

Public Private Partnership Policy Implementation in Refused Derived Fuel Waste Management

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Abstract— The purpose of this study was to analyze the implementation of the Public Private Partnership policy in managing Refused Derived Fuel (RDF) waste between the Cilacap Regency Government and PT. Solusi Bangun Indonesia, to find out the roles of actors in the implementation of the Public Private Partnership policy for RDF waste management in Cilacap Regency from various collaboration model negotiations, as well as to create an ideal and recommended Public Private Partnership implementation model in implementing RDF waste management policies in Cilacap Regency so that it is more optimal. The research method used in this research is quantitative research. The data needed are transcripts from interviews and observation notes as well as secondary data in the form of documents from the Environmental Service, data from UPT TPA Jeruklegi, DANIDA ESP3, Waste Assessment and other related data. The result of the implementation of this research is to draw the conclusion that the implementation of the RDF waste management policy was not timely and there were many dynamic problems in its implementation.

Keywords— Public Private Partnership, Refused Derived Fuel (RDF), Cilacap Regency Government, PT. Indonesian Build Solutions

I. INTRODUCTION

Nearly every municipality in Indonesia has waste management problems, and most of these problems can be traced back to improper residential waste disposal. Garbage from homes, both in cities and in rural areas, is simply referred to as "household waste". The problem is that if the waste is disposed of carelessly out of place, such as in rivers, in waterways or on roadsides, it can cause environmental pollution in a long time, either to the environment or to humans themselves so that it has an impact on the discomfort of living in the surrounding environment.

The population of an area and the level of economic activity both have an impact on the production and composition of its waste. The threat to the sustainability of the waste management system in the long term is exacerbated by the proliferation of non-conventional waste generated by various socio-economic activities of the community. The 2008 Ministry of Environment Waste Statistics Report shows that large and metropolitan areas generate 36 percent of their total mass as waste. For example, waste management in big cities which are also metropolitan cities such as in Jakarta, Surabaya City and Bandung City have varied ways of managing it. Pemprov DKI Jakarta continues to rely on the government's role in waste management, with sanitation officers collecting waste from homes and delivering it to the Garbage Disposal Site (TPS) for final disposal. While a large population has been achieved, there has been little uptake of the local population. Pemprov DKI Jakarta has begun to place the community as the person in charge of waste management.

The city of Surabaya produces 2,177 tons of waste every day, even though only 1,480 tons of waste goes to the TPA. This is a different challenge than faced by other locations. The rest of the waste collected by the TPA is composted in one of the city's ten communal composting centers managed by the Sanitation and Plantation Service (DKP) or incinerated in one of the city's ten mini-incinerator units, all of which are scattered around the city's 13 kelurahans. The Surabaya City Government is working with entrepreneurs and local residents to handle waste properly. From several examples of waste management in big cities as mentioned above, we can conclude that urban areas are one of the biggest contributors to waste. because urban areas have a higher population density than rural areas, and the causes of this density include population growth and urbanization flows. In another article it was said that after 72 years of Indonesia's independence, Indonesia was experiencing a waste emergency.

The amount and variety of waste generated in urban areas tends to increase along with the population and the level of economic and social activity in the city. In the metropolitan environment, various types of non-traditional waste are generated as a result of various types of socio-economic activities that occur there, which endanger the sustainability of the ecosystem. According to the 2008 Ministry of Environment Waste Statistics, Indonesia produces a total of 38.5 million tons of waste every year, 58% of which is food waste, 14% plastic, 9% paper, and another 19% is waste material. About 14.1 million tons or 36% of all waste comes from large and densely populated urban areas.

Improper waste management at the TPA has the potential to reduce environmental quality and must be avoided at all costs. Gas release from the anaerobic decomposition of waste caused by improper management and disposal of municipal solid waste without special treatment contributes to air pollution. The production of leachate and methane gas is one of the phenomena where waste in landfills contributes significantly to environmental damage. Management with an open system or open dumping has the potential to cause this pollution, which causes various negative impacts on the surrounding environment, including but not limited to: the spread of disease-causing bacteria; air pollution; unpleasant sights and smells; bad sight and smell; burning smoke; leachate pollution; noise; and social impact. To be effective, solid waste management must have a number of supporting factors. These factors include technical knowledge, institutional structure, legal or regulatory framework, financial resources, and public engagement.

Across Indonesia, particularly in Cilacap District, landfill remains a vital component of the urban economy. Water, soil, odor and visual pollution are just some of the negative impacts of landfill activities that do not meet the technical criteria and instead take the form of open dumping. In addition to the obvious environmental damage caused by open dumping, there is also the fact that property suitable for landfills is becoming scarcer and harder to come by in densely populated areas such as cities. Therefore, the federal government is encouraging local innovation in waste management to improve waste management efficiency and extend the useful life of municipal landfills.

II. LITERATURE REVIEWS

A. Government Theory

According to Utrecht etymologically, governance can be seen as an ongoing activity or policy that uses a strategy or rationale (ratio) and established protocols to achieve goals. There are also those who view government from a more process-oriented perspective, with Ndraha noting that the Science of Government (also known as *bestuurswetenschap*, Dutch for "science of government") was developed in the Netherlands in the early 20th century under the name *bestuurswetenschap*. and *bestuurskunde* (meaning the same as the art of government).

When discussing the process of administering government through the implementation of its functions and duties, Muhamad Labolo (2013: 34) explains that: "The government has two basic functions, namely primary or service functions and secondary functions or empowerment functions. The primary function is the government's function as a provider of public services that cannot be privatized, including defense and security services, civil services and bureaucratic services. While the secondary function is as a provider of governed needs and demands for goods and services that cannot be fulfilled on their own because they are still weak and powerless, including the provision and development of facilities and infrastructure.

Sumarto who stated that the state (government), the private sector (business world), and society (society) are the three main stakeholders who interact with each other and carry out their respective functions in the most basic concept of governance; their roles and responsibilities.

Collaboration is a general term used to describe dynamics involving two or more parties working together. Many experts, each

with their own unique perspective, have offered their own definition of collaboration. All these meanings stem from the same core ideas of participating in a group, working together to achieve a common goal, sharing responsibility, and holding one another to the same high standards.

