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Inter-Regional Cooperation for Better Household Waste Management Stairs in Lampung Province, Indonesia

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Abstract:

Household waste is an environmental problem that is still being faced by the Province of Lampung, Indonesia. To deal with the growing problem of household waste, the provision of regional landfills is currently very necessary, especially for urban areas that no longer have adequate landfills. However, the local government ego of each district/city to provide land to accommodate waste disposal from other districts/cities is a very urgent problem to be solved. This study argues that the Local Government of Lampung Province in implementing waste management policies based on Good Environmental Governance principles is still lacking even though Lampung Province has a fairly high household waste production. Until now, the local government has not formed a Regional Regulation on Waste Management as an important instrument in overcoming regional egos in waste management in Lampung Province. Local governments need to develop inter-regional cooperation to overcome household waste problems by establishing a Regional Final Disposal Site (TPA Regional) that can be used together. The formation of a legal product at the provincial level that regulates the TPA Regional is a solution to the problem of legal certainty in overcoming the local government ego.

Keywords: *Inter-regional collaboration, household waste management, Lampung Province*

1. Introduction

Garbage is still a big problem in many countries in the world, including Indonesia. The increase in population and changes in people's consumption patterns have led to an increase in the volume, types and characteristics of waste that are increasingly diverse, especially household waste. The government's lack of attention to the problem of household waste is increasingly worsening the condition of the surrounding environment (Yogiesti et al., 2010).

In the local context, the increase in the amount of household waste generated in several areas in Lampung, for example, is increasing along with the improvement in the level of the economy and community welfare. Based on the results of a survey by the Environmental Service of Lampung Province in 2017, eleven regions in Lampung Province have produced at least 2267.52 tons of household waste per day (Badan Pusat Statistik, 2018). However, the capacity or absorption capacity of the waste that reaches the TPA in each area is on average less than 10 percent of the total waste produced every day.

Until now, the handling and management of this waste is still not optimal. There are so many problems that come from this household waste, such as the amount of garbage that accumulates on the roadside, riverbanks and many other places without any attention from the government and the surrounding community. For people who have paid for waste transportation services by the local government, they are just waiting for their household waste to be transported to the TPA (Sukrorini et al., 2014). Meanwhile, some other people who do not pay for waste transportation services handle their waste by burning it themselves or throwing it anywhere.

Waste management is one part of the responsibilities of local governments. Regarding the management actors, basically there are two types of waste management, namely local (individual) waste management/handling and centralized waste management for a residential or city environment. One of the centralized waste management is landfill management (Jaksi, 2016). Until now, the local government and the community in managing household waste still rely on

the end-of-pipe solution approach. This approach focuses on waste management when the waste has been generated, namely in the form of collecting, transporting, and disposing of waste to the landfill (Dutt & King, 2014). It is time for the paradigm of waste management that is based on this final approach to be abandoned and replaced with a new paradigm of waste management (Hernawati et al., 2005). The new paradigm views waste as a resource that has economic value and can be utilized, for example for energy, compost, fertilizer or for industrial raw materials (KRISNANI et al., 2017). However, most people in Lampung Province still view waste as useless leftovers, not as a resource that needs to be utilized (Purnomo et al., 2017).

All TPA waste management systems in Indonesia, including in Lampung Province, were originally designed with a sanitary landfill system, but in its implementation almost all TPAs are currently operated with open dumping while the problem faced is the availability of land which is very lacking, especially in big cities. The main problem to be investigated is how to manage household waste with the availability of land that is no longer able to accommodate (overload) the volume that is increasing every year. Furthermore, this article discusses how local government policies in household waste management in Lampung Province are to overcome regional egos.

