Annual Report
on SDG 6 Clean Water and Sanitation

6.5 Water in the community

6.5.3 Does your university as a body support water conservation off campus?

Thaksin University supports water conservation outside its campuses by working with local Krajood handicraft communities to treat dye wastewater and promote the reuse of treated water. This work is part of the project "Dye-wastewater Management Using Activated Carbon Innovation Derived from Krajood Residues for Water Security in Songkhla Lake Basin."

Between 1 January and 31 October 2025, the University's research team conducted community activities at three off-campus locations: the Varni Krajood Handicraft Community Enterprise in Phanang Tung, Phatthalung, on 14 September 2025; the Thachang Community Enterprise Demonstration Centre in Phanang Tung, Phatthalung, on 5 October 2025; and the Krajood Weaving Group in Ko Saba, Songkhla, on 11 October 2025.



Figure 1: Varni community activity, 14 September 2025



Figure 2: Thachang community activity, 5 October 2025



Figure 3: Ko Saba community activity, 11 October 2025

The team explained the effects of dye wastewater and demonstrated how to make activated carbon from leftover Krajood using locally available equipment. Community members learned how to use the activated carbon in filter systems to treat wastewater from Krajood dyeing. The project report states that treated water can be reused and that the treatment helps reduce the discharge of untreated dye wastewater into local waterways.



Figure 4: Activated-carbon filter system demonstrated by the project team

The project report presents the following water-quality results for wastewater treated with the Krajood activated-carbon filter:

Indicator	**Water quality after treatment**
pH	6.5–7.5
Color	No visible color; clear
Turbidity	< 1 NTU
Total suspended solids (TSS)	< 5 mg/L
Biochemical oxygen demand (BOD)	< 2.2 mg/L

The report also states that the filter media could be reused for at least 15 treatment cycles. This refers to reuse of the filter media, not to a measured volume of water saved. The report does not state the volume of treated water actually reused; therefore, this report does not claim a specific amount of water saved or reused.

Thaksin University received a research and innovation activity grant of THB 1,000,000 from the National Research Council of Thailand (NRCT) for this project. The activities were carried out with local community enterprises and local government partners. The project report, funding agreement, cooperation letters, and activity video are provided as supporting evidence.

Supporting evidence:

1. NRCT research report: project activities, dates and locations, treatment process, and water-quality results- 6.5.3-1

https://drive.google.com/file/d/1sxy-BoeGI7xEw-18fekbd-8kWO8peIye/view?usp=sharing

2. NRCT funding agreement: project funding and implementation period-6.5.3-2

https://drive.google.com/file/d/1J8QVm4rWtDA9j6-2CiTpP-zPsFelmQbl/view?usp=sharing

3. Community and local government cooperation letters: local partners' commitment to learning, training, and applying the activated-carbon approach-6.5.3-3

https://drive.google.com/file/d/1QAMr_CiMbJ3RcdruqtQb0whxToGidJV2/view?usp=sharing

4. Project video: visual evidence of demonstrations and community participation outside the campus-6.5.3-4

https://drive.google.com/file/d/12V5VxqRIaV57TzDypNebVVcPE6IWdreI/view?usp=sharing

5. Public project information:

https://www.tsu.ac.th/home/details.php?id=5572
https://www.nrct.go.th/knowledge/detail/6004
https://www.facebook.com/share/p/1abMLGLjFT/
https://www.facebook.com/share/18ga25yrMH/
https://www.facebook.com/share/v/1cjDmdFa2q/