

Chiang Rai Zero Waste: A Step-by-step Approach toward Partnership for Sustainability

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Abstract

Chiang Rai Zero Waste (CRZW) is a long journey of participatory action research (PAR) towards sustainability. Previously Chiang Rai like any other provinces in Thailand was struggling with municipal solid waste management (MSWM). On one hand, new lifestyle and consumption patterns had driven waste generation and changed the composition of waste. On the other hand, the local governments lacked resources to develop hard infrastructures to keep up with the rising demand for waste management. Open dumping and uncontrolled burning of waste posed serious health, environmental and social risks. However, the problem could be reduced if waste was sorted and diverted from waste disposal.

CRZW was formed in 2015 by a group of researchers and practitioners and a support from Chiang Rai Provincial Administrative Organization (CR PAO). Based on research findings, more than 80% of waste could be diverted using a stepwise approach. In the first step, the installation of sa-wians and other simple equipment in the backyard was promoted to offer convenience in dealing with organic waste. The campaign became popular owing to its tie to local wisdom and was adopted by many agencies and communities. More than 50,000 sa-wians had been installed in Chiang Rai resulting in large diversion of organic waste. CR PAO then partnered with 18 villages in 2016 to pilot a source separation program that turned waste into raw materials for sufficiency economy. The program was later extended to 253 villages in 20 sub-districts and to all villages in Chiang Khong District in the following years. In 2017, an online platform, D-ToC (data-supporting system for the management of toxic waste in Chiang Rai) was developed by Mae Fah Luang University for CR PAO to coordinate the management of household hazardous waste (HHW) with 143 local governments in the province. This enabled Chiang Rai to send 23 tons of HHW for safe disposal– the highest volume in the country. As of May 2018, 46 tons of HHW and 38 tons of waste glass were registered in the online system. The local governments that subscribes to D-ToC must demonstrate their support to source separation and report evidences of how organic waste, recyclables and HHW were handled in their villages. The success of CRZW shows the potential of multiple leverages that can encourage participation and partnership for sustainability at various levels.

Keywords: home composting; household hazardous waste; participatory action research; recycling; soft infrastructure; waste diversion