B. Public Review

Thomas R. Dye defines state policy as whatever government chooses to do or not to do. Dye also believes that all government actions must be covered by state policies and have clear objectives if they are to be carried out by the government. So, it's not just a proclamation of what the government or its representatives want. Something the government doesn't do can have the same impact as government action.

The public policy implementation approach proposed by Grindle is known as "Implementation as a Political and Administrative Process". According to Grindle, the success of public policy implementation can be measured by looking at the steps taken to achieve the desired goals. According to Merilee S. Grindle, successful implementation is influenced by two major variables, namely the content of policy and the context of implementation. There are many factors that determine the success of a policy or program, such as how well the policy or program takes into account the needs of the intended beneficiaries, the nature of the benefits they receive, the desired depth of shift, the physical suitability of the program. location, clarity of implementation outline, and availability of adequate funds.

C. Waste management

The word management is a solid substance consisting of wet (organic) or dry (inorganic) materials that have been processed but are no longer needed, while process is a method of processing. The principles of responsibility, sustainability, justice, care, togetherness, togetherness, safety, security and economic value are one of the aims and objectives outlined in the Waste Management Law. Waste management has so far consisted of collection, transportation and final disposal systems. Community and regional waste is collected in one location, then transported by truck to a central transfer station before being disposed of in a designated landfill (TPA). Environmental pollution can occur due to careless disposal of waste in landfills.

D. Thinking Framework

The following is the flow of thought of the research framework that the author created to describe the flow of thought in research on the implementation of the RDF waste management PPP policy in realizing optimal, economical and sustainable urban waste management in Cilacap Regency:

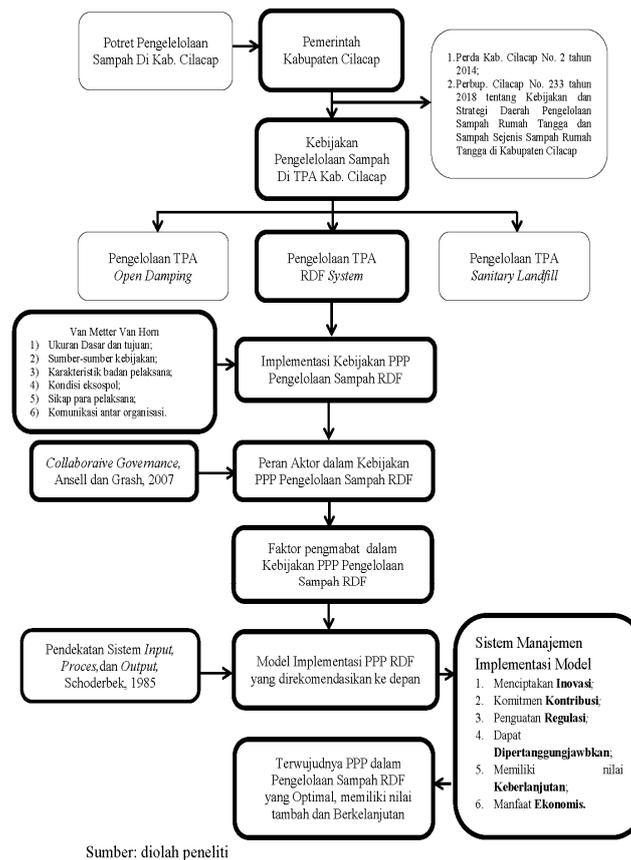


Fig. 1. Research Framework Chart

III. RESEARCH METHODOLOGY

The authors used a qualitative research strategy for this investigation. According to Kirk and Millier, qualitative research is a school of thought in the social sciences that places a major emphasis on the interaction and learning of people in their own environment and using their own language and terminology (Moleong, 2000, 3). The purpose of descriptive research is to provide concrete examples of facts, characteristics, social context, and the relationships between the topics studied.

As a qualitative research where the main data sources are words (narration) and actions and secondary sources are in the form of documents, photographs and others, in this study the data needed includes:

- 1) To see the public's opinion regarding the condition of waste management in Cilacap Regency, the data needed are interview transcripts and observation notes as well as secondary data in the form of documents from the Environmental Service, data from UPT TPA Jeruklegi, DANIDA ESP3, Waste Studies and other related data ;
- 2) To see the implementation of the policy, the data needed are related laws, related PPs, relevant Permendagri, related regional regulations and also various local government policies related to Waste Management, plus primary data in the form of transcripts from interviews with local government officials, village officials , and other stakeholders;
- 3) In order to describe waste management and the waste management cooperation plan as a tool to ensure the real conditions and research implementation, the data needed is photo documentation about the progress of the waste management cooperation plan and activities at the time the research was carried out.

IV. RESEARCH RESULTS AND DISCUSSION

E. Garbage Facility

The problem of waste management and sanitation will multiply along with the increase in waste production. Analysis of the waste generated in Cilacap Regency in 2016 revealed a daily average of 4,925 cubic meters. The study also estimated that garbage trucks and containers managed to transport around 26.80 percent of the waste to the TPA. Existing solid waste facilities can be seen in the table below:

TABLE 1 Number of Garbage / Feces Collection Facilities in 2012 – 2016

No	Garbage / Stool Collection Facility	2012	2013	2014	2015	2016
1	Garbage truck	19	21	21	21	21
2	Container Truck	9	11	11	11	11
3	Container	51	60	66	68	68
4	Garbage Cart	183	219	367	272	272
5	Temporary Disposal Site	50	50	50	50	50
6	Landfills	4	4	4	4	4
7	Stool Truck	2	2	2	2	2
8	Stool Waste Processing Agency	1	1	2	2	2

A. Waste Management Management

Table 2 below shows the target and realization of withdrawal from the solid waste service fee only for urban areas in 3 sub-districts, namely: Cilacap Selatan District, Central Cilacap District, and North District. All revenues obtained from user fees then go into the regional treasury. Furthermore, the office related to waste management in Cilacap Regency submitted a budget for operations as part of the overall APBD. Cilacap Regency Regional Regulation No. 3 of 2011 regulates the amount of retribution that must be paid, both by households and commercials. As regulated by law, the regional government is given the authority to collect fees for waste services to the community, so the Cilacap District Government collects fees for waste services.

