



University : National Chin-Yi University of Technology
Country : Taiwan
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[SDG 6] Clean Water and Sanitation 淨水與衛生

[6.3.4] Does your university as a body apply building standards to minimise water use? (relevant standards to be indicated)

NCUT has implemented a comprehensive Water Conservation Program to promote efficient water use, reduce environmental impact, and contribute to national and global sustainability goals. This program integrates infrastructure improvements, smart monitoring systems, recycled water use, and stakeholder education.

Water-Saving Measures at NCUT

The water-saving measures implemented at National Chin-Yi University of Technology (NCUT) showcase a comprehensive approach to sustainability and resource management. Below is a summary of the key aspects of NCUT's water conservation strategy:

1. Water Conservation Management and Strategy:

- **Comprehensive Plan:** NCUT has developed a detailed water conservation management plan, appointing dedicated personnel to oversee water-saving efforts.
- **Water-Saving Opportunities:** Regular assessments of water use across laboratories, dormitories, dining facilities, and air conditioning systems allow for targeted water-saving improvements.
- **Education and Advocacy:** Staff are enrolled in water conservation courses, and water-saving principles are promoted throughout the campus community.

2. Specific Water-Saving Measures:

- **Air Conditioning System:** Improved cooling technologies, condensate recovery, and regular system maintenance optimize water usage.
- **Water Equipment:** Installation of low-flow fixtures, smart meters, and real-time monitoring systems helps minimize wastage.
- **Restroom Facilities:** Dual-flush toilets and efficient models reduce water consumption, while users are educated on responsible usage.
- **Dormitories and Restaurants:** Awareness campaigns, water-saving appliances, and guidelines for efficient water use are implemented.
- **Gardens and Green Spaces:** Drought-resistant plants, smart irrigation, rainwater reuse, and mulching techniques reduce the water demand for landscaping.

3. Rainwater Collection and Reclaimed Water Use:



- **Enhanced Rainwater Harvesting:** NCUT has upgraded rainwater collection systems and expanded applications for rainwater reuse, such as irrigation and non-potable needs.
- **Reclaimed Water Treatment:** Advanced treatment technologies and expanded use of reclaimed water in cooling systems and irrigation help further conserve fresh water.
- **Sewage Treatment:** Discharged water from sewage treatment is enhanced for reuse in irrigation and other non-potable applications, meeting regulatory standards.

4. Water Conservation Performance Evaluation:

- **Target Water Reduction:** NCUT tracks and monitors reductions in water consumption, setting specific goals to measure progress.
- **Annual Water Consumption Monitoring:** The average water consumption per person is tracked, and total savings are calculated in cubic meters.
- **Cost and Economic Benefits:** The costs of water-saving measures are weighed against the financial savings from reduced water bills.

5. Recognition and Innovation:

- **Government Recognition:** NCUT has received accolades from the Water Resources Department for its outstanding achievements in water conservation.
- **Innovative Methods:** NCUT serves as a model for other institutions by sharing and showcasing innovative water-saving techniques.

6. Water-Efficient Appliances:

- **Sensor-Operated Urinals and Faucets:** Automatic flush systems and sensor-activated faucets are installed to optimize water use and maintain hygiene.
- **Dual-Flush Toilets:** Users can choose between two flush options, conserving water by adjusting for liquid or solid waste.

By implementing these strategies and continuously evaluating performance, NCUT not only promotes sustainability but also strengthens its commitment to water conservation, fostering an eco-friendly and resource-efficient campus environment.

Appliance	Total Number	Total number water Efficient appliances	Percentage
toilet urinals	350	350	100%
faucet	520	500	96.1%
two-stage toilet	215	215	100%
		Average Percentage	98.7%



NCUT's Building Standards and Water Conservation Efforts

1. Smart Water Monitoring

- **Digital water meters** are installed in every building to monitor daily water consumption.
- Real-time data helps detect leaks or unusual usage patterns, enabling quick corrective action.

2. Sewage Treatment and Reuse

- NCUT operates a **sewage treatment plant** in compliance with the **Water Pollution Prevention and Control Act**.
- Wastewater undergoes **physical, chemical, and biological treatment**.
- **40% of treated water** is reused for:
 - Irrigating campus greenery (lawns, trees, flowers).
 - Replenishing **Mingxiu Lake**.
- The remaining **60% is safely discharged** into designated channels.

