

POLICY PAPER

Analysing the Readiness of Indonesian Villages to
Independently Manage Their Waste (Case Study of Jepara
Regency in Central Java)



Transformasi
Center for Public Policy Transformation

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The Center for Public Policy Transformation (Tansformasi) convened regional leaders (Regency Heads and Head of Local Environmental Agencies) to an event entitled “*Transformative Leadership Workshop – Improving Waste Management Endeavors in Indonesia*” back in September 2019. The event took place in Bidakara Hotel, south of Jakarta. Among the participants of the workshop are government officials from Regencies of Semarang, Pekalongan, Jepara, Demak, Parigi Moutong, and Bogor.

There are at least 4 factors that encouraged the initiation of Transformative Leadership Workshop (TLW), as follows:

- The increasing population and change in society’s consumption pattern led to an increased volume, variations and characteristics of waste.
- The current daunting situation of untreated waste made it a national issue that must be tackled comprehensively, from the upstream to downstream, so as to bring about economic and health benefits to the people, safe for the environment, and able to change the people’s behaviors.
- The existing waste management does not compile with what is deemed as environmentally friendly method and technique, resulting in negative effects on public health and the environment.
- The waste management yearns for firm legal foundation, clear government responsibility and authority, combined with participative society and business entities, so that the waste management could be executed proportionally, effectively, and efficiently.

Two main outcomes are anticipated from this workshop. Firstly, Transformasi intended to provide insights on actual issues about global and national waste management for regional leaders. These officials are then expected to become inspired to promote better public policy making on regency/city level waste management. Secondly, Transformasi targetted an improved leadership capacity among the regents/mayors, which will

enable them to develop a policy network and collaborate with related stakeholders in terms of innovative, participatory and fact-based waste management (evidence-based policy). It should be underlined that regional government poses the core responsibility in executing waste management in their respective region, as stipulated in the Ministry of Home Affairs' Regulation No. 33 Year 2010 on Waste Management Guidelines. Therefore, it is important to have a better-informed, high capacity local government as they are the direct executor of waste management regulation in the field.

Subsequent to the TLW, Transformasi agreed to assist and advise Environmental Agency of Jepara Regency - who showed high enthusiasm to improve their waste management - in formulating village regulations relating to the allocation of Village Funds for waste management activities. Jepara Regency's eagerness in waste management improvement can be seen through the release of Jepara Regent's Instruction No. 3 Year 2019 on Villages' Independent Waste Management Program and Organic Waste Reduction in Jepara Regency. In support of the said instruction, Jepara Environmental Agency then formulated a program called "*Desa Mandiri Sampah*" or villages that can independently manage their own waste.

As referred to in Jepara Environmental Agency's module, *Desa Mandiri Sampah* means that a village (*desa*) is able to manage their waste from the source, leaving only the residue to be transported to the final landfill or TPA.¹ This program is an attempt to prolong the life of TPA, considering the majority of them are in practice still using open-dumping system.² As explained by Lulut Andi Ariyanto, S.T., Head of Sanitation and Solid Waste Division of Jepara Regency Environmental Agency, *Desa Mandiri Sampah* program will be financed with the revenue generation of the profit-oriented Village-Owned Enterprise (BUMDesa). Therefore, *Desa Mandiri Sampah* concept entails the village's financial independence, as the village is targetted to use its own funding, rather than relying on financial support from authorities above them, i.e. the Environmental Agency and Central Government.

Transformasi saw a financing opportunity from the Village Funds to finance BUMDesa, so that it can help succeeding the *Desa Mandiri Sampah* program. According to the

¹ <https://dlh.jepara.go.id/desa-mandiri-sampah/>

² In an open dumping landfill, trash will be piled up in an open area without further treatment, prone to releasing dangerous substance to the environment. As regulated in the Law No.18 Year 2008 on Waste Management, open dumping system is supposedly no longer allowed. Waste management practice with open dumping system could even be considered as a criminal act, according to the existing law.

Regulation of Ministry of Village, Underdeveloped Regions Development, and Transmigration No. 11 Year 2019 on Priority of the Use of Village Funds 2020, Village Funds are derived from the State Budget which then is transferred to the Regional Budget for the purpose of governance funding, development implementation, community development and community empowerment. It should be noted that the Village Fund is a special fund for village needs, making it different from the general state budget transfer to the regional budget (Dana Perimbangan; consisting of General Allocation Fund (DAU) and Specific Allocation Fund (DAK)) which is allocated to finance the implementation of regional autonomy.

