

**Behavioral Barriers to Employee Household Compliance with a
Waste Separation Pilot Program in Company-Provided Plantation
Housing: A Qualitative Case Study of PT Bisma Dharma Kencana**



INDIVIDUAL PROJECT THESIS

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AN INDIVIDUAL PROJECT THESIS

**Submitted in a partial fulfilment of the requirements for the degree of Master
of Business Administration**

CERTIFICATE OF APPROVAL

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We hereby declare that this Thesis is from student's own work, has been read and presented to IPMI Institute Board of Examiners, and has been accepted as part of the requirements needed to obtain a Master of Business Administration Degree and has been found to be satisfactory.

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NON-PLAGIARISM DECLARATION FORM

This Individual Project Thesis is a presentation of our original research work. Wherever contribution of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

Also, this work is being submitted in partial fulfilment of the requirements for the Master of Business Administration degree and has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Jakarta, 20 August 2026



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ABSTRACT

For palm oil companies that manage their own residential areas, household waste, especially its separation, has become a regulatory and operational concern. In late 2025, PT Bisma Dharma Kencana (PT BDK) launched a pilot waste separation program after receiving a Red PROPER rating. Despite the company providing the required facilities (bins labeled for organic, non-organic, and residual waste, regular collection, and staff to pick up the waste), the pilot produced low compliance among residents and high waste contamination. This suggested that the obstacles are not mainly technical but behavioral and managerial. The study therefore examined the behavioral and organizational barriers to household waste separation in the plantation housing of PT BDK, in order to understand why participation remained low and to develop practical recommendations that can improve compliance and support the program's expansion across the company's housing communities. The study used a qualitative single case study design, drawing on semi-structured interviews with selected households and company management, direct observation of waste handling, and a review of program documents, analyzed through framework-guided thematic analysis. It adopted an extended Theory of Planned Behavior, combining attitude, subjective norm, perceived behavioral control, and moral norm with four organizational factors: communication, training, supervision, and incentives. The findings show that low compliance is not mainly a problem of motivation. Residents were largely willing, and their attitude and moral norm were strong, while subjective norm was weak and household-level provisioning was missing. Moral norm was stronger than subjective norm, the reverse of what standard TPB predicts. On the organizational side, communication ran one way, training was weakest, supervision worked only under watch, and incentives were absent. These combined into five interacting barriers. The study concludes that the barriers are structural and social, and offers low-cost recommendations grouped by the party able to act: company management, government, and residents.

Keywords: household waste separation; Theory of Planned Behavior; moral norm; behavioral barriers; plantation housing; qualitative case study

CHAPTER I

INTRODUCTION

1.1 Industry Background

The palm oil industry remains a cornerstone of Indonesia's economy, providing employment and livelihoods contributing to national development (Purnomo et al., 2020). As the world's largest producer and exporter of palm oil, Indonesia dominates global supply, accounting for about 54 % of global palm oil exports with annual production around 56 million tonnes in 2023 (ANTARA, 2024). The industry's economic contribution extends beyond sheer production volume. Palm oil and its derivatives, including crude palm oil (CPO), refined products, oleochemicals, and biodiesel feedstock, are among Indonesia's top non-oil and gas export commodities, generating tens of billions of U.S. dollars annually in foreign exchange (Anggraeni, 2025). The industry is also a major employer and poverty-reduction driver, directly and indirectly supporting the livelihoods of over 16 million people across Indonesia, from plantation workers and smallholder farmers to workers in logistics and processing sectors (ANTARA, 2024).

However, the expansion of oil palm plantations in Indonesia has not been consistently accompanied by adequate environmental management systems, resulting in production activities that pose potential risks to the surrounding environment (Utomo et al., 2023). One of such concern is the management of household and daily waste, produced by people who work and live in the area of the palm oil mill and plantation. Because these residents live within company-managed areas rather than being served by municipal systems, the handling of their household waste falls directly to the plantation operator, making it both an environmental and an operational concern.

1.2 Company Background

PT Bisma Dharma Kencana (PT BDK) was established in 1996 as a palm oil company. The corporate office is located in Jakarta, while the core plantation and milling operation based in Central Kalimantan. The company has been operating for more than two decades and has grown into a mid-sized stable company in the region. Currently, the company manages 8,000 hectares of oil palm plantations and has its own mill and maintains 13 residential complexes for its employees and families.

The company has a workforce of approximately 1,100 people, a combination of permanent staff, field workers, and supporting operational personnel. With many employees living within company housing, PT BDK is responsible not only for plantation and milling activities but also social and logistical services such as basic infrastructure and housing maintenance, waste collection, local transportation, and basic community relations. This integration system places the company as the centre of local livelihood and daily life in the operational area.

1.3 Problem Background

The increasing national emphasis on waste management now includes the waste being separated at the source into five categories, but most only requires it to be into three, which are organic, recyclable (non-organic), and residual categories. It also required the community to be involved with waste reduction. The non-compliant regarding this stipulation can lead to administrative sanctions and reputational harm for the companies (Sembiring & Nitivattananon, 2010). However, unlike municipal areas, the plantation firms face practical challenges that are common for company housing; it depends on corporate policy design, on-site operational practices, and resident behaviour (Knickmeyer, 2020). With a sizable workforce that lives in PT BDK plantation and nearby settlements, a substantial amount of household waste is generated daily. The observation in the field shows that the domestic waste management in these housing areas mostly informal and

ineffective. The waste is disposed of without separation at the source, resulting in organic, recyclable, and residual waste being mixed and accumulated in one area. Furthermore, the waste collection is conducted irregularly, with schedules that are not clear or implemented consistently. Waste management practices also vary between housing blocks, and coordination with the local Environmental Agency (Dinas Lingkungan Hidup/DLH) regarding transport, rules, and final disposal remains unclear. These issues highlight structural and managerial coordination gaps that hinder the development of an effective and compliant domestic waste management system within the plantation area.

In response to increasing regulatory pressure and a formal sanction, PT BDK's management launched a pilot household segregation program in one of its thirteen housing communities. The pilot program provides three labeled bins per two households placed outside the home, arranges regular waste collection using a dedicated vehicle and collection crew, and transports the separated waste stream to central sorting facility. However, initial monitoring indicates non-compliance among residents and contamination of the separated waste streams. Studies in Indonesia similarly point to a gap between knowledge and practice. A study of a rural community in Bandung Barat found that residents were knowledgeable about waste separation yet did not actually carry it out, indicating that awareness alone does not translate into behavior (Rohima & Hasbiah, 2023).

The core problem in this situation is not only technical and logistical, but also behavioural and organizational. The theory of Planned Behaviour (TPB) explains that the intention to perform pro-environmental actions, such as waste separation, depends on three factors: attitude, subjective norms (social pressure), and perceived behavioural control (the perceived ease of acting) (Ajzen, 1991). Extended versions add a fourth. Moral norm is a person's own sense of ethical obligation, and it matters a good deal for environmental behavior. Indonesian studies point to attitude and perceived behavioral control as the strong ones. In urban communities in Depok, both positively influenced the intention to segregate organic waste. Subjective norm did not (Putri et al., 2024).

However, these behavioural factors do not operate on their own, but are shaped by how the company runs the program. The operational gaps that is described earlier, such as unclear procedures, poor communication with residents, and inconsistent supervision, are organizational factors, and they can influence resident willingness and ability to comply (Costa et al., 2022; Knickmeyer, 2020). However, communication, training, supervision, and incentives in this situation fall under company control, which also means providing the solutions. Without addressing both behavioural and organizational barriers together, the pilot risks failing to achieve its environmental and regulatory goals when the project is scaled up across all thirteen housing communities.

1.4 Research Questions and Objectives

The challenges described in the background section serve as the basis for framing the research questions of this study. These questions are built on an extended Theory of Planned Behavior, which adds moral norm to the theory's three original constructs, combined with four organizational factors drawn from waste management practice. The questions are:

1. What behavioral barriers keep residents from separating their household waste consistently under the current pilot program?
2. How do the individual constructs of the extended Theory of Planned Behavior affect the way residents separate their waste?
3. How do the company's organizational factors (communication, training, supervision, and incentives) affect residents' waste separation behavior?
4. What practical and suitable measures can the company take to improve compliance and help expand the program to all its housing communities?

Based on the research questions above, the objectives of the project are:

1. To identify the behavioral barriers that keep residents from separating their household waste, by observing how they handle their daily waste and by talking directly with them.

2. To examine how the individual constructs of the extended Theory of Planned Behavior affect the way residents separate their waste.
3. To assess how the company's organizational factors (communication, training, supervision, and incentives) affect residents' separation practice, by reviewing current procedures and interviewing company management and staff.
4. To develop practical recommendations that fit the local context and improve compliance and scaling, drawing on both the behavioral and organizational findings.

1.5 Project Scope and Limitations

This project focuses on household waste separation practices within one selected plantation housing community managed by PT BDK in Central Kalimantan. The primary unit of analysis is resident behavior in relation to the waste segregation system implemented by the company. The project does not aim to evaluate downstream waste processing technologies or external recycling market performance in detail, but rather concentrates on upstream, household-level practices and internal company management factors.

The findings and recommendations are therefore specific to the operational, social, and cultural context of PT BDK and similar plantation housing environments. Generalization to urban residential settings or other industries should be approached with caution.

1.6 Project Advantages

This project offers several practical advantages for PT BDK and related stakeholders. For company management, the findings provide evidence-based insights into why the current waste separation pilot has not achieved full compliance, enabling more effective allocation of resources and refinement of internal policies. Improved waste separation can reduce environmental risk, support regulatory compliance, and strengthen the company's environmental governance and sustainability profile.

For residents, clearer systems, improved communication, and behaviorally informed interventions can lead to a cleaner and healthier living environment. At a broader level, the project contributes to the understanding of how behavioral and managerial factors interact in plantation housing contexts, offering lessons that may be relevant to other plantation companies facing similar waste management challenges.

CHAPTER II

BUSINESS CONCEPT AND PLAN DESCRIPTION

2.1 Introduction

This chapter develops both the conceptual foundation and the business concept that underpin the study. First it establishes the problem facing PT BDK and why addressing it matters to the company, then builds the evidence and the framework that inform a practical solution. The chapter begins by reviewing the regulatory context governing household waste management in Indonesia and what it means commercially for plantation operators. Then it examines the main theoretical framework used to understand pro-environmental behavior, with emphasis on the Theory of Planned Behavior (TPB), and surveys the relevant empirical literature on waste separation behavior in Indonesia and comparable settings. Finally, it identifies the gap this study addresses and develops a conceptual framework that serves both as the proposed approach to PT BDK's problem and as the lens guiding data collection and analysis in the chapters that follow.

2.2 Regulatory Context of Household Waste Management in Indonesia

2.2.1 National Legal Framework

Indonesia's household waste management system is governed by a hierarchical legal ruling anchored in Law No. 18 of 2008 on Waste Management. This foundational legislation defines household waste as remnants of daily human activities in solid form, and dictates its management through a lifecycle approach encompassing reduction, segregation, collection, transport, processing, and final disposal (Government of Indonesia, 2008). The law was subsequently operationalized through Government Regulation No. 81 of 2012, known also as PP 81/2012, on Household and Household-like Waste Management, which provides detailed implementation mechanisms and assigns responsibilities to producers, regional governments, and households alike (Government of Indonesia, 2012).

A cornerstone requirement of PP 81/2012 is the obligation for waste to be sorted at the source into five categories: hazardous materials, biodegradable (organic) waste, reusable waste, recyclable (non-organic) waste, and residual waste. Article 10 of PP 81/2012 says that every person is obligated to reduce and manage their waste through the 3R principles: reduce, reuse, and recycle (Government of Indonesia, 2012). Non-compliance with these provisions can result in administrative sanctions, reputational damage, and legal consequences from environmental agencies known as Dinas Lingkungan Hidup/DLH (Sembiring & Nitivattananon, 2010). Despite this comprehensive legal ruling, the implementation across Indonesia still continues as a problem. Research indicates that local governments often lack technical capacity, funding, and inter-agency coordination to enforce the regulation effectively. This causes significant variation in waste separation across regions (Simamora & Junuudhizbulloh, 2023). This gap between regulatory intent and compliance forms the theme against which PT BDK's waste separation pilot project must be understood.

2.2.2 Implications for Plantation Companies

Oftentimes with companies operating in isolated plantation settings, complying with waste management regulation is considerably more demanding than for ordinary businesses or urban households. This is because the company not only generates waste but is also responsible for everything that happens to that waste afterward. Unlike urban households that rely on municipal waste services, plantation residents depend entirely on company-managed systems for their waste collection, transportation, and disposal. This places plantation operators such as PT BDK in a dual role: not only must they comply with PP 81/2012 as area managers, but they must also function as the primary agent of behavior change among their resident workforce (Knickmeyer, 2020).

The Indonesian Sustainable Palm Oil (ISPO) certification framework, which is compulsory for plantation companies under Minister of Agriculture Regulation No. 38/2020, further reinforces environmental governance obligations, including waste management, as part of broader sustainability and social

responsibility criteria (Government of Indonesia, 2020). Companies that fail to show good environmental management practices risk suspension of their certificate. In practice, losing certification can also affect access to buyers that require certified supply, although that is a commercial consequence rather than a provision of the regulation itself.

For PT BDK, these obligations translate into concrete business stakes. On the downside, non-compliance carry regulation exposure, since the company has already received a formal sanction, reputational harm, and under ISPO it is possible to receive certificate suspension. On a day-to-day basis, contamination of separated waste streams in the pilot program imposes additional operational costs, as mixed and contaminated waste must be re-sorted or disposed of as residual waste. An effective household waste segregation system would reduce these operational risks, strengthen the company's sustainability performance and compliance with Indonesian sustainable palm oil (ISPO) standards, and enhance the return on PT BDK's existing waste management infrastructure. This perspective, household waste separation is not merely a regulatory obligation but also a business challenge with measurable operational and organizational consequences, highlighting the value of a solution informed by both behavioral and organizational factors.

2.3 Theoretical Framework

This study based on two complimentary bodies of theory. The first explains waste separations at the level of the individual resident, using the Theory of Planned Behaviour and its extension to include moral norms. The second explains the conditions that surround and shape those individual decisions, drawing on the literature on organizational factors in waste management programs. The subsections below will explain the individual determinants first (Sections 2.3.1 to 2.3.6), then followed by the organizational dimension (Section 2.3.7).

2.3.1 Theory of Planned Behavior (TPB)

Since the introduction of the Theory of Planned Behaviour by Ajzen in 1991, it has received a great deal of interest from researchers worldwide. To date, it is one of the most used theories to explain pro-environmental intentions and behaviours in various contexts such as waste management, consumerism and sustainable transportation (Bamberg & Möser, 2007; Si et al., 2019). The theory holds that behavioural intention is the most proximate predictor of actual behaviour, and that intention is shaped by three variables: attitude toward the behaviour, which is the individual's positive or negative evaluation of performing it; subjective norm, which is the social pressure the person feels from family, peers, and supervisors to perform it or not; and perceived behavioural control (PBC), which is the person's belief in their ability to carry out the behaviour, including how easy or difficult it seems to them (Ajzen, 1991).

In the context of household waste separation, TPB has been applied extensively across diverse national and cultural settings. Studies in China, Iran, Greece, and Indonesia consistently show that these three constructs significantly predict residents' waste separation intentions and behaviors (Amir et al., 2025; Botetzagias et al., 2015; Hu et al., 2021; Pakpour et al., 2014). A study of residents in Guangzhou found that attitude, subjective norm, and PBC were all significant predictors of source separation behavior (D. Zhang et al., 2015). Similarly, an Indonesian multi-city study of 1,200 urban households found that perceived behavioral control was the strongest predictor of waste management behavior ($\beta = 0.367$, $p \leq 0.001$), followed by subjective norms ($\beta = 0.358$, $p \leq 0.001$), underscoring the importance of self-efficacy and social influence in Indonesian waste behavior (Amir et al., 2025).

TPB also acknowledges that in complex behaviors, additional variables beyond the original three may be necessary to improve predictive validity. In particular, scholars have added Moral Norm, an individual's sense of personal ethical obligation to perform a behavior as a fourth construct, noting that the sense of moral responsibility to protect the environment can independently influence

waste separation intention, particularly in community-oriented cultures (Botetzagias et al., 2015). Ajzen himself acknowledged that moral obligations related to specific behaviors should be considered alongside the traditional TPB constructs in certain domains (Ajzen, 1991). This extended TPB model, integrating moral norm, provides the primary theoretical lens for this study.

2.3.2 Rationale for Selecting the Theory of Planned Behavior

The choice of the Theory of Planned Behavior as the primary framework for this study was guided by four requirements arising from the research problem. The framework had to explain the determinants of a specific and effortful behavior rather than general environmental concern; it had to account for the social and normative pressures present in a close-knit plantation housing community; it had to accommodate the real infrastructural constraints that shape whether residents are able to separate waste, and not only whether they are willing to; and it had to be open to extension, so that moral considerations and organizational factors could be incorporated. Lists of other frameworks considered for this study, and reason why in the end it wasn't adopted, are explained in the table 2.1 below.

Table 2.1 Behavioral frameworks considered for this study

Framework	Core focus	Reason not adopted as the primary lens
Theory of Reasoned Action (Fishbein & Ajzen, 1975)	Attitude; subjective norm	Assumes full volitional control; bins, reliable collection, and sorting space are binding constraints in plantation housing
Norm Activation Model (Schwartz, 1977); Value-Belief-Norm (Stern, 2000)	Moral and altruistic motivation	Limited attention to perceived control; little purchase on organizationally driven behavior. Moral norm adopted instead as an added construct
Health Belief Model (Rosenstock, 1974)	Health threat; susceptibility; benefits against barriers	Oriented to health-protective decisions rather than routine household waste behavior
Social Cognitive Theory (Bandura, 1986)	Self-efficacy; observational learning	Broader and more complex for a small qualitative study; self-efficacy overlaps substantially with perceived behavioral control

Framework	Core focus	Reason not adopted as the primary lens
Transtheoretical Model (Prochaska & DiClemente, 1983)	Stages of readiness to change over time	Suited to longitudinal intervention studies rather than a single, bounded case study
Theory of Planned Behavior (Ajzen, 1991)	Attitude; subjective norm; perceived behavioral control	Selected. Models perceived behavioral control directly and is explicitly open to extension

Because of that, the Theory of Planned Behavior was selected. It satisfies all four requirements at once. It is built around a small and clearly defined set of constructs, it explicitly models perceived behavioral control alongside attitude and subjective norm, and it therefore captures directly the facilities and access constraints that characterize waste separation in estate housing. It also has strong and repeated empirical support in household waste and recycling research across diverse national settings, as shown in Section 2.3.1. Equally important for this study is that the theory is explicitly designed to be extended: Ajzen noted that additional predictors may be included where they improve the explanation of a particular behavior (Ajzen, 1991). The most common criticism of the Theory of Planned Behavior, that it is overly rational and gives insufficient weight to moral and contextual influences is acknowledged here, and this study is designed to respond to it directly. The core model is extended with a moral norm construct, which captures the ethical dimension that critics find lacking (Botetzagias et al., 2015) and it is situated within four organizational factors which represent the managed context in which residents act. By framing it this way, the extended Theory of Planned Behaviour keeps the focused structure and predictive strength of the original model while addressing the model's weaknesses.

2.3.3 Attitude Toward Waste Separation

Attitude in the TPB framework refers to the degree to which a person holds a favorable or unfavorable assessment of performing a target behavior (Ajzen, 1991). In the field of waste separation, attitude has consistently emerged as a significant predictor of separation intention, with studies show that residents who perceive waste separation as personally beneficial, environmentally meaningful, or

socially responsible are more likely to intend to and actually perform waste sorting (D. Zhang et al., 2015). Yet positive attitudes alone do not necessarily translate into compliant behaviour. Household waste separation remains limited in Indonesia, and studies have found that the gap is not explained by the absence of collection infrastructure alone (Zakianis et al., 2017).

It is often attributed instead to competing household priorities, to gaps in what households have available inside the home, and to the absence of immediate social or financial consequences for non-compliance, all of which are relevant to the context of company-managed plantation housing.

2.3.4 Subjective Norms and Social Influence

Subjective norms in the TPB context capture the individual's perception of social pressure from significant reference groups like family, coworkers, neighbors, and community leaders to perform or not the target behavior. In plantation housing environments, the close-knit residential community structure combined with employer-employee dynamics creates a strong normative social environment. When company management actively monitors waste segregations practices, its institutional authority becomes an important source of normative pressure beyond peer pressure alone. Residents who observe consistent support for waste segregation from their supervisors are more likely to perceive it as an expected social norm within their community (Costa et al., 2022). In this context, the overlap between employer authority and community leadership provides a distinctive setting in which normative pressure can be deliberately reinforced, creating opportunities to promote behaviour that may be unconventional to the neighbourhood.

Most of research in Indonesia regarding this topic often highlight the importance of community and social influence in driving pro-environmental behaviour. A study of waste management behaviour across Indonesian provinces found that strong predictors of household waste compliance come from subjective norms and perceived behavioural control, suggesting that both individual capability

and community-level social dynamics are important factors for behaviour change (Amir et al., 2025). This is supported by a study on Lakkang Island that found the social environment (influence of people around the household) had a significant effect on waste management behaviour, reinforcing that social pressure from the community plays a meaningful role in shaping compliance (Natsir et al., 2024). It is important to note, that the influence of subjective norms is not uniform across the waste separation literature. Subjective norm is widely regarded as the most variable of the three TPB constructs, which some studies have found to be a non-significant predictor. A study in 2019 of high school students found that subjective norm had no significant association with separation intention (Liao & Li, 2019). This variability suggests that the strength of social-normative influence depends on the setting. It may be higher in close-knit, collectivist communities such as plantation housing, where social ties and employer authority are more concentrated, although whether that holds in this particular community is examined in Chapter IV.

