

ENHANCING EFFICIENCY OF COMPREHENSIVE WASTE MANAGEMENT WITH ENVIRONMENTALLY FRIENDLY PROCESSES BY COMMUNITIES IN CHIANG MAI

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Introduction

Statement and Significance of the Problem

At present, the problem of waste is still a chronic problem in Thai society. In 2021, Thailand has approximately 24.98 million tons of solid waste, of which only 9.28 million tons, or about 37%, have been properly disposed of, and reused 7.89 million tons or 32% by the Pollution Control Department (PCD), Ministry of Resources Nature and the environment revealed that the situation of infectious waste in 2021 amounted to 90,009.23 tons, an 87 percent increase from 2020. There were about 669,518 tons of community hazards, an increase of 1.6 percent, most of which were scrap electrical and electronic products of 435,187 tons. Waste sorting at source 8.61 million tons were brought back to use, part of the reason why the amount of waste decreased. Due to the situation of the epidemic of COVID-19 but at the same time ordering food through the express food delivery system as a result, the number of single-use plastics has increased, such as Styrofoam boxes and plastic food boxes. Instead, the number has increased from a report from the Department of Health suggesting that in 2021, Thailand ranks fifth in plastic waste generation per capita in the world, with the amount of plastic waste 4,796,494 tons/year (or approximately 69.54 kg/year/person) and the proportion of plastic waste in general waste is the third highest in the world. The amount of plastic in Thailand 1.11 million tons of plastic bags, 0.40 million tons of plastic bottles, 0.23 million tons of glass, boxes, and trays. The average amount of waste across the country per year is 24-26 million tons, of which only 8-9 million tons are reused, about 9 million tons are properly disposed of, about 7-8 million tons are incorrect, which will be dumped into landfills. As for the residual waste, there are about 4-5 million tons/year. There are 355 correct waste disposal sites, 1891 incorrect ones, 74 incinerators without air pollution treatment system, 84 bulk dumping sites, and 50 outdoor incineration sites. 28 loading stations in the part of Chiang Mai which is a major tourist city Comprehensive waste management with eco-friendly processes Environment by the community, the amount of solid waste generated is 0.52 million tons, the amount of solid waste that is recycled is 0.11 million tons, the amount of solid waste that is properly disposed of is 0.30 million tons, the amount of solid waste that is improperly disposed of is 0.11 million tons. This shows that improperly disposed of waste accounted for 1 in 5 of all waste. There were 134 sites found, 125 sites were improperly disposed of, and only 5 sites were properly managed. which improper disposal of waste or neglect, resulting in waste left behind in the community, which will be the source of various pathogens such as hepatitis, typhoid, AIDS, etc., is the source and food of animals that carry diseases to humans such as flies, cockroaches, and rats, etc. There are 96 invalid waste disposal sites in Chiang Mai and of these there are only 3 valid waste disposal sites. Most of them are bulk ponds and landfills, with different sizes. Some localities have more than 1 location, such as the Mae Ho Phra Sub-district, Ban Pa Lao, Village 1 Rai, Ban Hua Fai, Village 3, Village 5, Village 8, Village 9. Each is about 2 rai, Saluang Subdistrict Administrative Organization, Moo 2, Ban Saluang Nai, Village 3, Ban Saluang Nok, with about 1-2 ngan, etc. If there is a large area, it will belong to the Wiang Fang Subdistrict Administrative Organization, Moo 13, Wiang Fang Sub-district, Wiang Fang

District. 150 rai of Fang used for landfill Chiang Mai Provincial Administrative Organization Ban Pa Tueng Noi, Village No.1, Pa Pong Sub-district, Doi Saket District, area of 1 rai, using landfills, waste management processes comply with the conditions of the Pollution Control Department. both in terms of finding the area for growing cities and there is often resistance from people who do not want garbage dumped or landfilled in their own community.