General Guidance of the Regulation No. 11/2019 on Priority of the Use of Village Funds 2020 explains that the establishment and development of BUMDesa is among the List of Prioritized Activities in the field of community empowerment. That being said, Jepara village government has an opportunity to start and capitalize their Village-Owned Enterprise (BUMDesa) with the Village Funds. Once the BUMDesa is established, the entity will then be able to finance the *Desa Mandiri Sampah* program with its generated revenue. Using this method, Jepara local government will no longer have to depend on the financial transfer from State Budget to Regional Budget in carrying out waste management activities.

In December 2019, Transformasi then held another workshop in partnership with the Environmental Agency entitled “*Enhancement of Waste Management at Village Level in Jepara Regency*”. This workshop aimed to socialize about the funding opportunity from Village Fund for *Desa Mandiri Sampah Program*. The workshop also provided materials on the lessons-learned from other places in Indonesia regarding waste management attempts through waste banks. This event was attended by the village leaders in Jepara. These villages are Mantingan, Suwawal Timur, and Rajekwesi.

With the possibility of the bureaucratic inefficiency or complexity among central government agencies, i.e. overlapping regulations between different ministries, regional government as the direct executor of waste management regulation is somehow demanded to think innovatively and act independently. Therefore, this paper aims to explain further about the rationale behind the importance for villages to become less reliance towards the central government support when it comes to waste management. The paper will also analyse the readiness of the local leaders to independently manage their waste. In addition, this paper will explore creative and innovative strategies that will enable village officials to finance their waste management programs and activities.

Research Questions

1. Why is it important for the villages to be financially independent when it comes to waste management?
2. To what extent have the villages (Mantingan, Suwawal Timur, and Rajekwesi) taken care of their waste, and what are the constraints?
3. What creative opportunities can be explored to improve not only the villages' waste management, but also their revenue, allowing them to be independent in waste management endeavors?

Objectives

1. To elaborate the importance of promoting an independent waste management at village level.
2. To discuss the current waste management condition in Jepara Regency in general, and in the villages in particular, to further identify challenges faced within waste management activities.
3. To formulate innovative, sustainable, and evidence-based waste management policy options for the village government.

Methodology

This policy research and data collection were conducted qualitatively. Data collection techniques include: (a) desk study; (b) FGD during workshops and fieldworks; (c) field observations; (d) interview with key informants; and (d) secondary data. The rundown of the workshop entitled “*Enhancement of Waste Management at Village Level*” as well as field visit in Jepara Regency is on the following:

Day 1 - 10 December 2019

TIME	ACTIVITIES	ADDITIONAL INFORMATION
08.00 - 08.30	Coffee Break	
08.30 - 08.45	Opening Ceremony	Abdul Halim
08.45 - 09.00	Keynote Speech from the Head of Jepara Environmental Agency	Farikhah Elida, S.T., M.T
09.00-09.15	Keynote Speech from Transformasi's Director	Ethika Fitriani
09.15 - 09.30	Introduction	Facilitators

09.15 – 10.30	Material I: Lecture on 5 Aspects of Waste Management (Law, Finance, Institutional, Technology, and Socio-Culture)	Farikhah Elida, S.T., M.T
10.30 – 12.00	Material II, Session 1: Materials on Waste Banks	Saharuddin Ridwan (ASOBSI)
12.00 – 13.00	Lunch Break	
13.00 – 15.00	Material II, Session 2: Materials on Waste Banks; Discussions and QnA	Saharuddin Ridwan (ASOBSI); and Participants
15.00 – 15.30	Coffee Break	
15.30 – 16.00	Mapping 5 Aspects of Waste Management in the participating Villages	Facilitator is assisted by co-facilitators from Transformasi and Jepara Environmental Agency

Day 2 – 11 December 2019

TIME	ACTIVITIES	ADDITIONAL INFORMATION
08.00 – 08.30	Coffee Break	
08.30 – 08.45	Opening Ceremony	Facilitator
08.45 – 11.00	Continued Discussion on Mapping Institutional Aspects of Waste Management in the Village	Participants
11.00 – 11.30	Facilitator's foreword before village representatives present about their waste management	
11.30 – 12.30	Lunch Break	
12.30 – 14.00	Presentation and QnA regarding the village's 5 Aspects of Waste Management	Participating Villages: 1. Mantingan 2. Suwawal Timur 3. Rajekwesi
14.00 – 15.30	Discussion about Village Funds opportunity to finance BUMDesa	Facilitator
15.30 – 16.00	Discussion on the Workshop Results and Follow-Up plan	Facilitator