TABLE 2 Revenue from Garbage Service Charges in Cilacap Regency

No.	Source	Target (IDR)			Realization (Rp)			Target Achievement		
		Year 2013	Year 2014	2015 year	Year 2013	Year 2014	2015 (until	Year 2013	Year 2014	2015 (until
1	PERTAMINA	28,800,00	28,800,000	28,800,000	28,800,00	28,800,00	21,600,00	100.0	100.0	75.0
2	MARKET	14,260,00	14,260,000	14,260,000	14,220,50	14,261,50	10,655,00	99.7	100.0	74,7
3	SETTLEMEN	249,720,0	240,320,00	261,740,00	244,391,5	235,240,5	196,489,0	97.9	97.9	75,1
4	SHOPS	16,020,00	16,020,000	21,500,000	21,600,00	21,380,00	16,200,00	134.8	133.5	75,4
	TOTAL	308,800,0	299,400,00	326,300,00	309,012,0	299,682,0	244,944,0	-	-	-

TABLE 3 2016 Regional Budget for Waste Management in Cilacap Regency

Field	Indirect Shopping		Shop Direct			Amount
	Employee	Other	Employee	Goods	&Capital	
SPATIAL	0	0	183,950,000	1,406,050,000	0	1,590,000,000
ENVIRONMENT	12,184,916,0	0	5,222,065,60	11,093,324,400	20,519,610,0	49,019,916,0
HOUSING AREA	0	0	94,544,500	560,455,500	1,150,000,00	1,805,000,00
TOTAL	12,184,916,0	0	5,500,560,10	13,059,829,900	21,669,610,0	52,414,916,0

In addition to the payment of fees, community participation in waste management can be seen from the existence of community-based waste management facilities and waste banks. These facilities in Cilacap City can be seen in table 3 and table 4 below:

TABLE 3 Community Based Waste Management in Cilacap City

No	Handling Place	Location	Amount	Capacity (m3/day)
1	Waste Manager RW XI Sidanegara	Jl. Galunggung, Sidanegara	1	15
2	LKP "Bu Nandang"	Jl. Bayur, Gumilir	1	3
3	Garbage Manager "Goddess Sri"	Psar Gede, Tambakreja Cilacap	1	2
4	Garbage Manager "Talun Coral"	Jalan Timah, Karang Talun Cilacap	1	1
5	Garbage Manager "Tegalreja"	Jl. Beo, Kel. Tegalreja Cilacap	1	1
6	Garbage Manager "Donan"	Jl. Karangsucu, Donan Cilacap	1	1
7	Garbage Manager "Papaya"	Jl. Papaya, Tambakreja Cilacap	1	1
TOTAL			7	24

TABLE 4 Garbage Banks in Cilacap City

No	Handling Place	Location	Amount	Capacity (m3/day)
1	"Mandiri" Garbage Bank	Perum Bumi Ketapang Damai	1	25
2	Garbage Bank "Radiant Green Pendawa"	Jl. Pandavas, Tritih Wetan	1	2
3	"Munggur Hijau" Garbage Bank	Jl. East Munggur, Mertasinga Cilacap	1	4
4	Garbage Bank of Al Ihya Ulummadin Islamic Boarding School	Etc. Kidul's Happiness, Kec. happiness	1	2
TOTAL			4	33

The operational management of urban waste in Cilacap Regency can be explained simply by the author as follows:

- 1) Waste Management at Source
- 2) Garbage Collection
- 3) Garbage transport

TABLE 5 List of Transport Units for Cilacap Regency

No	Region	Garbage Transport Vehicles		Wheel Loaders	Water Truck	Stool Truck	Excavators	bulldozer	Containers 6 m3
		trucks	Armroll						
1	Cilacap	13	3	1	1	1	1	1	15
2	Jeruklegi				1				3
3	Kroya	2	1			1			4
4	Sidareja	1	1			1			4
5	Maj	2	1						4
	Amount	18	6	1	2	3	1	1	30

4) Processing

Based on the data that the author took from the Environmental Service, that in the Cilacap area of the city there are several Integrated Waste Management Sites (TPST) facilities that process waste at the source before being transported to the TPA. With the existence of TPST, it is hoped that it can reduce the need for transportation fleets and extend the service life of the TPA. Table 6 below shows the TPST facilities in Cilacap City.

TABLE 6 TPST Facilities in Cilacap City

NO	PLACE OF HANDLING	AMOUNT	CAPACITY (M3/DAY)
1	RINJANI TPST	1	7
2	TPST JALAN MH THAMRIN	1	20
3	TPST WALK SELF-SUPPORT	1	4
4	TPST Jalan SIRKAYA	1	2
5	TPA TRITIH LOR	1	22
6	TPS 3R MEKAR KANTIL	1	3
7	TPST SUB CORE	1	3
TOTAL			61

5) Final Processing

Apart from being taken to the processing site, most of the amount of waste that is then transported is transported to the 4 available TPA locations in Cilacap Regency, namely:

- (1) TPA Tritih Lor, Jeruklegi District covers the waste service area in Cilacap City, namely Cilacap Selatan, Cilacap Utara, and Cilacap Tengah with a total of 14 Sub-Districts and was developed into Jeruklegi and Kesugihan Sub-Districts (total 4 Sub-Districts).
- (2) TPA Kroya in Kepudang Village, Binangun District; covering waste services in Kroya, Binangun, Adipala, Maos, Sampang, and Nusawungu Districts.
- (3) TPA Majenang Wanareja District; covering waste services in Majenang, Wanareja, Cimanggu, and Dayeuhluhur Districts.

(4) TPA Sidareja in Sidareja District; includes waste services in the Districts of Sidareja, Cipari, Kedungreja, Bantarsari, Gandrungmangu, Patimuan and Karangpucung.

In this study the authors will focus on RDF waste management at Jeruklegi TPA which serves urban area waste.