2.3.5 Perceived Behavioral Control

Perceived Behavioral Control (PBC) reflects the extent to which individuals believe they have the capability, resources, and opportunity to perform a behavior. In the context of waste separation, PBC encompasses residents' perceptions of whether they possess sufficient knowledge of the separation scheme, whether the bins are accessible and clearly labeled, whether pickup schedules are reliable and convenient, and whether the process of sorting requires excessive time or effort.

PBC consistently emerges as the most influential TPB construct in waste separation studies, particularly in developing country contexts where infrastructure deficits and inconsistent collection services reduce residents' sense of control over waste outcomes. The meta-analysis by Geiger et al. (2019), which examined 91 studies on household recycling, found that contextual factors, particularly the possession of a waste bin at home and house ownership, were significant predictors of recycling behavior alongside psychological factors.

This underscores that PBC is not merely a psychological perception but is materially shaped by the quality and availability of physical infrastructure, a finding directly relevant to PT BDK's operational context, where shared labeled bins and a regular collection service have been provided, but the containers needed for the first separation step inside the home have not.

2.3.6 Moral Norm

Moral norm refers to an individual's internalized ethical judgment about whether performing a particular behavior is morally correct or obligatory, experienced as a feeling of moral obligation rather than external pressure (Schwartz, 1977). In studies of waste separation behavior, incorporating moral norm has been shown to improve the explanatory power of the standard TPB model. Moral obligation has been found to be a significant predictor of waste separation intention, alongside perceived behavioral control (Babazadeh et al., 2023), and extended TPB models including moral norm explain more variance in both intention and behavior than the original three-construct model (Heidari et al., 2018).

In the plantation housing context, moral norm may be shaped by residents' sense of collective responsibility for the shared living environment, obligations felt toward family health and community cleanliness, and any religious or cultural values concerning environmental stewardship that are prevalent in the local community. Exploring moral norm alongside the standard TPB constructs therefore adds cultural and ethical depth to the behavioral analysis.

2.3.7 Organizational Factors in Waste Management Programs

The Theory of Planned Behavior explains waste separation primarily through individual determinants, and it treats the surrounding conditions, such as available facilities or social expectations, as background factors that feed into those determinants (Ajzen, 1991). In most studies this background is taken as given. In an employer-managed setting such as plantation housing, however, it is not a neutral given: it is actively created by the organization that runs the community.

The company decides how the program is communicated, whether residents are trained, how compliance is monitored, and what incentives or consequences apply. For this reason, the organizational dimension deserves theoretical attention alongside the individual one, rather than being treated as mere context.

A growing body of work on pro-environmental behavior in organizational settings supports this view. Studies of workplaces and managed communities show that an organization's climate, practices, and support structures shape whether its members adopt environmentally responsible behavior. Costa et al. (2022), for example, found that supervisor support strengthened the link between a supportive organizational climate and employees' subjective norms around waste separation, indicating that management can actively influence the social and psychological drivers of behavior rather than simply providing facilities. Reviews of recycling programs reach a similar conclusion, noting that clear communication and public education materially improve participation (Knickmeyer, 2020), and that external conditions such as infrastructure and education are important for sustaining behavior change over time (Hu et al., 2026).

Drawing these together, this study identifies four organizational dimensions through which management shapes waste separation behavior: communication and information dissemination, training and capacity building, supervision and enforcement, and incentive and accountability structures. Each operates by strengthening or weakening the individual determinants described earlier. Clear communication and training build residents' knowledge and perceived behavioral control; visible supervision and enforcement reinforce subjective and moral norms; and incentives and accountability give external weight to the intention to comply. The empirical evidence for each of these dimensions is reviewed in Section 2.4.3.

What makes these factors central to the present study, rather than peripheral, is that they are the elements directly under the company's control. PT BDK cannot reach into residents' minds to change their attitudes or sense of moral obligation, but it can decide how clearly the program is explained, how residents are trained, how consistently compliance is supervised, and how participation is rewarded or

enforced. The organizational dimension is therefore where managerial action actually takes place, and where any practical solution to the company's compliance problem must ultimately operate. Together with the extended TPB, it forms the second pillar of the conceptual framework developed in Section 2.6.

2.4 Review of Related Empirical Literature

2.4.1 Waste Separation Behavior in Indonesia

The literature on waste separation in Indonesia consistently identifies a significant gap between regulatory intent and actual household practice. A nationwide study using survey data from across Indonesian provinces found that household waste sorting behavior remains low, with knowledge about waste management identified as a significant influencing factor (Zakianis et al., 2017).

Beyond knowledge, structural barriers also play a major role: a survey of 900 households in Surabaya found that the most common reasons for not sorting waste were mixed collection and transport, lack of sorting facilities, and lack of time (Setiawan, 2020). Awareness and practice of household waste separation remain low across Indonesia. According to the Central Statistics Agency's Housing and Settlement Statistics 2022, drawing on the 2022 National Socio-Economic Survey (Susenas), only 19.49% of households both know about and practice the separation of organic and non-organic waste. A larger share (39.92%) are aware of waste separation but do not practice it, and nearly as many (39.87%) neither know about nor practice it (Badan Pusat Statistik, 2023).

Knowledge and education have been shown to be important precursors to positive waste separation attitudes and behavior. In a study of 562 high school students applying an extended Theory of Planned Behavior by Liao and Li previously mentioned, environmental knowledge emerged as the strongest predictor of waste separation behavior, and environmental education was found to be essential in equipping students with both the knowledge and the positive attitudes needed to separate waste (Liao & Li, 2019).

This pattern also holds in the Indonesian context: a study of 1,200 urban households across 12 Indonesian cities found environmental knowledge to be a significant predictor of household waste management behavior ($\beta = 0.126$, $p \leq 0.001$), alongside perceived behavioral control and subjective norms (Amir et al., 2025).

Notably, not all studies find infrastructure to be the decisive factor. In a study of 110 households on Lakkang Island previously mentioned, knowledge and the social environment significantly influenced waste management behavior, whereas income and access to physical facilities did not (Natsir et al., 2024). This suggests that simply providing bins and collection infrastructure is insufficient on its own, and that behavioral and social drivers may matter more. This finding has direct relevance to PT BDK, where infrastructure has been provided but compliance remains low.

2.4.2 Behavioral Barriers in Non-Urban and Institutional Housing Contexts

Insights into waste separation behavior in managed residential communities can be drawn from studies of housing estates where residents share collective waste infrastructure and a common community administration. A study of 321 residents in Bang Chalong Housing, a model community in Samut Prakan, Thailand, where most residents work as private-sector employees and waste collection is organized collectively for a small monthly fee, found that despite official recognition as a model community, its recycling program had attracted only 11% participation (Pongpunpurt et al., 2022). This illustrates that the presence of organized collection infrastructure does not by itself produce separation behavior.

A recurring theme in this literature is the gap between residents' intentions and their actual behavior. In a study of household waste sorting in China, personal norm was the major driver of intention, while facilities accessibility and government stimulus directly promoted the actual sorting behavior (B. Zhang et al., 2019). This means, motivation can shape intention, but accessible facilities and external prompting likely help to turn that intention into action. Ownership and

tenure status also emerge as relevant factors, like in the Bang Chalong community, where homeowners were found to separate waste significantly more often than tenants, a difference attributed to homeowners' longer-term stake in their living environment and greater willingness to improve it through their own behavior (Pongpunpurt et al., 2022). These dynamics have direct relevance to the plantation housing context, where the residence is tied to employment, and housing is employer-provided rather than owned. This may weaken residents' sense of personal investment in maintaining waste separation practices. A meta-analysis covering 46 studies on household waste separation found that intention was the key driver of separation behaviour. This was shaped by attitude, perceived behavioural control, moral norms, and awareness of consequences, while external factors such as infrastructure and education were important for sustaining the behavioural change (Hu et al., 2026). This indicates that effective programs typically need to address psychological, informational, and structural conditions in combination rather than in isolation

2.4.3 Role of Organizational Factors

As introduced in Section 2.3.7, the way a waste separation program is managed has a strong bearing on whether residents take part, and these organizational factors are the elements most directly under a company's control, which are communication and information dissemination, training and capacity building, supervision and enforcement, and incentive and accountability structures. This section reviews the empirical evidence for each of the four organizational dimensions in turn, drawing on studies of workplaces and managed communities.

The first organizational factor is communication and information dissemination. A review of good practices in household waste separation found that public education and clear, specific communication contribute significantly to improved recycling performance (Knickmeyer, 2020). The same study also found that when the requirements are complex or poorly communicated, even residents who intend to comply may fail to do so. Consequently, the clarity and simplicity of program instructions are important determinants of participation in household waste

segregation (Knickmeyer, 2020). Communication raises awareness, but residents also need the practical knowledge and skills to sort correctly, and that's where training and capacity building needed. As discussed earlier, environmental education has been found essential in equipping people with both the knowledge and the positive attitudes needed to separate waste (Liao & Li, 2019), and a recent meta-analysis similarly identifies education as an external factor that supports sustained behavioral change (Hu et al., 2026). For supervision and enforcement, the presence of an authority that visibly endorses and oversees the program strengthens residents' sense that separation is expected of them. In a workplace study, supervisor support was found to strengthen the link between organizational climate and employees' subjective norms regarding waste separation (Costa et al., 2022). In the plantation context, where management is also the employer, this supervisory role carries particular weight. The last one is incentive and accountability structures, because external prompting and rewards can help convert intention into action. A study of household waste sorting in China found that government stimulus directly promoted actual sorting behavior, beyond residents' personal motivation (B. Zhang et al., 2019), showing that visible incentives and consequences from the managing body can reinforce compliance.

2.5 Identified Knowledge Gap

While the Theory of Planned Behavior has been extensively applied to urban residential and public-space waste separation contexts, its application to plantation housing environments in Indonesia remains limited. The Indonesian studies reviewed in this chapter focus predominantly on urban municipal settings, leaving the distinct social and organizational characteristics of company-managed plantation communities largely unexamined. This gap has two dimensions. The first is contextual: plantation housing is a closed residential community in which the employer is simultaneously the service provider, the norm-setter, and the enforcement authority, a configuration that differs fundamentally from the municipal settings where most TPB research has been conducted.

The second is methodological. Existing studies rely largely on quantitative survey designs, and there is little qualitative exploration of how organizational management practices, such as communication, training, and supervision, interact with individual behavioral constructs, such as attitude, subjective norm, and perceived behavioral control, to shape waste separation outcomes.

Table 2.2 below summarizes the key empirical studies reviewed and the specific gap each leaves for the present study.

Table 2.2 Summary of Previous Empirical Studies

No.	Author(s) & Year	Title	Key Findings	Gap Addressed by This Study
1	Zhang, Huang, Yin & Gong (2015)	Residents' waste separation behaviors at the source: using SEM with the TPB in Guangzhou, China	Attitude, subjective norm, PBC, and situational factors all significantly predicted separation behavior.	Urban China, quantitative SEM; this study explores an Indonesian plantation employer-housing context qualitatively and adds organizational factors.
2	Botetzagias, Dima & Malesios (2015)	Extending the TPB in the context of recycling: the role of moral norms and demographic predictors	Adding moral norm significantly improved the prediction of recycling intention.	General Greek public, quantitative; this study applies the moral-norm-extended TPB qualitatively in a plantation setting with an organizational lens.
3	Amir, Miru & Sabara (2025)	Urban household behavior in Indonesia: drivers of zero-waste participation	PBC was the strongest predictor ($\beta=0.367$), then subjective norms ($\beta=0.358$); knowledge also significant.	Urban Indonesian households, quantitative; this study addresses the under-researched plantation employer-housing context and the management role.
4	Zakianis, Sabarinah & Djaja (2017)	The importance of waste management knowledge to encourage household waste-sorting behaviour in Indonesia	National sorting is low; knowledge is a significant influencing factor.	National survey, urban-oriented, knowledge-focused; this study gives qualitative, context-specific insight into plantation housing and organizational factors.

No.	Author(s) & Year	Title	Key Findings	Gap Addressed by This Study
5	Natsir et al. (2024)	Analysis of factors influencing community behavior in household waste management on Lakkang Island, Indonesia	Knowledge and social environment mattered; income and physical facilities did not.	Rural island community, quantitative; this study examines an employer-managed plantation community and the organizational role qualitatively.
6	Pongpunpurt et al. (2022)	Studying waste separation behaviors: a case study of Bang Chalong housing, Samut Prakan, Thailand	Despite shared infrastructure only 11% participated; homeowners separated more than tenants.	Thai employee housing, quantitative; this study focuses on the Indonesian plantation context and the employer's organizational practices, including management interviews.
7	Costa, Mouro & Duarte (2022)	Waste separation—who cares? Organizational climate and supervisor support's role in the workplace	Supervisor support strengthened the link between organizational climate and subjective norms.	Workplace, not housing, quantitative; this study transfers the organizational and supervisory lens to plantation residential waste separation, studied qualitatively.
8	Zhang, Lai, Wang & Wang (2019)	From intention to action: attitudes, facilities accessibility, and government stimulus in household waste sorting	Personal norm shaped intention; facilities and government stimulus drove actual behavior.	Urban China, government stimulus; this study examines company and employer organizational factors in plantation housing qualitatively.
9	Hu, Longfor, Dong & Qian (2026)	Beyond TPB: a meta-analysis of psychological and contextual determinants of household waste separation	Intention is the key driver; infrastructure and education support sustained change.	Meta-analysis of mostly urban, quantitative studies; this study gives qualitative, context-specific evidence from plantation employer-housing.

Addressing both dimensions is the central aim of this study. This study applies the extended TPB framework qualitatively in the specific setting of PT BDK's plantation housing. The aim is to understand what residents actually experience day to day, and the organizational factors behind it, in a way that survey data alone cannot show.

2.6 Conceptual Framework

Drawing on the extended Theory of Planned Behavior and the organizational factors discussed in Section 2.3.7, this study adopts a conceptual framework in which household waste separation behavior is shaped by two things together: individual behavioral factors and organizational management factors in the plantation housing context. Rather than a model to be tested statistically, the framework serves as a lens that guides the collection and interpretation of qualitative data. Compliance is expected to improve only when the company acts on both fronts at once, strengthening residents' individual readiness while putting the right organizational practices in place, rather than relying on infrastructure alone.

At the individual level, the four constructs of the extended TPB, namely Attitude, Subjective Norm, Perceived Behavioral Control, and Moral Norm, are expected to influence residents' intention to separate household waste, which in turn predicts their actual separation behavior. At the organizational level, four management dimensions are drawn from the literature reviewed earlier and proposed as contextual factors that shape or condition these individual-level pathways: (1) Communication and Information Dissemination, (2) Training and Capacity Building, (3) Supervision, Monitoring, and Enforcement, and (4) Incentive and Accountability Structures. Rather than acting as separate causes, these organizational factors are understood to strengthen or weaken the individual determinants. For example, clear communication and training can raise perceived behavioral control, while visible supervision and enforcement can reinforce subjective norms.

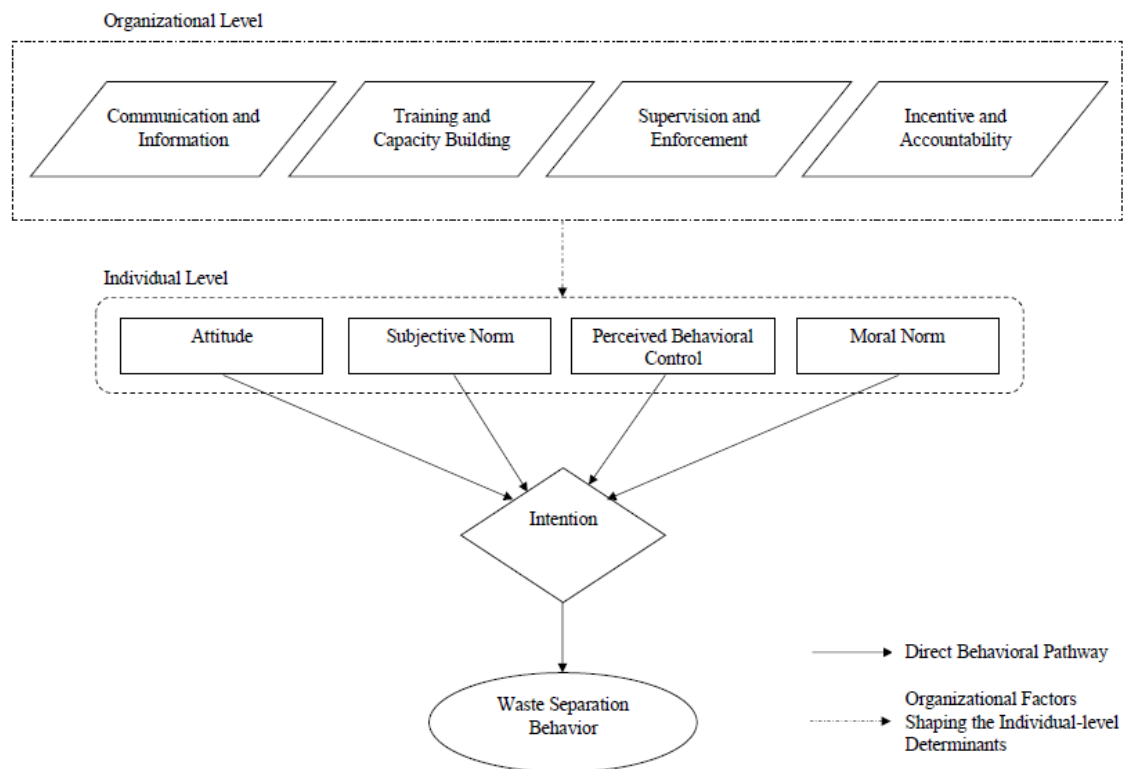


Fig. 2.1 Conceptual framework for household waste separation at PT BDK

The framework, as shown in Figure 2.1, proposes that effective household waste separation at PT BDK depends on two things at once: behavioral readiness at the individual level, and enabling conditions at the organizational level. Interventions that address only one side are expected to fall short. Providing bins without training and supervision, or raising awareness without ensuring reliable collection, is unlikely to produce sustained compliance on its own. This two-level framework guides the design of the interview and observation instruments in Chapter III, and the analysis of findings in the chapters that follow.

CHAPTER III

PLANNING AND IMPLEMENTATION

3.1 Research Design and Approach

This study used a qualitative research design, carried out as a single case study of household waste separation in PT BDK's plantation housing. A qualitative approach was chosen because the research questions ask not how much each factor matters, but why residents do or do not separate their waste, and how the company's management practices shape that behavior (Yin, 2018). Questions of this kind call for rich, descriptive data drawn from people's own accounts and from direct observation, rather than numerical measurement.

Three features of the problem made a qualitative design the better fit. First, the study is exploratory. Waste separation in plantation housing has received little research attention, as shown in Section 2.5, so the aim was to identify and understand the factors at work in this specific setting before they could be measured at scale. Second, the setting is small and bounded. The pilot program operates in a single housing community with a limited number of households, which suited the in-depth study of a few cases rather than a large survey. Third, much of the problem is organizational and relational, involving communication, supervision, and the employer-employee relationship, which are better understood through conversation and observation than through a questionnaire.

The study took the form of a case study because it examined a single, real-world program, PT BDK's waste separation pilot, within its actual context, where the line between the behavior and its organizational setting is not clear-cut. A case study allowed several sources of evidence to be used together, in this study interviews, direct observation, and documents, so that what people said could be compared with what was actually done on site. This combination also strengthened the credibility of the findings, since each source could confirm or qualify the others.

The main conceptual lens for this study, presented in Chapter II, was the Extended Theory of Planned Behavior together with organizational factors. As explained in Section 2.6, the framework was not treated as a model to be tested statistically. Instead, the study used an interview design combined with an observation instrument, using the framework's categories as markers for analyzing the data. In this way, the study could move between the framework and the field: the framework shaped what the interviews and observation looked for, while the field data gave concrete meaning to those categories in the plantation housing setting.

3.2 Research Setting

The study was set in the plantation housing of PT Bisma Dharma Kencana (PT BDK), a palm oil company operating in Central Kalimantan and the organization in which the researcher is employed. The study did not begin as an academic search for a site to examine. It grew out of a real operational problem within the company. The management's pilot waste separation program was not producing the expected compliance, and the question of why this was happening became a practical concern for the business. PT BDK is therefore both the origin of the research problem and its natural setting.

As described in Chapter I, the company manages roughly 8,000 hectares of oil palm, runs its own mill, and provides housing for around 1,100 employees and their families across thirteen residential complexes. These complexes do not fall under the municipal waste system, so the company itself provides waste collection and disposal, including the handling of household waste. This is part of what makes the setting distinctive for the study: the employer is at the same time the housing provider and the waste service operator, a combination rarely found in ordinary urban neighborhoods.

Within this wider setting, the study focused on the single housing community where the pilot waste separation program is running. The company provides a labeled bins each for organic, non-organic, and residual waste, with one set shared between every two households and positioned outside the homes. Waste collection is carried out periodically by an appointed officer using a motorcycle-drawn cart and the collected waste is taken to a central sorting post. Even with this infrastructure, early monitoring had shown low compliance and a high level of contamination in the separated waste, which is the problem this study set out to understand. This community was the focus because it is the only location where the program currently operates and therefore the only place where residents' actual experience of it could be observed. The shared arrangement of the bins is worth noting because it defines where the program's provision begins and ends. The company supplies the separation containers at the point of collection, outside the home, so whatever separation happens before that point which is inside the household, depends on containers or bags that residents provide for themselves.

The researcher's position as an employee of PT BDK was an advantage for the study since it provided direct access to the housing community, to company management and staff, and to the program's operating documents, and it brought first-hand familiarity with the local context. At the same time, this insider position carried responsibilities regarding objectivity and the employer-employee relationship, which are addressed in the trustworthiness and ethics sections later in this chapter.