Day 3 - 12 December 2019

TIME	ACTIVITIES	ADDITIONAL INFORMATION
07.00 - Finish	Field Visit on "Village Level Waste Management in Jepara Regency": 1. Mantingan Village 2. Suwawal Timur Village 3. Rajekwesi Village	Objectives of the field visit are: 1. To study waste management at the village through informal interviews with village government, youth and women groups who care about waste management 2. Observation and documentation

Findings and Analysis

A. The rationale behind the importance of independent financing for local government waste management

Transformasi previously conducted a Capacity Development Needs Assessment (CDNA) towards Gowa Regency Government. Inside the Budget Implementation Document of Gowa Environmental Agency, it is stated that as of 2019, the total Local Revenue or *Pendapatan Asli Daerah* is Rp. 419,200,000, originating from the regional levies in the form of waste / sanitation service fees (Rp. 400,000,000) and funeral service fees (Rp. 19,200,000). Meanwhile, Gowa Strategic Plan document identified that the total needs of Environmental Agency in the field of waste reached Rp. 10,437,092,600. This means that Gowa Government's Environmental Agency only has approximately 4% of independent funds to manage its waste with a scheme designed in the Strategic Plan. Therefore, in handling waste, Gowa government is still very dependent on the central government funding disbursement (Dana Perimbangan; DAU/DAK) to the regional budget. This Gowa government experience is an illustration about the regional government's reliance towards central government's financial assistance.

According to the Indonesian Law No. 23 Year 2014 on Local Government, regional government affairs are divided into mandatory and optional affairs. Article 12 of the law listed that environmental issues (including waste management) are among mandatory affairs that are "not related to the government basic services". As a consequence, explained by Imam Cahyadi, S.E., M.Si, Head of Domestic Cooperation of the Ministry of Home Affairs during TLW, non-basic services programs are not specifically regulated in the Regional Budget or APBD, showing its lesser priority in

comparison to that of basic services, such as education, health, public works and housing, social, and security programs. That being said, there is a certain degree to which the central government's designed financial disbursement for the local government's waste management is below what is actually needed in the field. The Ministry of Home Affairs is then encouraging regional government to conduct cooperation with other stakeholders, so that they are not completely dependent on the regional budget to accelerate their waste management services.

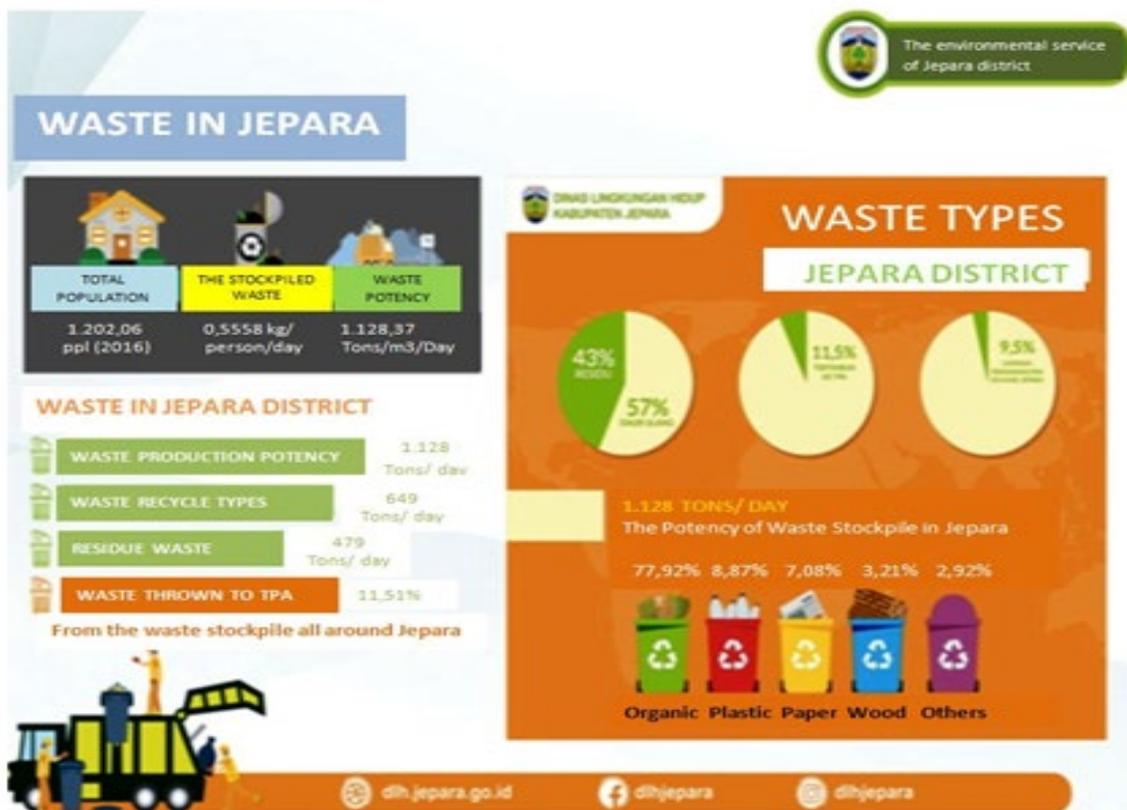
While Law 23/2014 on Local Government does not prioritize waste management within the financial disbursement from State Budget to Regional Budget, the Ministry of Village through Regulation 11/2019 listed waste management necessities among the priorities of Village Fund use. Some of the enlisted prioritized components are garbage dump, garbage carts, garbage transport vehicles, garbage processing machines, green open space construction, and construction of village waste banks. Therefore, it is important to inform respective local leaders regarding the availability of the Village Funds for waste management enhancement, since it is common that at times local leaders are not aware of the funding opportunities.