C. The role of actors in the PPP BOT (Build, Operations and Transfer) model in the implementation of the RDF waste management policy between the Cilacap Regency Government and PT. SBI

Based on the explanation above, it can be concluded that waste management can be collaborated with business entities or private parties, and the condition of limited budgets owned by local governments is also in accordance with the meaning of making rules regarding cooperation with business entities. Looking at the development of the waste management policy process using RDF technology in Cilacap Regency, in this first model the stakeholders play a role, namely between two parties, namely the Cilacap Regency Government and the business entity PT. SBI. The following is an overview of the actor's role in the PPP negotiation for RDF waste management in Cilacap Regency between the Cilacap Regency Government and PT. SBI in the BOT cooperation model:

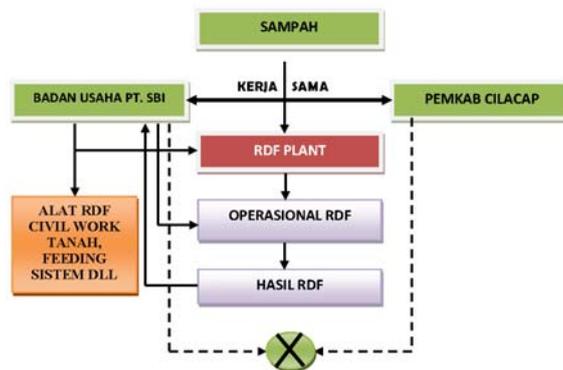


Fig. 2. The role of actors in the PPP BOT (Build, Operations and Transfer) model in implementing RDF waste management policies with PT. SBI

When the concept of the policy model above was rolled out, it turned out that PT. SBI refused the RDF cooperation offer with a total project investment value of ± 80 billion, because PT. SBI also considers the value of the investment too large to do so. In terms of regulations, actually this infrastructure cooperation model can be implemented if the private business entity has the financial capacity to build the RDF infrastructure and then the Cilacap Regency Government only needs to prepare a budget to provide a tipping fee to the private business entity. Another obstacle in the cooperation model is related to land acquisition.

D. The role of actors in the PPP Joint Venture (JV) model in implementing the RDF waste management policy with PT. SBI

Stakeholders have an important role in implementing RDF waste management policies through regional cooperation with third-party business entities, with the joint venture (JV) model, which is a form of public-private partnership in which the government and the private sector work together to provide infrastructure services. The following is an overview of the PPP model process in implementing the RDF waste management policy through regional cooperation with a third party PT. SBI with a joint venture cooperation model in detail the authors explain as follows:

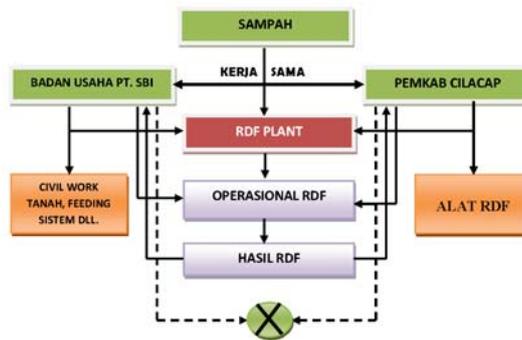


Fig. 3. The Role of Actors in the PPP Joint Venture (JV) Model in the Implementation of the RDF Waste Management Policy with PT. SBI

In the regional cooperation model, the joint venture model could not be implemented due to budget constraints from the Cilacap Regency Government which it felt were still working on a budget to invest as much as ± 40 billion and also related to the rules for land acquisition for the public interest that the Cilacap Regency Government had to procure the land. The concept of the joint venture cooperation model offered has yet to find common ground between the Cilacap Regency Government and PT. SBI thus seeks to collaborate with other parties, namely the Kingdom of Denmark's ESP3 program through the NGO DANIDA. The main reason for the lack of collaboration between the Cilacap Regency Government and PT. SBI is due to the lack of budgetary resources owned by the Cilacap Regency Government, where the investment value of ± 40 billion has not been able to budget. Likewise with PT. SBI with an investment value of ± 40 billion is also considered to be heavy because it does not match the payback period.

E. The role of actors in the PPP Joint Venture model in implementing RDF waste management with PT. SBI as well as with DANIDA ESP3 of the Kingdom of Denmark

The following is a chronological description of the KSDPK model in the implementation of RDF policies through regional cooperation with third-party business entities (KSDPK) with PT. SBI with a joint venture cooperation model approach:

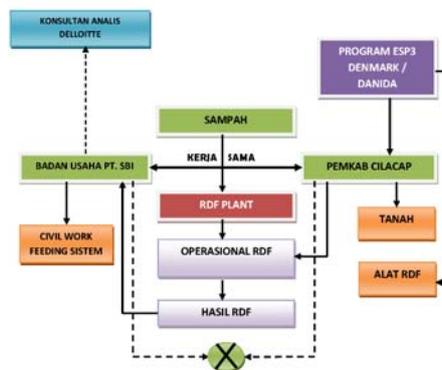


Fig. 4. The Role of Actors in the PPP Joint Venture Model in the Implementation of RDF Waste Management with PT. SBI as well as with DANIDA ESP3 of the Kingdom of Denmark

In communication, this cooperation model could not be implemented due to the limited budget of the Cilacap Regency Government to pay the tipping fee required by PT. SBI and payback period of PT. SBI is more than 2 (two) years, whereas according to company rules PT. SBI that the payback period in the investment business is a maximum of 2 (two) years. It turned out that after the entry into the ESP3 program, the Danish work had yet to find a common ground for agreement between the Cilacap Regency Government and PT. SBI, so that regional cooperation with third parties (PPP) business entities in RDF waste management in Cilacap Regency cannot be implemented. Therefore, the Cilacap Regency Government is trying to ask for help by collaborating with the Central Java Provincial Government and the Central Government through the Ministry of Public Works and Public Housing.