2. Discussion

2.1. Good Environmental Government and Waste Management Paradigm in Indonesia

The Policy for the Implementation of Waste Management must comply with the principles of Good Environmental Governance. Good environmental governance has the meaning of good governance that cares about the continuity and sustainability of the environment (Keraf, 2010). Meanwhile, according to Nopyandari's opinion that the implementation of the government based on the principles of Good Environmental Governance must meet several principles, including: (1) The principle of community participation, the application of this principle has not been maximally implemented, because there are still many people who have not actively participated; (2) The principle of the Upholding of the rule of law has not been fully implemented. In law enforcement the implementation of waste management in the Regency mostly uses the agreement of each village to make its own law, and there are still many who underestimate it; (3) The principle of transparency is implemented but not optimally, because not all data related to solid waste in Lampung Province can be provided by the provincial government website; (4) The principle of Care for Stakeholders has not been implemented optimally, but will be realized gradually because some villages have not been reached in relation to waste services; (5) The consensus-oriented principle has not been implemented because there is no Lampung Provincial Governor's Regulation on Regional Policies and Strategies for the Management of Household Waste and Waste Similar to Household Waste (Jakstrada). So there is no procedure in waste management; (6) The principle of equality has not been implemented optimally, one of which relates to the provision of counseling and activity in the waste management program; (7) The principle of Effective and efficient, has been running quite well. Maximizing resources, namely the existence of a waste bank program that produces economic value but has not been carried out thoroughly; (8) The principle of accountability, where the responsibility for waste management to the community and interested parties has been carried out; (9) Principles Strategic vision, in terms of waste management, it keeps repeating but is not implemented properly and is very slow (Nopyandari, 2014).

Therefore, local governments in implementing waste management policies based on the principles of Good Environmental Governance mentioned by Sonny Keraf and Nopyandari are still said to be very lacking. Some principles have been implemented, but the main principles have not been implemented, such as the Formation of the Governor's Regulation on Waste Management, so that it can be said that they have not been implemented optimally. Furthermore, there are 6 principles of Good Environmental Governance from the Indonesian Center For Environment Law (ICEL), which in their application in the area these principles have been implemented but are not yet at their maximum stage, the 6 principles put forward by the Indonesian Center For Environment Law (ICEL) are: 1) Empowerment, community involvement and public access to information 2) Transparency 3) Democratic decentralization 4) Recognition of the carrying capacity of ecosystems and sustainability 5) Recognition of indigenous peoples and local communities 6) Enforcement power is not fully realized (Nugroho, 2015). Due to the absence of law enforcement efforts to overcome the waste problem, the Regency and City Governments must go their separate ways in managing waste in their regions. Less effective and efficient waste management policies based on Good Environmental Governance in Lampung Province because the cooperation between the government and the community has not been maximized.

Waste management is essentially to fulfill everyone's right to a good and healthy living environment in accordance with the mandate of Article 28 H paragraph (1) of the 1945 Constitution of the Republic of Indonesia. In addition, in Law No. 18 of 2008 concerning Waste management has given the consequence that local governments are obliged to provide public services in waste management. The government is responsible for providing infrastructure and facilities for waste management. Lampung Province itself is a province with a population increase rate of 1.28 percent (Badan Pusat Statistik (Central Bureau of Statistics), 2015). The increasing number of residents in Lampung Province of course also results in or has an impact on the quantity of waste produced.

Garbage originating from the community or the area is only collected in one place, then transported and immediately disposed of in the TPA. Garbage is disposed of in the TPA without any further management which can cause environmental pollution. Waste management like this is called an end of pipe solution system which focuses on processing waste, once the waste has been generated. The activities carried out are the collection, transportation, and disposal of waste to the TPA. Waste management should be done by reducing, reusing, recycling and in its implementation involves the community (Purwaningrum, 2016). Waste is limited from its source and in each handling process a process of sorting, reusing and recycling is carried out so that it has economic and ecological benefits.

The problem of waste in Indonesia must be addressed from its roots, namely humans as the largest waste producer (Revani et al., 2016). Early education on the importance of managing a healthy environment by knowing and realizing waste management is very important. Public awareness of disposing of waste in its place does not depend on the economic level, position or class of a person (Nasution & Permadi, 2017). However, this is a reflection of the awareness gained from education that is applied from an early age, either at school or in the family environment.

Managing waste from upstream can actually also be done by the community itself by sorting/separating waste based on its type (Yudhistirani et al., 2016). The sorting is for example by dividing whether the waste is dry waste, wet waste, or plastic and bottle waste. This will certainly make it easier for the cleaning staff to provide treatment faster than having to do the sorting by the cleaners themselves.