3. Rainwater Harvesting and Reuse

- The **NCUT Dormitory** is equipped with a **rainwater recycling system**, primarily used for toilet flushing, reducing reliance on municipal water.
- Other buildings (e.g., Guoxiu Teaching Building) integrate **rainwater recovery systems** for non-potable uses

4. Leak Prevention and Maintenance

- Regular building inspections and preventive maintenance protocols help identify inefficiencies in water systems.
- Facilities staff use **smart alerts from monitoring systems** to respond quickly to issues.

5. Education and Awareness

- Water conservation education is embedded into **sustainability courses**.
- Campaigns and signage in **restrooms and dormitories** encourage responsible use of water by students and staff.

Contribution to the Sustainable Development Goals:

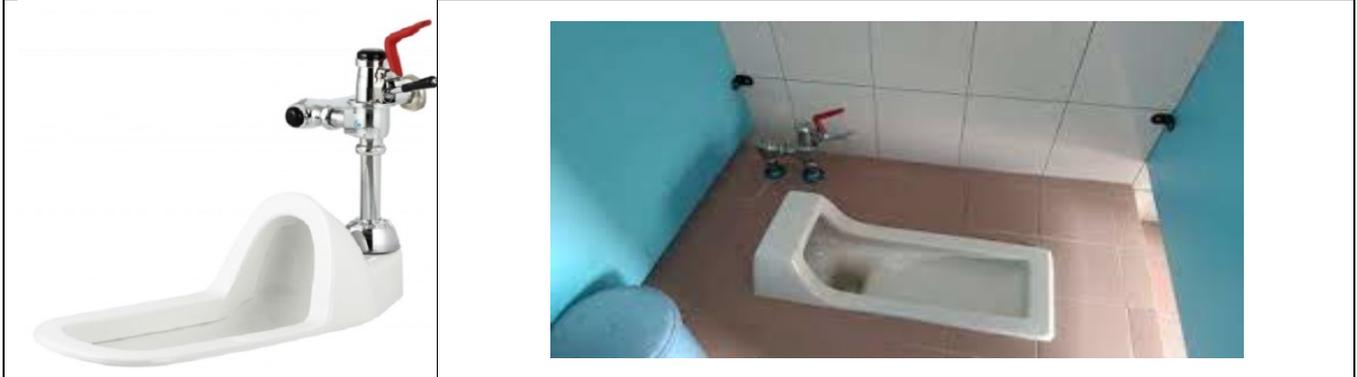
SDG	Contribution
SDG 6 – Clean Water and Sanitation	Ensures efficient water use and promotes recycled water use
SDG 9 – Industry, Innovation, and Infrastructure	Implements smart water infrastructure and real-time monitoring

SDG 11 – Sustainable Cities and Communities	Builds resilient water systems that reduce consumption and environmental pressure
SDG 13 – Climate Action	Reduces emissions associated with water transport and waste management

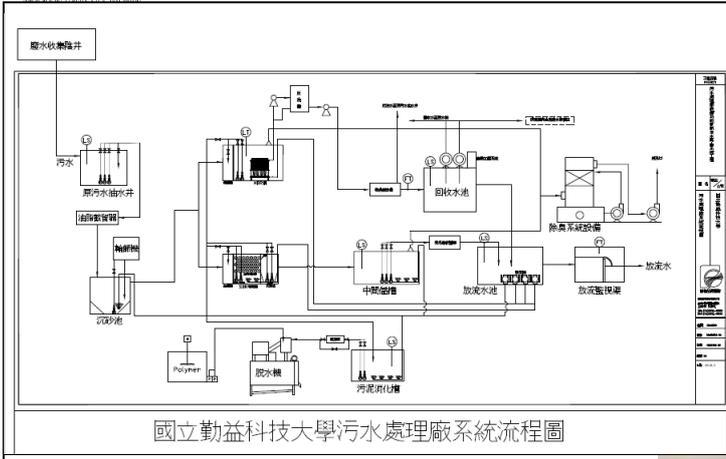


Induction urinal

Induction faucet and installation of water-saving device



Water saving equipment



NCUT has a sewage treatment plant, which is responsible for the sewage treatment and laboratory wastewater of the whole school. The sewage is partially recycled and reused according to regulations, and the rest is discharged from the discharge port.



NCUT reuses the discharged water treated by the sewage treatment plant and first deposits it in the middle pool.



The Mingxiu Lake of NCUT can be used as an ecological lake at the campus, and it also has a function of detention ponds, which can regulate the amount of water.