F. The role of actors in the PPP model of Asset Utilization Collaboration in implementing RDF waste management policies with PT. SBI and various stakeholders

Apart from the ESP3 program, the Cilacap Regency Government is also trying to ask for help by collaborating with the central government through the Ministry of Public Works and Public Housing to assist in RDF project development in Cilacap Regency in the form of civil work development support. Civil work grant assistance built by the Ministry of PUPR will be granted to the Cilacap Regency Government. As a rule, civil work grant assistance from the Ministry of PUPR will become an asset belonging to the Cilacap Regency Government. After the Cilacap Regency Government tried to recalculate the costs that had to be incurred, it turned out that there were still some supporting infrastructure that had to be met, but the Cilacap Regency Government still lacked a budget, because they still had to bear the relatively large RDF operational costs. so that the Cilacap Regency Government seeks assistance from the Provincial Government of Central Java to finance the RDF project. As a rule, aid from the Provincial Government of Central Java must also go through the mechanism of entering the regional treasury first and issuing it again for the RDF project budget line in Cilacap Regency. The following is an overview of the PPP model process in RDF waste management through regional cooperation with a third party business entity PT. SBI and the various stakeholders involved are as follows: The following is an overview of the PPP model process in RDF waste management through regional cooperation with a third party business entity PT. SBI and the various stakeholders involved are as follows: The following is an overview of the PPP model process in RDF waste management through regional cooperation with a third party business entity PT. SBI and the various stakeholders involved are as follows:

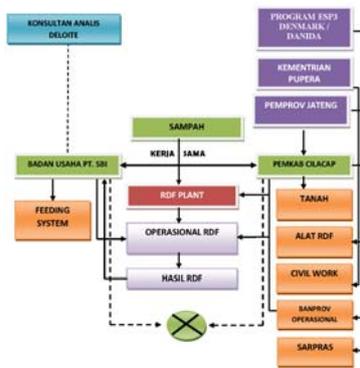


Fig. 5. The Role of Actors in the PPP Model Collaboration on the Utilization of Regional Assets in the Implementation of the RDF Waste Management Policy with PT. SBI and various Stakeholders

In the process of implementing the RDF waste management policy through regional cooperation with a third party business entity, PT. SBI with the collaborative model of asset utilization cannot be implemented, because PT. SBI does not want to make a fixed contribution that goes into the regional treasury to the Cilacap Regency Government. If you look at the applicable rules, the asset utilization collaboration model is the most appropriate model, but PT. SBI looked at it differently and considered that the capital issued by the Cilacap Regency Government was only capital for land acquisition and RDF operational costs, and RDF equipment, civil work was not considered capital because they considered it assistance from other parties. It is the problem of differences in views and interpretations that makes the pattern of cooperation in regional cooperation with third parties (KSDPK) in RDF waste management in Cilacap Regency unable to be implemented. So that between the Cilacap Regency Government and a third party business entity PT. SBI, continues to seek the most appropriate form of collaboration and according to the rules, the interests of each stakeholder can be accommodated.

G. The role of actors in the Operational Cooperation PPP (KSO) model in implementing RDF policies with PT. SBI and other stakeholders DANIDA ESP3, Central Java Province and the Ministry of PUPR

Cilacap Regency Government and PT. SBI carries out a pattern of regional cooperation with third parties in the form of operational cooperation and HR development which includes operational cost sharing and human resource development cooperation, namely the transfer of RDF waste management knowledge. It is this collaborative model of regional cooperation with third parties that is currently being run by the Cilacap Regency Government.

Negotiations carried out by actors or stakeholders based on explanations and elaborations in the implementation of the PPP

policy in RDF waste management in Cilacap Regency became a key factor until an understanding and cooperation agreement was made with the private sector PT. SBI. The role of the actors in the negotiation process in various collaboration model concepts between the Cilacap Regency Government and PT. SBI can be described in the following table:

TABLE 7 The Role of Actors in the PPP Model that Developed in the Implementation of the RDF Waste Management Policy between the Cilacap District Government and PT. SBI.

No	The role of actors in the negotiation of the PPP model in RDF	Implemented	Not Implemented	Information
1.	The role of actors in negotiating the PPP BOT model in implementing RDF with PT. SBI		√	Budgetary resource constraints on business entities
2.	The role of actors in negotiating the PPP Joint Venture model in implementing RDF between Cilacap Regency and PT. SBI		√	Budgetary resource constraints for both parties
3.	The role of actors in negotiating the PPP Joint Venture model for implementing RDF through collaborative collaboration with various stakeholders		√	Constraints Budgetary resources of both parties and differences in analysis
4.	The role of actors in the negotiation of the PPP model is the Collaborative Asset Utilization model of collaboration with various stakeholders collaboratively		√	Budgetary resource constraints for both parties and understanding of regulatory rules
5.	The role of actors in the negotiation of the PPP Operational Cooperation (KSO) model of RDF implementation through collaborative collaboration with various stakeholders	√		The proceeds from selling RDF are not in accordance with the regional government's wish to increase PAD

H. The ideal and recommended Public Private Partnership model in the implementation of RDF waste management policies in Cilacap Regency to be more optimal.

Table 8 Consideration Factors for the implementation of PPP RDF Waste Management in Cilacap Regency

No	Indicator	Explanation
(1)	(2)	(3)
1.	Regional financial Human Resources or expertise	1) The Cilacap Regency Government does not have enough budget for the construction of a new TPA and is also having difficulty with capital for the RDF project. 2) The Cilacap District Government does not have the human resource capacity to manage RDF.
2.	Improving service quality, accelerating development, and increasing PAD	1) With RDF waste management, there is no accumulation of waste in TPA, which in turn reduces the pile of waste in TPS. 2) The results of RDF management have a calorific value that can be used as an alternative fuel to replace coal by cement factories.
3.	There is support from the consumer / user	PT. SBI as the party that will utilize the results of RDF waste processing is ready to support, cooperate and buy RDF products
4.	The output of these public services can be measured and the rates calculated	1) When compared to RDF's operational costs, the results from RDF sales have not been able to recover the operational costs incurred. 2) The Cilacap Regency Government has benefited from budget efficiency in terms of the cost of constructing a new TPA over a period of 15 years.
5.	Have a good "track-record" in working with local governments	1) PT. Solusi Bangun Indonesia is a company assessed by the Cilacap Regency Government as having an excellent partnership in the field of environmental development through CSR and other programs 2) PT. Solusi Bangun Indonesia is a cement company with experience in processing waste into alternative fuels to be used as a substitute for coal in combustion kilns.
6.	There is an opportunity for competition from other legal entities	There are actually a lot of companies that use coal in Cilacap Regency, but since the RDF waste management plan was launched, with more or less research results that processed RDF waste has a calorific value of ± 3200 kJ/cal so no other company is interested except PT. SBI
7.	There are no regulations prohibiting legal entities from engaging in public services	In accordance with the Waste Management Law, the Regional Government Law, Government Regulations on Regional Cooperation, the Presidential Decree on PPPs and the Minister of Home Affairs Regulation on Technical Guidelines for Regional Cooperation, all allow and regulate regional cooperation with third-party business entities.

