Annual Report

on SDG 6 Clean Water and Sanitation

6.5 Water in the community

6.5.5 Does your university as a body cooperate with local, regional, national or global governments on water security?

Thaksin University works with national and local government partners and community organisations on water security. From 1 January to 31 October 2025, the University's activities included research on wastewater from Krajood dyeing, community demonstrations of wastewater treatment, and participation in a national water-security initiative.

National cooperation on water security

Thaksin University, with support from the National Research Council of Thailand (NRCT), carried out the project "Dye-wastewater Management Using Activated Carbon Innovation Derived from Krajood Residues for Water Security in Songkhla Lake Basin." The project developed and demonstrated a way to treat wastewater from Krajood dyeing using activated carbon made from leftover Krajood.

On 14 October 2025, Thaksin University representatives attended the NRCT-organized cooperation agreement ceremony, "Toward Thailand's Future: Water Security, No Floods, No Droughts." The event brought together NRCT, provincial partners from Songkhla and Phatthalung, and other organisations to support water-security work through research and innovation. The NRCT announcement names participating partners, including the Office of National Water Resources Region 4, the Agricultural Research Development Agency, and the Songkhla Provincial Administrative Organization. The University's participation is documented by the event photograph and attendance record provided with this report.



Figure 1: Thaksin University representatives at the NRCT water-security cooperation ceremony, 14 October 2025

Cooperation with local governments and communities

The University's research team shared the Krajood wastewater-treatment approach with local communities at three 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.

At the Thachang activity, the Mayor of Phanang Tung Subdistrict Municipality joined the event. The research team demonstrated how to make activated carbon from leftover Krajood and use it in a filter to treat wastewater from dyeing.



Figure 2: The Mayor of Phanang Tung Subdistrict Municipality and the Thaksin University team at the Thachang community activity, 5 October 2025

The University also worked with the Krajood Weaving Group in Ko Saba. The activity included representatives of the Ko Saba Subdistrict Administrative Organization, as documented in the activity photograph and records.



Figure 3: Thaksin University's community water-management activity with the Krajood Weaving Group in Ko Saba, 11 October 2025

At Varni Krajood Handicraft Community Enterprise, the team discussed wastewater from Krajood dyeing and demonstrated the treatment approach to community members.



Figure 4: Water-management learning activity at Varni Krajood Handicraft Community Enterprise, 14 September 2025.

Thaksin University also met with the Khuan Khanun District Community Development Office, under the Department of Community Development, Ministry of Interior, to discuss water-management approaches and cooperation on treating wastewater from Krajood dyeing in Khuan Khanun District. The discussion focused on ways to address wastewater from local handicraft production and support community-based water management.



Figure 5: Representative of the Khuan Khanun District Community Development Office at a project activity



Figure 6: Demonstration of the Krajood activated-carbon filter for dye wastewater

Wastewater treatment and water-quality results

During the community activities, the research team demonstrated how activated carbon made from Krajood residues could be used in a filter system to treat dye wastewater. The project report describes the treatment process and water-quality results. It also states that treated water can be reused and that treatment helps reduce the discharge of untreated dye wastewater into local waterways. Together, the NRCT-supported research, the national water-security cooperation ceremony, and the local activities show Thaksin University's work with national and local partners on water-management needs in the Songkhla Lake Basin.

Supporting evidence:

1. NRCT public announcement of the water-security cooperation ceremony, 14 October 2025.
https://www.nrct.go.th/news/detail/5684

2. NRCT public project information.
https://www.nrct.go.th/knowledge/detail/6004

3. NRCT research report: project activities, dates and locations, treatment process, and water-quality results-6.5.5-1
https://drive.google.com/file/d/1rZIcToyEr8SzoY6P1DehsyBG8FQ8w3u9/view?usp=sharing

4. NRCT funding agreement: project funding and implementation period- 6.5.5-2
https://drive.google.com/file/d/1dIXT33mRPOyMVzpUSsOUzXG2v5RjGo02/view?usp=sharing

5. Community and local government cooperation letters: local partners' commitment to learning, training, and applying the activated-carbon approach- 6.5.5-3
https://drive.google.com/file/d/1bMm7vrAG8SeUWH3P9rpUK8XPRxmR8QxI/view?usp=sharing

6. Project video: visual evidence of demonstrations and community participation outside the campus-6.5.5-4
https://drive.google.com/file/d/1dRCEddYSJRLHDD5NTMeQ0v-Veg-_3JR0/view?usp=sharing

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/