3.3 Participants and Sampling

Purposive sampling was used for this study as it is a standard method in qualitative research, because rather than drawing a broad random sample, purposive sampling selects participants who can provide relevant and specific information about the issue. Because the aim was to understand the behavioral and organizational factors behind waste separation in depth, participants were chosen for their direct experience of the pilot program rather than to represent the population statistically. Two groups of participants took part in the study, matching

the two levels of the conceptual framework. The first group was residents of the pilot housing community. Five households were approached across different blocks of the pilot community. Their consistency in separating waste was not known beforehand and was not used as a selection criterion, so the range of practice reported in Chapter IV, from almost no separation to nearly complete, is a result of the interviews rather than something the sampling was designed to produce. Interviewing residents addressed the individual side of the framework and also answered the first two research questions, on the behavioral barriers they face and on how their attitudes, norms, sense of control, and moral obligation relate to their practices. The second group was company management and staff directly involved in running the program where three participants were selected: the Health, Safety, and Environment (HSE) Manager, who is the person in charge of the pilot program and responsible for its design and direction; the on-site HSE staff member, who carries out the program day to day; and the Plantation Manager, who oversees the program as part of the wider estate operation. These roles covered the program from planning to execution to supervision, giving a full view of the organizational side. Interviewing this group addressed the organizational side of the framework and answered the third research question, on how the company's communication, training, supervision, and incentives shape residents' behavior, so including management was essential, since the organizational practices at the center of this study could not be understood from residents' accounts alone.

Eight participants are small by quantitative standards but appropriate for an in-depth qualitative case study, where the goal is richness and understanding rather than statistical generalization. The emphasis was on selecting information-rich cases, exploring each in detail; and so data collection continued until the accounts began to repeat and no substantially new themes emerged. By the final interviews, participants were describing the same core obstacles already raised by earlier participants, which indicated that the small sample had been sufficient for the questions asked. This bounded sample was also realistic given the single pilot community and the time available for on-site fieldwork.

To protect their confidentiality, the participants are identified in this thesis by code. Residents are coded R-01 to R-05 and management participants M-01 to M-03, and these codes are used consistently in Chapter IV.

3.4 Data Collection Methods

The study drew on three data sources: semi-structured interviews, direct observation, and document review. These three sources allowed the findings to be cross-checked, so that what participants said in interviews could be compared with what was observed on site and with what the program's documents specified. This combination is a standard way to strengthen credibility in a qualitative case study. The main source of data was the semi-structured interviews. This format uses a set of open-ended questions as a guide, while still allowing the conversation to follow the issues the participant raises, so the interviewer can collect more in-depth answers. Two interview guides were used, one for residents and one for management, each built separately from the relevant side of the conceptual framework. The resident interview guide followed the individual side of the framework. The questions revolve around the residents' views on waste separation and their outlook (attitude), the expectations they felt from the family, neighbors, and supervisors (subjective norm), the challenges they found in sorting, managing the bins, and collection of waste (perceived behavioral control), and their sense of responsibility for their shared environment (morality). The guide also asked the residents what they do with their waste daily, and how complicated it is to separate waste consistently.

The management interview guide followed the organizational side of the framework. The HSE Manager, the HSE staff member, and the Plantation Manager were asked to explain how the program was communicated to residents, whether any training or guidance was provided, and how compliance was monitored, including any incentives or consequences that applied. The interviews also covered management's assessment of the compliance results and their views on how to improve them.

Appendix C provides the full interview guides in English alongside the Bahasa Indonesia version used in the field, together with a table mapping each question to the construct it addresses. The guides were drafted in English, based on the conceptual framework developed in Chapter II, then translated into Bahasa Indonesia. For the purposes of this thesis, the responses were later translated back into English while preserving the true meaning of each answer. Appendix D and Appendix E provide the observation checklist and the document review guide. Both interview guides used open-ended questions, since this type of question works as a prompt for conversation and lets the interviewer explore topics in depth.

Each interview was conducted in Bahasa Indonesia, since using the participants' native language helped them speak freely without the confusion of a language barrier. Interviewing in the native language also helped keep the data accurate and reduced the loss of unclear points or nuance that might occur in a second language such as English. With the participants' consent, the interviews were recorded, transcribed, and translated into English while preserving the original meaning. The eight interviews were carried out on site between 14 and 17 July 2026, and the document review was completed by 18 July.

Direct observation followed, to see how waste was actually handled on site. During the fieldwork, the observation recorded how households used the shared, labeled bins, the condition and level of contamination of the separated waste, and how waste collection was carried out. The observation was recorded in notes and supported by site photographs, which are included in Appendix F. A direct conversation with the collection officer about how the waste is handled after collection added further to the data. This direct observation showed actual behavior rather than reported behavior, which helped bridge the gap between what people said and what they did.

Document review provided the formal, organizational picture of the program. The researcher sought the pilot's written procedures, any written communications or instructions given to residents, the collection schedule, and any monitoring or compliance records kept by the company. This review established that the pilot operates without a project-specific standard operating procedure and is guided instead by the national waste management regulations set out in Section 2.2, with residents' instructions delivered through socialization materials rather than a written household procedure. The absence of a program-specific procedure is treated as a finding in its own right and is discussed in Chapter IV.

Together, the three sources gave a comprehensive view of the program: the documents and regulations showed what was supposed to happen, direct observation showed the reality on site, and the interviews explained why.

3.5 Data Analysis

The analysis of the data used thematic analysis; this method is commonly used for qualitative data to identify, organize, and interpret patterns across a set of data. This study is suited to thematic analysis because it can be conducted within an existing framework while still remaining open to new ideas that emerged from the data themselves (Braun & Clarke, 2006).

The analysis was framework-guided. The conceptual framework provides two sets of categories. The individual side consists of attitude, subjective norm, perceived behavioral control, and moral norm; the organizational side covers communication, training, supervision, and incentives. The data collected, such as transcripts, field notes, and documents, were labeled and coded according to the categories they related to. For example, a resident's statement that separation bags are not provided was coded under perceived behavioral control, while a manager's description of how the program was announced was coded under communication.

At the same time, the analysis stayed open to themes that did not fit the framework. Where an important idea recurred that none of the predefined categories captured, it was recorded as a new theme. This kept the framework as a useful guide rather than a rigid filter, and it allowed the study to identify factors specific to the plantation housing context that the literature had not anticipated. Five emergent codes came out of the data in this way, and four of them recurred often enough to be presented as themes of their own in Chapter IV.

The analysis was carried out manually rather than with qualitative analysis software. This was appropriate given the small amount of data, and it aligned with familiarity with the source material. The process followed several steps: a clear understanding of the data by transcribing, translating, and reading through the material; preparation of a codebook by setting out each code with definition and example across the data so the same code would be applied consistently from all eight transcripts. Segments were coded at the level of their significance, which means that a single answer expressing more than one construct received more than one code, where the direction of each segment was recorded regardless of whether it was favorable or unfavorable for the individual data construct or whether it was adequate or lacking for the organizational ones.

The coded material was then organized into a matrix of codes against participants. This matrix allowed patterns to be read in two directions: down each construct, to see how consistently it appeared across participants, and across each participant, to see how the constructs combined in a single account. Related codes were grouped into broader themes, which were reviewed and refined to make sure they were well supported by the data. Throughout the analysis, the three data sources were read against one another, so that interview accounts, observed behavior, and documented procedures could be compared. The points where the sources agreed strengthened the findings, and the points where they differed became findings in their own right. These divergences, between management's account of what is provided and residents' accounts of what is actually available to them, proved informative and were examined in Chapter IV.

Finally, the themes were interpreted in relation to the research questions and the conceptual framework. This interpretation explains not only which behavioral and organizational factors shape waste separation at PT BDK, but also how they interact, which forms the basis for the conclusions and recommendations presented in Chapter V.

3.6 Trustworthiness

The quality of research cannot be judged only by the statistical measures used in quantitative research; it is assessed instead through four widely accepted criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Table 3.1 sets out the practical measures this study used for each of them.

Table 3.1 Measures taken for the four criteria of trustworthiness

Criterion	What it concerns	Measures taken in this study
Credibility	Whether the account is believable and accurate	Triangulation of three sources: interviews, direct observation, and document review; the account of where separation actually takes place confirmed by management, by residents, by observation of the bins and cart, and by the collection officer; interviews held in Bahasa Indonesia to reduce ambiguity and language barrier
Transferability	Whether the findings are useful in other settings	No claim to statistical generalization from a single case; detailed description of the setting, the participants, and the program provided; judgment of transfer to other plantation housing or employer-managed settings left to the reader
Dependability	Whether the process is consistent and traceable	Full record kept of how the research was carried out: interview guides, transcripts, field notes, photographs, codebook, and coding matrix (Appendix G); one interview guide per participant group; the same codebook applied across all eight transcripts; each analytic step documented
Confirmability	Whether the findings rest on the data rather than researcher preference	Each interpretation tied to participants' own words and to observed facts; insider position of the researcher acknowledged as a source of bias; management and resident accounts given equal weight; divergences between them reported and examined rather than resolved in favor of either side

3.7 Ethical Considerations

Since the study involved participants who are also employed by the researcher's own company, it is important to give careful attention to research ethics. Every step of the study in this research was followed by standard ethical principles with informed consent, voluntary participation, knowledge of confidentiality, and protection from harm. This particular care was given due to the employer-employee relationship. Before each interview, every participant was informed of the purpose of the study, what taking part involved, and how the information would be used. Participants were told that taking part was entirely voluntary, that they could decline to answer any question, and that they could withdraw at any point without giving a reason. Their consent was obtained before the interview began, and their permission was sought separately for audio recording.

Confidentiality was maintained throughout. Participants' names are not used in the thesis, and interview data are reported in a way that does not identify individuals. Because the housing community is small and the management roles are few, particular care was taken in reporting, so that quotations and details cannot be easily traced back to a specific person. Participants are identified by code only, as set out in Section 3.3. Management participants were made aware that, given their distinct roles, their views might be more identifiable than those of residents, and their consent was obtained on that understanding. All recordings, transcripts, and notes were stored securely and used only for the purposes of this study.

The most significant ethical issue in this study was the power relationship between the company and its employees. Residents and staff might feel some pressure to take part, or to give answers they thought the company wanted to hear, because the researcher is a fellow employee and the company provides their housing and livelihood. Several steps were taken to reduce this risk. Participants were assured that their decision to take part, and anything they said, would have no effect whatsoever on their employment, housing, or standing in the company. They were told that their individual responses would not be reported back to management in a

way that identified them, and that the study was concerned with understanding the program, not with evaluating any individual. The researcher was also careful to keep the research role separate from any work role, and to make clear that participants were free to speak openly and critically. Permission to carry out the study within the company and its housing community was obtained from PT BDK's management beforehand. This organizational approval, together with the individual consent of each participant, provided the ethical basis for the fieldwork.

3.8 Project Implementation

This section sets out how the research project was carried out, from preparation through to the completed analysis and reporting. The project was organized into five phases.

The first phase was preparation. Before going to the site, the researcher finalized the two interview guides, confirmed the schedule and access with company management, identified the households and staff to be approached, and prepared the consent arrangements and recording equipment. This phase ensured that the time on site was used efficiently.

The second phase was fieldwork. The researcher was on site for twelve days, from 13 to 24 July 2026, during which time other company duties unrelated to the study were also carried out. The research data collection itself was completed between 14 and 18 July: the interviews with the five selected households and with the HSE Manager, the HSE staff member, and the Plantation Manager were conducted between 14 and 17 July, and the observation of daily waste handling and collection, together with the gathering of program documents, was completed by 18 July. The original plan had allowed eight to ten days for data collection, but the work was completed in five, helped by the small size of the pilot community and by access arranged in advance. Carrying out interviews, observation, and document collection in the same visit allowed the three sources of data to be gathered together while the researcher was present in the community.

The third phase was data processing. The audio was transcribed in Bahasa Indonesia and then manually translated into English by the researcher. This was done with care to preserve the original meaning and to reduce bias and ambiguity from the language difference. The process produced a written record in both languages that served as the basis for the analysis.

The fourth phase was analysis. The transcripts, field notes, and documents were coded and organized into themes using the framework-guided thematic analysis described in Section 3.5. The three data sources were compared with one another, and the themes were reviewed and refined until they were well supported by the evidence. And lastly, the fifth phase was reporting. The findings were written up and interpreted in relation to the research questions and the conceptual framework, and the practical recommendations for PT BDK were developed from them. This final phase turned the analysis into the discussion, conclusions, and recommendations presented in Chapters IV and V.

3.9 Risk Management

As the study were carried out within the researcher's own company, all the access required was ready and available. This project was considered low-cost and feasible. The main considerations were therefore not resources but a small number of practical risks that could have affected the completion of the fieldwork, each of which was managed in a straightforward way. Table 3.2 list the risks, the mitigation planned for them, and their outcomes.

Table 3.2 Risks to the fieldwork and how they were managed

Risk	Mitigation	Outcome
1. Participant availability during the fieldwork window	Schedule arranged in advance during the preparation phase; researcher's familiarity with the site used to coordinate interviews	All eight intended participants available; no substitutions needed
2. Disruption to site access (operational demands, travel, weather)	Visit planned with company management; fieldwork schedule kept flexible enough to absorb short delays	No significant disruption during the visit
3. Limited site window, little room for repeat visits	Interviews, documents, and observation gathered during the same visit; small number of information-rich participants	Data collection completed ahead of the planned schedule
4. Employer-employee relationship making participants guarded	Ethical safeguards in Section 3.7: voluntary participation, confidentiality, individual responses not reported to management, study role kept separate from work role; direct observation as a partial check	Not fully removable in an insider study; reported practice checkable against what was seen on site

Together, these measures kept the identified risks manageable and protected the quality of the data the project depended on.

CHAPTER IV

ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the empirical findings of the study and discusses their meaning in relation to the conceptual framework developed in Chapter II. It draws on the three sources of data described in Chapter III, namely semi-structured interviews with eight participants, direct observation of waste handling within the pilot housing community, and a review of the available program documents together with the national regulations that govern them.

The participants consisted of five residents of the pilot community, coded R-01 to R-05, and three members of company management and staff, coded M-01 to M-03. All interviews were conducted in Bahasa Indonesia and were subsequently transcribed and translated into English, which means that the quotations presented in this chapter are translations, selected to remain as close as possible to the meaning expressed by the participants themselves.

Data were analyzed through framework-guided thematic analysis, in which the conceptual framework supplied the initial coding categories, as explained in Section 3.5. The individual-level data were sorted into four categories: attitude, subjective norm, perceived behavioral control, and moral norm. The organizational data were sorted into four as well: communication, training, supervision, and incentives. The analysis also stayed open to ideas the framework did not anticipate, and four such themes recurred often enough across the data to warrant separate treatment. The coded material was subsequently arranged into a matrix of codes against participants, which allowed patterns to be examined both within individual accounts and across the group as a whole. Where the three data sources supported one another, the resulting finding carries greater weight, whereas points of disagreement between them are reported and examined in their own right, since several of these divergences proved to be among the most informative results of the study.

In accordance with the requirements for this chapter, the findings and their discussion are presented together rather than separated. Each theme is first described using the participants' own accounts and the corresponding field observations, and is then interpreted through the Theory of Planned Behavior and the empirical literature reviewed in Chapter II. Where the present findings correspond with earlier research, this correspondence is stated explicitly, and where they depart from it, the departure is explained with reference to the particular conditions of the plantation housing setting. The intention throughout is to keep the interpretation anchored in the evidence gathered at PT BDK rather than in the literature alone. Table 4.1 gives an overview of the participants and the contextual details relevant to the study.

Table 4.1 Overview of participants

Code	Group	Context relevant to the study
R-01	Resident	Lives with spouse; household waste is handled mainly by the spouse; describes the waste as mostly organic
R-02	Resident	Company staff; lives alone with domestic help; small amount of waste, mostly non-organic
R-03	Resident	Lives alone and handles his own waste
R-04	Resident	Lives alone; small amount of waste; reports separating waste even before the program started
R-05	Resident	Lives with family and domestic help; also holds a supervisory position at the site
M-01	Management	HSE Manager; initiated and designed the pilot program
M-02	Management	On-site HSE staff; field coordinator for the daily running of the program
M-03	Management	Plantation Manager; oversees the program as part of estate operations

4.2 Waste Separation Practice in the Pilot Community

The five residents interviewed described a range of separation practices rather than a single, uniform level of compliance. At one end of that range, R-01 reported that he separated almost nothing, explaining that his waste was "thrown away without being sorted" and collected in a single plastic bag, on the reasoning that most of it was organic and therefore already close to uniform in composition. The one exception he described was that clearly recognizable bottles and glass were still set aside. R-03 occupied an intermediate position, in that he separated certain

materials but not others, placing food scraps into a biopori hole in his yard and setting aside larger non-organic items, while combining small food wrappers with his general waste. At the other end of the range, R-02, R-04, and R-05 described separating their waste consistently. R-04, who reported having sorted his waste even before the program began, and R-05, who estimated that his household's waste "already leaves separated, around 90%," represented the most complete practice among the residents interviewed.

The accounts given by management converged on a picture that qualifies these resident reports in an important way. All three management participants described a clear gap between collection and separation, in the sense that residents reliably place their waste out for collection, while the separation itself is in practice carried out largely by workers at the collection point rather than within the household. As M-02 stated, the separation is "mostly done by the workers at the TPS," and M-03 observed that for collection "the residents already comply," whereas separation at source remains inconsistent because residents are "not yet used to" it. The behavior that the program was designed to produce, namely separation at the household level, is therefore only partially achieved, with the sorting post absorbing much of the work that the household is intended to perform.

The direct observation carried out during fieldwork supported these accounts and is reported here in its own right, since observed behavior provides a check on what participants report about themselves. The facilities within the compound were found to be largely in place. Sets of three clearly labeled and color-coded bins for organic, non-organic, and residual waste are positioned along the walkways, with one set shared between every two households (Fig. 4.1), and collection is carried out routinely by an appointed officer equipped with a motorcycle-drawn cart (Fig. 4.2). The contents of the bins, however, were for the most part still mixed rather than separated at source. Organic material was repeatedly found within the non-organic bin (Fig. 4.3), and this mixing persisted through to the collection cart, in which waste belonging to all three streams was observed together (Fig. 4.4). Further photographic documentation of these observations is provided in Appendix F.

When asked directly, the collection officer confirmed that the separating is in practice mostly performed by him at the sorting facility, which corroborates the accounts given by the three management participants.



Fig. 4.1 Shared three-stream waste bins provided in the pilot housing community



Fig. 4.2 Collection cart used by the appointed collection officer



Fig. 4.3 Organic waste mixed into the non-organic bin



Fig. 4.4 Mixed waste in the collection cart

The document review added further context regarding how lightly the pilot has been formalized. The program operates without a project-specific standard operating procedure and is guided instead by the national waste management regulations discussed in Section 2.2, which means that residents' practices rest on socialization activities and general rules rather than on a written household procedure of their own. The absence of such a procedure is significant because it leaves the expected household routine undefined in written form, so that what residents are supposed to do at home depends entirely on what they remember from the socialization sessions.

Two features of this overall picture deserve to be drawn out. The first is that the pattern of compliance is not binary. It ranges across the residents from none, through partial, to nearly complete, and it can be selective even within a single household, as R-03's separation of large items but not small plastics demonstrates. This gradation is consistent with the broader evidence that separation behavior is better understood as a matter of degree shaped by several conditions acting together rather than as a simple presence or absence of compliance (Hu et al., 2026).

The second feature, and the more consequential one for PT BDK, is that the gap between high collection compliance and weak separation at source echoes a recurring finding in the literature reviewed in Chapter II, namely that the presence of collection infrastructure does not by itself produce separation behavior. In the Bang Chalong model community in Thailand, shared collection infrastructure coexisted with a recycling participation rate of only 11 per cent (Pongpunpurt et al., 2022), and a large survey conducted in Surabaya identified mixed collection and transport together with a lack of sorting facilities among the most common reasons households do not sort their waste (Setiawan, 2020). The experience of PT BDK corresponds closely to this pattern, and the observational evidence strengthens the reading, since the separation infrastructure at the site is not merely present but well maintained and actively serviced, and separation at source is nevertheless limited. The infrastructure therefore appears to constitute a necessary condition for separation without being a sufficient one.

The residents' accounts also reflect the awareness-action gap documented at the national level, where a substantial proportion of Indonesian households are aware of waste separation but do not practice it (Badan Pusat Statistik, 2023). Several residents in this study understood and endorsed separation in principle while separating only partially or not at all in practice, and the sections that follow examine the individual and organizational factors that account for this divergence. It is also worth noting that the residents who reported the most consistent separation tended to be those with small waste streams that were largely non-organic, as in the cases of R-02 and R-04, or those with an established prior habit, as in the cases of R-04 and R-05, whereas the household that reported no separation at all described its waste as predominantly organic. These differences suggest that the perceived ease of the task and the presence of an existing routine are closely bound up with whether separation actually takes place, and both themes are examined further in Sections 4.3 and 4.5.

4.3 Individual Behavioral Factors

This section addresses the second research question by examining how residents' attitudes, subjective norms, perceived behavioral control, and moral obligation relate to their waste separation practices. Each construct is presented in turn, followed by a summary of how they combine across the five residents.

4.3.1 Attitude

The attitude of residents toward waste separation was positive in almost every case, and in several cases strongly so. R-03 described separation as "very important" and linked it to national recycling efforts, and R-05 likewise called it "very important," framing waste as a matter that had grown into a national concern. Where residents explained their reasoning, they generally did so in terms of concrete benefits rather than abstract principle. R-04 stated that separated waste "can be useful," with organic material becoming fertilizer and non-organic material carrying economic value, and R-02 described a similar chain in which organic waste becomes compost, non-organic waste is recycled or sold, and only the residue is

passed to the collection service. R-01 was the one exception, and his case is instructive precisely because it is mixed rather than simply negative. He judged separation to be "not too important" for himself, while assigning importance to it for the program's managers and for the sorting post. In the same interview, however, he identified a clear benefit, namely that separating waste at home reduces the workload of the collection staff. His attitude is therefore best described as ambivalent, since he recognizes a favorable outcome in the abstract while discounting the value of the behavior for himself.