The 3R's concept is (1) reduce, encouraging us to reduce the use of goods that produce waste as much as possible, (2) reuse, reusing items that are usually thrown away by avoiding disposable items. This can extend the time the goods are used before they become waste and the third is recycle, which is recycling (Astoria & Heruman, 2016). Disposed waste must be segregated, so that each part can be composted or recycled optimally, rather than being dumped into the mixed waste disposal system as it exists today. Industries must redesign their products to facilitate the process of recycling these products (Hernawati et al., 2005). This principle applies to all types and flows of waste, where with this sorting, it will be easy for scavengers or recycling entrepreneurs to find waste that can be recycled. In addition, the disposal of mixed waste can damage and reduce the value of the material that may still be used again. Organic materials can contaminate materials that may still be recyclable and toxins can destroy the usefulness of both.

2.2. Lampung Provincial Government Policy in Waste Management

Government policies in the context of creating a clean society have not yet been able to run as they should. Population growth is certainly very influential on people's consumption patterns which result in an increase in the volume of waste, with specific types and characteristics of waste as part of the consumption pattern.

Talking about the problem of waste, what immediately arises in our minds in general is the problem of what is seen visually by the naked eye, namely the garbage in the trash cans, the garbage scattered on the roadside, and so on, not what will be caused or what will happen. be the impact of the waste problem.

In waste management, it is still constrained by the lack of public understanding of the importance of proper waste management (Purwanti et al., 2015). So far, people still think that waste is only a remnant of human daily activities that do not need attention. It is so easy for people to throw away the remnants of their daily activities, either in the form of food scraps, which come from solid objects that cannot be recycled or the remnants of their daily activities that can be recycled to be disposed of in any place. There is no attention from the community that is part of a weak community pattern to pay attention to the importance of public health.

Community participation is very supportive of an area's waste management program (Aryenti, 2011). Community participation in the solid waste sector is a process in which people as consumers as well as producers of solid waste services and as citizens influence the quality and smoothness of the infrastructure available to them. Community participation is important because participation is a tool to obtain information about the conditions, needs and attitudes of the local community. The community will trust the development project/program more if they feel involved in the preparation process.

In Law No. 18 of 2008 concerning Waste Management has also emphasized the importance of community participation in waste management. In managing towards zero waste, the process of sorting and processing must be carried out at the source of the waste, either simultaneously or sequentially with the waste container. Waste management begins with the location of the landfill or waste producer. Garbage is separated between organic waste and inorganic waste, and placed in different waste containers. Organic waste is to be processed into compost, while inorganic waste is usually used for recycling or reuse.

In addition, the community has the right to participate in the decision-making process, implementation and supervision in the field of waste management, to obtain correct, accurate and timely information regarding the implementation of waste management. and other rights of the community are to receive guidance so that they can carry out waste management in a good and environmentally sound manner.

Development documents or better known as Medium-Term or Long-Term Development Plans often contain national or regional visions and missions to realize a more advanced Indonesia in the future. Likewise with the Lampung Province RPJMD for 2019-2024, one of whose missions is "Developing Infrastructure to Improve Production Efficiency and Regional Connectivity". One of the commitments in carrying out this 4th Mission is to encourage the development of a regional waste management system (RPJMD Lampung, 2019). In carrying out this commitment, the Lampung Provincial Government provides a fairly large budget allocation for the 2020-2024 government period. In 2020 the budget allocation is Rp. 795,000,000, in 2021 the budget allocation is Rp. 1,384,345,000, in 2022 the budget allocation is Rp. 1,275,702,000, in 2023 the budget allocation is Rp. 1,870,363,000 and in 2024 the budget allocation is Rp. 1,544,175,000. The budget allocated to the RPJMD is larger than the RPJMD for the 2014-2019 government period (RPJMD Lampung, 2019). In the RPJMD, the waste management performance development program is targeted to have outputs in the form of regional regulations and governor regulations. In year 1 the targeted budget is Rp. 375,000,000, in the second year the budget allocated is Rp. 403,125,000, in the third year the budget allocated is Rp. 433,359,075 and in the fourth year it is Rp. 465,861,328, while in fifth year amounting to Rp 500,800,928. With legal products in the form of 2 regional regulations and 1 governor's regulation, but until the government changed to the regional regulation and the Lampung governor's regulation on waste management, it seems that it is still in the drafting stage.

