



## Communication for Participation in Creating Successful Waste Management by Communities

Sorachud Suchitta\*, Supaporn Sridee & Wittayatorn Tokeaw

*Sukhothai Thammathirat Open University, Nonthaburi, 11120 Thailand*

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### Abstract

This research aims to study communication consultancy services for a zero-waste community, which consists of 1) communication management that enhances public participation 2) communication strategies that enhance public participation 3) principles to develop the communication technique to enhance public participation. This study was qualitative research based on in-depth interviews. The key informants came from 4 groups: 1) Ministry of Natural Resources and Environment Executives 2) Environmental and Dissemination Scholars 3) Village/Community Leaders and 4) Village/Community Voluntary Group, with a total of 49 persons. The results indicated that (1) the communication to enhance participation in a zero-waste community consists of communication policy management, knowledge management, attitude adjustment, project perception, network management, and process management (2) the communication strategies consists of creating awareness of ownership, mission-driven, persuasion, communication tools, and teamwork (3) principals to develop communication tools consists of the development of communication policy, knowledge management, attitude adjustment, perception, network, process management, communication to enhances participation, ownership strategy, persuasion strategy, communication tool strategy, network-driven strategy, and participation strategy. This includes corporation with government and non-government sectors to drive the zero-waste community to be outstanding and a model for other areas.

### Introduction

Effective communication is a key factor for solving problems among various stakeholder. Especially, in managing local government organizations regarding solid waste in Thailand. In Thailand the law states that local government organizations must manage their own

solid waste. The critical issue for local government organizations is not being able to provide sanitary disposal and proper collection of generate solid waste. The two main factors that have an effect on local government organizations managing solid waste are (1) sufficient budget and (2) skillful technician (Pollution Control Department, 2012, 2015, 2016, 2021). The

conflict between people surrounding landfills and government sector is due to unreliable management procedures that have an effect to public health. Solid waste management is an important issue since it has increased to 25.27 million tons in 2020 (Pollution Control Department, 2021).

Overall, only 8.36 million tons (33%) of waste will be recycled while 9.13 million tons (36%) of waste will be sanitary disposal and 7.88 million tons (31%) unsanitary disposal (Pollution Control Department, 2021). Thus, solid waste is a major problem for Thailand's environment and requires urgent action. The best way to deal with overflow of solid waste is at source management. This method could significantly reduce the government budget. The cooperation from all stakeholders (government sector, private sector, public) is a key success of solid waste management. The Zero Waste principle based on 3Rs (reduce, reuse, and recycle) was implemented to the community by the Department of Environmental Quality Promotion (DEQP). The project educates people to separate solid waste at the source which helps to reduce large amounts of solid waste that ends up at disposal sites. Furthermore, DEQP set up a zero- waste community as a best practice of solid waste management. (Department of Environmental Quality Promotion, 2018, 2020).

The project started in 2009 with 5 main criteria as follows. (1) Plan and policy (2) Awareness and participation (3) Solid waste management based on 3Rs principle (4) Outcome and sustainability and (5) Solid waste management following sufficient economic theory (of King Rama IX) (Department of Environmental Quality Promotion, 2018). Communication and policy that are driven by the leader of local government organization is a main factor for success of a zero-waste community. It is important to provide knowledge, understanding, awareness and participation, which leads to being a role model for other communities (Department of Environmental Quality Promotion, 2020; Kala., K. et.al., 2020). The leader of a local government organization needs to provide strong messages with an effective communication channel in order to achieve the goal of sustainable solid waste management. Thus, the study of mechanism, strategy, and communication management of a successful zero- waste community can benefit other communities.

This study synthesis mechanism and strategies of communication that enhances the success for a zero-waste community, that can be implemented to other

communities. The focus of this study are on communities that can be considered role models regarding solid waste management under the Zero-Waste Project of DEQP, Ministry of Natural Resources and Environment. There are four communities that represent each region in Thailand: Northern region- Banrai Village Umong municipality in Lamphun; Central region- Rangpub Village Krubyai Municipality in Ratchaburi; Northeastern region- Haothanon Village Phralab Municipality in Khon Khan and Southern region-Ungthong Village Thungwang local administration in Song Khla.

This paper discusses the key success of effective communication that brings together the participation of solid waste management in a community. Finally, guidelines were developed that can be implemented nationwide.

## Objectives

1. To study the communication that enhances public participation in solid waste management of the community model.
2. To study the strategies that build up public participation in solid waste management of the community model.
3. To study the possible guidelines to develop public participation in solid waste management of the community model.

