ABSTRACT

Strengthening Household Waste Sorting through Community Education and EcoBin Design in Embalut Village, East Kalimantan

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Background : Household waste management in Embalut Village is not optimal. The survey results show that 94.2% of the community relies on transporting or disposing of waste to temporary shelters, while only 5.8% recycles or composts. This program aims to increase community knowledge and support for waste sorting through Sorting Class and EcoBin Design.

Objective : This program aimed to improve community knowledge of organic and inorganic waste sorting and strengthen community commitment to providing waste-sorting facilities through the Sorting Class and EcoBin Design initiatives.

Research Methods/ Implementation Methods : The activity was carried out in July 2026. Problem identification was carried out through surveys, observations, FGDs, ultrasound priority analysis, and root cause analysis using Fishbone. The Sorting Class involved 20 participants through interactive counseling and discussions on organic and inorganic waste. EcoBin Design involved 14 RT representatives through socialization of the design of a two-compartment trash can. Evaluation using pre-test, post-test, Wilcoxon test, paired t-test, and participant feedback.

Results : The Sorting Class showed an increase in the average score from 80 to 95.5, with significant differences in organic ($p = 0.004$) and inorganic ($p = 0.001$) materials. This increase in knowledge needs to be supported by adequate sorting facilities. EcoBin Design is a strengthening of education through the design of sorted bins. EcoBin socialization significantly increased knowledge ($t = -6.271$; $p < 0.001$) and received positive responses. A letter of commitment to support the provision of sorting facilities has been signed by all 14 RT chairmen. The EcoBin design has not been physically realized.

Conclusion/Lesson Learned : The integration of Class Sorting and EcoBin Design increases knowledge and strengthens community commitment to waste sorting. The realization of facilities and sustainable assistance is needed to support its implementation.

Keyword : Waste emination, EcoBin Design, Community Education, Household Waste Management.