If you look at it, the comparison of the budget in the 2014-2019 RPJMD with the 2019-2024 RPJMD has increased quite a lot, up to 2 to 3 times. With a budget of this size, it is very unfortunate that the Lampung Provincial Government, led by the Governor of Lampung Province, misses the opportunity to form and stipulate a governor's regulation on regional policies and strategies in Waste Management. In fact, this regulation will greatly assist the Lampung Provincial government in efforts to improve the quality of the environment that is polluted by household waste and similar household waste due to the occurrence of overload in the provided TPAs.

2.3. Model of Inter-Regional Cooperation in Overcoming Regional Ego of Household Waste Management in Lampung Province

As a country that implements regional autonomy, cooperation between regions is an important instrument in waste management in Indonesia. Because each region does not always have the capacity to manage waste, the following conditions often occur: 1) regions have waste management funds but do not have adequate landfill locations 2) regions have adequate landfill locations but the problem management system is still an obstacle and limited funds 3) lack of community participation in an area in the waste management process so that waste has spread to various central points of the environment such as rivers, sea coasts and so on.

Regional cooperation in the procurement of regional landfills can be one of the answers to the problem of waste that often passes through an area, either district or province. In the Governor's Regulation on Waste Management, the Regional TPA must be discussed as an effort to reduce and manage waste. Problems related to waste management in the area cannot be separated from the overload of the TPA but there is no land available to build a new TPA. Although the government has the authority to procure land for the public interest, it still requires a lot of study and time for development, while the need for a new TPA is increasingly pressing. Because Regional TPAs are considered more effective and efficient for several adjacent areas but have obstacles in building TPAs in their regions. Regional TPA development must begin with Regional Cooperation.

The regional cooperation process goes through several processes, namely the process of offering cooperation between regions, preparing a collective agreement, signing a collective agreement, preparing a cooperation agreement approved by the Regional People's Representative Assembly and finally the process of signing the cooperation. For more details, here is a chart on Regional Cooperation in more detail:

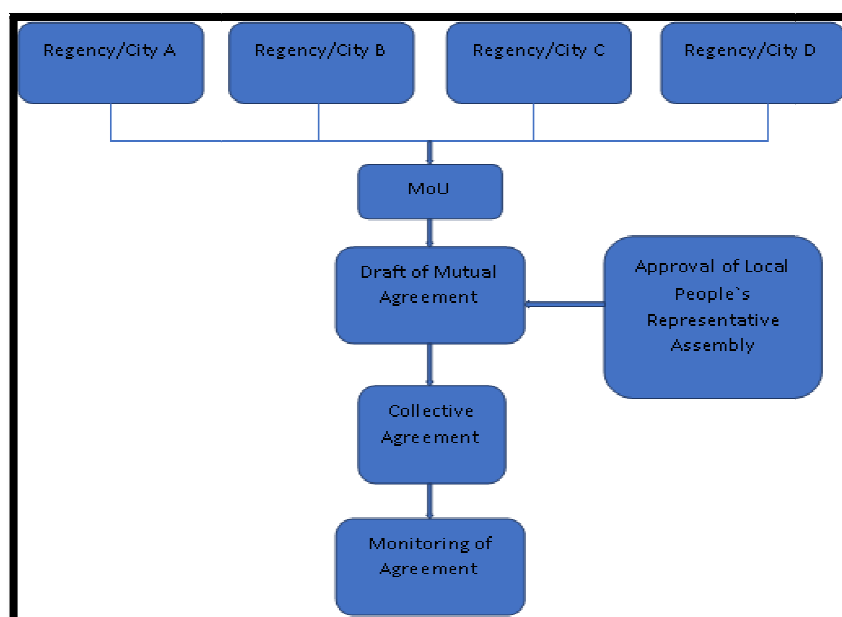


Figure 1: Diagram X. Stages of Regional Cooperation

To prepare for regional cooperation, the Regent/Mayor forms a Regional Cooperation Coordination Team (TKKSD) whose task is to prepare a cooperation plan which includes: (Nugroho, 2015):

- draw up a regional TPA cooperation plan that will be cooperated with other regions;
- prepare complete information and data regarding Regional TPA; and
- analysis of the measurable benefits and costs of cooperation that Regional TPAs are more beneficial if they are collaborated with other regions rather than being managed alone.