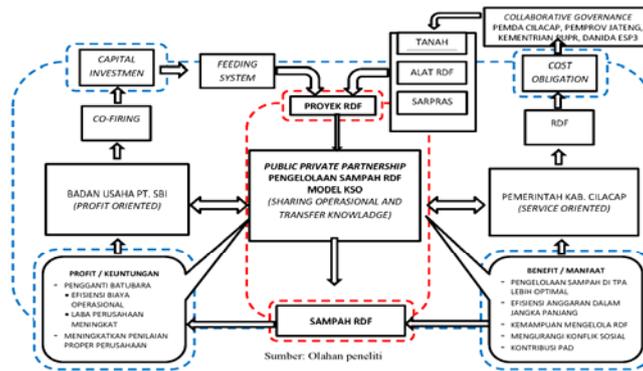


Fig. 6. Cooperation Policy Implementation Process in RDF Waste Management

Based on the description of the process of implementing cooperation policies in RDF waste management, which the authors describe in input, process and output, it can be seen which are the key factors in the process of implementing PPP for RDF waste management so that it can run to date. The first RDF waste management collaboration to become input is the 5 elements in management. This means that the PPP between the Cilacap Regency Government and PT. SBI is very dependent on man, money, materials, machines and methods so that RDF waste management can work. Next is related to capital and financing, because based on process experience in Cilacap the capital and financing factors issued by both parties will greatly influence policy implementation. In the process stages to determine the form of cooperation is very dependent on the regulations that are guided by. And finally in the output stage in the form of RDF waste which is the key factor is the profit and benefit factor.

. Furthermore, symbolization is carried out on the model that has been found so as to form an equivalent word that is easy but has a deep meaning. The symbolization of the model is as follows; innovation (innovation), contribution (contribution), regulation (regulation), accountability (accountable), sustainability (sustainability) and economic (economic) and abbreviated as the INCREASE Implementation Model.

Increase Implementation The model has 6 operationalization approaches in the process of making and implementing PPP policies in RDF waste management in Cilacap Regency between the Cilacap Regency government and the business entity PT. SBI which can be explained as follows:

1) Creating Innovation

The innovation carried out by the Cilacap Regency Government is innovation in the waste management system at the TPA from a sanitary landfill system to a Refused Derived Fuel (RDF) system, while PT. Solusi Bangun Indonesia must also innovate in the co-firing combustion system and create a feeding system to be able to utilize the low-calorie waste processed by RDF.

2) Commitment Contribution (contribution)

Waste management at TPA is the responsibility and obligation of the local government, while PT. SBI is of the opinion that waste management at TPA is not a corporate responsibility where the company is only responsible for processing the waste or waste produced by the company. However, PT. SBI is willing to assist the Cilacap Regency Government in overcoming the waste problem by adhering to company rules, so that the feeding system created by the business entity PT. SBI is not an obligation as a company to make the system, but is the value of an investment or capital that must meet business criteria.

(1) Commitment of Financing by business entities

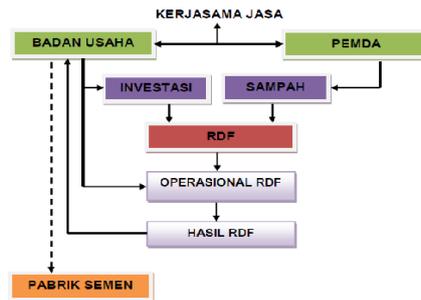


Fig. 7. RDF KSDPK Model with Service Cooperation Approach

(2) Commitment of Financing by local government

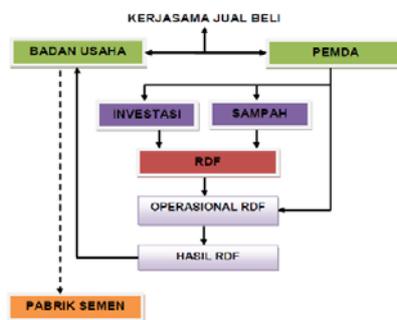


Fig. 8. Commitment to Financing by Local Government

(3) Co-Financing Commitment

The joint financing commitment by both parties is that the total value of the project will be divided in half between the regional government and the business entity in accordance with the agreement. The concept of cooperation in waste management with a joint venture (JO) approach is a collaboration between local government and legal entities where responsibility and ownership are shared in terms of providing infrastructure services.