Guidelines for solving waste problems of Chiang Mai which cannot be performed in any way and it's not just the government that has to act. The public sector and civil society are the backbone of driving efficiency in waste management. In addition to focusing on reducing the amount of waste One thing to focus on is proper waste management through an environmentally friendly process by the community. According to the numbers, almost all waste disposal sites are improperly operated. And in Mae Rim district, there are 3 waste disposal sites and all of them are not properly treated. Therefore, the researcher is interested in studying how to proceed. for the community to play a role in enhancing the efficiency of integrated waste management with an environmentally friendly process That is, garbage is properly disposed of, and a healthy environment is created.

Research Questions

1. How is environmentally friendly household solid waste management behavior of the people in Mae Rim District. Chiang Mai Province?
2. What factors affect the environmentally friendly household waste management behavior of the people in Mae Rim District? Chiang Mai Province
3. There is a guideline to increase the efficiency of environmentally friendly household waste management of the people in Mae Rim District. Chiang Mai Province

Research Objectives

1. To study the environmentally friendly household waste management behavior of the people in Mae Rim District. Chiang Mai Province
2. To study the factors affecting the environmentally friendly household waste management behavior of the people in Mae Rim District. Chiang Mai Province
3. To propose ways to increase the efficiency of environmentally friendly household waste management of the people in Mae Rim District. Chiang Mai Province

Research Hypothesis

1. The leading factor is knowledge about reducing the amount of solid waste. positive attitude towards behavior reducing the amount of solid waste and incentives for reducing the amount of solid waste Affecting the environmentally friendly household waste reduction behavior of the people in Mae Rim District. Chiang Mai Province
2. Contributing factors include having a policy on solid waste management. The presence of a waste bank in the community and the services of antique buyers affect the environmentally friendly household waste reduction behaviors of the people in Mae Rim District. Chiang Mai Province
3. Auxiliary factors include receiving information about waste reduction and receiving social support. Affecting the environmentally friendly household waste reduction behavior of the people in Mae Rim District. Chiang Mai Province
4. Factors of personal and household characteristics, namely gender, age, occupation, education level Number of household members household monthly income Duration of residence in the community, characteristics, residence, and social status Affecting the environmentally friendly household waste reduction behavior of the people in Mae Rim District. Chiang Mai Province

Significant of the Research

1. Make aware of the environmentally friendly household waste management behavior of the people in Mae Rim District. Chiang Mai Province

2 . Know the factors affecting the environmentally friendly household waste management behavior of the people in Mae Rim District. Chiang Mai Province

3. There will be a clear way to increase the efficiency of household waste management that is environmentally friendly for the people in Mae Rim District. Chiang Mai Province

Scope of the Study

research design scope in this study, it was a mixed research method (Mixed Method), both quantitative data were collected. and qualitative

Content Scope In this study, the researcher applied Educational and Ecological Assessment as a conceptual framework for research together with the synthesis of variables Independent from past research It consists of leading factors, facilitating factors, supporting factors, and attribute factors. personal and household

area boundary in this study, the researcher studied the area of Mae Rim District. Chiang Mai Province

population boundary in this study, the researcher studied households of people. whose house registration is in Mae Rim District Chiang Mai Province, 33,760 households.

Quantitative samples Using the Taro Yamane method, 395 people were sampled, which were randomly proportional to each of the 11 sub-districts.

quality samples will conduct an in-depth interview with those who are directly involved in waste management of Mae Rim District Including the Mae Rim District Chief, the Pong Yang Sub-District Administrative Organization, which has a waste disposal pond. sanitary academician Chiang Mai Province, community leaders, total 10 people

time boundary in this study, the researchers collected data during March. Until August 2023

Definition of term

Behavior to reduce the amount of solid waste means the practice according to the 5 RS principle of households in Mae Rim District. Chiang Mai Province about reducing the use of unnecessary items reusing solid waste, scrap materials repair or fix recycling of waste and avoiding the use of indestructible materials.