## Conceptual Framework

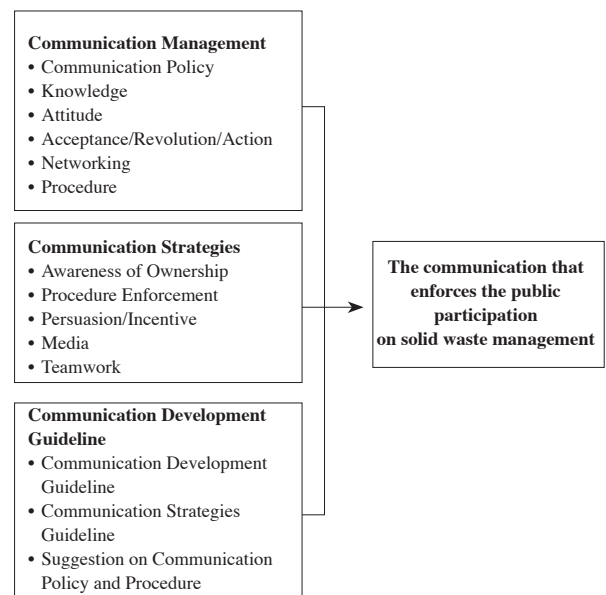


Figure 1 Conceptual Framework

## Research Methodology

### 1. *Population and Samples* (Yunuar H., 2018)

A total of 49 people were interviewed for this study and consisted of the following:

1. Policy makers (3): Minister of Natural Resources and Environment, General Director of DEQP and General Director of Pollution Control Department (PCD).

2. Scholars related to communication and environment (6); 3 persons of Dissemination Technical Office from DEQP and 3 persons of Environmental Office from PCD.

3. Local officer (8); 2 persons from each local government organization (Umong Municipality in Lamphun, Krubyai Municipality in Ratchaburi, Phralab Municipality in Khon Khan and Thungwang local administration in Song Khla).

4. Community members-leader/head (12); 3 persons from each village (Banrai Village in Lamphun; Rangpub Village in Ratchaburi; Haothanon Village in Khon Khan and Ungthong Village in Song Khla).

5. Focus Group Discussion (20); 5 persons from each village (Banrai Village in Lamphun; Rangpub Village in Ratchaburi; Haothanon Village in Khon Khan and Ungthong Village in Song Khla)

### 2. *Research Instrument*

Research instruments in this study used the following steps,

1. Study of theory from available materials (book, journal, research articles)

2. Study of objectives and conceptual framework.

3. Defining the main and details of the interview topics.

4. Adjusted interview topics due to propose objectives.

5. Revised interview topics due to advisor recommendation and pilot interviews. (Smith, R.D., 2002; Nurjanah, A., 2017)

### 3. *Collection of Data*

This study is based on qualitative research procedure. Data collection consisted of in-depth interviews and focus group discussions with sound records. The collection of data was conducted during May to August 2022 with the following procedure:

1. In-depth interview of target groups (face to face and one by one interviews).

2. Focus group discussions by collecting data as concrete ideas from the group.

Overall, the data from in-depth interviews and focus group discussions were rechecked for accuracy and trustworthiness by data triangulation and methodological triangulation procedures.

### 4. *Data Analysis*

The interview's data collections were analyzed and described based on the proposed objectives. The qualitative analysis was categorized due to target groups focus on communication channels and methods that motivated the zero-waste community (Bencharongkit., U., 2011; Sothanadati, S., 2013; Xua., L., et.al., 2021).

In this study, data triangulation method was used to guarantee the reliable of data (time, place, person, collection method).

1) Analysis of data due to objective no.1: Communication management that enhance people's participation in solid waste management.

2) Analysis of data due to objective no.2: Communication strategies that enhance people's participation in solid waste management.

3) Analysis of data due to objective no.3: Communication development guidelines that enhance people's participation in solid waste management.

## Results

This research studied the communication that enhances public participation in solid waste management, the strategies that build up public participation in solid waste management and the possible guidelines to develop public participation in solid waste management of the community model. The results of the study aligned with the objectives are as follows.

### • *Communication Policy*

The environmental policy concerning public participation in solid waste management of a zero-waste community begins at the ministry level.

At national level: The policy focuses on household waste through separation by using the 3Rs theory (reduce, reuse, and recycle). The project process implements effective communication channels and trends as methods to change people's behavior.

At regional level: Combine the policy of Ministry of Natural Resource and Environment and policy of concerning department. Then, assign/design planning and target the public to follow the policies.

At local level: Head of local government organization and officers cooperate with people in the community regularly about solid waste management issues through proper and effective communication

channels.

At community level: The leaders of community set up rules and agreements regarding solid waste management in their community. Then, the information and guidelines following the rule will spread to people through various media both traditional and modern channels.

- *Knowledge*

The procedure of providing knowledge about separation of solid waste at source and other relating information is one of the key successes of zero-waste society. When the majority of people in a community take the proper action, then the development and innovation will happen. The head of the village and team leader oversee enforcing the activity through various communication media to disseminate knowledge, cooperate, and action. The frequency of meetings and activities are essential to motivate the success of zero-waste community.