Co-financing commitments require collaboration between the city government and business entities from the beginning of the process, during the construction of the institution, and until the completion of the project. Financing Model In this collaborative style, both the public and private sectors are responsible for providing funding, from underwriting feasibility studies to laying the foundations for investment in newly created businesses. The PPP concept of shared capital requires an upfront commitment to share the risks and benefits of the venture. That is, everyone involved in the project's development and implementation must make some kind of contribution. In most cases, businesses have limited investment funds, which leads them to offer to share capital in creating RDF projects with local governments as potential partners. This gave rise to the concept of joint venture cooperation. The following is the author's proposal for a model of cooperation between the government and the business world in managing RDF waste:

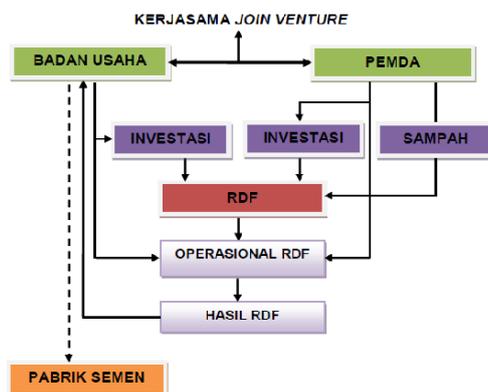


Fig. 9. The Concept of Joint Financing by Both Parties

3) Strengthening Regulation (Regulation)

In terms of strengthening regulations, what the author means is strengthening regulations regarding RDF-based waste management and strengthening regulations regarding public private partnerships in the regions. The regional regulation does not yet clearly and specifically regulate RDF-based waste management, so according to the author, it is necessary to amend the regional regulation and include points related to waste management using RDF technology. The aim is that the management of RDF carried out by the Cilacap Regency Government at Jeruklegi TPA has a clear legal umbrella and is used as a guideline for its structuring, development and sustainability.

Other regulations that need to be strengthened by the Cilacap Regency Government are regulations related to regional cooperation which also regulate in detail about cooperation with business entities. The concept of cooperation in waste management which is currently carried out by the Cilacap Regency Government with the business entity PT. SBI can still be further optimized so that it will provide maximum benefits for the Cilacap Regency Government, both direct and indirect benefits. So according to the author, it is necessary to make a Regional Regulation on Regional Cooperation apart from for the benefit of regional cooperation with business entities in waste management as well as to serve as a direct guide if there is potential for improvement in public services that require cooperation with business entities.

4) Can be held accountable (accountability)

The implementation of PPP in RDF waste management is to use regional budgets both in fulfilling infrastructure and budgets for operations, so that formally it must be accountable in the principle of good financial management. Looking at the financial operational management of the RDF project at Jeruklegi TPA, according to the author, it is still not quite right. This is indeed based on the concept of cooperation in which the employees or experts of the SBI business entity who are employed in the RDF project are funded by SBI itself and the rest are financed from operational APBD funds. So that financial management will make it difficult to be accountable.

5) Has a sustainability value

At present PPP in RDF waste management between the Cilacap Regency Government and PT. SBI has formally been operational for 3 years since its operation in 2020, and both parties have enjoyed mutual benefits and benefits. However, there are things that according to the author need to be an important concern for the sustainability of RDF waste management so that it can be carried out in the long term, namely related to the fact that the amount of urban waste that can be transported to Jeruklegi TPA is still not optimal and related to the capacity of the RDF system which processes maximum waste per day approx. 200 tons per day.

The problem with the limited waste processing capacity of RDF can be found a solution by re-optimizing the 3R concept, however, after decades of running, the 3R management is still not optimal. Therefore, the author provides input so that the Cilacap Regency Government increases the capacity of RDF so that the waste that is processed is bigger at the TPA without

leaving any waste to be dumped and stockpiled. PT. SBI has also stated that it is willing to accept as much RDF processing waste as possible from the Cilacap Regency Government, because currently the portion of material receipts for the co-firing system is 5% of the total coal demand, only around 2% is met from RDF. Another factor that needs to be anticipated by the Cilacap Regency Government in maintaining the sustainability of RDF waste management is related to cooperation partners. In the process of establishing PPP collaboration in RDF waste management and until now PT. SBI is very committed to helping the Cilacap Regency Government. In fact, the cooperation extension has been carried out and changes to several agreements, including those related to the sales value of RDF, whose prices are getting better. However, it also needs to be anticipated if PT. SBI does not want to accept any more RDF waste because it will return to piles of garbage, so the Cilacap Regency Government needs to take anticipatory steps by exploring the potential for other industries that use coal in Cilacap. In the process of establishing PPP collaboration in RDF waste management and until now PT. SBI is very committed to helping the Cilacap Regency Government. In fact, the cooperation extension has been carried out and changes to several agreements, including those related to the sales value of RDF, whose prices are getting better. However, it also needs to be anticipated if PT. SBI does not want to accept any more RDF waste because it will return to piles of garbage, so the Cilacap Regency Government needs to take anticipatory steps by exploring the potential for other industries that use coal in Cilacap. In the process of establishing PPP collaboration in RDF waste management and until now PT. SBI is very committed to helping the Cilacap Regency Government. In fact, the cooperation extension has been carried out and changes to several agreements, including those related to the sales value of RDF, whose prices are getting better. However, it also needs to be anticipated if PT. SBI does not want to accept any more RDF waste because it will return to piles of garbage, so the Cilacap Regency Government needs to take anticipatory steps by exploring the potential for other industries that use coal in Cilacap. In fact, the cooperation extension has been carried out and changes to several agreements, including those related to the sales value of RDF, whose prices are getting better. However, it also needs to be anticipated if PT. SBI does not want to accept any more RDF waste because it will return to piles of garbage, so the Cilacap Regency Government needs to take anticipatory steps by exploring the potential for other industries that use coal in Cilacap.

Cilacap Regency as an area that has many industries that utilize coal actually is a great opportunity for the innovation of waste management with the RDF system which produces calorific waste can be utilized by these industries. For example, there is a refined sugar factory industry, PT. Dharmapala Usaha Sukses (DUS) and the biggest user of coal is the Steam Tanaga Power Plant (PLTU) industry with a total capacity of nearly 3,000 mega watts. However, the sugar industry and the PLTU have not been able to receive RDF results until now because they have not innovated the co-firing system in their combustion system, because so far there has been no obligation from the central government to innovate the co-firing system and receive processed RDF waste products. , so that only PT.