If it is deemed more effective, then according to the provisions contained in the Regulation of the Minister of Home Affairs Number 22 of 2009 concerning Technical Guidelines for Regional Cooperation Procedures, TKKSD, both Provincial and Regency / City in carrying out their duties can form a Technical Team to prepare technical materials for objects which will be collaborated. For the cooperation offer, the district/city government that will become a potential partner for cooperation also forms a TKKSD which has the main task of assessing proposals and feasibility studies in the cooperation offer. If the Regional Head, after discussing with the TKKSD, accepts the offer of cooperation, then he will then provide a written answer to the cooperation plan. In the event that the initiator of the Regional TPA is the provincial government, the Governor offers a cooperation plan to several regional heads of regencies/cities in his area regarding the

development of Regional TPA management. It should be noted that inter-regional cooperation must be based on the following principles:

- Efficiency
- Effectiveness
- Synergy
- Mutual benefit
- Mutual agreement
- Good faith
- Prioritizing the national interest and territorial integrity of the Unitary State of the Republic of Indonesia
- Equality of position
- Transparency
- Justice
- Legal certainty.

The arrangement of the institutional concept of this cooperation can be seen in Law No. 23 of 2014 concerning Local Government in Article 363 paragraph (1) there is a statement of "mutual benefit" when viewed from the perspective of the formation of cooperation above that there are two perspectives namely; equal and unequal. The statement of mutual benefit is equal cooperation. However, paragraph (3) is still in this article that cooperation between regions is categorized as mandatory and voluntary cooperation. In theory, mandatory cooperation is based on *condecio sine quanon* (orders of legislation/orders from above).

Article 364 (1) obligatory cooperation is cooperation between bordering regions. The word border if viewed from the administrative geographical map of the government, there are two types of bordering regional governments, namely the first between regional and city governments, and the second is between provincial regional governments. So if you look at the two types of regional governments that are close together, they are in a position of equality at the level of government, therefore if they are categorized in the concept of collaborative institutions, they are included in the concept of collaborative equal institutions. If it is observed that between provinces are two regional governments that are at the same level of government, then in the perspective of the subjects this includes the concept of collaborative equal institutions which are more voluntary, but in this regulation it is regulated to be obligatory collaboration (inequal collaborative).

Furthermore, in Government Regulation No. 50 of 2007 concerning Procedures for the Implementation of Regional Cooperation, there is an affirmation of the basic principles of cooperation between regions: In Chapter II article 2, the regulation of cooperation between regions is carried out based on the principles: (d) mutual benefit, (e) mutual agreement and (h) equality, specifically on the principle of mutual agreement, if cooperation is formed on the basis of an agreement, and before the agreement begins there is an awareness of mutual need, the intended collaboration is a non-structural (equal collaborative) pattern, with this explanation found inconsistent arrangements, meaning that in the Law No. 23 of 2014 on mandatory inter-regional cooperation arrangements (command/equal collaborative), but in government regulation No. 50 of 2007 concerning Procedures for Implementation of Regional Cooperation, cooperation between regions is based on consensus (equal collaborative pattern). dispute resolution, there is an option to use the governor's decision other than the deliberation pattern as the main option. A position like this will eliminate the principle of equality which is the spirit of cooperation, if the principle of equality is not implemented then the institutional concept includes collaborative equal.

In the case of inter-regional cooperation in waste management, the first legal basis used was Law No. 23 of 2014, regarding the authority for waste affairs in this Law, there are strict authority arrangements between the central government, provincial regional governments and district/city governments as contained in the attachment explaining the division of Concurrent Government Affairs between the Central and Provincial Governments and Regency/Municipal Regions. Cities in matrix C concerning the Division of Government Affairs in the Field of Public Works and Spatial Planning, it is explained that the sub-waste affairs which are the affairs of the central government, provincial government and city district governments are as shown in the table below:

Province	Regency/City
Regional waste management and system development	System development and solid waste management within the regency/city area

Table 1: Distribution of Authority in Waste Management

Based on the table above, the affairs of regency/municipal waste that are in collaboration with other regional governments or in the sense that they are managed regionally are the affairs of the provincial government. So, when viewed from the position of the subject in the regional waste management cooperation, it consists of the provincial government, district government and city government. According to the Law No. 18 of 2008 concerning Waste Management, in this law the regulation of waste management cooperation can be found in Article 8 letter "b" the provincial government has the authority to facilitate cooperation between regions in one province, partnerships, and networks in waste management.