Household solid waste means general solid waste. Solid waste is recycled. born from a household in Mae Rim District Chiang Mai Province

organic waste and toxic or hazardous waste from the community generated by households in Mae Rim District. Chiang Mai Province

The leading factor means the internal factors of household members in Mae Rim District. Chiang Mai Province encouraged behavior Reducing the amount of solid waste, consisting of

knowledge about Reducing the amount of solid waste means knowledge and understanding. of people in households in Mae Rim District Chiang Mai Province about reducing the amount of solid waste by reducing the use of unnecessary items reusing solid waste, scrap materials repair or fix recycling of waste and avoiding the use of indestructible materials.

Good attitude toward waste reduction behavior means feelings or opinions. of people in households in Mae Rim District Chiang Mai Province

Motivation to reduce the amount of solid waste means something that motivates people in the household. in Mae Rim District Chiang Mai Province There is an intention to have behaviors to reduce the amount of solid waste, including household expenses. social acceptance and consciousness of social responsibility

Contributing factors mean physical environmental factors and policies that support or hinder the behavior of household waste reduction in Mae Rim District, Chiang Mai Province, consisting of:

Having a solid waste management policy means an announcement or policy of a village that encourage people in each household in Mae Rim District, Chiang Mai Province to have proper solid waste management.

Having a waste bank in the community means an operational model that promotes waste segregation. Garbage within the village by using the village as a place of action to understand the segregation of solid waste in Mae Rim District, Chiang Mai Province.

The service of the antique buyer means having an antique buyer come to buy garbage in the community in Mae Rim District, Chiang Mai Province.

Auxiliary factors refer to factors that a person receives responses from people around him or her. public health and his staff sub-district administration that encourage reduction behaviors. The amount of solid waste of households in Mae Rim District, Chiang Mai Province consists of

Receiving information about the reduction of solid waste means the channel for obtaining information. about reducing the amount of solid waste, including television, radio, newspapers, the Internet, public health personnel and officers of sub-district administrative organizations of households in Mae Rim District, Chiang Mai Province.

Social support means emotional support, informational support. Tool Support and support in giving evaluations from Household members, neighbors, health workers and officials of the Subdistrict Administrative Organization

Housing type means the residence of a person in a household in Mae Rim District, Chiang Mai Province.

Categorized into single-detached houses, townhouses/townhouses for living, condominiums, and commercial buildings for residence and business.

Social status means joining a group, club, association, or organization. Including having a social position in the household in Mae Rim District, Chiang Mai Province.

Review of Related Literature and Study

which from all theoretical concepts can be compiled and formulated into a conceptual framework as follows

1. Concept of environmental management
2. Concept of development management
3. Human Resource Development Concept and Awareness Creation
4. Participation Concept
5. Solid Waste Concept
6. The concept of solid waste management according to the 5RS principle
7. Duties of local authorities in solid waste management
8. The concept of sustainable development
9. Related Theoretical Concepts

PRECEDE Model (Predisposing, Reinforcing, and Enabling Causes in Educational Diagnosis and Evaluation) is a process of revision planning modeling. The PRECEDE-PROCEED Model (PPM), developed in the 1970s by Lawrence W. Green, was initially used as a conceptual framework. in the planning process for systematic health education (Green, 1976), which is the diagnosis and Assessment of education or learning and the environment according to the structure of leading, reinforcing and facilitating factors (Green, & Krueter, 1991), with an emphasis on the analysis of educational factors. or learning necessary for planning health promotion activities, consisting of 4 steps as follows (Green, & Krueter, 2005).

Step 1: Social assessment aims to study quality of life and social factors that determine quality of life. and affects health status both at the individual and community levels.

Step 2: Epidemiological Assessment behavior and environment (Epidemiological behavioral and environmental assessment) aims to prioritize problems collected public health considering the size of the problem the severity of the problem Difficulty in solving problems and the needs of the community towards the problem.