The big thing that according to the author needs to provide input is the need for alternative partners who have the potential to be invited to work together and can take advantage of the results of the RDF. RDF as explained in the previous section has a calorific content that can be used as an alternative fuel to replace coal. Cilacap Regency has several industries that utilize coal such as sugar factories and PLTU. From the results of the RDF, when it was running, it was known that the calories were approximately 3,000 calories. The Coordinating Ministry for Maritime Affairs and Investment also strongly encourages RDF in Cilacap Regency because it is hoped that the resulting RDF briquette production will be able to supply 3 percent of the needs of the PLTU in the Cilacap Regency area and the PLTU will benefit from fuel at a lower price. Based on the cooperation memorandum that the price of RDF in the first year is Rp. 22,000 per ton, which is very far from the market price of coal, so according to the author, the RDF price is still not optimal from an economic point of view. Based on this explanation, the authors believe that the performance of the RDF waste management policy will be more optimal if the Cilacap District Government seeks alternative partners such as PLTU so that there is RDF price competition so that RDF prices can be more competitive and can increase PAD more.

6) Has Economic Value (economic)

In the process, there were offers of various cooperation models between the Cilacap Regency Government and the business entity PT. SBI which in the end has a meeting point, namely the operational cooperation model but with various agreement

notes, namely capital and financing. Many experts argue that the notions between capital and costs have similarities, but in this paper the authors argue that in the PPP framework, the term capital is used more by business entities with the concept of profit-oriented so that capital or capital is a value of money issued by a business entity to seek certain benefits which are also in the form of money or goods. Meanwhile, according to the author, the term cost or cost is more appropriate for use by government agencies because the concept of government is service oriented, which is an obligation in service or administration of affairs and authority that must be borne by the government. Further understanding according to KBBI, that money capital can function as the main unit in transactions, money transfers, etc. Capital can also refer to money, assets or other forms of property that can be used to create more wealth or more profitable opportunities. Horngen defines cost as the resources sacrificed or sacrificed to achieve the final goal. that money capital which can serve as the main unit in transactions, money transfers, etc. Capital can also refer to money, assets or other forms of property that can be used to create more wealth or more profitable opportunities. Horngen defines cost as the resources sacrificed or sacrificed to achieve the final goal. that money capital which can serve as the main unit in transactions, money transfers, etc. Capital can also refer to money, assets or other forms of property that can be used to create more wealth or more profitable opportunities. Horngen defines cost as the resources sacrificed or sacrificed to achieve the final goal.

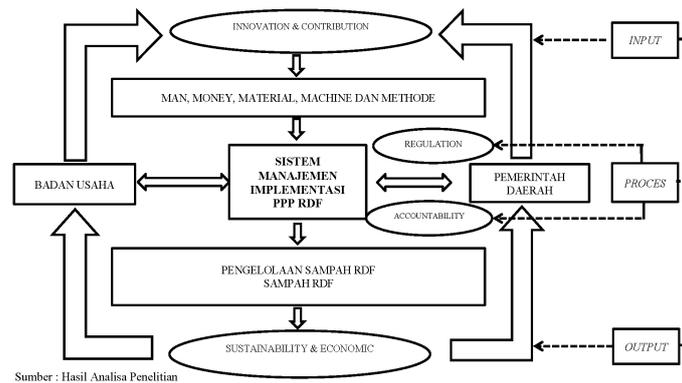


Fig. 10. INCREAS Implementation Model in PPP RDF Waste Management

V. CONCLUSION

Based on the factors underlying the problems in the implementation of the RDF waste management public policy with a collaborative approach in Cilacap Regency, which ultimately made the implementation of the RDF waste management policy not timely and there were many dynamic problems in its implementation. The author also takes a descriptive approach using Van Horn and Van Metter's theory so that in this writing the writer can draw the following conclusions:

- 1) That the implementation of the RDF waste management policy in Cilacap Regency did not run optimally because it was not in accordance with the planned time and target stages which were influenced by various supporting and inhibiting factors in the implementation process. The basic measures and policy objectives that become supporting factors are (1) Refused Derived Fuel (RDF) is a Waste Management Innovation, (2) RDF supports the Waste To Energy (WTE) Program, (3) Local governments can collaborate and the the inhibiting factor is the ability to manage Refused Derived Fuel (RDF). From the indicators of policy sources, the Cilacap district solid waste resources are the supporting factors, while (1) human resources (HR) and (2) budgetary resources are the inhibiting factors. From the indicators of the implementing agency's criteria that the Cilacap Regency Government factor supports the collaboration of RDF waste management and the Cement Factory of PT. SBI supports RDF waste management as a supporting factor. From the indicators of economic, social and political conditions, the factors of political and social support are supporting factors, while factors (1) regulatory constraints and (2) differences in views in terms of benefits are inhibiting factors. From the indicators of communication and attitudes of implementing agencies, communication factors and attitudes of implementing agencies are supporting factors for the implementation of the KSDPK policy in RDF waste management in Cilacap Regency. social and political that political and social support factors are supporting factors, while factors (1) regulatory constraints and (2) differences in views in terms of benefits are inhibiting factors. From the indicators of communication and attitudes of implementing agencies, communication factors and attitudes of implementing agencies are supporting factors for the implementation of the KSDPK policy in RDF

waste management in Cilacap Regency. social and political that political and social support factors are supporting factors, while factors (1) regulatory constraints and (2) differences in views in terms of benefits are inhibiting factors. From the indicators of communication and attitudes of implementing agencies, communication factors and attitudes of implementing agencies are supporting factors for the implementation of the KSDPK policy in RDF waste management in Cilacap Regency.

- 2) Whereas based on the actors involved in PPP RDF waste management, namely the Cilacap Regency Government, the Provincial Government of Central Java, the Ministry of PUPR and the Kingdom of Denmark's ESP3 Program. Negotiations between actors that led to various forms of offering the concept of cooperation made the process of implementing PPP policies in RDF waste management not running optimally and taking a long time to implement. So that the commitment of the actors is needed in terms of financing the RDF cooperation project.
- 3) Whereas the RDF waste management policy implementation model, based on a more in-depth analysis with a system approach, namely input, process and output has not run optimally, in the sense that it can be further optimized in the future by taking steps, namely creating innovation (innovation), commitment to contribution (contribution) , strengthening regulation (regulation), accountability (accountability), having a value of sustainability and economic value or symbolized by the INCREASE Implementation Model.

ACKNOWLEDGMENT

The researcher would like to thank the RDF in Cilacap Regency as a place for analysis and retrieval of some research data. The researcher would also like to thank all parties who played a role in completing this research.

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