The significance of this pattern is in what attitude cannot account for. Four of the five residents held favorable attitudes, yet their reported behavior ran from partial to nearly complete separation, and the bins observed on site were mostly still mixed. Attitude, then, does not tell apart those who separate from those who do not. This fits the awareness-action gap described in Section 4.2, where more Indonesian households are aware of separation than actually practice it (Badan Pusat Statistik, 2023). It also fits the survey by Amir et al. (2025), in which attitude was the weakest of the four factors tested and, unlike perceived behavioral control and subjective norm, was not a significant predictor of waste behavior in the regression. The contrast with the Guangzhou study, where attitude did predict separation behavior (D. Zhang et al., 2015), suggests that its influence is not fixed but depends on the setting. At PT BDK a positive view of separation is common, and something other than attitude is stopping that view from becoming steady practice.

4.3.2 Subjective Norm

Of the four individual constructs, subjective norm was the weakest. What makes it interesting, though, is not its weakness but its shape. In almost every interview, residents drew a line between two things: what they see other people doing, and what they feel is expected of them.

On the first, several residents noticed some separation going on around them. R-02 said his surroundings had generally taken up the recommended pattern. R-03 reported that a few neighbors had started to separate, partly because they had instructed their domestic helpers to do so, and R-04 guessed from the state of the neighboring bins that others were probably sorting too. R-05, looking at the wider workforce rather than his immediate neighbors, said that some other employees had begun to take part and that participation seemed to be growing. Only R-01 described the opposite, stating flatly that his neighbors "also don't sort."

On the second, the accounts pointed almost entirely the other way. Residents felt no expectation from the people around them. R-02 put it simply: no expectation existed, because waste was each household's own business. R-03 and R-04 said much the same, describing separation as a matter each household handles for itself. R-01 went further and rejected the very idea of social influence, remarking that being told what to do was "not the nature of adults," while R-05 said that for himself no one held any sway over the matter.

The theory offers a useful way to read this. Subjective norm has two parts. The descriptive norm is the perception of what others actually do, and the injunctive norm is the perception of what others expect or approve of. At PT BDK the descriptive norm is present, and in places even mildly positive, while the injunctive norm is largely absent. Social influence in this community is informational rather than normative. Residents can see that separation happens around them, but nothing in their social environment tells them that it is expected of them, and this is what drains the construct of much of its force.

This split also explains a piece of evidence that would otherwise look strange. R-03 said that if his neighbors began separating routinely, he would join them and do it regularly himself. He is responsive to the descriptive norm, in other words. The problem is that the surrounding practice is neither visible enough nor steady enough to trigger that response. His conditional willingness points to real potential in the social channel, potential that current conditions leave untapped.

Here the findings sit in tension with part of the Indonesian literature. In a survey of 1,200 urban households across twelve Indonesian cities, subjective norm emerged as the second strongest predictor of waste management behavior (Amir et al., 2025), and social environment was among the significant influences reported in the study of Lakkang Island (Natsir et al., 2024). The plantation housing context seems to weaken this channel rather than strengthen it. A likely reason lies in the makeup of the community. Households in employer-provided housing are connected to one another mainly through the workplace rather than through the neighborhood associations that shape many Indonesian residential areas, and several of the residents interviewed live alone. The result is a community that is physically close but, on the subject of household waste, socially quiet.

4.3.3 Perceived Behavioral Control

Residents' sense of control split along a line that runs through this whole study. On one side sits their own capability and the shared infrastructure, both of which they rated well. On the other sits provisioning inside the home, which they did not. Almost every resident said that separation is not difficult in itself. R-01 called it "easy enough." R-04 described it as "just easy." R-02 said it was not complicated, given how little waste he produced, and R-05 considered it undemanding because it starts in each home. R-03 gave the sharpest version of this. He said that separation "isn't really hard, it's the habit factor that makes it hard," which places the difficulty not in the task but in changing an old routine. The only real qualification came from the same participant, who noted that separating adds time to a chore usually done quickly, and from R-01, who found keeping several bags going at once a nuisance.

On the shared infrastructure, residents were positive again, and their answers line up with what was seen on site. R-01 confirmed that communal bins were provided and that collection was routine. R-03 described both the space and the regular pickup as available. R-05 listed the cart, the officer, the bins, and the sorting post as all being in place, and R-02 simply called the facilities complete.

The gap shows up at the household level, and it is the most consistent complaint in the entire resident dataset. R-01 said the plastic bags needed to separate at home were not provided, and that he had raised this before. R-03 said the separate bags for use from the house "aren't there yet." R-04 said the bags for the first sorting step were sometimes missing and that he had to prepare them himself. R-05, one of the most compliant residents, mentioned the same shortage. Even R-02, who had called the facilities complete, went on to ask for more bins and separation bags for household use, and raised the cost of single-use plastic as a further constraint. Observation confirmed the point from the other direction. Household waste arriving at the collection point often came in a single resident-supplied bag with mixed contents (Fig. 4.5). The first step of the separation chain is exactly the step the program does not equip.



Fig. 4.5 Household waste bag supplied by a resident, with mixed contents

So perceived behavioral control here is not low across the board. It is high on capability, high on the shared facilities, and low at the one point where the behavior has to begin. That distinction carries a lot of weight for how the finding is read. Studies in which perceived behavioral control came out as the strongest predictor of household waste behavior in Indonesia, such as Amir et al. (2025), treat the construct as a single quantity. What the present data show is that in a real setting

its parts can pull in opposite directions, and that an intervention aimed at the wrong part would miss the problem completely. The finding fits the Surabaya evidence, where a lack of sorting facilities was among the most common reasons households did not sort (Setiawan, 2020), and it fits the finding that access to facilities directly supports actual sorting rather than merely the intention to sort (B. Zhang et al., 2019).

The contrast with Lakkang Island is worth pausing on, because it looks like a disagreement and is really a clarification. In that study, access to physical facilities did not significantly affect behavior, while knowledge and social environment did (Natsir et al., 2024). At PT BDK the missing facility is not general infrastructure of that kind. It is small, specific, and sits at the exact moment of action, which is the plastic bag inside the home. General facility access can be adequate, as it broadly is here, while this narrow, decisive piece is still absent. The two findings do not really contradict each other once the level of the facility is made clear.

The shared arrangement of the bins deepens this point. As noted in Section 3.2, one set of bins is shared between two households and stands outside the homes. The company's provision, in other words, stops at the boundary of the house. Everything before that boundary, which is where separation actually has to start, depends on what the resident supplies. This is the structural reason the household bag keeps coming up, and it connects directly to the divergence between management and residents examined later in Section 4.5.1.

4.3.4 Moral Norm

Moral norm was the most consistent of the four individual constructs. Every resident expressed some sense of personal responsibility for separating waste, though the source of that feeling was not the same for each of them. R-02 framed it in terms of how waste reflects on a person, saying that waste "is a representation of us," and he described feeling uncomfortable when it is not managed well. R-03 spoke of guilt. He said he feels bad when he does not separate, and he noted that this feeling grew through his own reflection rather than being there from the start.

R-04 placed the obligation entirely within himself, pointing out that he had separated his waste even before the program began. R-05 tied his duty to his position, describing separation as his responsibility partly because other employees look to him. Even R-01, whose attitude was the least favorable, still spoke of a personal responsibility for a clean environment that came, in his words, from "encouragement from within oneself."

The construct also has some internal texture that is worth noticing. R-01's general sense of environmental responsibility did not reach as far as feeling bad about not separating. When asked whether he felt uneasy leaving his waste unsorted, he said not really, though he still set aside bottles and glass. A broad moral concern for the environment, in his case, does not attach itself to this specific behavior. R-02, R-04, and R-05 were different. Each reported discomfort when separation does not happen, and each linked that discomfort to having gotten used to separating. This is the clearest theoretical finding of the study. In this setting moral norm is the strongest of the individual drivers, and it is stronger than subjective norm. That ordering is the reverse of what a standard reading of the Theory of Planned Behavior would lead you to expect, and it is a direct, practical reason for the extended model adopted in this study. The finding supports the argument that adding moral norm improves the prediction of recycling behavior beyond the original constructs (Botetzagias et al., 2015), and it echoes the evidence from China that personal norm was the main driver of separation intention (B. Zhang et al., 2019).

The comparison with that Chinese study is worth taking one step further, because it lines up with PT BDK almost exactly. There, personal norm drove intention, while access to facilities and outside stimulus drove the actual behavior (B. Zhang et al., 2019). At PT BDK the first half of that is already in place. Residents hold both favorable attitudes and a felt sense of duty. The second half is not. The household bags are missing, and, as Section 4.4 will show, there is no incentive or accountability structure behind the program. So the pattern here is not a shortage of motivation. It is a breakdown in turning motivation into routine practice, and the missing pieces are structural rather than attitudinal.

4.3.5 Summary of Individual Factors

Table 4.2 brings the four individual constructs together across the five residents, so that the pattern behind the second research question can be seen at a glance.

Table 4.2 Individual behavioral factors across the five residents

Construct	Overall pattern	How it varied
Attitude	Mostly favorable	Four of five clearly positive; R-01 ambivalent
Subjective norm	Weak	Descriptive norm mildly present; injunctive norm absent or very weak for all five
Perceived behavioral control	Split	High on capability and shared facilities; low on household provisioning for all five
Moral norm	Consistently positive	Present in all five; specific discomfort at not separating absent only for R-01

Yet their actual practice does not follow this pattern. Reported behavior ranged widely, and the bins on site were mostly still mixed. The individual factors, taken on their own, cannot explain that gap, because on three of the four measures the residents look ready to separate. Two things stand out as the places where readiness fails to carry through. The first is the social environment, which supplies no sense that separation is expected. The second is the point of action inside the home, where the means to start separating are not provided. Both of these sit at the edge of the individual factors rather than inside them. One is social and one is structural, and neither is a matter of how residents think or feel.

This is why the organizational side of the framework matters so much for this case. The individual factors describe residents who are prepared to separate. To understand why that preparation does not become steady practice, the analysis has to turn to how the program is run, which is the subject of the next section.

4.4 Organizational Management Factors

This section addresses the third research question by examining how the company's practices in communication, training, supervision, and incentives shape residents' separation behavior. Each factor is drawn mainly from the management interviews, read against what residents reported and what was seen on site.

4.4.1 Communication and Information Dissemination

Of the four organizational factors, communication is the one the company has carried out most fully. M-01 described a tiered approach in which staff were briefed first, and staff together with HSE personnel then socialized the program to residents, backed up by flyers and posters. M-02 listed the channels used as WhatsApp group broadcasts, pamphlets, and flyers, and considered the information itself clear. M-03 described socialization delivered directly by the program's person in charge, accompanied by HSE staff. Residents' accounts confirm the effort was real. R-05 remarked that HSE had worked hard at socializing the program.

Two limits came through even so. The first is about reception. M-01 judged that the message needed to be repeated, especially on the separation step, and put the difficulty down to differences in how well residents took in the information. M-03 made the same point more sharply, linking the uneven reception to differences in residents' education and background. The message was sent clearly, in other words, but it did not land evenly.

The second limit is structural, and appears to be the more important of the two. The communication runs one way. M-03 said that two-way communication had not yet been set up, and that no channel for residents to give suggestions had been provided, though this was planned for later. R-01's experience shows the cost of that gap. He said he had raised the missing household separation bags before, yet at the time of fieldwork the shortage was still there. A message had gone down from the program to the residents, but the residents' message back up had nowhere to go.

The literature holds that clear and specific communication contributes a great deal to recycling performance, and that badly explained rules can defeat even people who mean to comply (Knickmeyer, 2020). PT BDK's case refines this in a useful way. Here the message seems to have been delivered clearly and through several channels, and compliance is still only partial, which means clarity of the message is not the thing holding the program back. What is missing is the return path. Without a way for residents to report problems, something as small and as fixable as a missing bag can persist, because the company has no reliable way of hearing about it.

4.4.2 Training and Capacity Building

Training is the weakest of the four organizational factors, and the managers themselves said as much. M-01 reported that no training had been given to residents, only visual guides shown during socialization. M-03 confirmed that there had been neither training nor a direct demonstration in residents' homes, and that residents had received a verbal notification only. M-02 described the socialization as having explained the benefits of separating, such as the economic value of non-organic waste and the use of biopori for organic waste, rather than the practical method of doing it. What residents were given, then, was the case for separating, not instruction in how to separate.

The same gap runs through the staff side. M-01 described his own preparation as informal, put together from internet research and regulatory documents rather than proper training, and he judged it not enough. M-03 said direct training had never been held, only online socialization of the regulations, and he too considered this insufficient, adding that he would welcome real training if it were offered. M-02 was the exception. He described the staff briefing as adequate, while still noting that changing behavior remained hard. The two managers judged staff preparation inadequate, while M-02, the on-site PIC who runs the program day to day, considered it adequate. Since two of the three, including the person who initiated the program, said preparation was not enough, the weight of the evidence points to capacity building having been minimal at both levels.

This gap matters more against the literature than it might first appear, because knowledge and education come up again and again in the studies reviewed in Chapter II as things that move separation behavior. Environmental knowledge was the strongest predictor of separation behavior among high school students in one extended Theory of Planned Behavior study (Liao & Li, 2019), it was a significant factor in a national Indonesian survey (Zakianis et al., 2017), and education appears in a recent meta-analysis as an external factor that supports lasting behavior change (Hu et al., 2026). PT BDK has told residents that they should separate and why. It has not taught them how.

That distinction is not just a wording point, and the field evidence shows why. R-03 was unsure where small food wrappers belonged, and simply put them with the general waste. The bins on site held organic material mixed into the non-organic container (Fig. 4.3). These are the kinds of mistakes that practical instruction is meant to prevent and that awareness-raising, on its own, does not. A resident can fully accept that separation matters and still get the sorting wrong, if no one has shown him which item goes where. The missing project SOP noted in Section 4.2 sharpens the same point. With no written procedure and no demonstration, the correct routine exists only in whatever residents remember from a socialization session, which is a fragile place for it to live.

4.4.3 Supervision, Monitoring, and Enforcement

All three management participants described supervision as something the program does, and all three described the same effect when they did. M-01 said that residents' waste is more separated when they are being watched. M-02 reported that residents are "quite compliant when supervised" and mentioned that crosschecking was part of the routine. M-03 named HSE as the party doing the supervising and described responsibility for the program as shared across the team. That all three, independently, describe the same thing makes this one of the firmer findings in the management data.

It also matters for what it says about the behavior underneath. Compliance that shows up when someone is watching and fades when no one is does not look like a settled routine. It looks like behavior held in place from outside. At PT BDK, supervision is producing separation at the moment of monitoring rather than a habit that continues on its own.

There is a more constructive way to read this, though, and it connects back to the subjective norm finding in Section 4.3.2. Supervisor support has been found to strengthen the link between an organization's environmental climate and employees' subjective norms about waste separation (Costa et al., 2022). That is directly relevant here, because at PT BDK management is not only the employer but also the housing provider, so the supervisory relationship already carries real weight. Recall that the piece missing from residents' social environment was the injunctive norm, the sense that separation is expected of them. Visible, steady supervision is one of the few channels the company actually has for supplying that missing sense of expectation. At present it is not being used that way. The supervision produces a short burst of compliance when it happens, rather than leaving behind a standard that residents feel even when no one is checking.

4.4.4 Incentive and Accountability Structures

By every account, this dimension is missing. On the side of sanctions, M-01 said that when non-compliance is found the response is only a verbal warning, with no record kept and no formal consequence. M-02 said sanctions had not been introduced or applied at all. M-03 explained the absence as a matter of timing, since the pilot was still in its early, habit-forming phase.

On the side of rewards, all three said there were none. M-01 mentioned that rewards were planned for a later stage but held back by uncertainty over what form they should take and by a concern not to add cost. M-02 and M-03 both said rewards should exist, and both believed they would push participation up. Residents saw the same thing from their side. R-03 put it most directly, saying there was no difference between those who separate and those who do not, precisely because no reward and

no sanction followed either way. Two residents raised the topic without being asked. R-04 suggested the collection officers be given some recognition, and R-05 wanted firmer pressure from management. The management participants' belief that consequences would help is backed by the literature. In the Chinese study discussed earlier, an outside stimulus from government was found to directly push up actual sorting behavior, on top of residents' own motivation (B. Zhang et al., 2019). Reading that against Section 4.3.4 shows what it means for PT BDK. Residents here already have the internal motivation that, in that study, produced the intention to sort. What the same study identified as the thing that turns intention into action, an external push alongside available facilities, is exactly what PT BDK has not set up. With no difference at all between separating and not separating, the program leans entirely on residents' own sense of duty. And the bins on site show that duty, by itself, is not carrying the program.

This gap also feeds back into the pattern from Section 4.4.3. Supervision produces compliance only while someone is watching, and there is no reward or penalty to give separation any weight once the supervision stops. The two absences reinforce each other. Nothing external supports the behavior in the moment, and nothing external follows from it afterward, so the behavior has nothing to hold it in place between one round of monitoring and the next.

4.5 Context-Specific Themes

Beyond the eight framework constructs, four themes came up often enough across the interviews to be treated on their own. Each one is tied to the particular conditions of this plantation housing setting, and each speaks to why the program works the way it does.

4.5.1 The Household Facility Gap and the Divergent Accounts

The lack of bags or containers for the first, in-house separation step was raised by all five residents and confirmed by observation, as already shown in Section 4.3.3. What turns this from an implementation detail into a theme in its own right is that management did not describe it the same way. M-03 said the facilities had been fully provided. R-02 also called them complete, and then, in the same interview, asked for household separation bags.

The disagreement is real, but it is not a case of one side being wrong. Management seems to be judging the facilities at the level the company has paid for and can see. The labeled bins, the cart, the officer, and the sorting post are all genuinely there, and observation confirmed they are in good order. Residents are judging the facilities at the level where the behavior has to start, which is inside the house, at the moment waste is produced. Both are describing the same program accurately, just from different points along the chain. Following the approach set out in Section 3.5, this difference is treated as a finding rather than as an error in the data, and what it reveals is a blind spot. The company believes the enabling conditions are met, so it has no reason to act on the one gap that residents keep naming. The missing feedback channel from Section 4.4.1 is what lets that blind spot survive, because the residents' side of the story has no way of reaching the people who could close the gap.

The shared bin arrangement makes the gap structural rather than accidental. As noted in Section 3.2, one set of bins serves two households and sits outside the homes. The company's provision, then, ends at the edge of the house. Inside, where separation actually begins, residents are on their own. This is not an oversight in how the bins were handed out. It is built into where the program chose to place them.

4.5.2 Habit and Behavioral Inertia

Habit came up on both sides as something that gets in the way. M-02 said that changing behavior and habit is hard, and that the effort has to be gradual. M-03 put low compliance down to habit together with the mix of backgrounds among residents, and described the pilot as being in a phase of forming new habits. R-03 named habit as the exact reason a task he found easy still did not get done. R-05, one of the more compliant residents, said that changing an old habit takes time.

Habit works in two directions here, so it is not only a barrier. Residents who have not yet turned separation into a routine are held back by the old way of doing things. For those who have built the routine, the same force works for them and makes the practice easier to keep up. R-02, R-04, and R-05 all described feeling uncomfortable when the waste is not separated properly, and each of them linked that feeling to having gotten used to separating. R-04's case is the clearest, since his habit already predates the program. What this suggests is that the target is not compliance on its own, but compliance that has settled into a routine. Section 4.4.3 showed that most households have not reached that point yet.

4.5.3 Displacement of Separation to the Sorting Post

That separation happens mostly at the collection point rather than in the home was reported by the three management participants, mentioned by two residents, seen directly during observation, and confirmed by the collection officer himself. The consequence of this is worth stating plainly, because it is not just a matter of who does the work.

The program is meant to produce separation at the source. Because the sorting post takes on that job, mixed waste never turns into a visible problem. The streams still end up separated by the time they reach their destination, the compound still looks clean, and no household ever feels any result from not taking part. R-01's reasoning shows the effect exactly. He does not separate, and he points out that the officers sort it anyway. So the displacement does more than move the workload onto the collection officer. It removes the signal that would otherwise tell residents,

and management, that separation at the source is not happening. Put next to Section 4.4.4, the two problems stack. There is no consequence built into the program, and the one natural consequence that might have existed, waste visibly going unsorted, is quietly cleaned up at the sorting post.

4.5.4 Leadership and Modeling

The last theme was raised from both sides. R-05 said that as someone in a supervisory role he has to set an example, and that it makes no sense to tell others to separate while not doing it himself. He described trying to be a person others could model themselves on. M-01 pointed to leaders practicing separation in the field as a way to drive compliance, and both R-05 and M-03 noted that wider management involvement was something the program did not really have, with the supervising left mostly to HSE.

This theme ties back to the weakness found in Section 4.3.2. Where expectation from peers is absent, a visible example from someone in authority is another way of sending the same signal. That fits this setting well, because management is also the employer, and the supervisory relationship already carries weight (Costa et al., 2022). It also lines up with the finding that residents separate more when they are watched. A figure who both practices separation and is known to expect it is, at the moment, the most reliable trigger for the behavior in this community, and right now that trigger is only present once in a while.

4.6 Behavioral Barriers to Consistent Separation

The previous sections examined the individual and organizational factors one by one. This section draws them together to answer the first research question directly: what behavioral barriers keep residents from separating their household waste consistently under the current pilot program? The most obvious message from the data is that the barriers are not mainly about motivation. Across the five residents, attitude was favorable in four cases and mixed in only one, a sense of personal duty was present in all five, and almost every resident described the task itself as easy. On three of the four individual measures, then, the residents look

ready to separate. If the problem were a poor attitude toward separation, the data would show it, and they do not. What the data show instead are practical conditions that stop willingness from turning into steady practice. Five barriers stand out, and they come from both sides of the framework.