Furthermore, other events or activities within the community regarding the issues of solid waste management include discussing, sharing, and doing to influence the community to create a better way of life.

- *Attitude*

Attitude is another key factor of long-term participation; all stakeholders need to educate and build awareness to the public regarding solid waste management. There are many ways to adjust the attitude of people, for example organize discussions on the issue controlled by a mentor. Organizing training courses and/or field visits to create more understanding, awareness, and participation for community waste management.

- *Acceptance/Revolution/Action*

The acceptance, revolution and action deals with changes of behavior that motivates people to take action on solid waste management. Sharing information and explaining the situation to people in the community among stakeholders leads to action plans. The plans discussed and created by all stakeholders in an agreement will enforce behaviors that supports a zero-waste community.

- *Networking*

Networking among community leader, head of the village, natural resources and environment volunteers and people in the community need to cooperate, work together, and share regularly. Networking motivates the participation of people beyond the individual living in the village, but also includes all stakeholders that share in the success of the project.

- *Procedure*

The design procedure needs to be based on the situation and issues of solid waste in each targeted area. However, the procedure should be based on agreement of all stakeholders that includes local government organization, regional level and provincial level of concerning unit.

2. Communication Strategies

- *Awareness of Ownership*

Site visits of people from the government sector and community leaders is an effective communication channel to investigate insights regarding problems of solid waste management in the area. Furthermore, people in the community are motivated to act regarding their own solid waste problems. The dissemination on the topic of solid waste management through any media channel of the community will benefit and motivate participants and action. The process of planning, taking action and revising the outcome are based on public preferences. Besides the conditions mentioned, the feeling of pride and ownerships regarding the zero-waste project will motivate people to take action and engage in planning activities to ensure effective implementation (Katz., D., 1960; Gibson, J.L., 2000).

- *Procedure Enforcement*

The motivation strategy are enhanced by the mixing of traditional media (radio, television, door to door knocking) and modern media ( YouTube, Facebook, Line, TikTok) that engages all target groups in communities.

- *Persuasion/Incentive*

Persuasion and incentives are different from place to place. Therefore, incentives that work for one community may not be proper with another community. Incentives should be based on each community's interests, benefits, and personal admiration (Kewthep, K., 2008; Kasemsuk, J., 2011). A cleaner community leads to healthier people living in that community. Furthermore, the money from selling recycle objects could be used as scholarships, loan, funeral fund, which offers benefits to people in the community.

The communication and media channels should aim to reach the majority of target groups. Including, the frequency and consistency of communications implemented through all available media creating impact to the target group (Narjanah, A., 2017; Xua, L. et. al., 2021).

- *Media*

Media is an essential tool to disseminate

knowledge and news to target groups. The proper media is an important key point for success of communication. The proper media provides more understanding and participation of each specific target group. Media as a communication tool is important among the team working on the zero-waste project as well as a disseminating tool to share the success to other communities. Media is not only mass media but could be symbols that reminds people about the project such as T-shirts, caps, and tote bags. (Uojongprasit, S., 2008; Kasemsuk, j., 2011; Sothanasatien., S., 2013).

- *Teamwork*

Teamwork is the power of unity, people concerned with the same issue join together and share responsibility. However, all participants (members of team) should be aware and align with the same issue. Team members should participate in all steps of activities, starting from analysis and planning. Then, create the process of solid waste management with effective communication developed by team members.

### 3. Communication Development Guidelines

- *Communication Development Guideline*

The strategy of the government sector is focused on building the new trend of society on solid waste management, awareness and participation through usage of main mass media such as television, radio and notice board. In addition, creating online media content by

posting on Facebook, Line, YouTube, Twitter and TikTok. Both traditional and new media are essential for communication of a zero-waste management society.

