Abstract

The main objective of this research is to establish an environmental profile, from a life cycle perspective, of the main packaging material of Calamay in Jagna, Bohol, the Philippines, and to use the information generated for strategic planning purposes. This study will benefit the whole industry in ensuring a sustainable cottage industry especially to women who generally depend on the industry for livelihood. A conceptual life cycle assessment (Jensen, 1995) was undertaken to a segment of the life cycle stage of the Calamay product system where a qualitative inventory of inputs used and outputs emitted were gathered. The system boundary defined under this study is confined to the processing of the Calamay’s main packaging material. The definition of the system boundary is consistent with the gate-to-gate approach in streamlining life cycle assessment (LCA) based on the guidance from the Society of Environmental Toxicology and Chemistry (SETAC, 1999). A case study approach was used to three informants and depth interviews were conducted to gather the data needed. A simple coding technique was applied in data analysis and the final codes identified from the responses were used to generate the environmental profile of the main packaging material. Photo-documentation was also conducted to visually reinforce the information generated. Based on the result of the environmental profiling, there are 9 major steps involved in the production of the main packaging material of Calamay. The inputs used during the process are mainly tap water, plastic sacks and bucket, paper box, cutting tools, and an improvised polishing machine termed as “kabayo”. No energy requirement was noted because the process involved is manual is undertaken. On the other hand, the outputs emitted to the environment are solid wastes, damaged coconut shells, water vapor, and waste/spilled water. Based on the environmental profile generated, it is recommended that
the results of this study be presented to relevant stakeholders for their validation in terms of inputs used and outputs emitted as well as the needed solutions to address waste water and solid waste emissions. On the other hand, the good practices noted in this profiling should be strengthened by providing innovative incentive mechanisms that will ensure its continuous use. Other life cycle approaches should also be undertaken for the Calamay packaging material to account for the quantitative aspect of the LCA and to also conduct an LCA to the entire Calamay product system. In addition, the information generated from this research can be used by local decision makers in developing basic guidelines to ensure that the processing of the main packaging material of Calamay will be environment-friendly.