The first is the missing means at the point of action. Households are not given bags or containers for the first separation step, so residents either supply their own or skip that step. Every resident raised this, observation confirmed it, and the shared bin arrangement makes it structural, since the company's provision stops outside the house. Made worse by management's belief that the facilities are already complete, this is the most concrete barrier of the five.

The second is the missing sense of expectation. Residents notice some separation around them, but they feel no expectation from neighbors, family, or the community, and several described waste as a private household matter. The injunctive norm that would tell residents separation is expected is largely absent. R-03's willingness to join in if his neighbors did shows that this channel could work, but the surrounding practice is not visible or steady enough to set it off.

The third is the missing know-how. Residents were told that they should separate and why, but not how. There was no training and no demonstration, and the result shows up in the misplaced items in the bins and in residents' own uncertainty about where particular things belong. A resident can accept that separation matters and still sort it wrong if no one has shown him the method.

The fourth is the missing consequence. Nothing rewards the households that separate and nothing follows for those that do not, so the program rests entirely on residents' own motivation. This is made worse by the way separation is displaced to the sorting post, which means that not taking part produces no visible failure. Supervision creates a short-lived exception, since residents comply while being watched, but nothing carries that compliance past the moment of monitoring.

The fifth is behavioral inertia. Old routines hold, and for residents who have not yet formed the new practice, habit works against them. For the few who have formed it, the same force works the other way and keeps the practice going, which points to routine, rather than one-off compliance, as the real target.

These five are not a checklist of separate problems. They work together, and that is what makes them stick. A resident who is willing but unequipped, who feels no expectation from anyone, who was never shown the method, and who faces no result either way, does not run into a single wall that stops him. He runs into the quieter problem that nothing in his situation moves him from being willing to actually doing it, week after week. This reading fits the conclusion, drawn across many studies, that programs work only when they deal with the psychological, informational, and structural conditions together rather than one at a time (Hu et al., 2026). It also explains why PT BDK's real investment in bins, collection, and communication has produced only part of the result it was meant to. The pieces that are missing are not the expensive ones. They are the small, specific enablers that sit between a willing resident and a sorted bin.

Seen this way, the low compliance in the pilot is not a puzzle. The company built the infrastructure and delivered the message, and both were done with genuine effort. What it did not put in place were the household-level means, the sense of expectation, the practical know-how, and the consequences that turn a willing resident into a consistent one. These are the behavioral barriers, and because they are specific, they are also addressable, which is the subject of the recommendations in Chapter V.

4.7 Evaluation of the Analysis

Before moving to the conclusions, it is worth being honest about what this analysis does well and where it is limited, since no study answers its questions perfectly and a fair reading of the findings depends on knowing their boundaries.

The main strength is that the central findings do not rest on a single source. The gap between collection compliance and separation at the source was described by the three management participants, reported by residents, seen directly in the bins and the collection cart, and confirmed by the collection officer. When four separate lines of evidence point the same way, the finding is hard to argue against, and the same triangulation supports the facility gap and the reliance on the sorting post. Where a point does rest on only one source, the text says so. A second strength is that using two groups of participants, residents and management, made it possible to examine the places where their accounts differed rather than smoothing them over. The disagreement about facilities in Section 4.5.1 turned out to be more useful than agreement would have been, because it pointed to a blind spot that neither group's account would have revealed on its own.

There are also real limitations. The first is scope. This is a single pilot community with eight participants, so the findings are meant as a close, detailed account of this one setting, not as something to be generalized statistically to all plantation housing. What the study offers other settings is a description rich enough for readers to judge how far it might apply to their own, which is the kind of transfer appropriate to a qualitative case study. The second is the mix of household types. The residents interviewed live in different situations, and those who reported the most consistent separation tended to be the ones with small, mostly non-organic waste, or with a habit formed before the program. This makes it hard to fully separate the effect of the behavioral factors from the effect of how much waste a household produces and what kind. The finding that willing residents still do not separate consistently holds regardless, but the reasons some separate more than others cannot be pinned entirely on the factors in the framework.

The third concerns intention. The study looks at how the four individual factors relate to residents' reported and observed behavior. Intention, which in the framework in Chapter II sits between the two, was not measured on its own, because the research questions ask about behavior and the factors behind it rather than about stated intention. Where a resident expressed conditional willingness, as R-03 did about follows his neighbors, it is reported as that. Measuring intention directly would give a more precise view of exactly where the path from motivation to action breaks, and this is a clear direction for future research.

A final point concerns the researcher's own position. As explained in Chapter III, the researcher is an employee of PT BDK. This gave access and background understanding that an outside researcher would have struggled to get, and it made the fieldwork possible in the first place. The same position could have led residents to present their practices in a more favorable light than is accurate. The observation was a partial check on this, and it is worth noting that what was seen in the bins was less separated than several residents' own accounts suggested. That gap between reported and observed behavior fits the possibility of some social desirability in the interviews, and it is one reason the observation is reported on its own rather than only as support for the interviews.

All things considered, the limits on the research shape how the findings should be taken into account but not undo the result. The core result, that residents are willing to try but held back by specific, structural, and social situations, is set on more than interviews, and is the reason why close single-site study is well suited for this research.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This study began from a simple problem. PT BDK received a Red PROPER rating for its solid waste handling, and in response the company started a waste separation pilot in one of its thirteen housing compounds. The pilot was meant to get households to separate their waste at the source, but compliance stayed low and the bins kept coming out contaminated. Because the facilities were largely in place, the more useful question was not a technical one. It was whether the real barriers were behavioral and managerial, sitting in how residents act and how the program is run. The study set out to answer that question through a single case at PT BDK, using interviews with residents and management, direct observation, and a review of the program documents.

The objectives followed from this. The study aimed to identify the behavioral barriers to consistent household separation, to examine how the individual constructs of the extended Theory of Planned Behavior relate to their practice, to assess how the company's organizational factors, namely communication, training, supervision, and incentives, affect that practice, and finally to develop recommendations that fit the local setting. Each objective is answered below, one research question at a time, with the detail behind the fourth set out in the recommendations that follow.

The first research question asked what behavioral barriers keep residents from separating their waste consistently under the pilot. The main finding is that the barriers are not really about motivation. Most residents were willing to separate and thought the task was easy, so the problem lies somewhere else. Five barriers came out of the data, and they sit on both sides of the framework. The first is the missing means at the point of action, which is in a sense perceived behavioral control, since households are not given bags or containers for the first separation step and the company's provision stops outside the house. The second is the missing sense of

expectation, which is subjective norm especially injunctive norm, because residents feel no pressure from neighbors or family and treat waste as a private household matter. The third is the missing know-how or training, as residents were told that they should separate and why, but never shown how. The fourth is the missing consequence, or in other word incentive and accountability, since nothing rewards those who separate and nothing follows for those who do not. The fifth is behavioral inertia, an emerging theme outside the framework used, where old routines hold and the new practice has not yet settled into a habit. These five do not act one at a time. They work together, and a resident who is willing but has none of these supports simply drifts back to mixing his waste.

The second research question asked how the individual constructs of the extended Theory of Planned Behavior affect the way residents separate their waste. Across the five residents, three of these four factors were broadly favorable. Attitude was positive in almost every case, with only R-01 ambivalent. Moral norm was the most consistent of all, since every resident expressed some personal sense of duty, and for several of them it was stronger than any social pressure. Perceived behavioral control was more of a split picture. Residents felt capable and rated the shared facilities well, but the provisioning inside the home, which is where separation has to begin, was the one thing they all said was missing. Subjective norm was the weak factor throughout. Residents could see some separation happening around them, but they felt no expectation that they should do it themselves. Put together, these factors describe residents who are mostly willing and able. The two places where that readiness fails to carry through are the social environment, which gives no sense that separation is expected, and the point of action inside the home, which is not equipped. It is worth noting that moral norm came out stronger than subjective norm, which is the reverse of what the standard Theory of Planned Behavior would predict, and this is part of why the extended model with moral norm was useful for this case.

The third research question asked how the company's organizational factors, namely communication, training, supervision, and incentives, affect residents' behavior. Of the four, communication has been done the most fully, through briefings, socialization, flyers, and WhatsApp broadcasts, and residents agreed the effort was real. The weakness on this side is that the communication runs one way, with no clear channel for residents to send problems back up, which is how something as small as a missing bag can stay unfixed. Training is the weakest of the four. Residents were given the case for separating but not the method, there was no demonstration and no written procedure, and the misplaced items in the bins are the visible result. Supervision does produce separation, but only while someone is watching, which points to compliance held in place from outside rather than a settled habit. Incentives and accountability are missing altogether. There is no reward for separating and no consequence for not, so the program rests entirely on residents' own duty. Taken together, the organizational side explains why willing residents do not become consistent ones. Nothing in how the program is run supports the behavior in the moment or follows from it afterward.

The fourth research question asked what practical measures the company can take to improve compliance and to support scaling. Because the barriers work together, the answer is a set rather than a single step. The company should equip the household for the first separation step and keep that supply going, open a channel that lets residents send problems back up, turn supervision into a stated and repeated expectation rather than a spot check, teach the method through a short demonstration and a simple written guide, introduce light recognition for those who take part, and look into an arrangement with an outside party for the streams that have value, so that the material the compound already produces may return something to the households that separate it. Government and local authorities can add the external push through recognition, technical guidance, and support for the sorting facility, while residents who already separate, especially those in senior positions, can make the practice visible to their neighbors.

On scaling, the order matters more than the speed. The pilot should be corrected first and checked for improvement before the model is taken to the remaining twelve communities, since copying it as it stands would spread the same gaps. These measures are set out in full in Section 5.2.

Across the four answers, the study points to one conclusion about the pilot. The program was built around collection, and as a collection scheme it works. It was not built around the household, which is where separation has to start, and that is where it comes up short. The shortfall is therefore in how the program was designed, not in the people it was designed for.

Two points follow that reach past PT BDK. On the setting, when the employer is also the housing provider and the waste operator, the ordinary community pressure that supports separation in a normal neighborhood is simply not there, and so far nothing in the employment relationship has been used in its place. On the theory, moral norm carried more weight than subjective norm across all five residents, which runs against the usual ordering in the Theory of Planned Behavior and suggests that for settings of this kind the extended model is the more useful one.

5.2 Recommendations

Based on the results in Section 4.6 and the organizational gaps in Section 4.4 across five barriers, the research identified several recommendations. As those barriers work together, the measures are meant to be read as sets rather than separately. Applying only one or two of them is not likely to improve compliance much. The recommendations are grouped by who is in a position to act: company management, government and local authorities, and residents themselves. As this pilot program is still early, they are framed as the steps that need to be taken rather than as firm conclusions.

5.2.1 Recommendations for Company Management

Most of the barriers found in this study sit within management's reach, so this group carries the largest share of the recommendations. Table 5.1 below summarizes the recommendations for company management.

Table 5.1 Recommendations for company management

No.	Measure	Barrier addressed	Note
1	Equip the household for the first separation step and keep the supply stocked	Missing means at the point of action	Most common resident complaint, confirmed by observation; lowest cost and most direct; closes the gap between the shared bins outside and where separation has to start
2	Open a two-way reporting channel, through the existing WhatsApp group or a named person in charge	One-way communication	Lets small and fixable shortages, such as the missing bags, reach the people who can act on them
3	Turn supervision into a stated and repeated expectation rather than a spot check	Missing sense of expectation (injunctive norm)	Employer and housing provider in one, so the expectation carries unusual weight in the compound
4	Teach the method: short practical demonstration plus a simple written guide or SOP residents can keep	Missing know-how	Also gives the program a written routine of its own, instead of resting on what residents remember from a socialization session
5	Introduce light recognition for households and collection staff who take part consistently	Missing consequence	Positive start preferred to penalties while the pilot is still habit-forming; management already believes rewards would help
6	Explore an arrangement with an outside party for the streams that have value, and return part of that value to the households that separate	Missing consequence	Recyclable material and organic waste for compost may have a buyer or a user; a waste bank was proposed twice by M-02, once unprompted. May reduce the volume the company handles and may fund the recognition in measure 5
7	Close the household, communication, training, and incentive gaps in the pilot and confirm improvement before scaling	All five, at scale	Copying the pilot as it stands would spread the same gaps to the remaining twelve communities

Measure 6 needs a note, because it is the only one that brings in a party from outside the company. Two of the three streams the pilot separates may have a use beyond disposal, which makes them an opportunity for the company rather than only a cost. Residents themselves described this chain, with organic waste becoming compost or fertilizer and non-organic waste being sold or recycled. An arrangement with an outside party that takes those streams, whether a waste bank, a collector, or a composting operator, might therefore do two things at once. It may reduce the volume the company has to move and dispose of, and it may create the consequence the program currently lacks. That second effect depends on one condition. The value returned has to reach the households that separate rather than stopping at the company, because an arrangement that pays the company for material sorted by the collection officer would repeat the displacement described in Section 4.5.3 rather than correct it. A waste bank fits that condition, since the return is paid to whoever brings the material, and it is the measure that M-02 raised on his own account. This study did not collect data on waste volumes, local prices, or the parties operating near the site, so the option is presented as one that is worth assessing rather than one that is expected to pay for itself.

5.2.2 Recommendations for Government and Local Authorities

The study also points to a role for the local environmental authority, the Dinas Lingkungan Hidup, and related bodies, mainly as a source of outside support that the company cannot easily supply on its own. One finding was that an external push, on top of residents' own motivation, is often what turns willingness into steady action. Local authorities are well placed to provide that push, whether through recognition of good practice, technical guidance on household separation, or support for the sorting facility. Because the pilot currently runs on national regulation without a procedure of its own, guidance from the dinas on how a household separation scheme should be set up and documented could also help the company formalize the program as it expands. These are offered as possibilities, since the company's own actions remain the main focus for this case.

5.2.3 Recommendations for Residents

Residents are the last group, and although a management study can only suggest so much here, a few points follow from the findings. Residents who already separate, and especially those who hold supervisory or senior positions in the compound, are in a good place to make the practice visible to their neighbors. The study found that one resident said he would separate regularly if he saw his neighbors doing the same, so visible practice by a few households could help build the expectation that is currently absent. Residents can also make use of the reporting channel, once it exists, to raise shortages and questions rather than quietly skipping the step. And for organic waste, the biopori method that one resident already uses is a low-cost option that others could adopt for their own food scraps. These are small actions, but they follow the same logic as the rest of the recommendations, which is to help a willing resident become a consistent one.

5.3 Limitations and Future Research

The limitations of this study were discussed in more detail in Section 4.7 and are only summarized here. The study is a single pilot community with eight participants, so its findings are meant as a close account of this one setting rather than something to be generalized to all plantation housing. The residents interviewed also differed in how much waste they produced and of what kind, which makes it hard to fully separate the effect of the behavioral factors from the effect of the waste itself. Intention, which sits between the individual factors and behavior in the framework, was not measured on its own, because the research questions asked about behavior and the factors behind it. And the researcher is an employee of PT BDK, a position that made the fieldwork possible but could also have shaped how openly residents described their own practice, which is part of why the observation is reported in its own right.

These limits open a few directions for further work. A study that measures intention directly would give a sharper view of exactly where the path from motivation to action breaks, which this study could only describe in general terms. Once the company corrects the gaps in the pilot, a follow-up that tests those changes, for example by providing household bags and practical training and then checking whether source separation improves, would show whether the recommendations actually work rather than only whether they sound reasonable. A larger study across several of the thirteen communities, perhaps pairing interviews with a short survey, could also test how far the pattern found here holds once the program is scaled.

The third party option raised in Section 5.2.1 would also need its own assessment before the company commits to it, covering the volumes the compound produces, the prices available locally, and which parties operate near the site, none of which was measured in this study.

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APPENDIX

APPENDIX A - CONSENT FORM

Research Team

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I, the undersigned below, declare that I have read and understood the contents contained in the Information Sheet, and stated the following:

- I am willing to answer all questions given;
- I understand that I did not benefit directly from this research;
- I understand that if there are further classification of this research I can contact the research team;
- I agree that this interview will be recorded, and also understand that my identity will be kept confidential;
- I understand that I can contact Fendra Agusta through fendra.agusta@ipmi.ac.id, if I object and have complaints about the conduct of this research ethic;
- I agree to participate in this interview.

Name :
.....
Signature :
.....
Date :
.....

APPENDIX B - INFORMATION SHEET

Research Team

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Why is the research being conducted?

This study looks at the behavioral and organizational reasons behind the low uptake of household waste separation in the plantation housing of PT Bisma Dharma Kencana (PT BDK) Palm Oil Mill & Plantation. After the company received a Red rating in the solid waste category of the national PROPER assessment, management set up a pilot waste separation program in one of its housing communities. So far, participation has been low and the separated waste is often mixed, which points to causes that go beyond equipment and procedures and into how people behave and how the program is run. Using an extended version of the Theory of Planned Behavior together with organizational factors such as communication, training, supervision, and incentives, the study seeks to explain this low participation and to suggest practical steps the company can take to raise it and to extend the program to its other housing areas.

The study forms part of my final research project for the Master of Business Administration at IPMI Institute, Jakarta, carried out under the supervision of Sidrotun Naim, M.P.A., Ph.D.

What participants will be asked to do?

If you agree to take part, you will join a one-on-one interview that lasts around an hour and follows a semi-structured set of questions. The conversation will be held in Bahasa Indonesia. You will be asked to talk about how household waste separation currently works at PT BDK, what you have experienced, the difficulties you have noticed, and how the people responsible for the program work together. You are also welcome to offer your own ideas for making the program work better and for keeping the living environment clean. With your agreement, the interview will be recorded so that what you say can be written up accurately.

The expected benefits of the research

This study should give a clearer picture of how household waste separation is actually practiced at PT BDK. By identifying the main behavioral and organizational obstacles in the current program, it aims to put forward workable suggestions that can lift participation, contribute to a cleaner and healthier place to live, and improve the company's environmental and sustainability record.

Risks

Taking part in this study is not expected to expose you to any meaningful risk. Your involvement is completely voluntary, and neither your choice to join nor anything you share in the interview will have any bearing on your job, your housing, or your position in the company. Your identity will remain confidential in anything that comes out of the study, whether a publication, a presentation, or any other form of sharing.

Confidentiality

Each participant is given a code, and that code, rather than any name, is what appears on the interview and transcription materials, so no personal details are written down alongside your responses. If you allow the interview to be recorded, the recording is used only for this study and is erased as soon as it has been written up. Transcription takes place as soon as possible after each interview, with any identifying details left out and the participant referred to only by code. The written records are kept in a secure place, separate from other project materials, for no longer than five years, after which they are destroyed, and only the researcher can access them.

Feedback

When the study is complete, you will receive a summary of the overall results, normally through the project report and any academic publications that follow from it.

Privacy statement

This research does not collect, access, or produce personally identifying information in its published results.

Questions/further information

If anything about the study is unclear, or you would like to know more, please get in touch with Fendra Augusta using the contact details listed above.

APPENDIX C - INTERVIEW GUIDE

This appendix presents the full text of both interview guides used in the study, with the English version alongside the Bahasa Indonesia version used in the field. Before each interview, the interviewer recorded the participant code, group, date, time, location, interviewer name, recording file name and duration, language, confirmation of informed consent, and a brief context note.

Guide A - Resident Interview (Panduan A)

No.	English	Bahasa Indonesia
1	Could you tell me a little about the household here, including who lives here and who usually takes care of the waste day to day?	Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?
2	Could you describe how your household waste is usually handled over a day, from the kitchen to where it finally goes?	Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampai akhirnya dibuang ke mana?
3	What is your view on separating waste into different types? Is this something important to do?	Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?
4	In your view, what are the good sides of separating waste, and what are the things that make it troublesome?	Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?
5	Do the people around you, such as neighbors, family, and coworkers, separate their waste too? What do they expect from you?	Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?
6	Is there anyone whose opinion could make you start separating your waste, or make you stop?	Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?
7	How easy or hard is it for you to separate waste here? What usually gets in the way?	Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?
8	Do you have the things needed to separate, such as bins, space to keep them, and separate collection?	Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?
9	Do you feel a personal responsibility for how this household's waste is managed? If so, where does that feeling come from?	Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana

No.	English	Bahasa Indonesia
		sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?
10	Would you feel uncomfortable, or would it not bother you, if you did not separate your waste? Why?	Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?
11	If you had to name the single biggest reason waste separation works or does not work here, what would it be?	Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?
12	Is there anything I have not asked about that you feel is important to share?	Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Guide B - Management and Staff Interview (Panduan B)

No.	English	Bahasa Indonesia
1	Could you explain your role in this waste separation program, and how long you have been involved?	Boleh dijelaskan peran Bapak/Ibu dalam program pemilahan sampah ini, dan sudah berapa lama terlibat?
2	Briefly, how was this pilot program designed, and how is it supposed to work?	Secara singkat, bagaimana program percontohan ini dirancang dan bagaimana semestinya berjalan?
3	How is the program communicated to residents? Through what channels is the information delivered?	Bagaimana program ini dikomunikasikan kepada warga? Melalui saluran apa saja informasinya disampaikan?
4	In your view, how clearly is that information received by residents? Are there any obstacles in communicating it?	Menurut Bapak/Ibu, seberapa jelas informasi tersebut diterima warga? Adakah kendala dalam mengomunikasikannya?
5	Have residents ever been given training or guidance on how to separate waste? If so, what form did it take?	Apakah warga pernah diberi pelatihan atau panduan cara memilah sampah? Jika ya, seperti apa bentuknya?
6	Do the staff who run the program also receive preparation? In your view, is it already adequate?	Apakah staf yang menjalankan program juga mendapat pembekalan? Menurut Bapak/Ibu, apakah sudah memadai?
7	How is residents' compliance monitored or supervised, and who is responsible for it?	Bagaimana kepatuhan warga dipantau atau diawasi, dan siapa yang bertanggung jawab atas hal itu?
8	What happens if a resident does not separate their waste? Is there any follow-up?	Apa yang terjadi jika ada warga yang tidak memilah sampah? Apakah ada tindak lanjut?
9	Is there any reward or encouragement to separate waste, and are there consequences for not doing so?	Apakah ada penghargaan atau dorongan untuk memilah sampah, dan apakah ada konsekuensi jika tidak melakukannya?
10	In your view, does that affect residents' behavior?	Menurut Bapak/Ibu, apakah hal tersebut berpengaruh terhadap perilaku warga?