The same regulation (Regulation 11/2019 on Priority of Village Funds Use 2020) that prioritizes funding allocation on waste management also prioritizes funding for the establishment and development of BUMDesa. Perhaps in the very short term, considering the BUMDesa is not yet established, Jepara village government could apply and utilize Village Funds directly to finance waste management necessities. However, as the regulation covers Village Funds' use for year 2020 only, there is an uncertainty whether waste management will also be prioritized in the following years. Therefore, the longer term scheme should always be taken into account, that is to form a BUMDesa (using Village Funds) that could sustainably and independently finance waste management activities in Jeperan villages.

B. Jepara Regency's Opportunities and Challenges in Regional Waste Management

During Transformative Leadership Workshop (TLW) conducted last September 2019, Head of the Environmental Agency of Jepara Farikhah Elida, ST., MT. delivered a presentation titled "*Waste Management Effort Improvement in Jepara Regency*". Some of the key information is on the following:

- (1) Jepara Regency is located around 76 kilometers from Semarang, the Capital City of Central Java Province. The Regency is directly bordered by Java Sea in the north and west, Demak Regency in the south, and Kudus Regency and Pati Regency in the east.
- (2) The population of Jepara Regency was 1,202.06 (2016) with waste generation of 0.5558 kilogram/person/day. Overall, the waste potential in Jepara Regency is 1,128.38 ton/m³/day, but only 70 tons/day or around 6% is collected (the details are presented in the figure).
- (3) For acceleration of waste management to achieve Clean Jepara in 2025, the local government has planned an ideal waste management program adjusted with the existing condition.
- (4) Household waste and household waste equivalent handling and reduction efforts in Jepara Regency are described in Jakstrada document. Some schemes



have been implemented, including the development of Jepakah (Jemput Sampah Terpilah/Sorted Trash Collection) and Siangsa (Sistem Informasi Angkut Sampah Jepara/Jepara Trash Collection Information System) applications. Jepakah and Siangsa are technology-based transportation and

- sorting which have run since 2017. While Jepapah’s operation is focused on urban area waste handling, Siangsa is focused on rural area waste handling.
- (5) Regional Budget (APBD) allocation for waste management has been existing, but the amount is still small. Therefore, Jepara Regency Government develops waste management innovation in the region, including in the financing aspect.
 - (6) Millennials joining as tourist ambassadors also collaborate and volunteer to spread education on waste management. Considering Jepara’s location that spans along coastal line, these millenials also act as coastal clean-up rangers to help maintaining the cleanliness of beaches.

From the presentation, Transformasi identified the SWOT of Jepara Regency waste management, as follows:

STRENGTH	WEAKNESS
<ol style="list-style-type: none"> 1. Jepara Regency Government has 3 final landfills (TPA), namely TPA Bandungan, TPA Gamulung, and TPA Krasak. 2. Jepara Regency Government has formulated Jakstrada document, Local Regulation on Waste Generation, and Local Regulation on Waste Service Retribution. 3. Department of Environment of Jepara Regency forms special beach-cleaning team called Coastal Clean-up Ranger. 4. Jepara Regency Government has developed mobile applications on waste management, i.e. SiAngsa (Jepara Waste Transportation Information System) & Jepapah (Sorted Trash Collection). 	<ol style="list-style-type: none"> 1. Jepara Regency does not have intermediate waste handling facility (TPS)
OPPORTUNITY	THREAT
<ol style="list-style-type: none"> 1. Opportunity of waste management financing through Village Budget (APBDes) 2. Development of SiAngsa and Jepapah applications to improve waste management services in Jepara Regency. 	<ol style="list-style-type: none"> 1. It is predicted that in a few years TPA in Jepara Regency cannot store waste generation anymore. 2. Private sector and environmental groups should be involved in waste management in Jepara Regency.