The next regulation as the basis for regional waste management is the Minister of Home Affairs Regulation No. 33 of 2010 concerning Guidelines for Waste Management, several articles of this regulation that regulate waste management cooperation include Article 27 (1) and (2) it is described that inter-regional cooperation in waste management consists of

two or more regencies/cities in one province or between provinces. If it is seen from the equality of the positions of the subjects of cooperation, the concept of the cooperative institution that is built is collaborative equal.

Of the two waste management policies, namely Law no. 18 of 2008 concerning Waste Management and Regulation of the Minister of Home Affairs No. 33 of 2010 concerning Guidelines for Waste Management, these two regulations build a collaborative Equal model on cooperation between regions for Final Waste Processing Sites. From the analysis of the regulations above, there are dissimilarities in the institutional model that is built, namely from the Regional Government regulations, an in equal cooperation institutional model is developed and from the waste management regulation an equal cooperation institutional model is developed. This condition is a separate problem in the process of forming the TPA. As the results of interviews with informants in the field. From the whole series of interview data, if drawn into a theoretical analysis, the cooperation between regions that will be built is the subjects in an unequal position (City, Regency, Province). In the context of developing inter-regional cooperation institutions according to regional needs, it is necessary to understand the meaning of cooperative institutions in depth, because in every cooperation there are different situations, objectives, and conditions, therefore the establishment of cooperation institutions is a very decisive activity for the development of cooperation. More specifically, inter-regional cooperation institutions require the form of cooperation, cooperation management, organizational structure, regulatory framework, and funding sources that exist in the entire cooperation process. Therefore, in addition to providing infrastructure, it is also necessary to have a management institution that is able to meet the needs of the community. Given the considerable challenges in the future, as well as the demands for higher performance, waste management institutions need to work more directed and focused. For this reason, it is necessary to organize and develop institutional models that have been built based on existing regulations so that they are able to provide better waste services. In addition, the description of the conditions and conditions of the community will also affect the ways in which cooperation in waste management is carried out, so that the form of cooperation that is manifested in the form of agreements and arrangements will also differ according to the needs of each cooperation actor based on the conditions and circumstances of the community and the state of the region.

Moreover, the institutional concept of regional waste landfill cooperation in the legislation is an unequal collaborative pattern with weaknesses in several aspects of management, cooperation formats/cooperation institutions, organizational structure. regulatory framework. The concept of collaborative institutional model/pattern of unequal collaboration is difficult to implement in the domination of the decentralization paradigm. This institutional format will also touch on other activities such as implementing programs in order to increase regional capacity as members, facilitating horizontal learning between regions, and even reaching an agreement to create a joint action program. In other words, the format of cooperation that is built will face many challenges. The collaboration has the characteristics of developmental networks, outreach networks, and action networks. Thus, local governments need to strengthen cooperation policies in waste management through strong regulations. This regulatory authority is expected to create sustainability and effectiveness of cooperation through the creation of a strict sanctions structure for parties who do not implement the results of the collective agreement. This is intended so that the network among members can be strongly institutionalized.

3. Conclusion

Cooperation between regions is an order of law. Theoretically, the cooperation whose process is formed based on statutory orders is mandatory in the form of a collaborative in-equal cooperation pattern/model. Therefore, it is necessary to have a cooperative institution that has a regulatory function to exchange information to determine joint decisions by means of deliberation and consensus in the administration of regional waste management affairs which are the authority of the provincial government. If the implementation is carried out in a cooperative way, then the possible cooperation is in the form of a Consortia, because technically the waste management institution has been determined to be in the form of a Regional Technical Implementing Unit. Thus, the cooperative institution will not carry out operational functions in waste management, while the regulatory function and its regulation are attached to the agency in charge of affairs. The development of the concept of inter-regional cooperation institutions (regional TPA) must be supported by regulations that can provide legal certainty in its implementation.

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