No.	English	Bahasa Indonesia
11	In your own view, why is the compliance rate still low?	Menurut pandangan Bapak/Ibu sendiri, mengapa tingkat kepatuhan masih rendah?
12	In your view, what would most improve compliance, and is it feasible to expand this program to other housing communities?	Menurut Bapak/Ibu, apa yang paling dapat memperbaiki kepatuhan, dan apakah program ini memungkinkan untuk diperluas ke komunitas perumahan lainnya?
13	Is there anything I have not asked about that you feel is important to share?	Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Question-to-Construct Mapping

The tables below show the construct or purpose each question is designed to elicit. Questions marked as open or context are not tied to a single construct.

Guide A (Resident)

Q No.	Construct / purpose the question is designed to elicit
1	Household context (background; not coded)
2	Reported practice (BEH)
3	Attitude (ATT)
4	Attitude (ATT) - perceived benefits and costs
5	Subjective norm (SN) - descriptive and injunctive
6	Subjective norm (SN) - social influence
7	Perceived behavioral control (PBC) - ease and barriers
8	Perceived behavioral control (PBC) - facilities and provisioning
9	Moral norm (MN) - source of obligation
10	Moral norm (MN) - discomfort at not separating
11	Overall barrier (open, diagnostic)
12	Closing (open; anything else the participant wishes to add)

Guide B (Management and Staff)

Q No.	Construct / purpose the question is designed to elicit
1	Role and background (context)
2	Program design (context)
3	Communication (COM) - channels
4	Communication (COM) - clarity and obstacles
5	Training (TRN) - resident training
6	Training (TRN) - staff preparation
7	Supervision (SUP)
8	Incentives (INC) - sanctions and follow-up
9	Incentives (INC) - rewards and consequences
10	Incentives (INC) - perceived effect on behavior
11	Overall barrier (open, diagnostic)
12	Recommendations and program scaling (open; addresses RQ4)
13	Closing (open; anything else the participant wishes to add)

APPENDIX D - OBSERVATION CHECKLIST

Checklist used for the on-site observation described in Section 3.4. Observations were recorded as field notes; photographs are in Appendix F

No.	Observation focus	What was observed
1	Waste separation facilities	Layout and labeling of the shared three-stream bins (organic, non-organic, residual); one set per two households; presence or absence of bags or containers for the first sorting step inside the home
2	Household use of the bins	How households placed and disposed of waste into the shared bins
3	Condition of separated waste	Degree of mixing within each stream, in the bins and in the collection cart
4	Collection process	Timing and method of collection; the appointed officer; the motorcycle-drawn cart
5	Sorting post (TPS)	General condition; where separation of waste actually took place
6	Collection officer account	Handling of waste after collection, from a direct conversation with the officer

APPENDIX E - DOCUMENT REVIEW GUIDE

Guide used for the review of program documents and the relevant regulation described in Section 3.4.

No.	Document sought	What was examined for
1	Pilot's written procedures (SOP)	Whether a project-specific standard operating procedure existed for household waste separation
2	Written communications and instructions to residents	Socialization materials, flyers, posters, group messages; content and clarity
3	Collection schedule	Routine and frequency of waste collection in the pilot community
4	Monitoring and compliance records	Any company records on supervision, compliance, or follow-up
5	National waste management regulation	The regulation (Section 2.2) guiding the pilot in the absence of a project-specific SOP

APPENDIX F - FIELD OBSERVATION DOCUMENTATION

This appendix presents additional photographs taken during the on-site field observation described in Section 3.4. They document the condition of the separated waste and the collection process in the pilot community. Figures 4.1 to 4.5 in Chapter IV are drawn from the same set of field photographs.



Fig. F.1 Contents of the three household bins (organic, non-organic, and residual)



Fig. F.2 Waste collection by the appointed officer at the shared bins



Fig. F.3 Collected waste in the collection cart



Fig. F.4 Mixed waste in the non-organic bin



Fig. F.5 Mixed waste in the non-organic bin (closer view)

APPENDIX G - CODING FRAMEWORK AND CODING AUDIT TRAIL

This appendix presents the full coding framework and the coded meaning units for all eight participants (R-01 to R-05 and M-01 to M-03). It forms the audit trail for the thematic analysis described in Sections 3.5 and 3.6. The analytic content (code names, definitions, valence meanings, and coding notes) is in English. The coded segments and the anchor example quotes are kept in the original Bahasa Indonesia, the language of the interviews, so that the coding can be checked against the transcripts; the quotations cited in Chapter IV are the English translations of these segments.

G.1 Codebook

Group	Code	Name	Definition (what it captures)	Meaning of "+" / (present)	Meaning of "-" / (lacking)	Anchor Example (Bahasa Indonesia)
TPB Core	ATT	Attitude	Personal judgment of whether separating is useful/worthwhile (costs vs. benefits). Can be positive or negative.	sees separating as useful/beneficial	considers it unimportant / not worthwhile	R-04: "bisa jadi pupuk... nilai ekonomis" / R-01: "untuk pribadi nggak terlalu penting"
TPB Core	SN	Subjective Norm	Social pressure: whether important others (neighbors, family, colleagues) separate and expect it from the participant.	peers separate and/or an expectation exists	peers do not separate / no expectation	R-03: "kalau tetangga rutin, saya ikut" / R-01: "mereka juga nggak memilah"
TPB Core	PBC	Perceived Behavioral Control	Perception of how easy/hard separating is and whether one feels able (skill, time, tools, knowledge).	feels easy / able / complete	feels hard / hindered / lacking tools	R-03: "nggak susah" / R-01: "gampang, cuma plastik tidak tersedia"
TPB Core	INT	Intention	A statement of willingness or a plan to separate (start / continue / expand).	states willingness / intends to separate	states reluctance / no intention	Not Applied. See Section 4.7
Moral Norm	MN	Moral / Personal Norm	An internalized sense of personal obligation, feeling 'this is the right thing to do', or guilt/discomfort when not separating.	feels obligated / guilty if not	does not feel a personal obligation	R-03: "merasa bersalah ketika tidak memilah" / R-02: "sampah representasi dari kita"
Organizational Factor	COM	Communication	How the program is delivered to residents: channels, clarity, and whether feedback flows upward.	channel present / message clear	channel lacking / ineffective / no feedback	M-02: "WA group, pamflet, flyer" / M-03: "belum ada sarana saran"
Organizational Factor	TRN	Training	Whether residents/staff receive training or practical guidance on how to separate, and whether it is adequate.	training present / adequate	training lacking / none	M-01: "belum ada pelatihan... hanya panduan visual"
Organizational Factor	SUP	Supervision	How compliance is monitored and by whom, including the 'compliant only when watched' pattern.	supervision present / working	supervision lacking / not routine	M-01: "warga patuh ketika diawasi" (pengawasan HSE)
Organizational Factor	INC	Incentives	Rewards or sanctions (or their absence): praise, fines, waste bank, verbal warning.	reward / sanction present	none / only a verbal warning	M-01: "hanya teguran lisan" / R-03: "tidak ada reward dan sanksi"

Group	Code	Name	Definition (what it captures)	Meaning of "+" / (present)	Meaning of "-" / (lacking)	Anchor Example (Bahasa Indonesia)
Emergent Theme	BEH	Reported Practice	What the participant says he actually does now, the compliance outcome, from 'not at all' to 'mostly separated'.	reports separating	does not separate (~ = partial)	R-05: "sudah 90% terpisah" / R-01: "dibuang tanpa dipilah"
Emergent Theme	HAB	Habit	Old routines and the difficulty of changing them, mentioned as a barrier. (presence code - no valence)	(neutral - just mark its presence)		M-02: "mengubah kebiasaan itu susah" / R-03: "faktor kebiasaan"
Emergent Theme	FAC	Facility Gap	A specific and recurring complaint: separation bags/containers at the household level are not provided.		lacking / not provided	R-01: "fasilitas plastik tidak tersedia" / R-04: "plastik pemisah kadang nggak ada"
Emergent Theme	TPS	Burden on TPS	Separation mostly happens at the collection point, done by the officer, rather than at the source (home). (presence code)			M-02: "pemisahan sebagian besar oleh petugas di TPS"
Emergent Theme	LEAD	Leadership Modeling	Leaders set (or are expected to set) an example as a driver of compliance.	example present	expected but not yet present	R-05: "sebagai pimpinan harus memberi contoh" / M-01: "pemimpin yang beri teladan"

Valence Marking Guide

Symbol	Meaning
+	pushes TOWARD separating (good attitude / peers support / feels easy / feels obligated / reports separating)
-	pushes AWAY from separating (unimportant / peers don't separate / hindered / no felt obligation / does not separate)
~	a genuine mix within one segment (use sparingly) - e.g. partial separation
present / lacking	for structural factors (COM, TRN, SUP, INC, FAC, LEAD): mark whether it is PRESENT/adequate or LACKING/absent
n/a	presence code (HAB, TPS) or a suggestion/recommendation row - valence does not apply
(empty)	context/background row deliberately left uncoded

Valence +/- applies to: ATT, SN, PBC, INT, MN, BEH. Structural factors use present/lacking. HAB & TPS = presence.

G.2 Code x Participant Summary Matrix

Cell content = the valence that appears (+ / - / ~ for attitude-behavior codes; present / lacking for structural factors). • = code raised as a suggestion/attribution without valence. Empty cell = did not appear.

Group	Code	M-01	M-02	M-03	R-01	R-02	R-03	R-04	R-05
TPB Core	ATT				-, +	+	+	+	+
TPB Core	SN				-	+, -	+, -	+, -	+, -
TPB Core	PBC				-, +	+	-, +	+	+
TPB Core	INT								
Moral Norm	MN				+, -	+	+	+	+
Org. Factor	COM	present, lacking, •	present	present, lacking, •					present
Org. Factor	TRN	lacking	lacking, present	lacking					
Org. Factor	SUP	present, •	present	present, •					•
Org. Factor	INC	lacking, •	lacking, •	lacking, •			lacking	•	•
Emergent Theme	BEH	~		~	-, ~	+	~, -	+	+, ~
Emergent Theme	HAB	•	•	•			•		•
Emergent Theme	FAC			present	lacking	lacking	lacking	lacking	lacking
Emergent Theme	TPS	•	•	•	•	•			
Emergent Theme	LEAD	present, •							present, •

G.3 Interview Transcripts

R-01 (Warga)

Identitas Wawancara

Kode partisipan: R-01

Kelompok: Warga

Panduan wawancara: Panduan A (Warga)

Tanggal wawancara: 14 Juli 2026

Lokasi: Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: July 14, 09.48 T ES

Durasi rekaman: 25.15 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?

Jawaban: Di rumah saya dan Istri, serta peliharaan saya ikan lele. Biasanya yang mengurus istri dan kadang saya bantu, ditaruh di plastic.

Pertanyaan 2: Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampai akhirnya dibuang ke mana?

Jawaban: ditaruh di plastik dan dibuang tanpa dipilah, karena Sebagian besar sampah saya organik. Kalau sesuai standar ada 3 kategori sampah dan seharusnya dipisah, tapi umumnya saya kumpulkan di 1 plastik sebelum dibuang ke tempat sampah di bagian organik.

Pertanyaan 3: Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?

Jawaban: soal memilah, untuk pribadi nggak terlalu penting, Cuma untuk pengelola (tim pemisah sampah di TPS PT BDK) penting karena akan dikumpulkan di TPA yang ditentukan oleh dinas terkait. Bagi kita pribadi tidak terlalu penting karena walau kita nggak milah, sampah tetap diambil oleh petugas cuma kesadaran kita aja untuk membantu. Perusahaan juga sudah menghimbau kita.

Pertanyaan 4: Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?

Jawaban: sisi baiknya, memilah di rumah itu membantu mengurangi beban kerja petugas yang memilah lagi sampah di TPS. Sisi merepotkannya banyak, kita harus sedia 3 plastik terpisah untuk memilah di rumah sebelum ke tempat sampah, menambah pekerjaan kita, plastik sampah yang diperlukan untuk memilah dari pribadi dan nggak disediakan, jadinya perlu kesadaran lebih untuk memilah.

Pertanyaan 5: Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?

Jawaban: saat ini nggak. Yang memilah full petugas. Yang diharapkan tidak ada karena mereka juga nggak memilah. Justru saya yang mengharapakan mereka memilah, karena bisa mengurangi beban kerja petugas pemilah.

Pertanyaan 6: Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?

Jawaban: tidak ada, itu bukan sifat orang dewasa.

Pertanyaan 7: Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?

Jawaban: untuk memilah gampang aja, Cuma kadang nggak ada motivasi, apalagi sampah saya hampir semua organik, sama fasilitas plastik sampah tidak tersedia dan saya harus sedia pribadi. Saya pernah komplain agar disediakan sampah plastik.. kalau penghambat, menurut saya itu kesadaran sih.

Pertanyaan 8: Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?

Jawaban: ada. Disediakan. Petugas juga sudah ada, sudah jalan rutin setiap hari kecuali tanggal merah.

Pertanyaan 9: Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?

Jawaban: Pasti ada. Sampah saya sebelumnya juga saya yang kelola. Secara naruliah manusia pasti ingin ngelihat lingkungannya bersih, itu dorongan dari dalam diri sendiri.

Pertanyaan 10: Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?

Jawaban: nggak terlalu karena kebanyakan sampah saya organik, jadi secara nggak langsung sudah terpisah juga walau tercampur sedikit dengan sampah residu seperti kantong plastik pembungkusnya. Biasanya kalau ada sampah lain

yang jelas kelihatan dan gampang misahnya seperti botol bekas air mineral atau botol kaca bekas sirup, tetap saya pisah.

Pertanyaan 11: Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?

Jawaban: menurut saya pemilahan sampah ini tidak berjalan, karena kurangnya kesadaran diri dan modal / fasilitas untuk memilah sampah tersebut. Kedua hal tersebut harus beriringan.

Pertanyaan 12: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: untuk pilot project ini, fasilitas yang level umum sudah terpenuhi, tinggal yang level mendalam di perumahan seperti plastik. Untuk proyek lanjutan ke perumahan lain, mungkin struktur organisasi dari petugas pemilahan sampah ini diperjelas dan diperbaiki.

R-02 (Warga)

Identitas Wawancara

Kode partisipan: R-02

Kelompok: Warga

Panduan wawancara: Panduan A (Warga)

Tanggal wawancara: 15 Juli 2026

Lokasi: Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 15, 08.18 t wc; Jul 15, 08.34 t wc 2

Durasi rekaman: 19.44 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?

Jawaban: Saya tinggal di komplek perumahan staff, tinggal sendiri, tapi ada asisten rumah tangga yang membantu merawat rumah dan mengelola sampah.

Pertanyaan 2: Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampah akhirnya dibuang ke mana?

Jawaban: Sesuai program, dari rumah sendiri sudah dianjurkan untuk dipisah dan karna saya sendiri, sampah saya sedikit dan kebanyakan anorganik jadi lebih gampang memilahnya dan saya juga sudah ajarkan ke ART untuk memilah sampah.

Pertanyaan 3: Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?

Jawaban: Ya, penting, karena kita mengikuti anjuran dari pemerintah untuk mengelola sampah rumah tangga supaya meningkatkan kualitas lingkungan kita.

Pertanyaan 4: Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?

Jawaban: Sisi baik: dengan terpilah sampah tersebut, kita bisa menambah value dari sampah tersebut, seperti sampah organik menjadi pupuk, sampah anorganik bisa dijual untuk daur ulang, sampah residue bisa dikirimkan ke dinas terkait untuk dikelola, sehingga tidak merusak lingkungan. Sisi merepotkan: tidak juga, karena kita mulai dari yang awal/kecil, sehingga kesulitan itu jadi nggak ada

Pertanyaan 5: Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?

Jawaban: Kebetulan di lingkungan tempat saya tinggal itu kebanyakan lajang, jadi sampah mereka nggak banyak. Dan saya lihat di sekitar saya, mereka sudah mengikuti pola yang dianjurkan. Kalau harapan tidak ada karena sampah tanggung jawab individu masing – masing per rumah

Pertanyaan 6: Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?

Jawaban: Nggak ada

Pertanyaan 7: Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?

Jawaban: Internal: nggak ribet dan nggak susah, karena sampah saya nggak banyak. Lingkungan: kalau dari awal/rumah sendiri sudah dipisah, beban kerja petugas di TPS akan lebih mudah.

Pertanyaan 8: Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?

Jawaban: Ada lengkap

Pertanyaan 9: Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?

Jawaban: Ada, karena sampah yang di rumah kita itu representasi dari kita, jika sampah kita tidak dikelola dengan baik, maka akan jelek, buruk representasi kita, kotor, tikus datang, bau, dan lain-lain

Pertanyaan 10: Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?

Jawaban: Karena itu sudah menjadi kebiasaan, kalau nggak dipilah nggak nyaman karena bisa bau. Biasanya organik saya fokus buang duluan setelah dipisah dengan anorganik, karena kalau tidak dipilah, terpaksa tiap hari dibuang bercampur, dan ini beresiko tidak terangkut langsung dan jadi bau

Pertanyaan 11: Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?

Jawaban: Secara garis besar sudah berjalan baik. Sudah ada kesadaran dari beberapa rumah untuk memilah. Ada fasilitas dari perusahaan. Ada petugas untuk angkut ke TPS. Ada jadwal pengangkutan berkala ke dinas terkait

Pertanyaan 12: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: Untuk program pengangkutan sampah sudah sesuai standar pemerintah. Hanya perlu peningkatan di beberapa sisi, seperti penambahan bak sampah dan kantong plastik untuk pemilahan sampah di rumah. Perlu dipikirkan wadah yang lebih ekonomis, alternatif dari plastik yang dipakai di rumah. Karena kalau disediakan wadah plastik sekali pakai terus cost nya akan tinggi. Perlu ada inovasi baru untuk sampah yang dari rumah, supaya bisa langsung ke tempat sampah yang di luar tanpa menghabiskan/merusak wadah yang dari rumah.

R-03 (Warga)

Identitas Wawancara

Kode partisipan: R-03

Kelompok: Warga

Panduan wawancara: Panduan A (Warga)

Tanggal wawancara: 14 Juli 2026

Lokasi: Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 14, 14.45 AK

Durasi rekaman: 17.51 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?

Jawaban: saya tinggal di rumah sendiri, yang mengurus sampah sehari – hari juga saya sendiri.

Pertanyaan 2: Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampai akhirnya dibuang ke mana?

Jawaban: biasanya sampah – sampah organik saya gabung dengan sampah – sampah lain dalam satu plastik. Tapi kalau sampah non organik yang besar – besar, itu saya pisah. Yang digabung itu sampah plastik – plastik bungkus makanan yang ukurannya kecil. Plastik tersebut dibuang ke tempat sampah yang sudah disediakan, biasanya dibuang ke tempat sampah anorganik. Sampah organik yang sedikit seperti sisa – sisa makanan saya buang langsung ke tanah ke biopori di halaman rumah saya.

Pertanyaan 3: Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?

Jawaban: melihat fungsinya sangat penting, karena mendukung program pemerintah terkait daur ulang.

Pertanyaan 4: Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?

Jawaban: sisi baiknya itu sisi ekonomis dari daur ulang. Kalau hal yang merepotkan itu menambah waktu untuk pekerjaan yang biasanya perlu waktu singkat. Plastik sampah juga harus sedia dari pribadi untuk pemisahan ini, itu juga merepotkan.

Pertanyaan 5: Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?

Jawaban: sudah mulai beberapa ada yang memilah, karena beberapa tetangga ada yang memiliki asisten rumah tangga, dan ART tersebut sudah diberi pengertian terkait pemilahan sampahnya. Untuk harapan mereka soal pemilahan sampah, nggak ada, karena ini masing – masing sendiri – sendiri.

Pertanyaan 6: Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?

Jawaban: tetangga sih, jika tetangga sudah mulai rutin memilah sampah semua, maka saya juga akan ikut rutin memilah.

Pertanyaan 7: Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?

Jawaban: sebetulnya nggak susah, Cuma faktor kebiasaan yang mebuat susah.

Pertanyaan 8: Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?

Jawaban: tempat sampah ada, tetaapi tempat sampah yang dari rumah sendiri berupa plastik terpisah belum. Ruang dan pengangkutan rutin sudah.

Pertanyaan 9: Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?

Jawaban: saya merasa kalau itu tanggung jawab sendiri, dan merasa bersalah ketika tidak memilah sampah.

Pertanyaan 10: Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?

Jawaban: di awal merasabiasa saja, Cuma setelah refleksi diri pribadi, merasa bersalah kalau tidak memilah.

Pertanyaan 11: Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?

Jawaban: tidak berjalan karena faktor diri sendiri/pribadi, baik karena malas atau yang lain. Orang – orang merasa tidak memiliki tanggung jawab atas pemilahan. Tidak ada sanksi sosial.

Pertanyaan 12: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: antara karyawan yang memilah sampah dan yang tidak memilah tidak ada perbedaan karena tidak ada reward dan sanksi.

R-04 (Warga)

Identitas Wawancara

Kode partisipan: R-04

Kelompok: Warga

Panduan wawancara: Panduan A (Warga)

Tanggal wawancara: 16 Juli 2026

Lokasi: Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 16, 09.15

Durasi rekaman: 19.59 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?

Jawaban: Tinggal sendiri, sampah yang dihasilkan saya buang sendiri ke tempat sampah yang telah disediakan.

Pertanyaan 2: Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampai akhirnya dibuang ke mana?

Jawaban: karena saya sendiri, sampah saya sedikit. Yang organik langsung saya buang ke halaman untuk jadi pupuk tanaman. Yang anorganik baru dibuang ke tempat sampah. Anorganik dikumpul di plastik yang saya siapkan sendiri, lalu baru dibuang ke tempat sampah.

