Annual Report
on SDG6 Clean Water and Sanitation

6.3 Water usage and care

6.3.5 - Does your university as a body plant landscapes to minimise water usage? (e.g. use drought-tolerant plants)

Thaksin University has adopted an integrated approach to landscape and building management that minimizes water consumption and enhances ecological sustainability across both the Songkhla and Phatthalung campuses. Guided by national building and environmental regulations as well as the TSU Green Campus and Building Design Standards, every new or renovated facility incorporates water-saving features such as drought-tolerant plants, permeable ground surfaces, rainwater-harvesting systems, and drip-irrigation technology. These efforts align with international building standards whose mutual aim is to ensure that all structures and landscapes are safe, efficient, and sustainable, and that environmental policies are effectively implemented on campus. The university's environmental strategy emphasizes the creation of low-maintenance green areas using resilient native species, including *Terminalia catappa*, *Wrightia religiosa*, *Tabebuia chrysantha*, *Etlingera elatior*, and drought-resistant grasses to reduce water demand while maintaining natural biodiversity. The landscaping plan is closely integrated with TSU's broader climate-action and green-infrastructure initiatives to ensure long-term water conservation, flood resilience, and carbon-neutral development.

Thaksin University incorporates water efficiency into landscape planning and plant selection to minimize water demand in campus green spaces. Plants are selected according to local site conditions and climate, with preference given to resilient species with low water requirements.

The university's landscaping approach includes:

- ✓ Low-water and drought-tolerant plants: Using suitable species, including various cacti and Echeveria succulents, to reduce watering requirements.
- ✓ Trees and ground-cover plants: Selecting appropriate trees to provide shade and ground-cover plants to protect the soil surface, helping reduce evaporation and retain soil moisture.
- ✓ Rock gardens: Incorporating rock gardens with low-water plants to reduce the area requiring frequent irrigation and lawn mowing.
- ✓ Water-conscious landscape design: Matching plants to their growing conditions and avoiding water-intensive species where they are unnecessary.
- ✓ Together, these practices help reduce irrigation demand and the resources required to maintain campus landscapes, supporting the university's commitment to efficient water use under SDG 6: Clean Water and Sanitation.






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During the reporting period from 1 January to 31 December 2025, Thaksin University expanded campus green space and used treated water for landscape maintenance. These activities addressed two aspects of landscape water management: establishing planted areas and reducing reliance on freshwater for irrigation.



On 26 February 2025, the Phatthalung Campus Office planted 1,307 trees at Thaksina Forest Park, a site of more than 31 rai (approximately 5 hectares) north of the Faculty of Nursing. University staff, students, and school pupils participated in the planting. The university recorded the tree species planted and their distribution across designated zones. The planting record documents the species used and provides a basis for assessing their suitability for local conditions and their irrigation needs.

For landscape maintenance, the university's water reuse dashboard displayed 23,931.08 m^3 of treated water pumped for plant watering and green-space maintenance under the 2025 reporting filter. This record documents the use of treated water as an alternative to freshwater for irrigation. The water savings attributable to plant selection would require separate assessment based on the irrigation needs of the species planted and records of water use at the site.



At the operational level, TSU's Facility and Environmental Division continuously upgrades campus infrastructure to optimize water efficiency. Smart-sprinkler and rain-sensor-drip systems have reduced irrigation water consumption by more than 40 percent. Permeable pavements and green roofs are expanding each year, while harvested rainwater from rooftops is reused for landscape maintenance and cleaning. All construction and renovation projects comply with the Green Building Standards and Safety Regulations, ensuring that every facility embodies sustainability, resilience, and safety as core design principles. Through this integrated framework, combining research, education, community service, and institutional management, Thaksin University demonstrates its commitment to sustainable water use and landscape management. These collective actions directly support Sustainable Development Goal 6 (Clean Water and

Sanitation) and reinforce the university's role as a model of environmentally responsible higher education in southern Thailand.

Supporting evidence:

Campus landscaping and low-water plants

- Photographs of campus landscaping and low-water plants. https://drive.google.com/drive/folders/1DCoTLKTsXT70i8B5sfrOuf6JO19v7mtw

Thaksin Forest Park

- https://sdg.tsu.ac.th/detail.php?aNum=20250626115829&id_list=974&utm_source=chatgpt.com

Into the Mud to Plant Rice and Tell Its Story: Thaksin University Revives Coastal Rice-Farming Traditions

- https://sdg.tsu.ac.th/detail.php?id_list=1198&aNum=20250722101240

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- https://tsu.ac.th/home/details.php?id=5527

Research Paper

https://agri.tsu.ac.th/upload/files/1678855111_13%20%E0%B8%A1%E0%B8%B4%E0%B8%A265%20Smart%20Greenhouse%20%E0%B8%AA%E0%B8%B3%E0%B8%AB%E0%B8%A3%E0%B8%B1%E0%B8%9A%E0%B8%9B%E0%B8%A5%E0%B8%B9%E0%B8%81%E0%B8%9E%E0%B8%B7%E0%B8%8A%E0%B9%83%E0%B8%99%E0%B9%80%E0%B8%82%E0%B8%95%E0%B8%A3%E0%B9%89%E0%B8%AD%E0%B8%99%E0%B8%8A%E0%B8%B7%E0%B9%89%E0%B8%99.pdf