According to the information directory belonging to the Ministry of Environment and Forestry called National Waste Management Information System (SIPSN), TPA Bandengan first operated in 2000. The total area of the landfill is 7.29 Ha, with 5.20 Ha of it is already used up. This landfill receives 80 ton of waste per day, some of which

will be produced into compost and biogas.³ Meanwhile, the Environmental Agency of Jepara through their presentation during TLW stated that each of TPA Gemulung and TPA Krasak receives daily waste of approximately 24-30 m³ and 30-42 m³. No waste treatment facility is mentioned in the later two landfills. The Environmental Agency then predicts that with the current trend, Jepara final landfills will no longer be able to accommodate incoming piles of garbage in the next few years. TPAs burden is exacerbated by the absence of intermediate waste treatment facilities (TPS) in Jepara. Thus, the Environmental Agency of Jepara is eager to conduct the *Desa Mandiri Sampah* program to lessen the waste transport to the TPAs.

C. Jepara Villages' Waste Management through Five Aspects (Law, Finance, Institutional, Technology, and Socio-Culture)

Jepara Regency Environmental Agency chose Mantigan, Suwawal Timur, and Rajekwesi villages to participate in the workshop entitled "*Enhancement of Waste Management at Village Level in Jepara Regency*" back in December 2019 with Transformasi. The villages were selected due to the existence of community waste banks as means of waste management supporting institution in the villages. The Environmental Agency also mentioned about the sound coordination between community waste banks and the village government. Moreover, the three villages' area represents other villages ranging from the upstream, centre, and downstream.

Following the workshop, Transformasi conducted field visit to three Jepara villages, such as Mantigan, Suwawal Timur, and Rajekwesi. The visit resulted in a number of interesting findings, as follows:

- (a) There is a female-dominant involvement in waste management activities in supporting the organization of community waste banks
- (b) The youth spirit and participation in the community waste banks sparked the villages' optimism for improving waste management services
- (c) The good coordination between village members, village government, and Jepara Environmental Agency is a crucial supporting factor for the success of the waste management efforts' follow-up plans

Through the visit, Transformasi also identified the existing five aspects in waste management in each village, as follows:

³ http://sipsn.menlhk.go.id/?q=data-tabel1%2Ftpa-tpst&field_f_wilayah_tid=1459&field_kat_kota_tid=All&field_periode_id_tid=2168

Mantingan Village:

Located in Tahunan District, Mantingan was formed in 1928 with an area of 243.12 Ha. This village is directly adjacent to:

1. North : Krapyak Village
2. South : Petekeyan Village
3. East : Sukodono Village
4. West : Tegalsambi Village

With a population of 11,511 people or 3,451 heads of households, the potential for generated waste in Mantingan Village is 6.33 tons/day. The mapping results of Mantingan Village can be seen in the table below:

Aspect	Explanation
Law or Regulation	There is no village regulation regarding waste management in Mantingan Village.
Institutional	The Mantingan village government has initiated the establishment of 9 waste banks in each 9 neighbourhood unit. In its development, only 2 waste banks are still operating, namely the Rembulan Waste Bank and the Kemuning Waste Bank. The two waste banks were established through a Decree of the Head of the Mantingan Village in 2018.
Socio-Culture	The waste management initiative is only undertaken in 2 neighbourhoods units. In addition, there is also an Organic Village in one of the Community Wards.
Technology	Waste management in the Mantingan Village is completely managed by the Waste Banks and still uses manual approaches, such as three-wheeled motorcycles to transport waste.
Financial	In the 2019 APBDes worth Rp. 2,792,519,770, the Mantingan Village Government allocated a budget of Rp. 13,500,000 for development in the forestry and environment sectors. The details are as follows:

- (1) Training / socialisation / outreach / awareness about the Environment and Forestry amounting Rp. 2,000,000;
- (2) Greening / preservation of the environment amounting Rp. 3,000,000
- (3) Terraces making / watersheds cleaning / river plasters procurement amounting Rp. 3,000,000;
- (4) Trash can procurement / garbage dump construction amounting Rp. 2,000,000; and
- (5) Other activities in the sub-sector of forestry and environment amounting Rp. 3,500,000.