Pertanyaan 3: Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?

Jawaban: Menurut saya penting, karena bisa bermanfaat. Contohnya yang organik bisa jadi pupuk, yang anorganik untuk nilai ekonomis nya.

Pertanyaan 4: Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?

Jawaban: sisi baik: bisa dimanfaatkan seperti yang saya ceritain di atas, jadi pupuk untuk organik, dan bisa jadi sumber pemasukan kalau yang anorganik. Merepotkan: agak sedikit aja, nggak terlalu merepotkan, karena sebelum ada program ini saya sudah memilah sampah seperti itu, jadi nggak terlalu merepotkan.

Pertanyaan 5: Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?

Jawaban: untuk detailnya saya kurang memperhatikan, tapi kalau melihat tempat sampahnya sepertinya memilah. Harapan dari tetangga tidak ada karena kami sampah untuk masing – masing saja.

Pertanyaan 6: Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?

Jawaban: nggak ada orang seperti itu

Pertanyaan 7: Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?

Jawaban: mudah aja. Penghambat: plastik untuk pemilah awal di rumah kadang nggak ada.

Pertanyaan 8: Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?

Jawaban: ada, tapi ya tadi itu plastik utk pemisah awal itu kadang nggak ada dan harus saya siapkan sendiri.

Pertanyaan 9: Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?

Jawaban: ada, dari diri sendiri, karena sebelum program ini pun saya sudah memilah

Pertanyaan 10: Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?

Jawaban: seperti ada kurangnya karena saya sudah terbiasa.

Pertanyaan 11: Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?

Jawaban: udah berjalan, karena petugas sudah ada dan fasilitas sudah cukup lengkap.

Pertanyaan 12: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: petugas sampah harus difasilitasi, diberi penghargaan agar lebih semangat.

R-05 (Warga)

Identitas Wawancara

Kode partisipan: R-05

Kelompok: Warga

Panduan wawancara: Panduan A (Warga)

Tanggal wawancara: 17 Juli 2026

Lokasi: Kantor PMKS PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 17, 07.52

Durasi rekaman: 23.08 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh cerita sedikit tentang keluarga di rumah ini, termasuk siapa saja yang tinggal di sini dan biasanya siapa yang mengurus sampah sehari-hari?

Jawaban: Yang tinggal di rumah ada saya, anak 2 orang, istri, sama ada 1 ART. Yang ngurusin sampah itu ART saya dan dibantu istri.

Pertanyaan 2: Boleh diceritakan bagaimana sampah rumah tangga Bapak/Ibu biasanya ditangani dalam sehari, mulai dari dapur sampai akhirnya dibuang ke mana?

Jawaban: Ketika selesai sosialisasi pemilahan ini, saya langsung info ke keluarga dan ART untuk memilah sampah. Yang organik langsung dipisah kecuali sisa – sisa nasi, yang langsung saya jadikan makanan ternak. Kalau di rumah saya sampah residu cukup banyak seperti tissue, pembalut, dan lain – lain, jadi itu khusus dipisah. Dari rumah saya sudah keluar dalam bentuk terpisah sampahnya. Dirasa sudah 90% terpisah, karena mungkin ada sedikit yang masih tercampur.

Pertanyaan 3: Menurut Bapak/Ibu, bagaimana soal memilah sampah menjadi beberapa jenis? Apakah ini sesuatu yang penting untuk dilakukan?

Jawaban: menurut saya sangat penting, karena isu sampah sudah isu nasional. Menyadarkan orang terkait sampah ini berat karena perbedaan karakter orang –

orang. Dan sebagai pimpinan, kita harus memberikan contoh, jangan sampai kita nyuruh orang memilah sampah, tapi kita nggak memilah.

Pertanyaan 4: Menurut Bapak/Ibu, apa saja sisi baik dari memilah sampah, dan apa saja hal yang merepotkan?

Jawaban: sisi baik: untuk petugas yang mengutip sampah jadi lebih enak dan gampang. Merepotkan: mengajak orang, harus dengan memberi contoh. Harus lebih cerewet dalam sosialisasinya. Di PMKS ini kita tiap jumat mengadakan sweeping sampah bersama. Plastik untuk di rumah juga kurang tersedia, jadi saya sudah sedia tempat sampah terpisah dalam rumah, dan langsung bawa ke tempat sampai pemilahan yang di luar.

Pertanyaan 5: Apakah orang-orang di sekitar Bapak/Ibu, seperti tetangga, keluarga, dan teman kerja, memilah sampah juga? Apa yang mereka harapkan dari Bapak/Ibu?

Jawaban: secara pasti nggak ada saya perhatikan, karena saya fokus ke sampah saya. Cuma kalau dari pemantauan karyawan lain, sudah ada beberapa yang melakukan. Selama proyek ini jalan, sudah ada peningkatan karena kerja keras kita bersama.

Pertanyaan 6: Adakah seseorang yang pendapatnya bisa membuat Bapak/Ibu mulai memilah sampah, atau justru berhenti?

Jawaban: saya mencoba menjadi orang yang diteladani tersebut, tapi untuk saya pribadi nggak ada.

Pertanyaan 7: Seberapa mudah atau sulit bagi Bapak/Ibu memilah sampah di sini? Apa yang biasanya menjadi penghambat?

Jawaban: tidak susah karena dari rumah masing – masing. Yang jadi penghambat ya hati masing – masing. Watak orang – orang ini yang berbeda – beda. HES sudah berusaha keras untuk memberi sosialisasi.

Pertanyaan 8: Apakah Bapak/Ibu memiliki hal-hal yang dibutuhkan untuk memilah, seperti tempat sampah, ruang untuk menaruhnya, dan pengangkutan yang terpisah?

Jawaban: Tersedia semua, lengkap ada gerobak, petugas, tempat sampah, TPS. Fasilitas sudah lengkap.

Pertanyaan 9: Apakah Bapak/Ibu merasa memiliki tanggung jawab pribadi atas bagaimana sampah rumah tangga ini dikelola? Jika ya, dari mana perasaan itu berasal?

Jawaban: ada. Dari setelah sosialisasi saya merasa itu tanggung jawab saya karena saya salah satu yang jadi contoh karyawan untuk melakukan sesuatu.

Pertanyaan 10: Apakah Bapak/Ibu akan merasa kurang nyaman, atau biasa saja, jika tidak memilah sampah? Mengapa?

Jawaban: sekarang kurang nyaman karena sudah terbiasa.

Pertanyaan 11: Jika Bapak/Ibu harus menyebut satu alasan terbesar mengapa pemilahan sampah berjalan atau tidak berjalan di sini, apa alasannya?

Jawaban: sekarang berjalan tapi belum maksimal, karena proyek ini baru, dan butuh waktu untuk mengubah kebiasaan lama, tapi saya yakin bisa.

Pertanyaan 12: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: pressure dari manajemen perlu lebih keras. Perlu punishment untuk oknum yang tidak mau ikut meilah. Pengawasan juga perlu ditingkatkan oleh PIC. Manajemen dan PIC perlu melihat langsung ke lokasi agar bisa melihat dan terlibat langsung, jangan Cuma ditugaskan ke HES lalu dilepas.

M-01 (Manajemen)

Identitas Wawancara

Kode partisipan: M-01

Kelompok: Manajemen

Panduan wawancara: Panduan B (Manajemen dan Staf)

Tanggal wawancara: 17 Juli 2026

Lokasi: Online (by phone)

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 17, 14:32 Jkt

Durasi rekaman: 23.25 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh dijelaskan peran Bapak/Ibu dalam program pemilahan sampah ini, dan sudah berapa lama terlibat?

Jawaban: Dari awal program, karena saya PIC tidak resmi, inisiator, dan perancang programnya. Waktu itu kita kena merah PROPER, dan ketika saya laporkan ke direksi, langsung diminta bentuk tim perancang program ini.

Pertanyaan 2: Secara singkat, bagaimana program percontohan ini dirancang dan bagaimana semestinya berjalan?

Jawaban: dirancang sesuai dengan arahan pemerintah, dengan konsep memilah pada sumbernya langsung dan mengurangi timbulan sampah. Semestinya berjalan

secara terus menerus dengan pemilahan berasal dari rumah masing – masing warga, dan petugas hanya perlu melakukan sedikit pemisahan di sisa – sisa yang masih tercampur, tetapi kelihatannya beban pemisahan sebagian besar masih di petugas.

Pertanyaan 3: Bagaimana program ini dikomunikasikan kepada warga? Melalui saluran apa saja informasinya disampaikan?

Jawaban: kita melakukan sosialisasi terhadap para staff duluan, mengenai pentingnya program ini, dan kemudian staff – staff ini dengan HES officer melakukan sosialisasi kepada warga, yang harapannya dapat di teruskan infomasinya kepada keluarga masing-masing. Kita melalui sosialisasi langsung, dan kemudian follow up sosialisasi lewat flyer dan poster.

Pertanyaan 4: Menurut Bapak/Ibu, seberapa jelas informasi tersebut diterima warga? Adakah kendala dalam mengomunikasikannya?

Jawaban: Dari input yang kita dapatkan sejauh ini, masih perlu ada peningkatan karena masih perlu dilakukan berulang, terutama dari segi pemilahan, karena untuk pengumpulan sampah sudah berjalan dengan baik. Se jauh ini kendala berupa kemampuan warga menerima informasi, karena untuk sosialisasi dan komunikasi, sudah diupayakan semaksimal mungkin.

Pertanyaan 5: Apakah warga pernah diberi pelatihan atau panduan cara memilah sampah? Jika ya, seperti apa bentuknya?

Jawaban: Belum ada. Kita hanya pernah melakukan panduan memilah sampah secara visual sewaktu sosialisasi. Untuk pelatihan dari pemerintah pun hanya pernah daring dan hanya berupa sosialisasi peraturan.

Pertanyaan 6: Apakah staf yang menjalankan program juga mendapat pembekalan? Menurut Bapak/Ibu, apakah sudah memadai?

Jawaban: Belum secara formal, hanya berupa informasi yang didapatkan secara otodidak di internet dan berdasarkan regulasi pemerintah yang pernah diinfokan secara daring. Ini dirasa belum memadai dan diperlukan suatu training khusus, Cuma kita belum ada bayangan trainingnya seperti apa, dan belum ada input juga dari pemerintah, karena kalau dinilai oleh pemerintah atau instansi terkait, program ini sudah sukses karena ketika sampai di tempat pengumpulan yang mereka sediakan, sampah dari kita sudah dalam bentuk terpisah.

Pertanyaan 7: Bagaimana kepatuhan warga dipantau atau diawasi, dan siapa yang bertanggung jawab atas hal itu?

Jawaban: Warga patuh ketika diawasi, Cuma kita belum pernah melakukan pengecekan detail ya terkait apakah sampahnya benar lebih terpilah ketika diawasi atau nggak. Menurut pengamatan ketikan dilakukan pengawasan, memang lebih terpilah sih. Pengawasan dilakukan oleh divisi HES.

Pertanyaan 8: Apa yang terjadi jika ada warga yang tidak memilah sampah? Apakah ada tindak lanjut?

Jawaban: sejauh ini hanya berupa teguran lisan jika ditemukan langsung. Belum ada pendataan dan sanksi terhadap rumah yang tidak memilah sampah.

Pertanyaan 9: Apakah ada penghargaan atau dorongan untuk memilah sampah, dan apakah ada konsekuensi jika tidak melakukannya?

Jawaban: belum ada. Kita berniat menerapkannya di tahap selanjutnya, Cuma masih terkendala terkait apa reward dan punishment yang harus diberikan, karena belum ada acuan juga di kita, dan sebisa mungkin reward dan punishment ini juga jangan sampai menambah cost untuk proyek ini.

Pertanyaan 10: Menurut Bapak/Ibu, apakah hal tersebut berpengaruh terhadap perilaku warga?

Jawaban: Harusnya ya, karena warga indonesia lebih cenderung patuh jika ada hukuman. Apalagi untuk hal yang baru seperti ini, mengubah kebiasaan yang sudah dilakukan dari lama. Kalau tidak ada faktor luar seperti sanksi dan reward, bisa lama untuk mengubahnya.

Pertanyaan 11: Menurut pandangan Bapak/Ibu sendiri, mengapa tingkat kepatuhan masih rendah?

Jawaban: Kebiasaan, masih kurang pengetahuan, dan kesadaran. Udah dari lama sampahnya tinggal buang kan, yang penting dikumpul di tempat sampah. Mengubah itu susah. Dan juga kan warga diisitu beda – beda ya latar belakangnya, jadi pemahaman terhadap pentingnya memilah sampah, dan konsekuensi nya kalau nggak memilah itu kurang.

Pertanyaan 12: Menurut Bapak/Ibu, apa yang paling dapat memperbaiki kepatuhan, dan apakah program ini memungkinkan untuk diperluas ke komunitas perumahan lainnya?

Jawaban: sosialisasi dan pengawasan perlu lebih ditingkatkan, disertai reward dan punishment. Sama dengan praktek pemisahan di lapangan yang dilakukan oleh pemimpin – pemimpin disitu yang bisa memberikan teladan.

Pertanyaan 13: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: peningkatan rutinitas pengecekan dan sosialisasi. Mungkin staff – staff, kepala kebun, atau pimpinan – pimpinan disana yang berpengaruh bisa membantu ikut melakukan pengawasan dan sosialisasi, tidak hanya divisi HES.

M-02 (Manajemen)

Identitas Wawancara

Kode partisipan: M-02

Kelompok: Manajemen

Panduan wawancara: Panduan B (Manajemen dan Staf)

Tanggal wawancara: 14 Juli 2026

Lokasi: Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 14, 11.11 HES

Durasi rekaman: 12.31 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh dijelaskan peran Bapak/Ibu dalam program pemilahan sampah ini, dan sudah berapa lama terlibat?

Jawaban: Koordinator lapangan di proyek pemilahan sampah ini, kurang lebih sudah 6 bulan.

Pertanyaan 2: Secara singkat, bagaimana program percontohan ini dirancang dan bagaimana semestinya berjalan?

Jawaban: Overall berjalan dengan baik, karena di satu sisi kita sudah kerja sama dengan pihak terkait selama 6 bulan ini, dan kita sudah ngirim sampah yang sudah terpilah ke tempat yang ditentukan oleh dinas terkait. Kita sudah berupaya maksimal, walau kinerja pemisahan sebagian besar dilakukan oleh petugas di TPS.

Pertanyaan 3: Bagaimana program ini dikomunikasikan kepada warga? Melalui saluran apa saja informasinya disampaikan?

Jawaban: Sosialisasi dilakukan kepada warga dalam bentuk broadcast di Whatsapp group, pamflet, dan flyer.

Pertanyaan 4: Menurut Bapak/Ibu, seberapa jelas informasi tersebut diterima warga? Adakah kendala dalam mengomunikasikannya?

Jawaban: Sudah cukup jelas, kendalanya dari masing – masing warga, dimana warga masih belum biasa memilah. Kendala komunikasi tidak ada dan baik – baik saja.

Pertanyaan 5: Apakah warga pernah diberi pelatihan atau panduan cara memilah sampah? Jika ya, seperti apa bentuknya?

Jawaban: Pelatihan praktek memilah belum, Cuma sewaktu sosialisasi sudah diinformasikan bahwa pemilahan ada keuntungan masing – masing, seperti

keuntungan ekonomi dari daur ulang sampah anorganik, dan pemanfaatan biopori untuk sampah organik.

Pertanyaan 6: Apakah staf yang menjalankan program juga mendapat pembekalan? Menurut Bapak/Ibu, apakah sudah memadai?

Jawaban: sudah diberikan pembekalan dan sudah memadai, Cuma tetap terkendala di mengubah prilaku dan kebiasaan masing – masing.

Pertanyaan 7: Bagaimana kepatuhan warga dipantau atau diawasi, dan siapa yang bertanggung jawab atas hal itu?

Jawaban: Cukup patuh untuk warga apabila diawasi, karena kami juga crosscheck kembali. Yang bertanggung jawab harus warganya masing – masing, jadi ketika diawasi lebih tertib.

Pertanyaan 8: Apa yang terjadi jika ada warga yang tidak memilah sampah? Apakah ada tindak lanjut?

Jawaban: belum ada pemberian dan penerapan sanksi terhadap warga yang tidak memilah sampah.

Pertanyaan 9: Apakah ada penghargaan atau dorongan untuk memilah sampah, dan apakah ada konsekuensi jika tidak melakukannya?

Jawaban: Sekarang belum ada, tapi untuk jangka panjang sebaiknya ada reward buat warga yang memilah, karena jika ada reward, warga akan lebih semangat memilah sampahnya.

Pertanyaan 10: Menurut Bapak/Ibu, apakah hal tersebut berpengaruh terhadap perilaku warga?

Jawaban: kemungkinan akan berpengaruh ke warga dan lingkungan, karena warga akan berlomba – lomba untuk memilah sampah.

Pertanyaan 11: Menurut pandangan Bapak/Ibu sendiri, mengapa tingkat kepatuhan masih rendah?

Jawaban: karena mengubah kebiasaan/prilaku yang biasa dilakukan itu susah, makanya kita berusaha pelan – pelan merubah perilaku warga.

Pertanyaan 12: Menurut Bapak/Ibu, apa yang paling dapat memperbaiki kepatuhan, dan apakah program ini memungkinkan untuk diperluas ke komunitas perumahan lainnya?

Jawaban: adanya reward dari perusahaan untuk warga, sehingga warga bisa antusias. Dan juga kalau ada bank sampah sehingga masyarakat bisa mendapatkan insentif ekonomi langsung dari proses pemilahan sampah ini.

Pertanyaan 13: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: perlu disediakan bank sampah yang bisa memotivasi warga untuk memilah.

M-03 (Manajemen)

Identitas Wawancara

Kode partisipan: M-03

Kelompok: Manajemen

Panduan wawancara: Panduan B (Manajemen dan Staf)

Tanggal wawancara: 17 Juli 2026

Lokasi: Ruang Meeting Kantor Kebun PT BDK

Pewawancara: Fendra Agusta

Nama berkas rekaman: Jul 17. 14.37 mk

Durasi rekaman: 25.23 menit

Bahasa: Indonesia

Persetujuan (informed consent): Diperoleh

Pertanyaan dan Jawaban

Pertanyaan 1: Boleh dijelaskan peran Bapak/Ibu dalam program pemilahan sampah ini, dan sudah berapa lama terlibat?

Jawaban: Untuk peran, sesuai struktur perusahaan, pengelolaan sampah ini ditangani oleh HES, yang kemudian melapor ke saya selaku manager Kebun. Sebagai pengawas utama, dimana pengawas lapangan yaitu Staff HES melapor ke saya, saya merasa selama kurang lebih enam bulan sejak saya menjadi pengawas utama ini, warga masih perlu waktu untuk membiasakan proses pemilahan sampah.

Pertanyaan 2: Secara singkat, bagaimana program percontohan ini dirancang dan bagaimana semestinya berjalan?

Jawaban: Dari pemerintah sudah ada ketentuan proses pemilahan ini sesuai standarnya. Ketentuannya sudah ada. Kita disini tinggal mengikuti arahan tersebut. Walaupun sedikit banyak ada kendala, kita mencoba untuk terus mengikuti sesuai standar tersebut.

Pertanyaan 3: Bagaimana program ini dikomunikasikan kepada warga? Melalui saluran apa saja informasinya disampaikan?

Jawaban: berupa sosialisasi langsung ke petugas pengumpul sampah, ke warga langsung oleh PIC, dan didampingi oleh HES sampai saat ini belum ada saya dengar komunikasi timbal balik berupa saran dari karyawan, karena kita memang belum menyediakan sarana untuk menyampaikan saran tersebut. Kedepannya akan kita coba adakan.

Pertanyaan 4: Menurut Bapak/Ibu, seberapa jelas informasi tersebut diterima warga? Adakah kendala dalam mengomunikasikannya?

Jawaban: Karena tingkat pendidikan dan latar belakang warga beragam, jadi penerimaan informasi juga beragam, ada yang langsung bisa nerima, ada yang agak lama memprosesnya, ada yang bahkan mungkin menerima informasi tersebut tapi tidak tersimpan dan langsung lupa. Untuk sarana dan petugas sosialisasi sudah sesuai standar dan prosedur, Cuma memang karena latar belakang ini yang menjadi kendala.

Pertanyaan 5: Apakah warga pernah diberi pelatihan atau panduan cara memilah sampah? Jika ya, seperti apa bentuknya?

Jawaban: belum sampai ke pemberian pelatihan dan contoh langsung ke dalam rumah, hanya melalui pemberitahuan lisan. Tetapi fasilitas sudah kita lengkapi dan kita terbuka menerima pertanyaan selama sosilasi jika ada yang tidak jelas atau kurang paham dalam tatacara oemilahan sampah ini.

Pertanyaan 6: Apakah staf yang menjalankan program juga mendapat pembekalan? Menurut Bapak/Ibu, apakah sudah memadai?

Jawaban: untuk training langsung belum pernah, tetapi pernah diberi sosialisasi daring mengenai peraturan oleh dinas terkait. Saya rasa memang belum memadai, dan jika memang ada niat untuk mengadakan training, saya sangat support karena saya rasa akan sangat membantu, walau sekarang pun untuk petugas pengumpulan sudah melakukan tugasnya dengan baik.

Pertanyaan 7: Bagaimana kepatuhan warga dipantau atau diawasi, dan siapa yang bertanggung jawab atas hal itu?

Jawaban: untuk warga, sebenarnya yang menjadi masalah adalah pemilahan. Untuk pengumpulan sampahnya sendiri, warga sudah taat. Lingkungan sekarang sudah sangat bersih karena sampah sudah rutin dikumpul, dan pelaporan serta pengumpulan sampah ke dinas terkait pun sudah lancar karena sampah yang akan dikumpulan ke dinas terkait sudah dipilah oleh petugas di TPS. Hanya saja memang baiknya pemilahan dilakukan dari rumah. Warga belum terbiasa memilah sampahnya masing – masing. Yang bertanggung jawab saya rasa kita semua bersama. Kalau untuk pengawasan, petugas HES.

