Annual Report

on SDG 6 Clean Water and Sanitation

6.5 Water in the community

6.5.7 Does your university as a body actively promote conscious water usage in the wider community?

Thaksin University promotes responsible water use in local communities through research, demonstrations, and knowledge-sharing on the treatment of wastewater from Krajood dyeing. In 2025, the University's research team worked with Krajood handicraft communities on the project *"Dye-wastewater Management Using Activated Carbon Innovation Derived from Krajood Residues for Water Security in Songkhla Lake Basin."* The project introduced a treatment method using activated carbon made from leftover Krajood and showed community members how it could be used in a filter system.

The team conducted activities at three community locations:

- Varni Krajood Handicraft Community Enterprise, Phanang Tung, Phatthalung, on 14 September 2025
- Thachang Community Enterprise Demonstration Centre, Phanang Tung, Phatthalung, on 5 October 2025 and
- Krajood Weaving Group, Ko Saba, Songkhla, on 11 October 2025





Figure 1: Water-management learning activity at Varni Krajood Handicraft Community Enterprise, 14 September 2025



Figure 2: Community demonstration on Krajood dye-wastewater treatment at Thachang, 5 October 2025



Figure 3: Water-management activity with the Krajood Weaving Group in Ko Saba, 11 October 2025.

During the activities, the team discussed wastewater from Krajood dyeing and demonstrated how to prepare activated carbon from Krajood residues using locally available equipment. Community members were shown how to place the material in a filter system to treat dye wastewater. The project report describes the treatment approach as a way to reduce the discharge of untreated dye wastewater into local waterways and identifies the potential for treated water to be reused.



Figure 4: Activated-carbon filter system demonstrated for treating Krajood dye wastewater

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

Indicator	Reported result after treatment
pH	6.5–7.5
Color	Clear; no visible color
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 can be reused for at least 15 treatment cycles. This refers to reuse of the filter media; the available project information does not specify the total volume of treated water reused. The University therefore reports the treatment results and reuse potential without claiming a measured volume of water saved.

Through these activities, Thaksin University shared practical knowledge with Krajood producers about wastewater treatment and responsible handling of water used in handicraft production. The community demonstrations connected the treatment method with local production practices and the protection of water resources in the Songkhla Lake Basin.

Supporting evidence:

1. NRCT research project report: 6.5.7-1

https://drive.google.com/file/d/1DIYJy8JJKhoTGHhseZcmt-UzsDhxhyA4/view?usp=sharing

2. NRCT funding agreement: 6.5.7-2

https://drive.google.com/file/d/1a2WYUQG0wzWIHFOx6H0lH_jvMDLtInAA/view?usp=sharing

3. Community activity photographs or video: 6.5.7-3

https://drive.google.com/file/d/1Ql5EfTTDwGcnRizJKCiYsha2hafpOT7F/view?usp=sharing

4. 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/