In the 2020 APBDes, the Mantingan Village Government allocated a budget of Rp. 66,000,000 for development in the forestry and environment sectors. The details are as follows:

- (1) Procurement of garbage transport vehicles to support *Desa Mandiri Sampah* program amounting Rp. 30,000,000;
- (2) Trash can procurement / garbage dump construction amounting Rp. 30,000,000;
- (3) Training / socialisation / outreach / awareness about the Environment amounting Rp. 3,000,000; and
- (4) Greening / preservation of the environment amounting Rp. 3,000,000.

Suwawal Timur Village:

Located in Pakis Aji District, Suwawal Timur was formed in 2007 with an area of 583.68 Ha. This village is directly adjacent to:

1. North : Suwawal Village, Slagi Village, Kawak Village
2. South : Lebak Village and Wonorejo Village
3. East : Guyangan Village
4. West : Suwawal Village

With a population of 6,144 people, the potential for generated waste in Suwawal Timur Village is 3.38 tons/day. The mapping results of Suwawal Timur Village can be seen in the table below:

Aspect	Explanation
Law or Regulation	There is no village regulation regarding waste management in Suwawal Timur Village.
Institutional	The Suwawal Timur Village government has initiated the establishment of a waste bank named Bank Sampah Cermat, which was established through a Village Head Decree.
Socio-Culture	<p>In general, Bank Sampah Cermat is responsible for waste management activities in Suwawal Timur Village.</p> <p>In its implementation, Bank Sampah Cermat initiated a number of programs, including:</p> <ol style="list-style-type: none"> 1. Pay off Land and Building Tax (PBB) in One Day 2. Saving the Trash Every Sunday Morning <p>30% of Bank Sampah Cermat's income is allocated for social activities (home renovation) and education (English Language Courses).</p>
Technology	Waste management in the Suwawal Timur Village through Bank Sampah Cermat still uses manual approaches, e.g. three-wheeled motorcycles to transport waste.
Financial	In the 2019 APBDes worth Rp. 2,665,841,000, the Suwawal Timur Village Government allocated a budget of Rp. 9,043,000 for training in managing the waste bank for Bank Sampah Cermat.

Rajekwesi Village:

Located in Mayong District, Rajekwesi was formed in 1970 with an area of 369 Ha. This village is directly adjacent to:

1. North : Ragu Klampitan Village
2. South : Damarjati Village
3. East : Pancur Village
4. West : Geneng Village

With a population of 5,079 people or 1,541 heads of households, the potential for generated waste in Rajekwesi Village is 2.79 tons/day. The mapping results of Rajekwesi Village can be seen in the table below:

Aspect	Explanation
Law or Regulation	There is no village regulation regarding waste management in Rajekwesi Village.
Institutional	In general, Bank Sampah Mutiara is responsible for waste management activities in Rajekwesi Village.
Socio-Culture	The socio-cultural initiatives undertaken by the Bank Sampah Mutiara in Rajekwesi Village include: (1) Cooperating with Puskemas through sanitation programs for villagers; (2) Working closely with schools to provide education on waste management; and (3) Utilizing community gathering facilities to socialize the waste management program run by the waste bank
Technology	Basic waste segregation tools are available
Financial	There is no official statement based on village planning documents that can be verified.

It could be seen from the above tables that the fundamental component, which is waste management regulation, is not yet formulated in all three villages. As a consequence, there is no clear roles of village officials regarding waste management service delivery. The only existing institution specifically dealing with waste management in the sample villages is the community waste banks. When further inquired about the challenges in conducting an effective waste management in their villages, local government officials mentioned that local people do not consider waste as an urgent issue. They are still comfortable with dumping the trash in their spacious backyard, flowing it in the river,

or even burning it. Having thought that they have solved the waste issues with the current methods, local people are strongly against paying any retribution fee for proper waste picking and transporting services.

To evaluate the villages' development in *Desa Mandiri Sampah* program, Jepara Environmental Agency created an assessment form based on the five aspects in waste management.⁴ The sample form could be seen on the following:

Desa Mandiri Sampah Assessment Form

No.	Aspect	Success Indicator	Stakeholders	Score
1	Regulation	Existence of village regulation regarding waste management in general	Village Government	
		Existence of village regulation regarding technical guidance in waste management		
		Existence of village regulation regarding retribution fee in waste management service delivery		
		Existence of village regulation regarding involved stakeholders' role in waste management		
		Existence of village regulation regarding waste processing and dump locations		
2	Technology	Waste segregation, at least between organic and non-organic waste	Village Members	
		Segregated waste placement, at least between organic and non-organic waste		
		The availability of waste management technology	Village Government	
		Technological, systematic, and structural innovation in waste management		
		Village waste processing facility		
		Waste transport vehicle		
		Waste management infrastructures		
		Standard Operating Procedures (SOP) on waste management		
3	Institution	Human resources training on waste management	Environmental Agency, with the help of Village Government	
		Monitoring and evaluation towards waste management activities		
		Socialisation and training on waste management	Village Government, with the help of Environmental Agency	
		Formulation of waste management institutions in the village		
		Coordination of government institutions and involved village stakeholders regarding waste		