Pertanyaan 8: Apa yang terjadi jika ada warga yang tidak memilah sampah? Apakah ada tindak lanjut?

Jawaban: untuk sekarang, masih tahap sosialisasi, tahapo membentuk kebiasaan. Biar ada keinginan untuk memilah lalu menjadi kebiasaan. Perlu waktu memang untuk menimbulkan kebiasaan memilah ini. Belum ada karena kita amsih dalam tahap sosialisasi.

Pertanyaan 9: Apakah ada penghargaan atau dorongan untuk memilah sampah, dan apakah ada konsekuensi jika tidak melakukannya?

Jawaban: saat ini belum ada. Sebaiknya ada.

Pertanyaan 10: Menurut Bapak/Ibu, apakah hal tersebut berpengaruh terhadap perilaku warga?

Jawaban: kalau untuk warga Indonesia, tanpa sanksi, susah untuk melakukan sesuai aturan. Dan kalau ada reward, juga bisa memberi semangat untuk melakukan.

Pertanyaan 11: Menurut pandangan Bapak/Ibu sendiri, mengapa tingkat kepatuhan masih rendah?

Jawaban: faktor kebiasaan dan latar belakang lingkungan masing – masing warga. Pendidikan juga sangat berpengaruh, baik dalam membentuk pola pikir, maupun dalam kemampuan menerima informasi.

Pertanyaan 12: Menurut Bapak/Ibu, apa yang paling dapat memperbaiki kepatuhan, dan apakah program ini memungkinkan untuk diperluas ke komunitas perumahan lainnya?

Jawaban: harus dilakukan pengawasan secara continuous dan langsung, supaya ketika ada ketidakpatuhan, bisa langsung diberikan pengarahan dan sosialisasi.

Pertanyaan 13: Apakah ada hal yang belum saya tanyakan, tetapi menurut Bapak/Ibu penting untuk disampaikan?

Jawaban: Dalam penanganan sampah ini, terutama dalam pemisahan sampah anorganik, pihak dinas terkait hanya sebagai pengawas dan penampung, tidak ikut serta dalam memberikan sosialisasi dan pengarahan kepada masyarakat dan membebankan sepenuhnya ke perusahaan. Harapannya, mereka juga bisa ikut terlibat, karena apabila mereka ikut terlibat dalam memberikan sosialisasi, akan lebih terlihat resmi dan, kalau ngelihat perilaku warga disini, bisa lebih meningkatkan kepatuhan.

G.4 Coding Audit Trail by Participant

R-01 (Resident)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Tinggal dengan istri; sampah biasanya diurus istri, kadang dibantu, ditaruh di plastik			Background - deliberately left uncoded (context)
2	Dibuang tanpa dipilah; dikumpulkan dalam 1 plastik (alasan: sebagian besar organik)	BEH	-	Practice: does not separate
3	Untuk pribadi tidak terlalu penting; penting bagi pengelola/TPS	ATT	-	Rates the benefit to himself as low
4	Sisi baik: mengurangi beban kerja petugas pemilah	ATT	+	Situational positive attitude (benefit)
4	Merepotkan: harus sedia 3 plastik terpisah; menambah pekerjaan	PBC	-	Feels troublesome (a burden)
4	Plastik untuk memilah tidak disediakan	FAC	lacking	Household facility gap
4	Petugas memilah ulang sampah di TPS	TPS	n/a	Burden shifts to the officer
5	Tetangga tidak memilah; tidak ada harapan dari mereka	SN	-	No social pressure/support
5	Yang memilah full petugas	TPS	n/a	Separation at the TPS, not at the source
6	Tidak ada yang bisa mempengaruhi; "bukan sifat orang dewasa"	SN	-	Rejects social influence
7	Memilah gampang saja	PBC	+	Capability: easy
7	Terhambat: fasilitas plastik tidak tersedia; pernah komplain	PBC	-	Hindered in practice (facilities)
7	Harus sedia plastik pribadi untuk memilah	FAC	lacking	Household facility gap (recurring)
8	Tempat sampah komunal & pengangkutan rutin tersedia	PBC	+	COMMUNAL level adequate - different from the household level (Q7)
9	Ada tanggung jawab pribadi; dorongan dari dalam diri sendiri (ingin lingkungan bersih)	MN	+	Moral norm present
10	Tidak terlalu kurang nyaman bila tidak memilah (krn kebanyakan organik)	MN	-	Specific guilt about separating is thin - contrast with Q9 (broad environmental duty IS present)
10	Botol/kaca yang jelas tetap dipisah	BEH	~	Partial separation (easy items)
11	Pemilahan dinilai tidak berjalan	BEH	-	Practice conclusion: not working
11	Penyebab: kurang kesadaran + kurang fasilitas (keduanya harus beriringan)	FAC	lacking	Participant's own theory of the cause
12	Fasilitas umum terpenuhi; tinggal level rumah (plastik); struktur petugas perlu diperjelas	FAC	lacking	Remaining gap is at the household level

R-02 (Resident)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Tinggal sendiri di komplek staff; ada ART yg bantu kelola sampah			Background - context
2	Sesuai program sudah dipisah dari rumah; sampah sedikit & kebanyakan anorganik jadi gampang; sudah ajarkan ART memilah	BEH	+	Reports separating
3	Penting; mengikuti anjuran pemerintah untuk tingkatkan kualitas lingkungan	ATT	+	Rates separating as important
4	Sisi baik: menambah value (organik->pupuk, anorganik->daur ulang dijual, residu->dinas)	ATT	+	Benefit
4	Sisi merepotkan: tidak juga, mulai dari yg kecil, kesulitan jadi nggak ada	PBC	+	Feels easy / not troublesome
5	Lingkungan kebanyakan lajang, sampah sedikit; sekitar sudah mengikuti pola yg dianjurkan	SN	+	Descriptive norm +: surroundings have taken up the pattern
5	Harapan tidak ada; sampah tanggung jawab individu per rumah	SN	-	Injunctive norm -: no expectation/pressure
6	Tidak ada orang yg pendapatnya mempengaruhi	SN	-	Rejects social influence
7	Internal: nggak ribet/susah krn sampah sedikit	PBC	+	Capability: easy
7	Kalau dari rumah sudah dipisah, beban petugas TPS lebih mudah	TPS	n/a	Aware of the burden on the TPS
8	Ada lengkap	PBC	+	Feels the facilities are complete (contrast with R-01/03/04 who highlight household plastic)
9	Ada; sampah representasi dari kita; kalau tak dikelola -> jelek, kotor, tikus, bau	MN	+	Strong moral norm
10	Sudah kebiasaan; kalau nggak dipilah nggak nyaman krn bau; organik dibuang duluan	MN	+	Uncomfortable when not separating (habit supports it)
10	Organik difokus dipisah & dibuang duluan	BEH	+	Separating practice
11	Secara garis besar sudah berjalan baik; ada kesadaran beberapa rumah; ada fasilitas, petugas, jadwal angkut	BEH	+	Judges the program to be working
12	Perlu penambahan bak sampah & kantong plastik pemilahan di rumah; perlu wadah lebih ekonomis (plastik sekali pakai cost tinggi); perlu inovasi wadah dari rumah	FAC	lacking	Although Q8 says 'complete', still suggests adding household bins/plastic - check the nuance

R-03 (Resident)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Tinggal sendiri; urus sampah sendiri			Background - context
2	Organik digabung dgn sampah lain di 1 plastik; anorganik besar dipisah; plastik kecil bungkus makanan digabung; organik sedikit ke biopori halaman	BEH	~	Partial separation (large items separated, small plastics combined)
3	Sangat penting; mendukung program pemerintah terkait daur ulang	ATT	+	Rates it important
4	Sisi baik: sisi ekonomis dari daur ulang	ATT	+	Economic benefit
4	Merepotkan: menambah waktu utk pekerjaan yg biasanya singkat	PBC	-	Time burden
4	Plastik sampah harus sedia dari pribadi -> merepotkan	FAC	lacking	Separation plastic must be self-supplied
5	Beberapa tetangga sudah mulai memilah (via ART yg diberi pengertian)	SN	+	Descriptive norm +: some have started separating
5	Harapan dari tetangga tidak ada; masing-masing	SN	-	No expectation/pressure
6	Jika tetangga sudah rutin memilah, saya juga akan ikut rutin	SN	+	Responsive to a positive descriptive norm (conditional)
7	Sebetulnya nggak susah, cuma faktor kebiasaan yg membuat susah	PBC	+	Capability easy...
7	...faktor kebiasaan yg membuat susah	HAB	n/a	Habit as a barrier
8	Tempat sampah dari rumah berupa plastik terpisah belum ada	FAC	lacking	Household plastic not provided
8	Ruang & pengangkutan rutin sudah ada	PBC	+	Communal level adequate
9	Tanggung jawab sendiri; merasa bersalah ketika tidak memilah	MN	+	Moral norm (guilt)
10	Di awal biasa saja; setelah refleksi pribadi merasa bersalah kalau tidak memilah	MN	+	Guilt emerged after reflection
11	Tidak berjalan krn faktor diri sendiri (malas dll); orang merasa tak punya tanggung jawab; tidak ada sanksi sosial	BEH	-	Judges (beyond himself) that it is not working
11	Orang lain merasa tak punya tanggung jawab; tidak ada sanksi sosial	SN	-	Absence of moral/social norm in others (attribution)
12	Antara yg memilah & tidak tidak ada bedanya krn tidak ada reward & sanksi	INC	lacking	No reward/sanction

R-04 (Resident)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Tinggal sendiri; buang sampah sendiri ke tempat yg disediakan			Background - context
2	Sampah sedikit; organik ke halaman jadi pupuk; anorganik dikumpul di plastik yg disiapkan sendiri lalu ke tempat sampah	BEH	+	Reports separating (self-supplied plastic)
3	Penting; bisa bermanfaat: organik->pupuk, anorganik->nilai ekonomis	ATT	+	Rates it important/beneficial
4	Sisi baik: dimanfaatkan (pupuk & pemasukan)	ATT	+	Benefit
4	Merepotkan: sedikit saja, tidak terlalu, krn sebelum program sudah memilah	PBC	+	Not troublesome (long-standing habit)
5	Kurang memperhatikan detail; dari tempat sampahnya sepertinya (tetangga) memilah	SN	+	Descriptive norm weak/tentative
5	Harapan dari tetangga tidak ada; masing-masing	SN	-	No expectation/pressure
6	Tidak ada orang seperti itu (yg mempengaruhi)	SN	-	Rejects social influence
7	Mudah saja	PBC	+	Capability easy
7	Penghambat: plastik untuk pemilah awal di rumah kadang tidak ada	FAC	lacking	Household plastic sometimes unavailable
8	Ada, tapi plastik pemisah awal kadang tidak ada, harus disiapkan sendiri	FAC	lacking	Household facility gap (recurring)
9	Ada, dari diri sendiri; sebelum program pun sudah memilah	MN	+	Internal moral norm
10	Seperti ada kurangnya (kurang nyaman) krn sudah terbiasa	MN	+	Uncomfortable when not separating
11	Sudah berjalan, krn petugas sudah ada & fasilitas cukup lengkap	BEH	+	Judges the program to be working
12	Usul: petugas sampah difasilitasi & diberi penghargaan agar lebih semangat	INC	n/a	Recommendation (reward for the officers)

R-05 (Resident)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Tinggal dgn keluarga & 1 ART; ART & istri yg urus sampah			Background - context
2	Setelah sosialisasi langsung minta keluarga & ART memilah; organik dipisah (sisa nasi utk ternak); residu (tissue dll) dipisah khusus; dari rumah sudah keluar terpisah; dirasa ~90% terpisah	BEH	+	High compliance (~90%)
3	Sangat penting; isu sampah sudah isu nasional	ATT	+	Rates it very important
3	Sebagai pimpinan harus memberi contoh; jangan menyuruh orang memilah tapi diri tak memilah	LEAD	present	Leadership example
4	Sisi baik: petugas pengutip jadi lebih enak/gampang	ATT	+	Benefit (for the officers)
4	Merepotkan: mengajak orang, harus memberi contoh, harus lebih cerewet sosialisasi; tiap Jumat sweeping sampah bersama di PMKS	LEAD	present	Effort at example-setting & mobilization
4	Plastik untuk di rumah kurang tersedia; sudah sedia tempat sampah terpisah dalam rumah, langsung dibawa ke luar	FAC	lacking	Household plastic lacking (self-supplied)
5	Tidak pasti memperhatikan; dari pemantauan, sudah ada beberapa karyawan lain yg melakukan; ada peningkatan	SN	+	Descriptive norm +: some have joined in
6	Mencoba menjadi orang yg diteladani; untuk diri sendiri tidak ada yg mempengaruhi	LEAD	present	Positions himself as a role model
6	Untuk diri pribadi tidak ada yg mempengaruhi	SN	-	Not influenced by others
7	Tidak susah krn dari rumah masing-masing	PBC	+	Capability easy
7	Penghambat: hati/watak masing-masing orang yg berbeda; HSE sudah berusaha keras sosialisasi	COM	present	HSE socialization active; barrier = others' character/attitude
8	Tersedia semua lengkap: gerobak, petugas, tempat sampah, TPS	PBC	+	Communal level complete (compare the household plastic gap in Q4)
9	Ada; setelah sosialisasi merasa itu tanggung jawabnya krn ia salah satu contoh karyawan	MN	+	Moral norm, tied to the role-model position
10	Sekarang kurang nyaman krn sudah terbiasa	MN	+	Uncomfortable when not separating
11	Sekarang berjalan tapi belum maksimal; proyek baru; butuh waktu ubah kebiasaan lama; yakin bisa	BEH	~	Working but not yet at full level
11	Butuh waktu untuk mengubah kebiasaan lama	HAB	n/a	Old habit as a barrier
12	Usul: pressure manajemen lebih keras; punishment utk yg tak ikut; pengawasan ditingkatkan oleh PIC	INC	n/a	Recommendation (punishment)
12	Usul: pengawasan ditingkatkan oleh PIC	SUP	n/a	Recommendation (supervision)
12	Usul: manajemen & PIC lihat langsung ke lokasi, jangan hanya dilepas ke HSE	LEAD	n/a	Recommendation (leadership presence/example)

M-01 (Management)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	PIC tidak resmi / inisiator / perancang; program lahir dari rating PROPER merah			Background - deliberately left uncoded (context)
2	Desain: memilah dari sumber & kurangi timbulan; realitanya beban pemisahan sebagian besar di petugas	TPS	n/a	Gap between design and reality: source -> TPS
3	Sosialisasi bertingkat: staf dulu, lalu staf+HSE ke warga; langsung + flyer/poster	COM	present	Communication channels used
4	Perlu diulang, terutama pemilahan; kendala = kemampuan warga menerima informasi	COM	lacking	Message reception effectiveness still low
4	Pengumpulan sudah baik, pemilahan masih lemah	BEH	~	Management observation (not a resident self-report)
5	Belum ada pelatihan; hanya panduan visual saat sosialisasi; pelatihan pemerintah hanya daring	TRN	lacking	Practically no resident training
6	Pembekalan staf belum formal (otodidak dari internet + regulasi); dirasa belum memadai	TRN	lacking	Staff preparation self-taught and judged inadequate; contrasts with M-02
7	Warga lebih terampil saat diawasi; pengawasan oleh divisi HSE	SUP	present	'Compliant only when watched' pattern
8	Hanya teguran lisan bila ditemukan; belum ada pendataan/sanksi	INC	lacking	Minimal follow-up
9	Belum ada reward; rencana di tahap lanjut; terkendala jenis reward/punishment & agar tidak menambah cost	INC	lacking	Intention present, but hindered by design & cost
10	Keyakinan: warga cenderung patuh bila ada hukuman	INC	n/a	Management attribution (a suggestion, not an observation)
10	Mengubah kebiasaan lama itu lama & susah	HAB	n/a	Habit barrier
11	Penyebab: kebiasaan + kurang pengetahuan + kurang kesadaran; latar belakang warga beragam	HAB	n/a	Management attribution: 'knowledge' -> related to TRN/PBC; 'awareness' -> the ATT/MN domain
12	Usul: tingkatkan sosialisasi	COM	n/a	Recommendation
12	Usul: tingkatkan pengawasan	SUP	n/a	Recommendation
12	Usul: reward & punishment	INC	n/a	Recommendation
12	Pemimpin praktik pemisahan di lapangan sebagai teladan	LEAD	present	Example-setting as a driver
13	Usul: rutinitas pengecekan & sosialisasi ditingkatkan; libatkan lebih dari HSE	SUP	n/a	Recommendation - expand supervision
13	Usul: kepala kebun/pimpinan berpengaruh ikut pengawasan & sosialisasi	LEAD	n/a	Recommendation - example-setting

M-02 (Management)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Koordinator lapangan proyek pemilahan, kurang lebih 6 bulan			Background - context
2	Overall baik; sudah kirim sampah terpilah ke tempat yg ditentukan dinas; namun pemisahan sebagian besar oleh petugas di TPS	TPS	n/a	Reality: separation at the TPS, not at the source
3	Sosialisasi: broadcast WA group, pamflet, flyer	COM	present	Communication channels
4	Informasi cukup jelas; kendala komunikasi tidak ada; kendala ada di warga yg belum biasa memilah	COM	present	Communication judged clear (contrast with M-03 who highlights residents' background)
4	Warga masih belum biasa memilah	HAB	n/a	Habit barrier (management attribution)
5	Pelatihan praktik memilah belum ada; saat sosialisasi hanya diinformasikan keuntungan (ekonomi anorganik, biopori organik)	TRN	lacking	Information given, practical training not
6	Staf sudah diberi pembekalan dan sudah memadai; tetap terkendala mengubah perilaku/kebiasaan	TRN	present	!! DIVERGENCE: M-02 rates staff preparation ADEQUATE; M-01 & M-03 say NOT YET adequate - check
6	Terkendala mengubah perilaku & kebiasaan	HAB	n/a	Habit barrier
7	Cukup patuh apabila diawasi; ada crosscheck; ketika diawasi lebih tertib	SUP	present	'Compliant when watched' pattern
8	Belum ada pemberian & penerapan sanksi	INC	lacking	No sanction
9	Belum ada reward; jangka panjang sebaiknya ada; reward bikin warga lebih semangat	INC	lacking	None yet; confident a reward would help
10	Reward kemungkinan berpengaruh; warga akan berlomba memilah	INC	n/a	Management attribution (presumed effect of a reward)
11	Mengubah kebiasaan/perilaku susah; berusaha pelan-pelan	HAB	n/a	Management attribution: habit
12	Usul: reward dari perusahaan; bank sampah agar warga dpt insentif ekonomi langsung	INC	n/a	Recommendation (reward + waste bank)
13	Usul: sediakan bank sampah yg memotivasi warga	INC	n/a	Recommendation

M-03 (Management)

No.	Coded Segment	Code	Valence	Note (rationale / coding boundary)
1	Manager Kebun / pengawas utama; HSE lapor ke beliau; ~6 bulan			Background - context (role)
1	Warga masih perlu waktu untuk membiasakan proses pemilahan	HAB	n/a	Observation: residents not yet accustomed
2	Pemerintah sudah tetapkan standar; perusahaan tinggal mengikuti; ada kendala tapi terus diikuti			Program design context (follows the agency standard)
3	Sosialisasi langsung ke petugas & ke warga oleh PIC, didampingi HSE	COM	present	Communication channels (cascade)
3	Belum ada komunikasi timbal balik/saran; sarana penyampaian saran belum disediakan; ke depan akan diadakan	COM	lacking	No feedback channel
4	Penerimaan informasi beragam krn pendidikan & latar belakang warga; sarana & petugas sosialisasi sudah sesuai standar	COM	lacking	Reception effectiveness uneven; cause = background/education
5	Belum ada pelatihan & contoh langsung ke rumah; hanya pemberitahuan lisan	TRN	lacking	No practical training
5	Fasilitas sudah dilengkapi; terbuka menerima pertanyaan saat sosialisasi	FAC	present	!! DIVERGENCE: management claims facilities are COMPLETE; residents R-01/03/04/05 complain household plastic is absent - check
6	Training langsung belum pernah; hanya sosialisasi daring peraturan; dirasa belum memadai; mendukung bila ada training	TRN	lacking	Aligns with M-01; contrasts with M-02
7	Masalahnya pemilahan; pengumpulan warga sudah taat; lingkungan bersih; sampah dipilah petugas TPS; baiknya dari rumah; warga belum terbiasa	BEH	~	Observation: collection compliant, source separation not yet
7	Sampah dipilah oleh petugas di TPS	TPS	n/a	Separation burden at the TPS
7	Pengawasan oleh petugas HSE; tanggung jawab dianggap bersama	SUP	present	Supervisor = HSE
8	Masih tahap sosialisasi/pembentukan kebiasaan; belum ada sanksi	INC	lacking	No follow-up/sanction yet
8	Perlu waktu menimbulkan kebiasaan memilah	HAB	n/a	Habit still being formed
9	Saat ini belum ada reward/konsekuensi; sebaiknya ada	INC	lacking	None yet
10	Warga Indonesia tanpa sanksi susah taat aturan; reward beri semangat	INC	n/a	Management attribution (role of sanction/reward)
11	Faktor kebiasaan & latar belakang; pendidikan berpengaruh (pola pikir & kemampuan terima info)	HAB	n/a	Management attribution: habit + education (related to TRN/PBC)
12	Usul: pengawasan continuous & langsung agar bisa segera arahkan bila ada ketidakpatuhan	SUP	n/a	Recommendation - direct supervision
13	Usul: dinas terkait ikut memberi sosialisasi (kini hanya pengawas/penampung, membebaskan ke perusahaan); keterlibatan dinas dinilai bisa naikan kepatuhan	COM	n/a	Recommendation - involve the agency (legitimacy)