

ABSTRACT

This study analyzes the environmental impact of liquid waste from tempe mendoan MSMEs in Pliken Village using the Life Cycle Assessment (LCA) method. The production process generates liquid waste rich in organic compounds like proteins and fats, which can cause environmental pollution if not properly managed. The LCA approach identifies potential environmental impacts throughout the production cycle, from raw material procurement to waste disposal. Findings show that liquid waste from soybean washing, boiling, draining, and soaking significantly contributes to water pollution. To address this, the study recommends several waste management strategies: producing liquid organic fertilizer (LOF) for sustainable agriculture, converting waste into biogas for renewable energy, installing Solar Power Plants (PLTS) for environmentally friendly operations, and building a Wastewater Treatment Plant (WWTP) to reduce water pollution. These strategies not only minimize environmental impacts but also improve energy efficiency and add value to MSMEs. This study aims to provide a reference for sustainable liquid waste management in similar MSMEs, supporting the achievement of Sustainable Development Goals (SDGs).

Keywords : *LCA, Green Manufacturing, Waste, Production, SDGs, MSMEs.*