⁴ Program Module of *Desa Mandiri Sampah* by the Environmental Agency of Jepara Regency.

		management		
		Data, documentation, and achieves of waste management		
		Partnership with third party		
		Short, Middle, and Long Term strategies on waste reduction		
		Waste management activists	Women and Youth Organisations	
4	Financial	Funding allocation for waste management infrastructure	Village Government	
		Funding allocation for segregated waste dump procurement		
		Financing system	Village Waste Management Institution	
		Records of funding allocation		
		Operational funding for waste management		
5	Socio-Culture	People's willingness to participate in waste management (at least 70% of population)	Village Members and Village Government	
		Hotline that accommodates people's suggestion and recommendation on waste management		
		Hotline that accommodates people's complain on waste management		
		Payment for waste management services		
		CSR focusing on waste management programmes	Private Sector	

Instructions:

1. Score 1 for fulfilled component, and score 0 for unfulfilled component
2. Count the total of (X) to find the village's category
3. The formula to count the total of (X) is $X = \text{aggregated score}/32$
4. Village categories:
 - *Desa Mandiri Sampah* (Independent village), total score of > 0.80
 - *Desa Peduli Sampah* (Paying attention to waste), total score of $0.70 < X \leq 0.80$
 - *Desa Sadar Sampah* (Conscious about waste), total score of $0.59 < X \leq 0.70$
 - *Desa Tidak Sadar Sampah* (Unconscious about waste), total score of $0.49 < X \leq 0.59$
 - *Desa Tertinggal* (Underdeveloped village), total score of < 0.49

With the data gathered through our last visit, a brief assessment regarding the village's readiness to become a *Desa Mandiri Sampah* could be done using the above Environmental Agency's assessment form. However, the result of the assessment might not do justice to the sample villages, considering there are a few things that need to be improved in the assessment form. First and foremost, the final result of the assessment should be concentrated on the amount of treated waste in the village, since the ultimate goal of *Desa Mandiri Sampah* program is to lessen the burden of the TPAs.

Second, the indicator of the assessment seems to be a one-fits-for-all design. Meanwhile, the sample villages have different characteristics, starting from their typology (mountain, city, and coastal areas), the dominant type of generated waste (food leftovers, industrial debris, plastics, etc), or even the people's culture. Therefore, there might be an indicator that can be applied in one place, but ineffective in different place. The current assessment form encourages the villages to own all listed indicators in order to earn a higher score, but it does not bring the best practice in different villages.

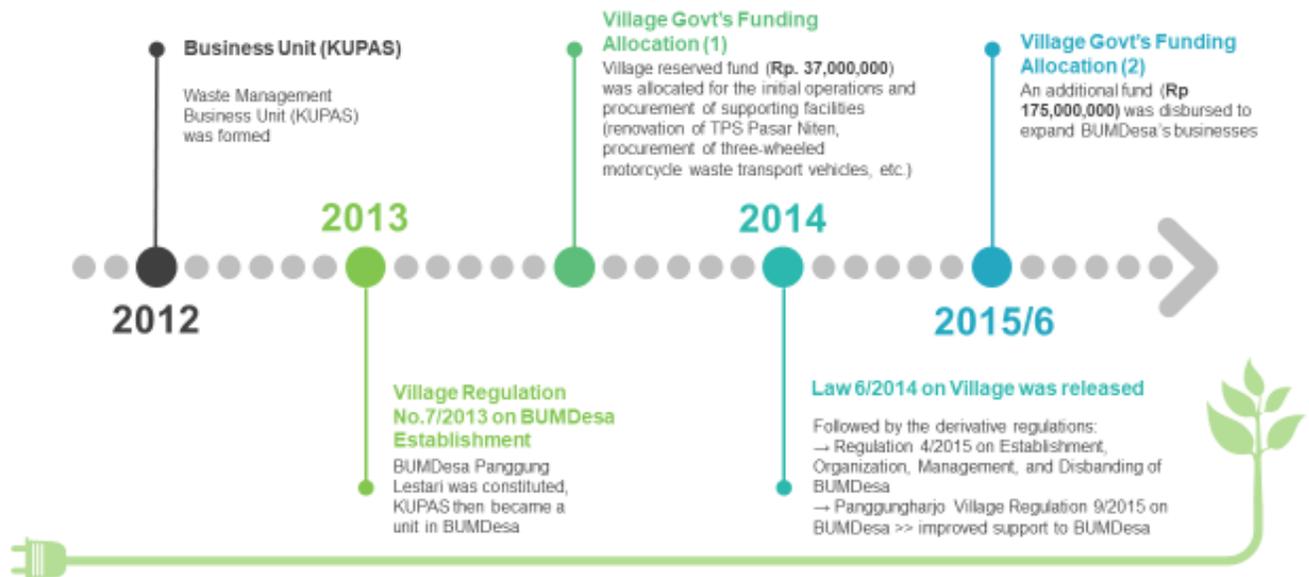
Third, each village has different stage of development in different indicators. Instead of giving a score of 0 for unfulfilled component and score of 1 for fulfilled component, the score scaling could be changed into 1 to 10 depending on the development of each component within the village's waste management.

