contracting unit has reviewed and confirmed it. In 2024, there was no occupational accident in the contracting of on-campus projects.

## 5.1.2 Green Smart Campus and Buildings

Every new school building has been awarded the Green Building Label since 2012, and the Student Activity Center in 2022 has been awarded the Smart Building Label in addition to the Green Building Label.

▼ List of green buildings

| Building | Date | Award |
|---|---|---|
| College of Humanities and Social Sciences Building | Oct. 2012 | 9 indicators of Gold Label Green Building |
| | 2013 | Participated in the Kaohsiung Green Building Award and won Public Building Award and Rainwater Storage Facilities and Reuse Award |
| Administration Building | Sept. 2014 | 9 indicators of Bronze Label Green Building |
| Second Student Dormitory | April 2016 | Qualified Green Building Label for Dormitory |
| Student Activity Center | July 2022 | Basic Type of Qualified Green Building Label |
| | Dec. 2022 | Smart Building Label |

## 5.1.3 Water Resource Management

### Water resource treatment system

The main source of water for NUK comes from the tap water provided by District 7 of Taiwan Water Supply Company. The main source of water comes from the Gao-ping River, which is not significantly affected by the water intake.

Starting from 2010, the school cooperated with government agencies and implemented the Four-Saving Plan. Although the Plan ended in 2015, it has continued to implement water-saving measures and intended to reduce the annual water consumption by 2% compared with the previous year. It aims to review the annual water conservation goals, but in recent years, the weather has been hot, and water consumption increases year after year. Due to the pandemic in 2020-2021, online teaching was adopted. Since the faculty and students were not on campus, the consumption of water decreased significantly.

**Reclaimed water system :**
The water treated by the school sewage treatment plant meets the discharge water standard. Except for heavy rain, 100% is recycled and stored in the middle tank of the sewage treatment plant and used as the campus ecological water system, irrigation, and plants to use.

**Rainwater recovery system :**
The rainwater storage and reuse system set at the College of Humanities and Social Sciences is mainly to replenish the artificial lake nearby as an ecological water system.

**Water-saving facilities :**
Budgets are made year by year to replace the urinals and toilets of male and female toilets and the taps on each floor to water-saving equipment.

Specific improvement measures for water saving in toilets include the widespread installment of two-stage flushing toilets or water-saving toilets

▼ Statistics of water consumption

| Year | Billing interval | Meter unit | Water saving rate calculated | Water recovery volume | Water recovery PCT |
|---|---|---|---|---|---|
| 2015 | 2014/11/19~2015/11/23 | 163.032 | — | — | — |
| 2016 | 2015/11/24~2016/11/22 | 188.022 | -15.33% | 117.309 | 62.39% |
| 2017 | 2016/11/23~2017/11/21 | 176.309 | 6.23% | 111.621 | 63.31% |
| 2018 | 2017/11/22~2018/11/21 | 203.49 | -15.42% | 171.938 | 84.49% |
| 2019 | 2018/11/22~2019/11/21 | 204.291 | 0.00% | 179.294 | 87.76% |
| 2020 | 2019/11/22~2020/11/21 | 152.389 | 25.41% | 141.934 | 90.00% |
| 2021 | 2020/11/22~2021/11/21 | 139.024 | 8.77% | 128.551 | 92.47% |
| 2022 | 2021/11/22~2022/11/21 | 182.021 | -34.70% | 172.489 | 94.76% |
| 2023 | 2022/11/22~2023/11/21 | 161.823 | 11.10% | 149.416 | 92.33% |
| 2024 | 2023/11/22~2024/11/21 | 160.073 | 1.08% | 147.735 | 90.78% |

*Water conservation rate = (last year's tap water use - current year's water use) / last year's water use

Attachment 2

# 第九章 環境保護對策及替代方案

## 9.1 施工期間環境保護對策

### 9.1.1 地質

結構物設計或現地施工前，建議宜在計畫區內，先做地質鑽探，並進行土壤物理性質試驗、工程性能試驗及基礎承載力試驗等，以供設計或施工時的參考。物理性質試驗主要目的，在於了解土壤基本性質，以做土壤的檢定及分類，並用於計算土壓力、土壤垂直應力及評估土壤壓實程度等工作。試驗項目包括顆粒分析、含水量測定、液限試驗、塑限試驗、土壤單位重測定、比重試驗、空隙比測定及土壤分類等。工程性能試驗又稱為力學試驗，包括無圍壓縮試驗、直接剪力試驗、三軸壓縮試驗及單項度壓縮試驗等，試驗所得之參數可用於評估黏土層的沈陷量。

施工時則可採取以下之對策以減輕影響

(1)開挖深地基或進行鑽井時，宜規劃井點系統，並做好水層阻隔與封井工程工作，以避免鹽水或水質較差的水，