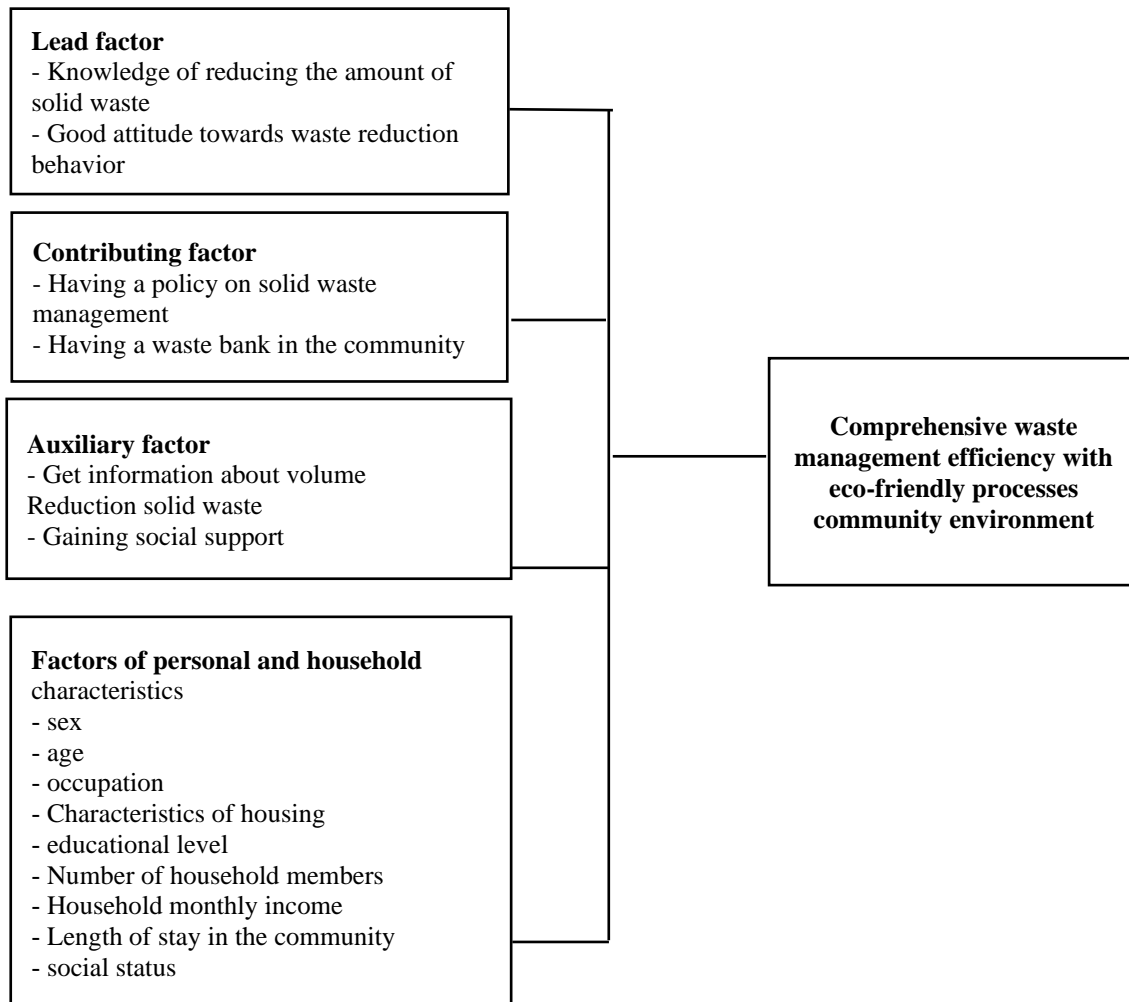
Step 3: Educational and ecological assessment (Educational and ecological assessment) aims to analyze the causal factors of health behavior, consisting of

Predisposing factors are factors within a person at the cognitive level that influence, motivate, or lead to the performance of health behaviors such as knowledge, attitude, perception.

10. Related Research

11. Conceptual Framework

Conceptual framework



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