D. Innovative Financing of Waste Management Activities through BUMDesa

As mentioned by the Environmental Agency of Jepara, the fee and revenue gathered from waste management will be the authority of BUMDesa. Success story of a Village-Owned Enterprises, for instance, could be seen through BUMDesa Panggung Lestari of Panggunharjo Village in Bantul Regency. With an initial capital of Rp. 37,000,000, BUMDesa Panggung Lestari could now reap billions of rupiah profit. One of the BUMDesa's business units is waste management unit. Services provided by the said unit is waste transport, waste segregation, and most importantly, waste recycle. This unit has efficaciously promoted a circular economy with their paramount product, the refined used cooking oils.⁵ Below is the brief history of BUMDesa Panggung Lestari:

⁵ Profil Badan Usaha Milik Desa (BUMDesa) Panggung Lestari by Panggunharjo Village, Sewon, Bantul Regency

History of BUMDesa Panggung Lestari



The model shown by BUMDesa Panggung Lestari shed some light on a more assuring, independent waste management by village officials, in a way that not only they can manage their waste, but also be financially independent from authorities above them. To date, all participating Jepara villages in Transformasi's facilitated workshop still do not own any BUMDesa that can help with financing the *Desa Mandiri Sampah* program. Therefore, in the near future, Transformasi plans to assist Jepara village officials' study visit to BUMDesa Panggung Lestari in Yogyakarta province, to gain a better understanding and more insights regarding establishing and developing BUMDesa in their own area. However, it should be emphasized that each region has its own characteristics. Thus, it will be ideal if each BUMDesa can promote and accommodate the village people's local wisdom, industry and livelihood.

E. Conclusion

Jepara Government's initiation to carry out *Desa Mandiri Sampah* was encouraged by the lowering capacity of the TPAs. The idea to promote financially independent villages in waste management is also supported by the rationale, that is the limited priority of waste management within budget allocation as stipulated in Indonesian Law No.23 Year 2014 on Local Government. Faced by this challenge, Jepara government believes that BUMDesa could be a solution that will boost the villages' financial liberation in waste management.

With the release of Ministry of Village's Regulation No. 11 Year 2019 on Priority of Village Funds Use, village government has a new method of financing their waste management. The reason is that the Village Funds can cover both waste management program and BUMDesa establishment. Therefore, in the shorter term, Jepara village government could apply for the Village Funds directly through the waste necessities scheme. In the longer but immediate term, using the Village Funds, Jepara villages should concentrate to form BUMDesa that could sustainably and independently finance waste management activities.

In spite of the availability of the village funding for year 2020, research in the field shows that four aspects in waste management (regulation, institution, finance, and technology) of Jeparan villages are still low. The cause of the multiple weaknesses is rooted in the absence of a proper regulation that manages the human resources, budgeting, and operations of waste management programs. By improving the fundamental aspect, that is regulation, other aspects will then automatically be leveraged. Transformasi's follow-up plan in regard to this finding is to facilitate the formulation of village regulation specifically directed towards waste management. Additionally, Transformasi also plans to facilitate Jepara village government's study visit to BUMDesa Panggung Lestari to gain more insights regarding BUMDesa establishment and development.

Nevertheless, Jepara Environmental Agency's intention to promote *Desa Mandiri Sampah* program, as well as their different approaches to finance the program without having to keep relying on the central government's financial support should be appreciated. The women and youth groups' spirit and participation in the community waste bank should also be appreciated as they sparked optimism for improving waste management services. The sound coordination between village members, village government, and Jepara Environmental Agency is a crucial supporting factor for the success of the waste management efforts' follow-up plans that Transformasi is committed to facilitate with.