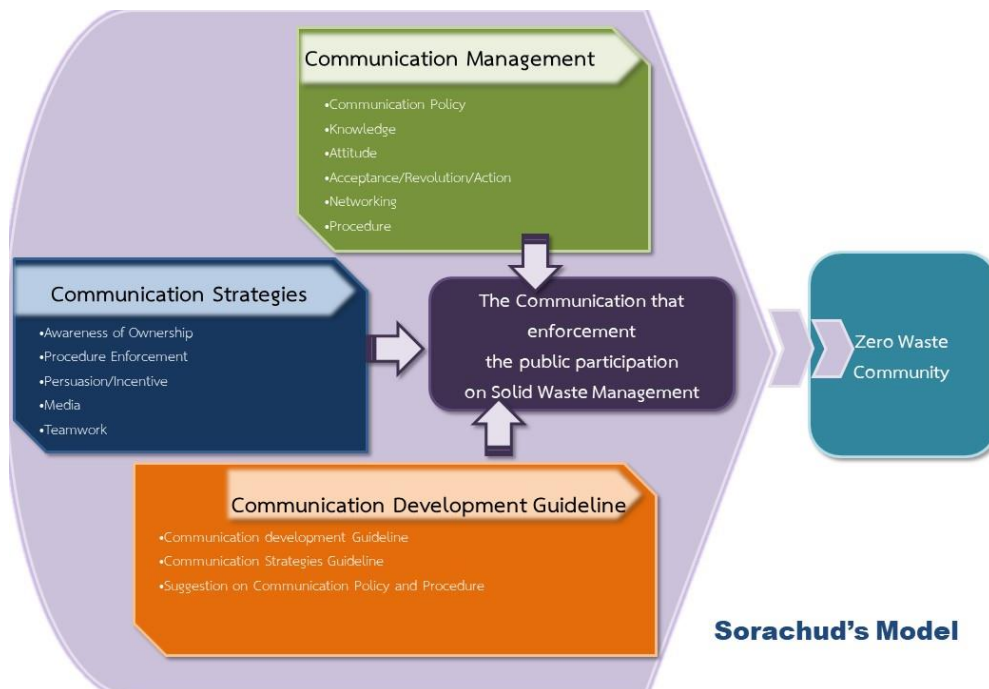
- *Communication Strategies Guideline*

The results indicated that the mix of traditional and new media are necessary to reach all generations. The mix media are perfect combination to enforce awareness, perception, participation, and action of all generations in the community. The older generation might be familiar with traditional media such as television, radio, newspapers, and other printout materials. However, younger generations are familiar with communications through social media such as Facebook, Line, YouTube, Twitter and Tiktok.

### *Suggestion on Communication Policy and Procedure*

Overall, the policy dealing with communications that enhance participation of public is a one-way communication. The policy is flowing from central to regional to provincial and finally the expectation to implement at the local level. However, one-way communication is not efficient for the project that highly requires participation of the public.

Thus, two-way communications should be applied as the focus by inviting all stakeholders to share and take action on solid waste management (Sothasatien, S., 2013; Department of Environmental Quality Promotion, 2018).





## Discussion

From the Sorachad's Model, the communication that enhances public participation consists of:

1) Communication Management which intends to enforce public participation in solid waste issue by focusing on communication policy, knowledge management, attitude adaptation, acceptance/revolution, network and procedure management (Benjarongkit, U., 2011; Sothasatien, S., 2013).

2) Communication Strategy that creates owner spirit, motivates the mission, persuades, media and networks (Smith, R.D., 2002; Kala, K. et. al., 2020).

3) Guidelines to develop communication to enforce the message:

(1) Public participation by developing communication policy, knowledge management, attitude adaptation, network and work procedure.

(2) Strategies development for public participation in a zero-waste community focused on ownership, procedure motivation, media and teamwork.

(3) Communication procedure for public participation in a zero-waste community developed by the network of central government, local government organization and community (Sothasatien, S., 2013; Department of Environmental Quality Promotion, 2013, 2018; Xua., L., et.al., 2021)

Community is the focus point of a zero-waste project that is supported/cooperated with government sector at all levels (central, regional, and local) as sender of important messages. The content of messages contains the main issues of communication that enhances public participation and includes useful innovation for solid waste management. The content development and knowledge of zero-waste details are delivered through communication channels including community broadcasting, radio, poster, notice board and meeting. Nowadays, social media such as YouTube, Tiktok, Facebook, and Twitter can reach a large target group especially for the younger generation.

In this study, the receivers of the message includes people in the target community, stakeholders, and networks. The ultimate goal is the message content sent through communication media that creates impact to the receiver and enforces the activity of the zero-waste community successfully.

## Suggestion

The study of "Communication for Participation Building in Waste Management by Successful

Communities" has recommendation/suggestion dealing with policy, action and future research as follows:

### 1. Policy

(1) Ministry of Natural Resources and Environment by the Department of Environmental Quality Promotion should be working on a communication strategy plan to enhance participation of the public on solid waste management. The communication plan should be effective to enforce activity and participation from all stakeholders.

(2) Ministry of Natural Resources and Environment by the Department of Environmental Quality Promotion should train people in target communities on communication skills using any social media to increase communication channels.

### 2. Action

(1) Communication strategy should be developed to reach target groups with various media channel. This will enhance public participation in the project.

(2) Communication training should be organized for target groups with appropriate communication/media that are suitable for the specific target group.

### 3. Future Research

(1) The communication study should be extended to other target group/stakeholders for example recycling store, youth and municipality staff.

(2) A study should be conducted that is specific to key factors that motivate the success of villages regarding solid waste management.

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