

# **Awareness Enhancement Project for Reducing Single-Use Plastic Packaging in Daily Life Based on the 3R Principles and Participatory Waste Management in the Surrounding Areas of Walailak University**

**Phusit Horpet**

**Lecturer, Marine Science Program,  
School of Science, Walailak University**

The current consumption patterns in Thai society, which prioritize convenience and speed, have led to a new crisis of rapidly increasing plastic waste from single-use plastic containers and packaging. These plastics now account for over 80% of solid waste. A significant portion of this plastic waste has the potential to leak into waterways and eventually reach the sea and ocean, contributing to the growing problem of marine debris. This marine plastic pollution impacts marine life and the environment, a concern regularly highlighted in the media through distressing reports. The issues of solid waste and marine debris are not just local or national concerns but have escalated to a global crisis, which has now been elevated to a national priority that requires urgent resolution. This is not a problem for any single person to solve, but a responsibility we all share. One way to begin addressing this issue is by changing our consumption habits to be more environmentally friendly, particularly by reducing the use of single-use plastic containers and packaging in our daily lives. This project aims to enhance knowledge, understanding, awareness, and foster environmental responsibility to encourage behavior change toward eco-friendly consumption, focusing on reducing the use of single-use plastic packaging in daily life. It follows the 3R principles: Reduce, Reuse, and Recycle. The project also promotes proper solid waste management among students and staffs at Walailak University (WU) through activities that implement effective waste sorting on campus. The success of these efforts will then be expanded to the surrounding areas, aligning with the waste management policies of Nakhon Si Thammarat (NST) Province and Tha Sala District Administration. The focus is on reducing waste at its source by sorting waste before disposal, particularly organic waste (food scraps) and recyclable waste (sellable items), to help address the current issue of overflowing waste in the city.

Various activities have been driven in collaboration with students under the name "Marine Conservation Club, MCC" Marine Science Program, School of Science, WU through participatory engagement with both internal and external university agencies, as well as the community (University-Community Engagement, UCE). These activities have been integrated with student activities, teaching, academic services, and research since the academic year 2011. The process includes planning meetings, implementation, and outcome review with relevant agencies.

The main activities include:

1. **“Say No to Plastic Bag” Fabric Bag Painting and 8R Campaign** in collaboration with the Center for Library Resources and Educational Media to encourage students and staff to reduce the use of single-use plastics.
2. **“WU Marine-guard Waste Segregation Unit”** inspired by the waste sorting initiative at Khua Muang Walking Street Market in Nan Province, Northern Part of Thailand which was awarded as one of the world’s top 100 sustainable destinations in 2023 (Green Destinations Top 100 Stories 2023). The initiative promotes proper waste sorting before disposal during the National Children's Day 2024 event and at the local community market, “Bo Tha Green Market,” at the Walailak University Botanical Garden. Student volunteers assist by facilitating and educating the public on proper waste sorting, raising awareness among those disposing of waste. This includes not only sorting recyclable waste but also organic waste (food scraps and liquids) to reduce the amount of general waste. Additionally, students help separate different types of single-use plastics (e.g., plastic bags, cups, straws, food containers, and utensils), recording the number of pieces and weight. They present this data to market participants to highlight the significant amount of single-use plastic waste generated. They also suggest alternatives, such as using personal food containers, reusable bags, lunchboxes, and personal drinking cups, through educational signs and following that,
3. **The expansion of the WU Marine-guard Waste Segregation Unit** and education on marine waste management from the source by reducing the use of single-use plastic packaging in collaboration with Ban Tha Sung School through the “Tha Sala Coffee Spirit” event organized by the Tha Sala Tourism Club.
4. moreover, **An educational activity on food waste management** using Black soldier fly larvae (BSFL) led by Asst. Prof. Dr. Hathaichanok Kommen from the Chemistry Program, School of Science, aimed at the residents of Village No. 2 in Tha Sala Subdistrict.
5. **A beach cleanup activity** with data collection using the International Coastal Cleanup (ICC) guidelines, involving student representatives from seven primary and secondary schools in Tha Sala District, village health volunteers, representatives led by Mr. Sarayuth Lekakarn, Deputy Chief Administrator, Tha Sala District Administration Organization, representatives led by Mr. Rabill Thongnark, the Director of the NST Marine Conservation Center, Department of Marine and Coastal Resources, community leaders, and local residents. The volunteer groups involved in the beach cleanup included Tha Sala Ban Rao Group and Trash Hero Tha Sala, among others.
6. **Capacity building** for students through a lecture on solid waste management and strategies to prevent plastic waste from reaching the ocean, delivered by Dr. Vongvachira Ovararin, the Deputy Mayor of Nakhon Si Thammarat Municipality.

Up until now, the works of the Marine Conservation Club (MCC, WU) students have continuously received prestigious awards, including five gold medals and two silver medals from the Department of Climate Change and Environment (formerly known as the Department of Environmental Quality Promotion), along with other awards in activities related to promoting eco-friendly consumption and solid waste management from the source to reduce marine waste. These efforts aim to mitigate the impact on marine life and the environment. The activities have been jointly driven with Dr. Jindarha Prampramote from the Academic Services Center, Walailak University.

